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**PAURODONTUS ABERRANS N. SP. (NEMATODA : TYLENCHIDA)**  
**WITH A NOTE ON SPECIAL BRANCH OF THE OVIDUCT.\***

*By*

**C. NANDAKUMAR AND S. KHERA**

*Nematology of Millets (P. L. 480 Project). Department of Zoology, University of  
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During a survey of plant parasitic nematodes around rhizosphere of *Pennisetum typhoides* Stapf & Hubb., a new species of the genus *Paurodontus* Thorne, 1941 was found which is being described hereunder. Only nine specimens, six female and three male, were recovered.

**PAURODONTUS ABERRANS N. SP.**

(Fig 1, A—I)

*Measurements :*

6 ♀♀: L=0.36–0.4 mm; a=14–17; b=4.5–5.3; c=10.7–12.7;  
V= $88.7^{+82.5}$  81–83; spear=10  $\mu$ .

3 ♂♂: L=0.32–0.36 mm; a=16–19; b=4.0–4.6; c=8.0–9.7;  
T=55.5–57.3; spear=9  $\mu$ ; spicula=16–17  $\mu$ ; gubernaculum=6–7  $\mu$ .  
*Female* (Holotype): L=0.37 mm; a=15; b=5.0; c=12.3; V= $41.8$  82.7.

Body straight when relaxed by gentle heat, obese tapering towards both the extremities, more so posteriorly. Transverse striae easily visible throughout the body length. Lip region low, continuous with body contour, flattened anteriorly with a slight depression at the oral opening. Spear 10 $\mu$  long with distinct small rounded basal knobs. Oesophagus with valveless, poorly developed median bulb. Basal bulb spindle-shaped bearing a long posterior extension which

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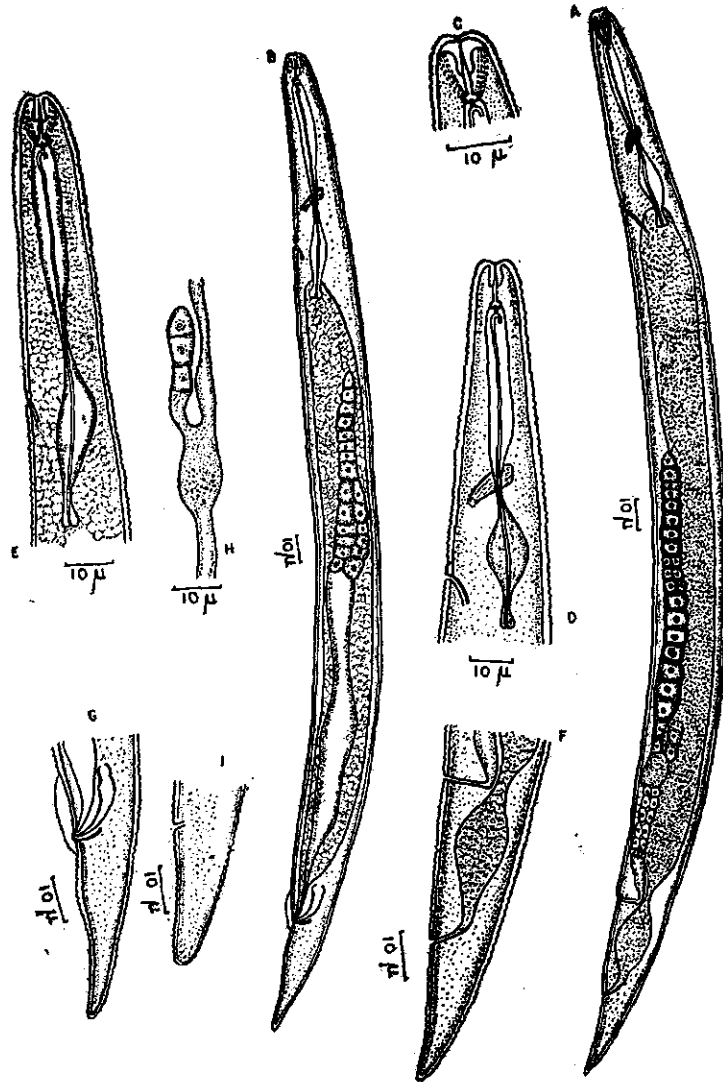


Fig. 1. A. Female, entire; B. Male, entire; C. Lip region enlarged; D. Anterior end of female; E. Anterior end of male; F. Posterior end of female; G. Posterior end of male; H. Anterior end of oviduct of a paratype showing the branch; I. Tail tip variation in a paratype.

projects into the anterior end of intestine. Excretory duct prominent with cuticularised pore opening, situated  $70\mu$  from the anterior end, just below the hemizonid.

Ovary single, prodelphic, outstretched with oöcytes arranged in a single file except a short zone where these are in double rows. Vulva a transverse slit. Vagina at right angle to the body axis and extends inward a short distance to join the uterus. Attached to the proximal end of the oviduct is a short branch, directed anteriorly, measuring  $150\mu$  in length. In a paratype it measures even up to  $250\mu$ . Vulva-anus distance greater than tail length. Tail straight,  $2\frac{1}{2}$  times the anal-body-diameter long with sub-acute, conoid, bluntly pointed tip. In a paratype tail tip narrowly rounded.

*Male* (Allotype):  $L=0.35$  mm;  $a=16.0$ ;  $b=4.2$ ;  $c=8.9$ ;  
 $T=56$ ; spicula= $17\mu$ ; gubernaculum= $6\mu$ .

Similar to female in general appearance but slightly less obese than the latter. Spear  $9\mu$  long. Testis single, outstretched. Spicules paired, ventrally arcuate, cephalated. Gubernaculum simple trough-shaped. Bursa adanal, slightly crenate, enveloping  $1/8$  of the tail length. Tail with a subacute terminus.

*Holotype*. Female collected on September 20, 1966; slide no. NMB 9/P.L. 480 deposited in the Zoology Museum, University of Jodhpur, Jodhpur (Rajasthan), India.

*Allotype*. Male; slide no. NMB 11/P.L. 480, other data as for holotype.

*Paratypes*. Five females and two males; slides no. NMB 9 & 10/P.L. 480, other data as for holotype.

*Type host*. Collected from the soil around the roots of pearl millet (*Pennisetum typhoides* Stapf & Hubb).

*Type locality*. Masobria, Jodhpur (Rajasthan), India.

## DISCUSSION

The forms are included in the genus *Paurodontus* because of the stem-like extension of the basal oesophageal bulb, symmetrical spear knobs, conical tail and an adanal bursa in the male.

The new species comes close to *P. apiticus* Thorne, 1941 since it shares common characters like presence of a special branch in the oviduct, absence of post-uterine sac and straight tail. Despite these resemblances, it can be identified from *P. apiticus* by the differences in the following features : (1) general body size (*P. apiticus* 0.4-0.7 mm), (2) Vulva-anus distance in relation to tail length (shorter in *P. apiticus*), and (3) tail shape (acutely pointed in *P. apiticus*).

It also resembles *P. densus* Thorne, 1941 in body size and in having vulva-anus distance longer than tail length. However, it can be distinguished by the presence of an easily discernible special branch of the oviduct (absent in *P. densus*) and a straight conoid blunt tail as against the ventrally arcuate subacute tail of *P. densus*.

Amongst the tylenchids, *P. apiticus* and the present forms are unique in having a special branch in the oviduct. This anomalous structure is easily discernible and non-variable. The authors feel that this character may form the basis of a separate new genus. More information on the occurrence of this peculiar structure in other species and its functional significance is awaited before any hasty change in the present status of *P. apiticus* and the new species described herein, is proposed.

A KEY TO THE SPECIES OF *PAURODONTUS* THORNE, 1941

1. Stem-like extension of the basal oesophageal bulb short, tail elongate.....2  
    Stem-like extension of the basal oesophageal bulb long, tail conoid.....6
2. Basal oesophageal bulb enclosed in a chamber.....3  
    Basal oesophageal bulb not enclosed in a chamber,.. .....5
3. C=7.2; tail terminus acutely pointed.....*P. gracilis* Thorne, 1941  
    C=9 and above; tail terminus subacutely rounded.....4

4. L=0.59-0.63 mm; a=34.1-34.9. Post-uterine sac as long as the vulvar body-width.....*P. savani* Husain & Khan, 1965  
L=0.75-0.84 mm; a=44-45. Post-uterine sac twice as long as the vulvar body-width.....*P. bajrai* Khan et al., 1968
5. Head 1/3 as wide as body at the base of oesophagus, tail 3-4 times the anal body width long.....*P. chowdhary* Husain & Khan, 1965  
Head 3/7 as wide as body at the base of oesophagus, tail about seven times as long as anal body width.....*P. similis* Siddiqi, 1961
6. Oviduct bearing special branch; a=below 24.....8  
Oviduct not bearing special branch; a=24 or above.....7
7. Tail straight, sharply pointed; vulva-anus distance shorter than tail length.....*P. niger* Thorne, 1941  
Tail ventrally arcuate, subacute; vulva-anus distance greater than tail length.....*P. densus* Thorne, 1941
8. Tail sharply pointed; vulva-anus distance shorter than tail length.....*P. apiticus* Thorne 1941  
Tail subacute, bluntly pointed; vulva-anus distance greater than tail length.....*P. aberrans* n.sp.

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