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A NEW NEMATODE SPECIES, PRATYLENCHUS MULCHANDI,
FROM MILLETS OF RAJASTHAN*

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In a survey, during 1965-66 of plant parasitic nematodes in various millet tracts in Rajasthan, a single species of the genus *Pratylenchus* was found to outnumber all other species at Lamba, Merta city. Not a single male has so far been obtained out of the several samples processed from the original collection or from the stock cultures maintained thereof. These nematodes are judged to represent a new species. In earlier publications Nandakumar and Khera (1969 a and b) and Nandakumar *et al.* (1969) mentioned the species as *P. nuli* which is a *nomen nudum*. It is described herein as *P. mulchandi*.

Pratylenchus mulchandi n. sp.

(Figs. A-J)

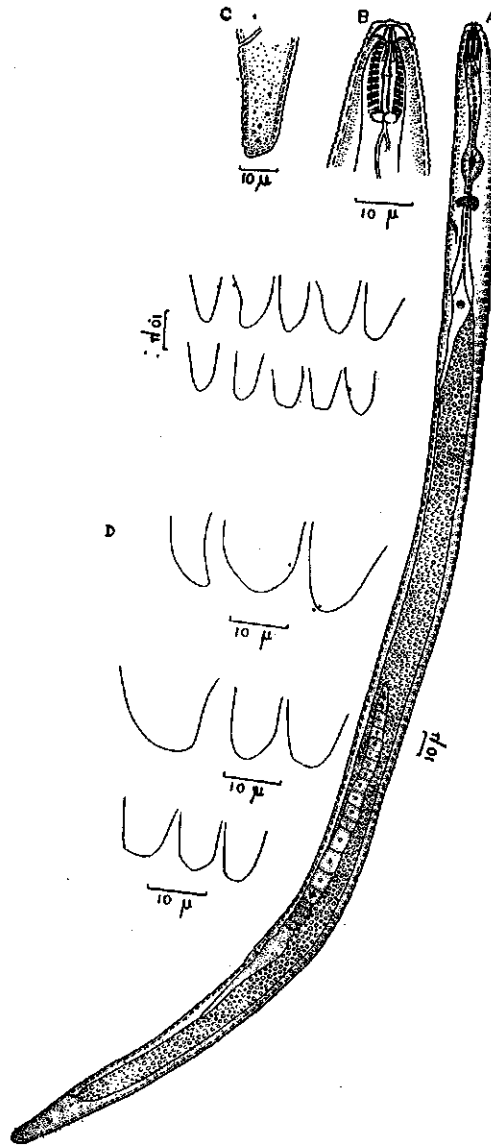
Measurements 55 ♀♀: L = 0.51 mm (0.44-0.58 mm);
a = 24 (22-28); b = 5.8 (5.0-6.4);
b' = 4.6 (3.3-5.0); c = 22 (17-27);
44.6 7.1 23-50 6-10
V = 76.8 (75-78);
spear = 16-20 μ.

Male unknown.

Female (Holotype) L = 0.54 mm; a = 27; b = 5; b' = 3.4;
24 7
c = 18; V = 77; spear = 18 μ.

A moderately large and slender species, most of the specimens measuring 500 μ or more. Body usually slightly arcuate on thermal death; tapering towards both the extremities, more abruptly posteriorly to a blunt tail. Annulations fine throughout the body, becoming coarse towards the tail. Lateral fields bearing four distinct incisures. Head contour dome-shaped. Lip region high and distinctly set off, bearing 3 annules. Sclerotisation of the labial framework is heavy, outer margins of which extend posteriorly between first and second body annules. Basal knobs of the spear broad and flattened. Hemizonid prominent, covers 3 annules and situated just above the excretory pore. In paratypes hemizonid covers even upto 5 annules. Excretory pore at 85 μ from the anterior end. Of the several specimens of *P. mulchandi* examined, difference in oesophageal lobe shape has been noted on several occasions. It was found to vary from broad and massive to a much long and extensive lobe, sometimes twice body-width long and at times more than thrice the body-width.

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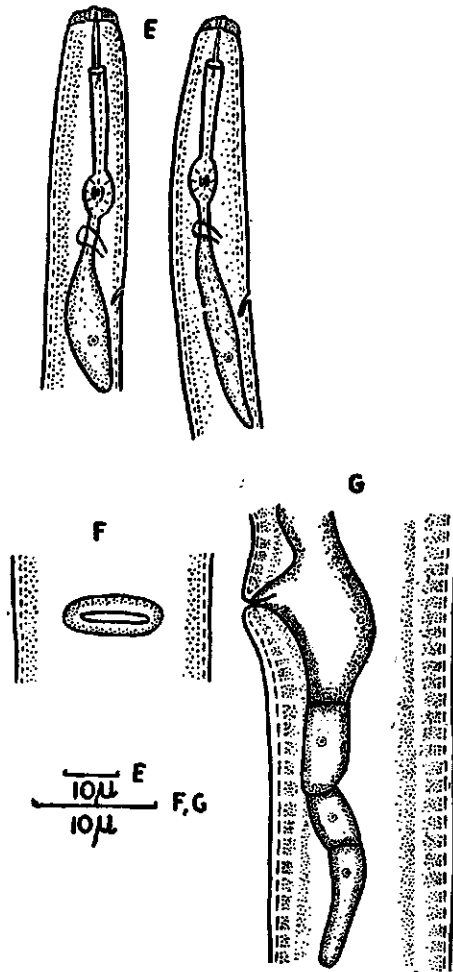
Pratylenchus mulchandi n. sp.

Female

Figs. A to D. A. Entire, B. Anterior end enlarged, C. Tail, D. Variation in tail shape.

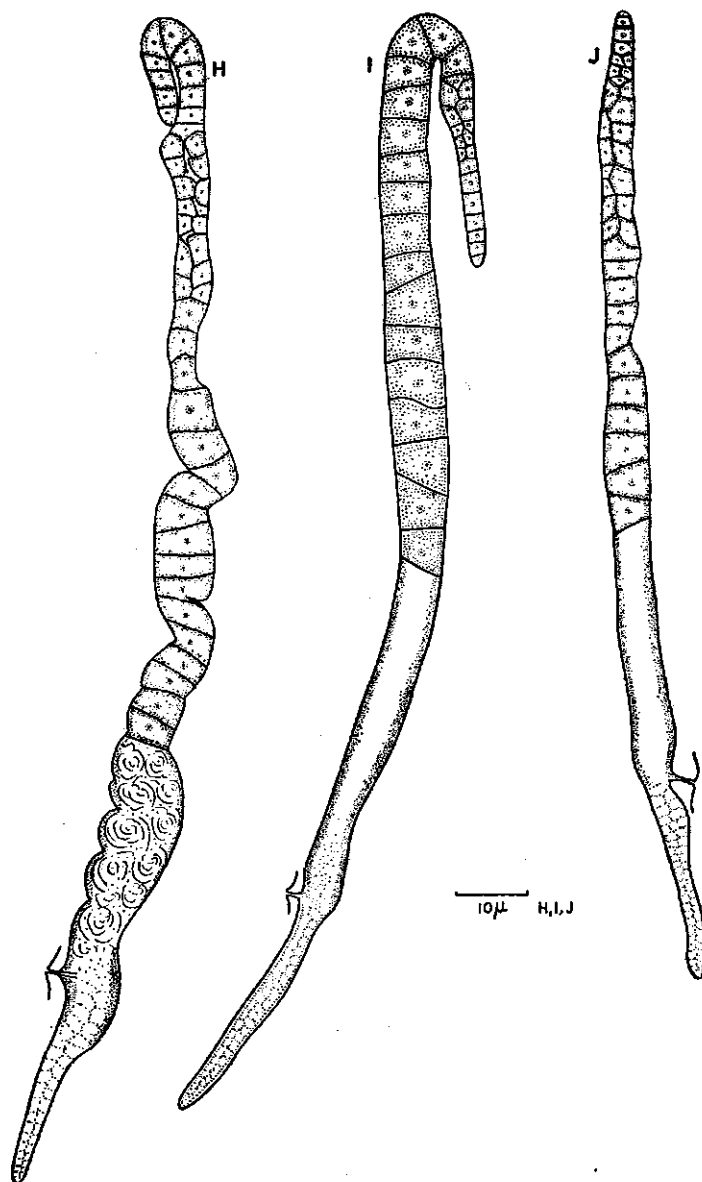
Prodelphic outstretched ovary. Oocytes arranged in a single row throughout the entire length. In some specimens, however, a short zone of ovary near the proximal end was found to be double layered.

Considerable variation was observed in the arrangement of oocytes. They may be arranged in single row throughout or in double rows, from the region slightly posterior to the cap cell. There was difference in area covered by the double row of oocytes; in general, proximal end of the ovary had double row of oocytes, usually $1/5$ of the gonad carried a double row. In some specimens, however, the double rows extended upto $1/3$ of the gonad. Few forms were observed with reflexed ovary as well. Post-uterine sac distinct, 35μ long, more than $1\frac{1}{2}$ body-widths at vulva. In paratypes $30-40 \mu$ long; some with rudiments of ovary. Vulva-anus distance 100μ . Tail obtuse and truncate in holotype. However, tail shape highly variable in paratypes, tapering to an obliquely conical, squared, narrowly or broadly rounded tip. Tail tip smooth and unstriated or with feeble, indistinct and irregular striae. Tail 30μ ,



Figs. E to G. E. Variation in oesophageal lobe, F. Vulva ventral view, G. Post-uterine sac of a paratype showing rudimentary ovary.

nearly $2\frac{1}{2}$ anal-body-diameter long comprising sixteen annules (upto 22 in paratypes).



Figs. H to J. H & I. Reflexed ovary, J. Ovary showing double row of oocytes towards the proximal end.

Holotype: Female collected on September 30, 1965; slide no. NMB 1/P.L. 480 deposited with the Zoology Museum, University of Jodhpur, Jodhpur.

Paratypes : 54 females ; slide nos. NMB 2-8/P.L. 480. Some paratypes deposited with USDA, Crops Research Division, Beltsville, Maryland.

Type host : Collected from the soil around the roots of pearl millet (*Pennisetum typhoides* Stapf and Hubbard) and great millet (*Sorghum vulgare* Pers.).

Type locality : Lamba, Merta city 60 miles north-west of Jodhpur (Rajasthan).

DISCUSSION : Although *Pratylenchus mulchandi* n. sp. shares common characters with *P. zaeae* Graham, 1951 and *P. crenatus* Loof, 1960 in the presence of 3 annules in the lip region and in the absence of males, it differs in the position of vulva, by the presence of conspicuous and longer post-uterine sac as well as by the variation in the tail shape. The new species is closely akin to *P. thornei* Sher and Allen, 1953 and *P. delattrei* Luc, 1958 in the presence of 3 annules in the lip, in having strongly developed sclerotisation of labial framework and in general appearance of the body shape. In the absence of spermatheca and males, *P. mulchandi* comes still closer to *P. delattrei*. However, *P. mulchandi* can be identified from *P. thornei* by shorter body size, absence of spermatheca and males and also in the comparative length of the post-uterine sac, whereas bigger body size, conspicuous and more extensive post-uterine sac and variation in the tail shape readily distinguish the new species from *P. delattrei*.

The species is named after Dr. Mulchand Tikyani.

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