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## OCCURRENCE OF *XIPHINEMA DIVERSICAUDATUM* (NEMATODA) IN THE SLOVAK REPUBLIC

by

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**Summary.** A plant nematode survey undertaken in 1991-1992 in the Slovak Republic revealed the presence of the Longidoridae *Xiphinema diversicaudatum* (Micoletzky) Thorne in six localities in the central and southern parts of the country. It occurred mainly in the rhizosphere of plum trees, but in one case it was found associated either with cherry or grapevine.

During a plant nematode survey carried out in 1991 and 1992 in Slovakia, populations of the longidorid *Xiphinema diversicaudatum* (Micoletzky) Thorne were detected in six localities. Since *X. diversicaudatum* is the

natural vector of the plant viruses (Lamberti and Roca, 1987) *Arabid mosaic virus* (AMV) and strawberry latent ringspot virus (SLRV), it is thought useful to comment on its occurrence and distribution.

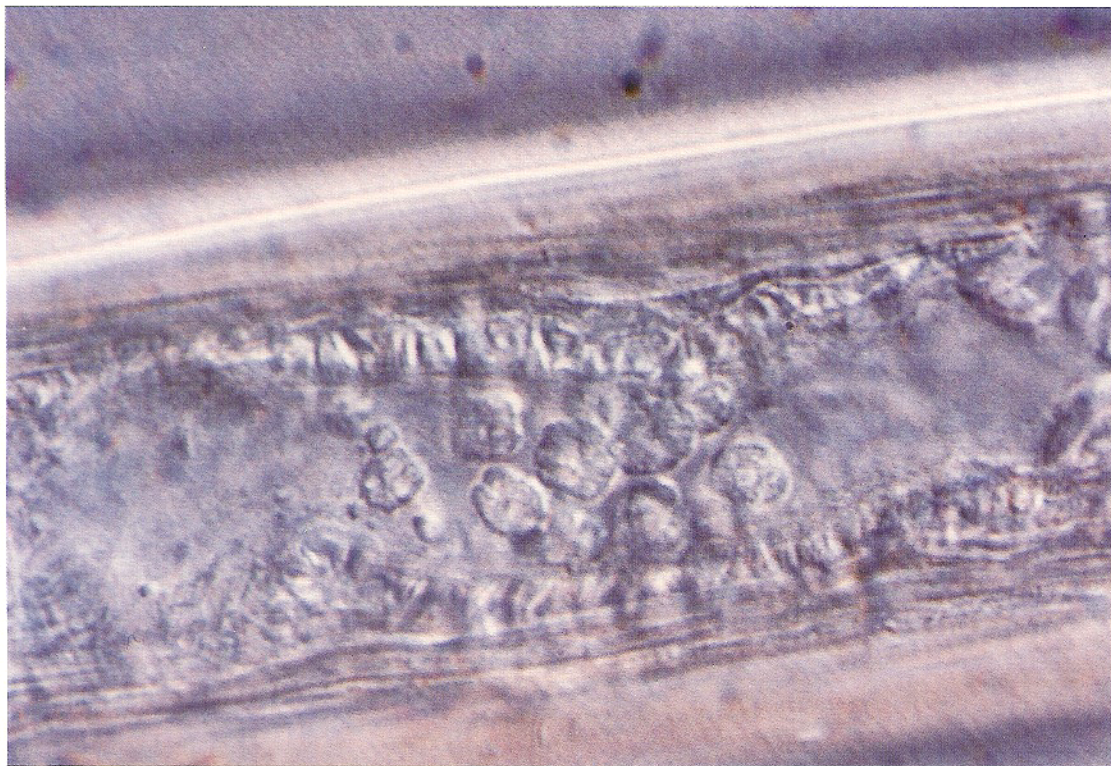


Fig. 1 - The pseudo-Z organ in the distal part of the uterus of *Xiphinema diversicaudatum* from Štítnik, Slovakia.

TABLE I - *Morphometric characters of two populations of Xiphinema diversicaudatum from the rhizosphere of plum trees in Slovakia.*

Locality	Cifäre		Štítnik	
n	2 ♀	2 ♂	7 ♀	7 ♂
L mm	4.2 (3.9-4.5)	3.9 (3.8-4.0)	4.3 (4.0-4.6)	4.4 (4.1-4.7)
a	71 (70-72)	83 (82-84)	78 (73-82)	89 (86-91)
b	8.3 (8.3)	7.9 (7.8-8.0)	9.2 (8.7-10.7)	9.2 (8.2-11.3)
c	101 (94-108)	85 (82-88)	86 (73-94)	90 (80-96)
c'	1.0 (1.0)	1.0 (1.0)	1.2 (1.0-1.3)	1.0 (1.0-1.2)
V	46 (46)	–	43 (42-45)	–
Odontostyle µm	131 (129-133)	133 (133)	142 (133-147)	135 (133-143)
Odontophore µm	80 (77-84)	77 (77)	76 (70-80)	79 (77-84)
Oral aperture to guiding ring µm	126 (126)	127 (122-133)	129 (119-133)	123 (105-133)
Tail µm	42 (42)	46 (43-49)	50 (49-56)	48 (44-54)
J µm	17 (17)	17 (14-21)	21 (19-21)	19 (14-22)
Body diam. at lip region µm	14 (14)	14 (14)	14 (13-14)	13 (10-14)
Body diam. guiding ring µm	41 (40-42)	42 (42)	38 (35-41)	36 (35-38)
Body diam. at base of oesophagus µm	49 (49)	46 (43-49)	48 (42-49)	48 (45-49)
Body diam. at vulva µm	59 (56-63)	–	55 (52-56)	–
Body diam. at mid body µm	–	47 (45-49)	–	49 (43-54)
Body diam. at anus µm	42 (42)	44 (42-45)	44 (42-49)	46 (42-49)
Body diam. at beginning of J µm	31 (28-35)	30 (28-32)	25 (21-28)	24 (21-28)
Spicules µm	–	70 (70)	–	69 (63-70)

## Material and methods

Soil samples were collected from the rhizosphere of fruit trees and vines in 126 localities. Composite samples of 1 to 2 kg from contiguous plants were put in plastic bags and taken to the laboratory. Nematodes were extracted from 500 g aliquots, after thorough mixing of the samples, by wet-sieving technique (Brown and Boag, 1988), fixed in FAA and mounted in anhydrous glycerin. Measurements were taken with the aid of a camera lucida.

## Results

Morphological and biometrical (Table I) characters of the Slovakian populations fit the morphometrics of other European populations of *X. diversicaudatum* (Pitcher *et*

*al.*, 1974). Its identity is further confirmed by the presence of the typical pseudo-Z organ constituted by globular bodies (Grimaldi-De Zio *et al.*, 1979) at the junction of the uterine pouch with the distal part of the uterus (Fig. 1).

*Xiphinema diversicaudatum* occurred in samples from the rhizosphere of plum trees (*Prunus domestica* L.) at Cifäre, Hodruša Hämre, Nižna Slana and Štítnik, cherry trees (*P. avium* L.) at Nedožery, and at Myslenice (Fig. 2) a single male occurred from grapevine (*Vitis* sp.).

## Conclusions

A previous record of *X. diversicaudatum* from Czechoslovakia refers to Bohemia (Erbenová, 1975). This is the first record of the species for Slovakia. The sites where it occurred are characterized by loamy to sandy-loamy uncar-

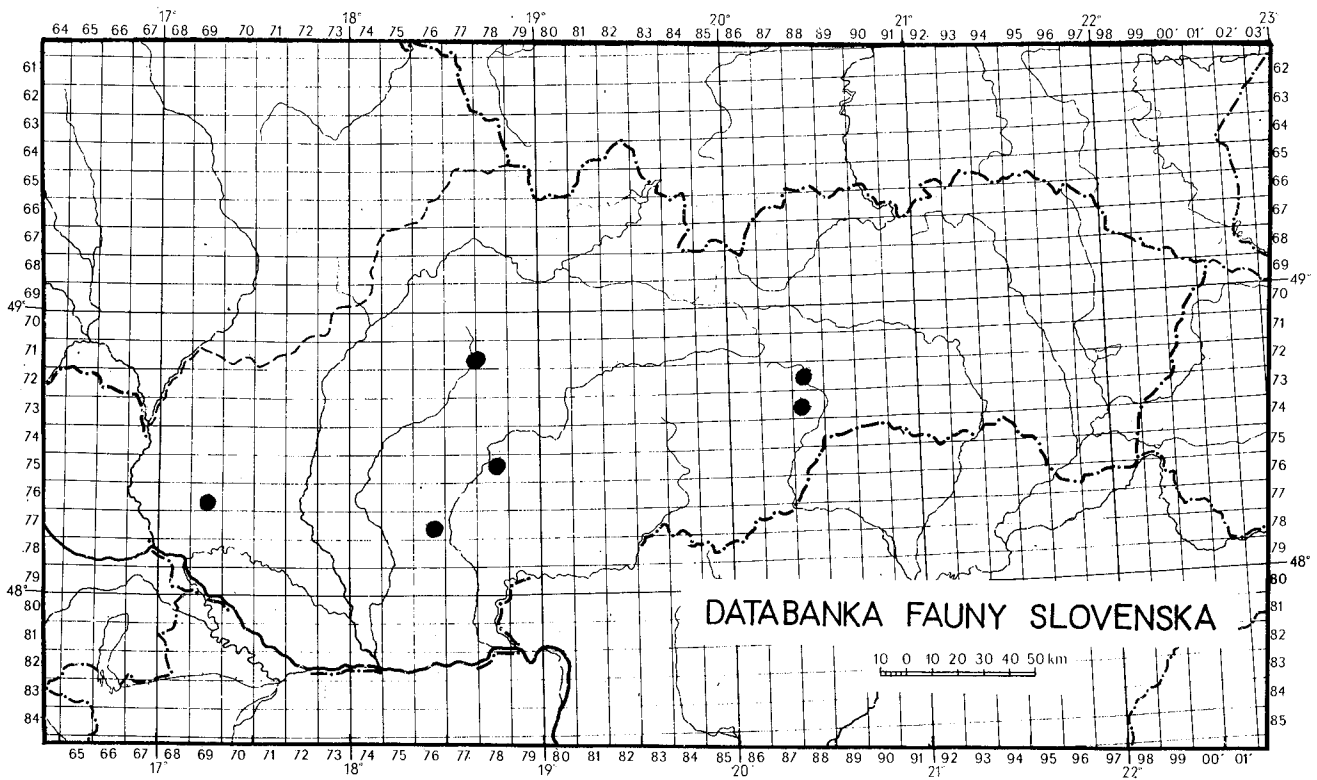


Fig. 2 - Geographical distribution of *X. diversicaudatum* in Slovakia (Slovak fauna database map).

bonated soils, pH 5.5-6.5 at an altitude of 200 to 400 m, with mild winters (8-10°C mean yearly temperature) and a subhumid climate (about 700 mm rainfall). Its presence is of phytopathological relevance not only as a vector of plant viruses, but also as a pathogen on several crops.

#### Literature cited

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