A DESCRIPTION OF PRATYLENCHUS MANALIENSIS SP. N. ASSOCIATED WITH APPLE IN INDIA (NEMATODA: PRATYLENCHINAE)

by

M.L. KHAN and N.K. SHARMA

Summary. Pratylenchus manalensis sp. n. is described from the rhizosphere of apple trees (Malus domestica) in Himachal Pradesh, India. The species is characterized by six incisures in the lateral field, intestine overlapping the rectum, an oblong spermatheca and the presence of males.

Soil samples were collected from the rhizosphere of apple trees (Malus domestica Borkh) in several localities of Himachal Pradesh, India. Several of them contained specimens of Pratylenchus species and in one population some specimens, in our opinion represented a new species which is described here as P. manalensis. Specimens were fixed in F.A.A., transferred to glycerine alcohol in a desiccator for slow dehydration and mounted in anhydrous glycerine.

PRATYLENCHUS MANALIENSIS sp. n.
(Fig. 1)

Paratype Females (21): L = 0.43-0.64 mm (0.57); a = 22.32 (26); b = 5.7 (5.5); c = 16-25 (22); V = 78-83 (80.5); Styllet = 14-16 μm.

Holotype (female): L = 0.50 mm; a = 26.4; b = 6.2; c = 17; V = 80; Styllet = 15.5 μm.

Allotype (male): L = 0.49 mm; a = 29; b = 6.5; c = 20; T = 49; Styllet = 14.5 μm.

Female body almost straight anteriorly and slightly curved ventrally in the posterior half when fixed. Lip region with three annuli, the first convex. Body cuticle finely striated, 1.2-1.5 μm apart at mid-body. Cephalic framework well developed, strongly sclerotized, anchor shaped, its outer margins extending into the second body annule. Styllet strongly developed, the metenchym slightly longer than the telenchium. Basal spear knobs rounded. Orifice of dorsal oesophageal gland 3 μm behind spear base. Excretory pore 75-90 μm from anterior end, slightly anterior to the basal oesophageal lobe. Hemizonid just anterior to excretory pore. Lateral field with six incisures, the outer two crenated, inner lines smooth and clear in the posterior half of the body but in the oesophageal region oblique broken lines often present. Oesophagus typically pratylenchoid, oesophageal lobe 50-60 μm long and overlapping intestine ventrally for about 2-2½ times body width. Vulva a transverse slit, reproductive system, prodelphic, outstretched anteriorly. Oocytes arranged in single column. Spermatheca oval on somewhat rectangular with few spemrs. Post-uterine sac 18-23 μm long, 1.0-1.5 times body width at vulva. Tail 25-30 μm long, consisting of 19-23 annuli, gradually and slightly depressed on both sides and terminating in a rounded crenated terminus.

Male similar to female in general morphology. Lip region with slight sexual dimorphism. Spicules paired, 19-23 μm long, slightly arcuate ventrally. Gubernaculum simple crescent shape, 4-5 μm long. Bursa extending to terminus, outer margin finely striated. Single testis with spermatoocytes, leading to vas deferens and opening through cloaca. Phasmids almost in the middle of tail.

Type habitat and locality. Nematodes were collected from the rhizosphere roots of apple (Malus domestica B.) in Manali (HP) India.

Type specimens. Holotype and allotype mounted in glycerine on slide No. 801/Pratylenchus manalensis sp. n. paratypes on slides 802-806. Three paratypes were deposited in the National Nematode Collection IARI, New Delhi, two paratypes deposited with C.I.P., St. Albans, UK.

Differential diagnosis. Pratylenchus manalensis sp. n. closely resembles P. crenatus Loof, 1960 and P. teres Khan et Singh, 1975 in having six incisures and crenated tail terminus. It differs from P. crenatus in the differently shaped spear knobs, number of lip annules, well developed and
oval to slightly rectangular spermatheca containing sperms, shorter post-uterine sac and presence of males and longer oesophageal gland lobe (stylet 14-18 μm long; lip annules 2-4; spermatheca indistinct; post-uterine sac long undifferentiated and absence of males in *P. crenatus*). From *P. teres* it differs in the elongated basal oesophageal lobe, distinct and well developed spermatheca, small stylet with rounded knobs, more posterior vulval position (V = 80%) and presence of males (basal oesophageal lobe shorter; spermatheca indistinct; stylet longer with anchor shaped knobs; anterior vulval position and absence of males in *P. teres*).

3 - Lip region conoid; stylet 16-18 μm long with anchor-shaped stylet knobs; vulva 70-77%; post-uterine sac one vulval body width long *.. P. teres* Khan et Singh, 1975
- Lip region often flat or low; stylet 14-18; μm long with rounded stylet knobs; vulva 78-86% post-uterine sac one vulval body width long ........................................ 4
4 - Male absent; spermatheca without sperms; tail broadly rounded at tip .......... *P. crenatus* Loof, 1960
- Male present; spermatheca with sperms; tail gradually tapering at tip ...................... *P. manaliensis* sp. n.

**Key to Pratylenchus species with six lateral lines.**

1 - Lip region with two annuli ........................................ 2
   Lip region with three annuli ..................................... 3
2 - Stylet 14.5-15.4 μm long; spermatheca indistinct; vulva 75-83%; tail terminus smooth *.. P. hexinciscus* Taylor et Jenkins, 1957
- Stylet 15-17 μm long; spermatheca distinct, empty; vulva 79-86%; tail terminus crenated *.. P. estoniensis* Ryss, 1982

**Literature cited**


KHAN E., and SINGH D.B., 1975 - Five new species of *Pratylenchus* (Nematoda: Pratylenchidae) from India. *India J. Nematol.*, 4: 199-211.


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Fig. 1(Front page) - *Pratylenchus manaliensis* sp.n.: A and B, entire female; C, female anterior end; D, male anterior end; E and F, vulval region; G, male tail; H-J, female tails.

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