Tylenchus (Irantylenchus) clavidorus n. sp. and Merlinius camelliae n. sp. (Tylenchida: Nematoda) from Iran

By

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Tylenchus (Irantylenchus) clavidorus n. subgen., n. sp. is characterized by its moderately developed spear with a rounded to clavated basal swelling; by the ventral junction of oesophageal lumen with spear base (spear lumen), and by the position of the dorsal oesophageal gland-outlet (half to one spear length behind spear base). Tylenchus vicinus Szczygieł, 1970 belongs also to this subgenus. Merlinius camelliae n. sp. is distinguished by the annulated tail tip with thickened cuticle, by an offset spermatheca, by the spicula with curved and notched distal end and by the strongly curved gubernaculum.

Soil samples collected from around roots of alfalfa from an orchard in Isfahan contained seven females and two males of a new species that could not be placed in any previously described genus of the family Tylenchidae. As they show many characters of the genus Tylenchus they are described as representatives of a new subgenus of Tylenchus. Two females, three males and two juveniles belonging to a new species of Merlinius were recovered from soil around roots of tea and orange.

The nematodes were killed and fixed according to the modified Seinhorst method (De Grisse, 1969) and transferred to glycerine before measuring.

Tylenchus (Irantylenchus) clavidorus n. subgen., n. sp.
(Fig. 1)

Measurements

Holotype (female): L = 870 μ; a = 35; b = 6; c = 5.8; c' = 9.2 (tail length/anal body width): V = 63; spear = 12 μ; body width = 25 μ; oesophagus = 145 μ; tail = 150 μ.

Paratype females (6): L = 740-965 μ; a = 32-33; b = 5.7-6.4; c = 5.4-6.4; c' = 8.4-10; V = 62-65; spear = 11.5-12 μ; body width = 22-30 μ; oesophagus: 130-152 μ; tail = 120-165 μ.

Paratype males (2):

1. One with a tail similar to females: L = 730 μ; a = 43; b = 5.3; c = 4.7; c' = 8; T = 41; spear = 11 μ; body width = 17 μ; oesophagus = 138 μ; spicules = 21 μ; gubernaculum = 5 μ; tail = 155 μ;

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2. Another male has a much shorter tail with a broadly truncated terminus:

\[ L = 665 \mu; \ a = 35; \ b = 5.2; \ c = 10; \ c' = 4.7; \ T = 56; \ \text{spear} = 11.5 \mu; \ \text{body width} = 19 \mu; \ \text{oesophagus} = 127 \mu; \ \text{spicules} = 23 \mu; \ \text{gubernaculum} = 6 \mu; \ \text{tail} = 65 \mu. \]

Description

Body fusiform, tapering slightly anteriorly to a rounded and finely striated lip region; posteriorly ending in an elongated filiform tail. Cuticle finely annulated; annules distinct, measuring 1.2 \( \mu \) near mid-body and somewhat wider in the neck and tail region (1.4 \( \mu \)). Lateral fields marked by four incisures; measuring 1/3 to 1/4 as wide as body, the number of incisures reduced to two near the middle of the neck region and disappearing posteriorly to the level of the anus (Fig. 1 I). Deirids prominent, about at the level of the excretory pore. Phasmids visible only in one female, situated about two body annules anterior to the anus.

Head rounded, slightly truncated anteriorly, continuous with body contour, marked by 5 or 6 very fine transverse striae, 3-4 \( \mu \) high by 7-8 \( \mu \) wide (about 1/3 of the body-width at neck base). Head-outline in a face view round to rectangular. Oral opening small, submedian lips bearing the four cephalic papillae which are usually visible, the lateral lips provided with small, oblique clefts, representing the amphids (Fig. 1 C) as described by Geraert (1965) for Tylenchus spp. The protractor muscles of the spear appear as bundles around the spear (Fig. 1 D). Spear slender, well developed, tapering anteriorly; the anterior portion is very fine and occupies about 1/3 of total spear length; the posterior portion becomes gradually wider and ends in a clavate base. Anterior end of oesophageal lumen curved, somewhat reminiscent of a question-mark and joining the spear base (spear lumen) ventrally. Dorsal oesophageal gland orifice opening at base of question-mark, about a half to one spear length behind spear base (Fig. 1 B & H). These characters (spear shape, ventral junction, question-mark shape and position of outlet) were especially distinct while the specimens were alive. Procorpus shorter than isthmus. Median oesophageal bulb well developed, ovate to round, with crescentic thickenings in the middle, situated at 42-45 \% of the oesophagus. Isthmus slender, enveloped by the nerve ring near its middle. Basal oesophageal bulb pyriform, with three gland nuclei its base extending about 3 to 4 \( \mu \) over anterior end of intestine. Oesophageal lumen widens gradually within the basal bulb and joins the intestinal lumen with a rather wide (2 \( \mu \)) base. Excretory pore located about opposite base of isthmus; 100-115 \( \mu \) from anterior end of the body or at 75-86 \% of the neck length; excretory duct fairly well cuticularized. Hemizonid just anterior to excretory pore, except in one paratype where it is 3 to 4 \( \mu \) anterior to it. Hemizonion about 20 \( \mu \) posterior to excretory pore.

Vulva a transverse slit; vagina at right angles to body axis, occupying about 1/3 of the vulval body diameter. Posterior uterine branch shorter than corre-