

The foliar nematode, Aphelenchoides ritzema-bosi (Schwartz, 1911) Steiner & Buhrer, 1932, caused widespread damage to chrysanthemum leaves in outdoor nurseries in southern Ontario.

A tree survey in Ontario and Quebec revealed a number of species of plant-parasitic nematodes associated with the roots of 17 kinds of trees. Most of the plant-parasitic nematodes encountered had not previously been recorded attacking forest trees in Canada. Species of Hemicycliophora, Rotylenchus, and Paratylenchus were observed to be the most frequent tree root parasites. Two ectoparasites, Criconema menzeli (Stefanski, 1924) Taylor, 1936, and Criconemoides demani (Micoletzky, 1925) Taylor, 1936, which were found associated with tree roots, had not previously been recorded from Canada. Another ectoparasite recorded for the first time from Canada was Criconema octangulare (Cobb, 1914) Taylor, 1936, found on moss roots.

Predaceous nematodes belonging to the genus Monochus were found in the soil of 50 per cent of the tree root samples examined from Ontario and Quebec. The six species encountered in order of abundance were: Monochus papillatus (Bastian, 1865) Cobb, 1916; M. brachyurus (Buetschli, 1873) Cobb, 1917; M. muscorum (Dujardin, 1845) Cobb, 1916; M. parvus (de Man, 1880) Cobb, 1916; M. sigmaturus Cobb, 1917; and M. trionchus Thorne, 1924.

Phenological Data, 1957

In 1957, first anthesis dates for plants under observation at Ottawa were mostly slightly earlier than usual. This contrasts with 1956 when practically all the observed anthesis dates were later than the averages. Table I shows the dates of first anthesis in 1957 and the departure in days from the average date of previous years (I.J. Bassett).

The chief feature of the phenological data collected in the Prairie Provinces in 1957 is that the majority of the species recorded bloomed earlier than normal. There were no excessively wet or cool periods to delay the development of plant growth throughout the season until heading time. Late-flowering species bloomed slightly early and the wheat plots took less than the usual time for early sown wheat to mature (R.C. Russell).

Table I. Phenological Data at Ottawa, Ontario - 1957

<u>Species</u>	<u>No. of Years of Observation</u>	<u>First Dates of Anthesis 1957</u>	<u>No. of Days Departure from Average</u>
<u>Alnus rugosa</u>	6	8/4	2L
<u>Acer saccharinum</u>	22	9/4	3E
<u>Corylus cornuta</u>	5	16/4	1L
<u>Poa annua</u>	6	18/4	8E
<u>Populus tremuloides</u>	17	21/4	3L
<u>Ulmus americana</u>	22	21/4	5E
<u>Populus grandidentata</u>	6	22/4	2E
<u>Acer rubrum</u>	6	23/4	4E
<u>Acer negundo</u>	17	25/4	11E
<u>Betula papyrifera</u>	6	27/4	5E
<u>Celtis occidentalis</u>	5	1/5	10E
* <u>Acer saccharum</u>	22	No flowering on the marker trees this year	
<u>Fraxinus americana</u>	5	3/5	9E
<u>Prunus pensylvanica</u>	16	8/5	9E
<u>Alopecurus pratensis</u>	6	10/5	4E
<u>Fagus grandiflora</u>	5	12/5	4E
<u>Smilacina stellata</u>	16	19/5	1E
<u>Pinus sylvestris</u>	22	19/5	8E
<u>Poa pratensis</u>	6	19/5	9E
<u>Quercus macrocarpa</u>	6	21/5	2E
<u>Rumex acetosella</u>	6	1/6	2E
<u>Anemone canadensis</u>	16	2/6	1E
<u>Juglans nigra</u>	6	5/6	2E
<u>Carya cordiformis</u>	13	10/6	1E
<u>Dactylis glomerata</u>	6	11/6	N
<u>Bromus inermis</u>	16	17/6	1E
<u>Phleum pratense</u>	16	23/6	2E
<u>Agropyron repens</u>	4	24/6	2E
<u>Tilia americana</u>	16	28/6	8E
<u>Rhus typhina</u>	11	1/7	6L
<u>Ambrosia trifida</u>	6	2/7	9E
<u>Catalpa ovata</u>	14	3/7	1L
<u>Cephalanthus occidentalis</u>	12	15/7	3E
<u>Artemisia vulgaris</u>	4	29/7	1L
<u>Ambrosia artemisiifolia</u>	5	1/8	10E
<u>Hamamelis virginiana</u>	14	11/9	9E

*No specimens of Acer saccharum flowered or fruited in the Arboretum, Canada Experimental Farm in 1957. Other non-flowering years were in 1946 and 1951.

(I. J. Bassett)

Table II. Phenological Data taken at Winnipeg, Saskatoon, and
Edmonton in 1957

<u>Species</u>	<u>Winnipeg</u>		<u>Saskatoon</u>		<u>Edmonton</u>	
<u>Pulsatilla ludoviciana</u>	--	--	19/4	N	19/4	12 E
<u>Populus tremuloides</u>	22/4	4 E	28/4	2 L	29/4	2 L
<u>Corylus rostrata</u>	--	--	--	--	26/4	6 E
<u>Shepherdia canadensis</u>	--	--	--	--	29/4	10 E
<u>Phlox hoodii</u>	--	--	28/4	1 E	--	--
<u>Salix petiolaris</u>	--	--	3/5	4 E	29/4	7 E
<u>Acer negundo</u>	--	--	3/5	4 E	29/4	5 E
<u>Betula papyrifera</u>	--	--	7/5	4 E	29/4	10 E
<u>Thermopsis rhombifolia</u>	--	--	5/5	6 E	--	--
<u>Prunus americana</u>	8/5	6 E	--	--	--	--
<u>Amelanchier alnifolia</u>	12/5	6 E	8/5	6 E	13/5	4 E
<u>Prunus pensylvanica</u>	--	--	13/5	7 E	8/5	10 E
<u>Viola rugulosa</u>	--	--	13/5	9 E	22/5	N
<u>Smilacina stellata</u>	23/5	1 E	24/5	1 E	13/5	13 E
<u>Prunus melanocarpa</u>	23/5	3 E	24/5	4 E	25/5	4 E
<u>Crataegus chrysocarpa</u>	17/5	6 E	25/5	3 E	23/5	8 E
<u>Cornus stolonifera</u>	26/5	6 E	24/5	6 E	28/5	5 E
<u>Viburnum lentago</u>	2/6	1 E	--	--	--	--
<u>Thalictrum turneri</u>	--	--	--	--	28/5	7 E
<u>Elaeagnus commutata</u>	--	--	30/5	5 E	30/5	7 E
<u>Lonicera glaucescens</u>	--	--	3/6	5 E	27/5	13 E
<u>Hedysarum americanum</u>	--	--	5/6	3 E	--	--
<u>Achillea lanulosa</u>	--	--	5/6	5 E	--	--
<u>Anemone canadensis</u>	7/6	1 L	7/6	4 E	19/6	5 E
<u>Galium boreale</u>	--	--	11/6	4 E	11/6	11 E
<u>Maianthemum canadense</u>	--	--	--	--	5/6	1 L
<u>Zizia aurea</u>	12/6	?	--	--	--	--
<u>Rosa alcea</u>	--	--	16/6	4 E	3/6	8 E
<u>Campanula petiolata</u>	--	--	20/6	2 E	12/7	2 L
<u>Bromus inermis</u>	--	--	23/6	1 E	19/6	8 E
<u>Gaillardia aristata</u>	--	--	22/6	3 E	--	--
<u>Spiraea alba</u>	--	--	25/6	6 E	--	--
<u>Symphoricarpos occidentalis</u>	--	--	25/6	8 E	11/7	6 L
<u>Chamaenerion spicatum</u>	--	--	1/7	2 E	9/7	1 L
<u>Psoraleidium argophyllum</u>	--	--	7/7	4 E	--	--
<u>Phleum pratense</u>	--	--	--	--	10/7	3 L
<u>Apocynum androsaemifolium</u>	--	--	--	--	11/7	2 E
<u>Solidago missouriensis</u>	--	--	12/7	3 E	--	--

<u>Species</u>	<u>Winnipeg</u>		<u>Saskatoon</u>		<u>Edmonton</u>	
<u>Solidago canadensis</u>	22/7	N	--	--	18/7	3 E
<u>Grindelia perennis</u>	--	--	21/7	2 E	--	--
<u>Oligoneuron canescens</u>	--	--	25/7	1 E	--	--
<u>Aster conspicuus</u>	--	--	--	--	23/7	1 E
<u>Aster laevis</u>	--	--	26/7	3 E	23/7	7 E
Wheat						
Sown	6/5	7 L	8/5	8 L	1/5	N
Emerged	17/5	7 L	21/5	8 L	11/5	N
Headed	26/6	5 E	6/7	4 L	--	--
Mature	11/8	4 L	8/8	2 E	15/8	4 E

(R.C. Russell)