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A TAXONOMIC REVISION OF THE NEMATODE SPECIES (DORYLAIMIDA) REPORTED BY KHERA (1970) FROM INDIA

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ABSTRACT

Out of 11 nematode species reported by Khera (1970) from the bank of still and running water from India, the specimens of 5 species are available in the National Zoological Collections of the Zoological Survey of India, Calcutta. These specimens were re-examined and it was noted that the taxonomical status of some needed revision. Moreover, the descriptions and illustrations as provided by Khera were also inadequate. The present paper reports the changes in the taxonomical status of the following species : *Dorylaimus stagnalis* Dujardin, 1845 from Jodhpur as *Laimydorus finalis* Thorne, 1975 ; *Dorylaimus ruwenzorii* apud Khera, 1970 as *Mesodorylaimus* sp, ; *Dorylaimus multialaeus* Khera, 1970 transferred to *Laimydorus*. The male of *Eudorylaimus odhneri* apud Khera, 1970 along with an unidentified female on the same slide represents a new species *Laimydorus kherai*.

The status of *Dorylaimus stagnalis* apud Khera, 1970 partim from Lucknow, a single female of *Eudorylaimus odhneri* and *Actinolaimus omercooperi* remains unchanged.

INTRODUCTION

Khera (1970) reported 11 nematode species including two new of the Order Dorylaimida from the banks of still and running waters in Uttar Pradesh, Rajasthan and Kerala. These species were inadequately described and illustrated and for some only the body dimensions were provided. The specimens were deposited in the Nematode Collection of the Zoology Museum of Jodhpur University, Rajasthan where Dr. Khera was a Reader in the Zoology Department till 1969. However, in the same year he joined the Zoological Survey of India, Calcutta. Subsequently he shifted most of his nematode slides from Jodhpur and registered the same in the National Zoological Survey of India, Calcutta.

The present author was able to trace some of the registered specimens of five species reported by Khera (1970). A study of these revealed that the identification of some species was not correct. Unfortunately, the majority of the specimens were not properly preserved.

The present paper reports the revised identification of the specimens of five species, out of 11, reported by Khera (1970). The following table provides the present status of

all the species. The asterisk indicates that the specimens of the species are not traceable. The status of the nontraceable species has not been changed except *Labronema* sp. which was identified only on a single juvenile specimen.

Status of the species reported by Khera (1970)

Past	Present
1. *Dorylaimus stagnalis* Dujardin, 1845 from Lucknow and Jodhpur	(i) Lucknow population = *D. stagnalis*
	(ii) Jodhpur population = *Laimydorus finalis* Thorne, 1975
2. *Dorylaimus ruwenzorii* de Coninck, 1935 (= *Mesodorylaimus ruwenzorii*) from Pachhapadra (Rajasthan)	*Mesodorylaimus* sp.
3. *Dorylaimus multialaeus* Khera, 1970 from Lucknow	*Laimydorus multialaeus* (Khera, 1970) N. Comb.
4. *Mesodorylaimus biroi** (Daday, 1899) Andrássy, 1959	*M. biroi*
5. *Mesodorylaimus centrocercus** (de Man, 1880) Geraert, 1966	*M. centrocercus*
6. *Eudorylaimus odhneri* (Allgen, 1950) Andra'ssy, 1959	(i) *Eudorylaimus odhneri*
	(ii) *Laimydorus kherai* n. sp.
7. *Eudorylaimus udaipuriensis** Khera, 1970	*Eudorylaimus udaipuriensis*
8. *Labronema* sp. (juvenile)	?
9. *Actinolaimus omercooperi* Filipjev, 1931	*Actinolaimus omercooperi*
10. *Actinolaimus costatus** Schneider, 1935	*Actinolaimus costatus*
11. *Nygolaimus intermedius** (de Man, 1880)	*Nygolaimus intermedius*

Dorylaimus stagnalis Dujardin, 1845

(Fig. 1, E-H)

Measurements :

Females (4) : L = 3.79-4.35 mm ; a = 38-46 ; b = 4.5-5.6 ; c = 17-20 ; V = $^{14\text{-}15}_{40\text{-}44}{}^{12\text{-}17}$.

Males (3) ; L = 3.04-3.30 mm ; a = 30-33 ; b = 4.2-4.8 ; c = 78-87 ; T = 59-65.

DESCRIPTION

Female : Body straight or slightly ventrally curved posterior to vulva, tapering gradually towards both extremities. Cuticle finely striated, 5-9 μm thick (thickest on tail), marked with 32-34 longitudinal lines in the middle and at base of oesophagus. Lateral chords $\frac{1}{4}$th-$\frac{1}{3}$rd of the corresponding body-width near middle. Dorsal and ventral body pores 6-8 and 25-27 respectively. Lateral body pores 89-99 (2 females), of which 18-21 in oesophageal region, 68-76 in intestine and prerectum region and 3 in caudal region.

Lip region rounded, slightly marked by a depression, 1/1.45-1/5.5 body-width at base

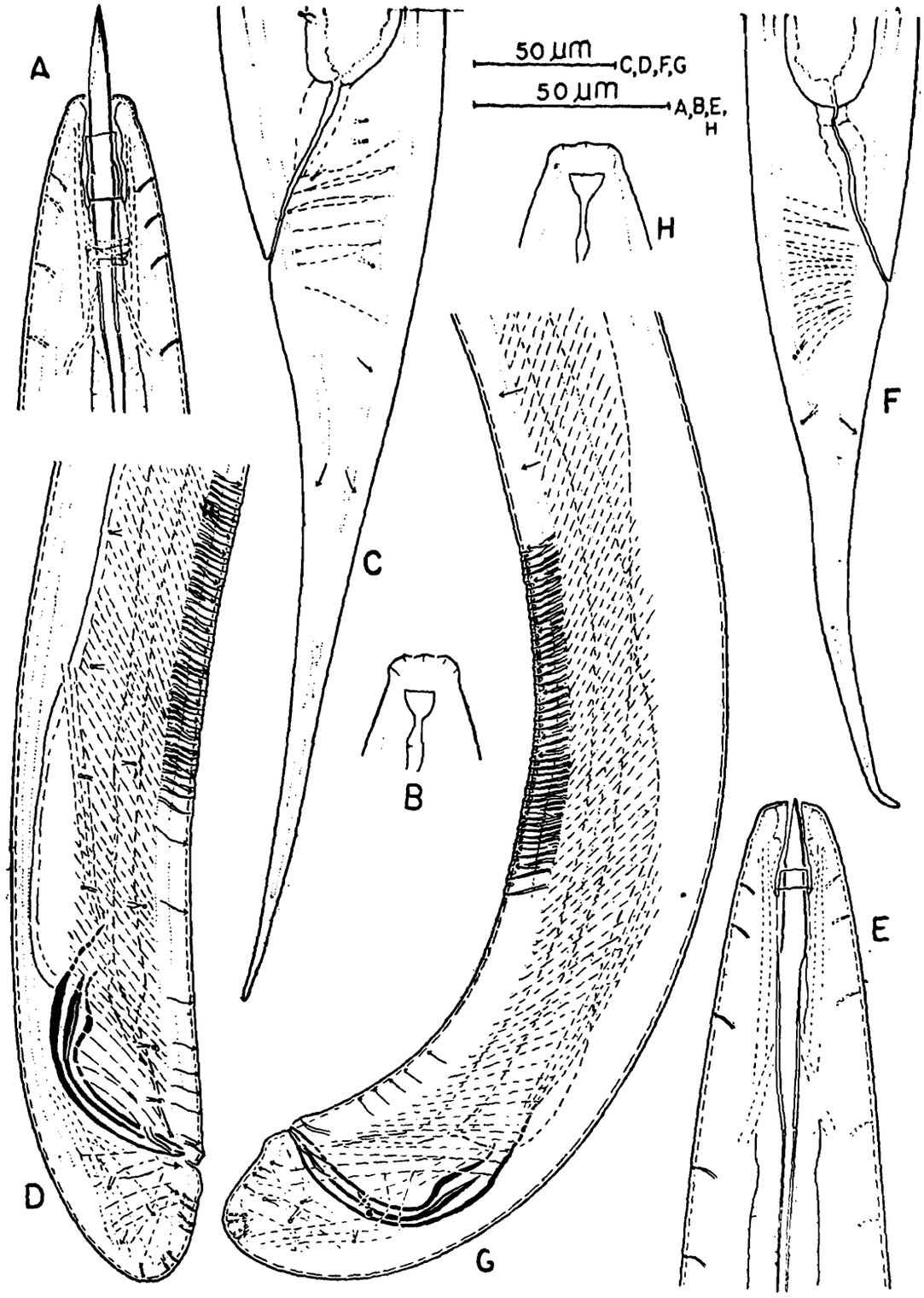

Fig. 1. A—D : *Laimydorus finalis* Thorne, 1975, A—Anterior end; B—Surface view of anterior end, C—Female tail, D—Posterior region of male. E—H : *Dorylaimus stagnalis* Dujardin, 1845, E—Anterior end, F—Female tail, G—Posterior region of male, H—Surface view of anterior end.

of oesophagus. Lips amalgamated bearing the usual number of papillae. Amphids stirrup-shaped, apertures occupying 9-10 μm or slightly less than half of the corresponding body-width and 7-8 μm from anterior end. Sensillar pouches 16-18 μm from amphidial slits.

Odontostyle 40-45 μm or 2.0-2.2 lip region-widths long, aperture 16-18 μm or 35-41% of the odontostyle length. Guiding ring 22-24 μm or 1.0-1.1 lip region-width from anterior end. Odontophore 46-53 μm or about 1.0-1.2 times the odontostyle length. Basal expanded part of oesophagus occupies 51-53% of the oesophageal length. The locations of the oesophageal gland nuclei and their orifices could not be observed. Nerve ring 186-200 μm or 24-26% of the neck region from anterior end. Oesophago-intestinal disc present. Cardia-conoid, enveloped by intestinal tissue. Prerectum 230-295 μm or 5.0-7.0 anal body-widths long. Rectum 60-65 μm or 1.3-1.4 anal body-widths long.

Vulva transverse. Vagina 43-45 μm or extending less than half way across body. Reproductive system amphidelphic. Uterus and oviduct separated by a sphincter. Oocytes arranged in a single row except in the growth region. Tail elongate, tapering gradually, 200-222 μm or about 5 anal body-widths long, with 3 caudal pores on each side.

Male : Similar to female in general shape and morphology except for the tail and male reproductive system. Odontostyle 42-45 μm or 2.0-2.2 lip region-widths long, aperture 15-17 μm or 34-38% of odontostyle length. Odontophore 45-49 μm or about 1.1 times the odontostyle length. Reproductive system typical. Supplements consist of an adanal pair and a series of 42-48 contiguous ventromedians. The first ventromedian supplement situated at about 2.5 anal body-widths from the cloacal opening. Subventral papillae 17-21, irregularly spaced. Spicules 98-108 μm or 1.7-2.1 anal body-widths long when measured along the curved median line. Lateral guiding pieces 18-21 μm long. Copulatory muscles 68-80, extending beyond the supplement region. Prerectum 350-440 μm or 6.4-8.6 anal body-widths long. Tail bluntly rounded, 35-39 μm or 0.6-0.7 anal body-width long, with 10-12 caudal pores on each side.

Habitat and locality : From the banks of ditches at Nadwa and Pyagpur House area, Lucknow (U. P.)

Remarks : Khera (1970) identified these specimens as *D. stagnalis* from Lucknow and reported them along with the misidentified population from Jodhpur. The present study of the Lucknow population confirms that this population may be accommodated under *D. stagnalis*. However, these specimens differ from *D. stagnalis* in having slightly rounded lip region and shorter odontostyle.

Mesodorylaimus sp.

Syn. **Dorylaimus ruwenzorii** apud Khera, 1970

Nec **Dorylaimus ruwenzorii** De Coninck, 1935

= **Mesodorylaimus ruwenzorii** (De Coninck, 1935) Andrássy, 1959

(Fig. 4, A-B)

Measurements :

Female (1) : L = 1.22 mm ; a = 42 ; b = 5.0 ; c = 18.4 ; $V = {}^{12}44.4{}^{15}$.

DESCRIPTION

Female : Body irregularly curved upon fixation, tapering gradually towards both ends. Cuticle about 2 μm thick, finely striated transversely. Lateral chords 1/3.5 of body-width near middle. Ventral, dorsal and lateral body pores not seen.

Lip region offset from body by a constriction, about $\frac{1}{4}$th of body-width at base of oesophagus. Amphidial pouches not seen. Odontostyle 13 μm or 1.8 lip region-widths long, aperture 4.5 μm or about 35% of the odontostyle length. Guiding ring 7.2 μm or 0.9 lip region-width from anterior end. Odontophore 15.5 μm or about 1.2 times the odontostyle length.

Basal expanded part of oesophagus occupying about 40% of the neck region. Oesophageal gland neclei and their orifices not visible. Cardia short, rounded. Nerve ring 85 μm or about 33% of the neck region from anterior end. Prerectum 66 μm or about 4.5 anal body-widths long. Rectum 21 μm or 1.5 anal body-widths long.

Vulva transverse, flushed with body. Vagina 15 μm or slightly less than $\frac{1}{2}$ of the corresponding body-width. Reproductive system amphidelphic. Uterus and oviduct separated by a sphincter. Oocytes arranged in a single row except in the growth region.

Tail elongate-conoid, 67 μm or about 4.7 anal body-widths long. Caudal pores not seen.

Habitat and locality : From the banks of sline ditch at Pachhapadra, Rajasthan.

Remarks : Since *D. ruwenzorii* de Coninck, 1935 had already been transferred by Andrássy (1959) to his newly proposed genus *Mesodorylaimus*, Khera (1970) must have reported Pachhapadra population (3 ♀ ♀) as *M. ruwenzorii*. Out of 3 females, only one female, mounted on slide W 7192/1 along with juvenile of some unidentified dorylaim species, was available which confirms that the longitudinal ridges (32) reported by Khera (l.c.) are not present. The present study also reveals that the single available female belongs to the genus *Mesodorylaimus* but it differs from *M. ruwenzorii* in having shorter odontostyle, odontophore and tail (odontostyle 16 μm, odontophore about 1.5 times the odontostyle length and c=10 in *M. ruwenzorii*). However, Khera had measured the odontostyle 10-11 μm and calculated the value of c=9 – 13.5.

Unfortunately, it was not possible to identify this specimen to species level because of bad preservation. Hence, it has been reported as *Mesodorylaimus* sp.

Laimydorus multialaeus (Khera, 1970) N. Comb.

Syn. **Dorylaimus multialaeus** Khera, 1970

(Fig. 2)

Measurements :

Females (3) : L=2.42-2.58 mm ; a=35-38 ; b=5.3-5.9 ; c=10.0-12.4 ; $V=^{15\text{-}18}_{43\text{-}47}{}^{21\text{-}23}$

Males (2) : L=2.01-2.17 mm ; a=37-39 ; b=4.4-4.8 ; c=96-109 ; T=64-66.

DESCRIPTION

Female : Body slightly ventrally curved in the posterior half, tapering gradually towards both extremities. Cuticle finely striated transversely, 3-6 μm thick (thickest on tail). Lateral chords slightly less than 1/3rd of

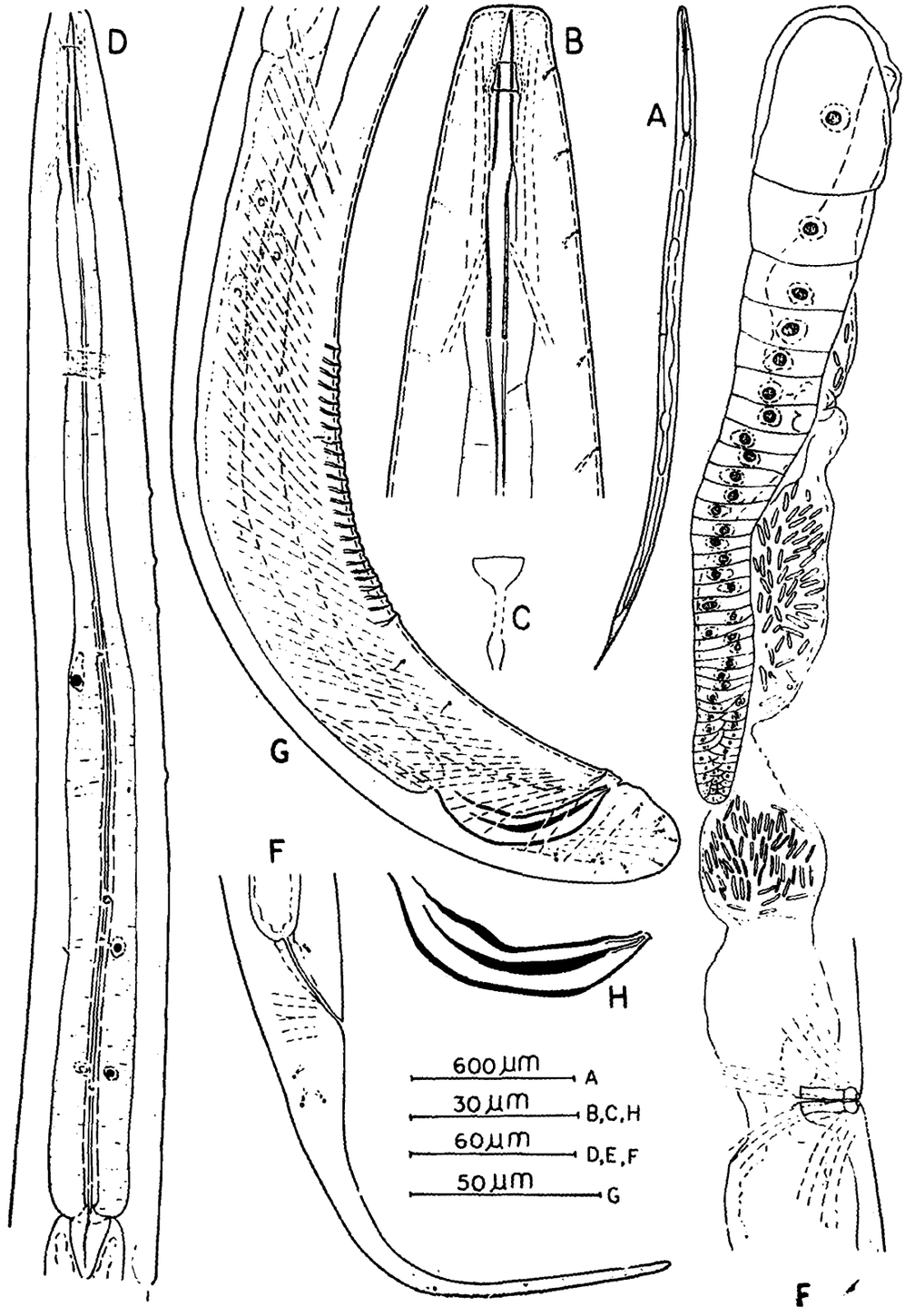

Fig. 2. A—H : *Laimydorus multialaeus* (Khera, 1970) n. comb., A—Entire female, B—Anterior end, C—Amphid, D—Anterior region, E—Anterior female reproductive system, F—Female tail, G—Posterior region of male, H—Spicule and lateral guiding piece.

body-width near middle. Lip region marked by a slight depression, bearing the usual number of papillae. Amphids stirrup-shaped, slits occupying 8-9 μm or 60% of the corresponding body-width, 6-7 μm from anterior extremity. Sensillar pouches 17-18 μm from amphidial slits. Odontostyle 25-28 μm or 1.6-1.9 lip region-width long ; aperture 10-12 μm or 36-42% of the odontostyle length. Odontophore 28-31 μm or about 1.1 odontostyle length. Guiding ring 14-15 μm or about one lip region-width from anterior extremity.

Basal expanded part of oesophagus occupying 48-51% of the neck region. Position of the oesophageal gland neclei and their orifices as follows :

DO = 52.6-53.9 S_1N_1 = 70-73 S_2N = 85-88
DN = 54.6-56.3 S_1N_2 = 75-77 S_2O = 87-90
DO-DN = 2.0-2.4

Nerve ring 125-138 μm or 27-30% of oesophageal length from anterior end. Cardia elongate conoid, about $\frac{1}{4}$th-$\frac{1}{3}$rd of the corresponding body-width long, enveloped by intestinal tissue. Oesophago-intestinal disc present. Prerectum 123-180 μm or 4-6 anal body-widths long. Rectum 37-38 μm or 1.2-1.5 anal body-width long.

Vulva transverse. Vagina 23-25 μm or about $\frac{1}{3}$rd of corresponding body-width long, sclerotized pieces present at vulva-vagina junction. Gonads amphidelphic. Uterus much longer than oviduct, spermatheca-like structure present, filled with sperms. Sperm 9-14 μm long. Egg 70-90 × 40-43 μm. Oocytes arranged in a single row except in the growth region.

Tail elongate-conoid, 200-256 μm or 7-10 anal body-widths long, with 3 caudal pores on each side.

Male : Similar to female in general shape and morphology except for the more curved posterior part of the body and differently shaped tail. Male reproductive system typical. Three pairs of ejaculatory glands in the prerectum region. Spicules 50-53 μm or 1.8-1.9 anal body-widths long medially. Lateral guiding pieces more or less rod-shaped, 9-11 μm long. In addition to one adanal, 23-24 contiguous ventromedian supplements present. Subventral papillae not visible except two between adanal and ventromedian supplement region. Prerectum starting anterior to the copulatory muscles, 232-320 μm or 8-13 anal body-widths long. Tail convex-conoid with rounded terminus, 20-21 μm or 0.7-0.8 anal body-width long, with 6-7 caudal pores on each side.

Habitat and locality : From the banks of a freshwater drain connected to a river near office of the Registrar, Lucknow University, Lucknow (U. P.).

Remarks : Khera (1970) described a new species, *D. multialaeus*, from Lucknow. Three female and 2 male paratypes are available in the National Collection of Zoological Survey of India on slide W. 7183 and W. 7184. The study of these paratypes confirms that they do not belong to the genus *Dorylaimus* Dujardin, 1845 because of the absence of the cuticular longitudinal lines and should be accommodated under the genus *Laimydorus* Siddiqi, 1969. Since these specimens do not fit with the descriptions of known species of the genus *Laimydorus*, a new combination is being proposed. *Laimydorus multialaeus* (Khera, 1970) n. comb. comes very close to *L. baldus* Baqri & Jana, 1982 but differs in the absence of pseudo 'Z' organs and presence of spermatheca-like structure in the uteri,

and slightly wider and differently shaped amphids.

Khera (1970) has reported the length of odontophore 38-42 μm and prerectum in female 100-108 μm which has been confirmed here as 28-31 μm and 123-180 μm respectively.

Laimydorus finalis Thorne, 1975

Syn. **Dorylaimus stagnalis** apud Khera, 1970 partim (Jodhpur population)

Nec **Dorylaimus stagnalis** Dujardin, 1845

(Fig. 1, A-D)

Measurements :

Female (1) : L=4.11 mm ; a=33 ; b=5.4 ; c=15 ; V=$^{14}40^{19}$.

Male (1) : L=3.14 mm ; a=35 ; b=4.4 ; c=90 ; T= ?

Description

Female : Body slightly ventrally curved upon fixation and tapering towards both ends. Cuticle 5-8 μm thick (thickest at tail). Lateral hypodermal chords about $\frac{1}{3}$rd of body-width near middle. Dorsal, ventral and lateral body pores numerous but difficult to count precisely. Lateral body pores 136 or more, 35 in the oesophageal and 4 in the caudal region.

Lip region marked by a slight depression, about $\frac{1}{5}$ th of body-width at base of oesophagus. Amphids stirrup-shaped, apertures occupying 8-9 μm or slightly less than half of the corresponding body-width and 9-10 μm from anterior end. Sensillar pouches 17 μm from amphidial slits.

Odontostyle 45 μm or 2.0 lip region-width long ; aperture 21 μm or 47% of the odontostyle length. Guiding ring 28 μm or 1.3 lip region-width from anterior end. Odontophore 44 μm or about equal to odontostyle length. Basal expanded part of oesophagus occupies 53% of the oesophageal length. Locations of the oesophageal gland nuclei and their orifices could not be observed. Nerve ring 172 μm or 22% of the neck region from anterior end. Cardia with rounded tip, enveloped by intestinal tissue. Oesophagointestinal disc present. Prerectum 250 μm or 4.8 anal body-widths long. Rectum 64 μm or slightly more than anal body-width long.

Vulva a longitudinal slit. Vagina 58 μm long or 45% of the corresponding body-width, surrounded by sphincter, with moderately scelrotized distal region. Reproductive system amphidelphic. Uterus filled with oval sperms, 4-6 μm long. Uterus and oviduct separated by sphincter. Ovaries reflexed, oocytes arranged in a single row, double row and then in multiple rows at the region of growth.

Tail elongate conoid, 268 μm or 5.1 anal body-widths long, with 4 caudal pores on each side.

Male : Similar to female in general morphology except the tail shape and male reproductive system. Odontostyle 46 μm or 2.2 lip region-widths long, aperture 22 μm or 48% of the odontostyle length. Odontophore 40 μm or 0.9 of the odontostyle length. Reproductive system typical. Supplements consist of an adanal pair and a series of 47 contiguous ventromedians. The first ventromedian supplement situated at about 2.5 anal body-width from the cloacal opening. Subventral papillae 24, irregularly spaced,

Spicules 105 μm or 2.1 anal body-widths long when measured along with curved median line. Lateral guiding pieces 14 μm long. Copulatory muscles extending beyond the supplement region. Prerectum 318 μm or 6.3 times the anal body-width. Tail bluntly rounded, 35μm or 0.7 anal body-width long, with 12 caudal pores on each side.

Habitat and locality : From the bank of Kailana Lake, Jodhpur, Rajasthan.

Remarks : Khera (1970) reported 7 females and 6 males of *D. stagnalis* from Kailana Lake, Jodhpur but for the present study only a single female and a male (slide No. W 7188/1) were available. The study shows that Khera (l. c.) had misidentified Jodhpur population as *D. stagnalis* because these actually belong to *Laimydorus finalis* Thorne, 1975 and not *D. stagnalis*. The strong musculature was perhaps misinterpreted as longitudinal cuticular linings.

Laimydorus kherai n. sp.

Syn. **Eudorylaimus odhneri** apud Khera, 1970 partim (male)

Nec. **Dorylaimus odhneri** Allgen, 1951

= **Eudorylaimus odhneri** (Allgen, 1951) Andra'ssy, 1959

(Fig. 3, C—H)

Khera (1970) identified one female and a male as *Eudorylaimus odhneri* (Allgen, 1951) Andrássy, 1959 from Suraj Kund, Lucknow. These two specimens along with two other females marked as unidentified dorylaims have been found on slide W 7193/1. The present study shows that the male reported by Khera (l. c.) as that of *Eudorylaimus odhneri* actually belongs to *Laimydorus*. This male and one unidentified female on the same slide represent a new species which is named as *L. kherai* n. sp. The second unidentified female on the same slide also belongs to *Laimydorus* but the identification could not be confirmed because it has shifted below the sealing material of the cover slips.

Measurements :

Holotype female (1) : L = 2.92 mm ; a = 45 ; b = 5.1 ; c = 12 ; $V = {}^{19.6}_{44}{}^{21.4}$.

Paratype male (1) : L = 2.49 mm ; a = 50 ; b = 4.2 ; c = 12 ; T = 59.

DESCRIPTION

Female : Body ventrally curved posterior to vulva upon fixation and tapering towards both ends. Cuticle finely striated ; 4-6 μm thick (thickest at tail). Lateral hypodermal chords about $\frac{1}{3}$rd of corresponding body-width near middle. Dorsal, ventral and lateral body pores could not be counted because of the dorsoventral position of the specimen in the posterior region.

Lip region almost continuous. Amphids stirrup shaped, apertures occupying 7 μm or about half of the carresponding body-width and 6.5 μm from anterior end. Sensillar pouches could not be observed. Odontostyle 31 μm or 1.7 lip region-width long ; aperture 11.5 μm or 27% of the odontostyle length. Guiding ring 18 μm or one lip region width from anterior extremity. Odontophore 35 μm or 1.1 times the odontostyle length. Basal expanded part of oesophagus occupies 44% of the oesophageal length. Locations of oesophageal gland nuclei and their orifices not clear. Nerve ring 172 μm or 33% of the neck region from anterior end. Cardia

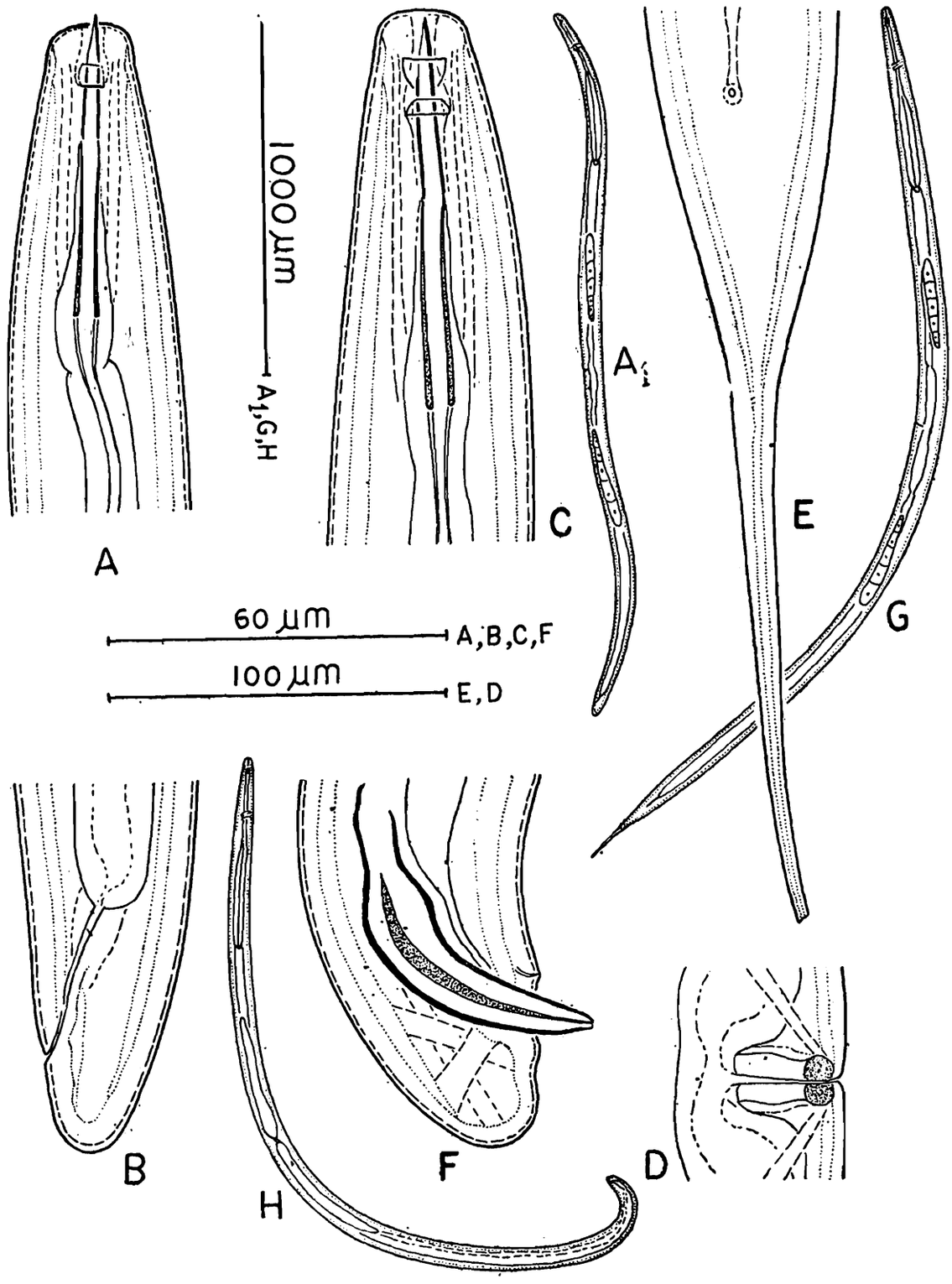

Fig. 3. A_1 & A—B ; *Eudorylaimus odhneri* (Allgen, 1950) Andrassy, 1959, A_1—Entire female, A—Anterior end, B—Female tail. C—H : *Laimydorus kherai* n. sp., C—Anterior end, D—Vulva and Vagina, E—Female tail, F—Male tail, G—Entire female.

appears to be tongue-shaped, but has become distorted due to flattenning of the specimen. Oesophago-intestinal disc present. Prerectum 150 μm or about 3 anal body-widths long. Rectum length could not be measured because of the dorso-ventral position of the nematode.

Vulva a transverse slit. Vagina 30 μm or 45% of the corresponding body-width, with a moderately sclerotized distal region. Uterus and oviduct separated by sphincter, uteri filled with sperms. Ovaries reflexed ; oocytes arranged in a single row, double row and then in multiple rows at the region of growth.

Tail 245 μm long, elongate filiform, tip broken. Caudal pores not seen.

Male : Similar to female in general morphology except for tail shape and male reproductive system. Odontostyle 31 μm or about 2 lip region-widths long. Odontophore 36 μm or about 1.2 times the odontostyle length. Guiding ring 17.5 μm or 1.2 lip region-widths from anterior extremity. Gonads typical. Supplements consist of an adanal pair and a series of 26 contiguous ventromedians. The first ventromedian supplement situated 2.3 anal body-widths from cloacal opening. Subventral papillae not seen. Spicules 65 μm or 2.1 anal body-widths long along curved median line. Lateral guiding pieces present. Tail bluntly rounded, 20 μm or 0.65 anal body-width long. Caudal pores present.

Differential diagnosis : *Laimydorus kherai* n. sp is close to *L. conurus* (Thorne, 1939) Siddiqi, 1969 and *L. baldus* Baqri & Jana, 1982. From the former it differs in having shorter body and odontostyle, more posteriorly situated guiding ring (L=1.6 mm ; odontostyle and guiding ring=19 μm and 13 μm respectively as calculated from Thorne, 1939). The male further differs from *L. conurus* in having more ventromedian supplements and longer spicules (ventromedian supplements 21 and spicules 50 μm long). *L. kherai* has longer odontostyle and odontophore, more posteriorly situated guiding ring and longer spicules than *L. baldus* (odontostyle 24-25 μm, odontophore 29-30 μm, guiding ring 14-15 μm, and spicules 53 μm in *L. baldus*).

Type habitat and locality : From the banks of stagnant freshwater tank, Surajkund, Lucknow, U. P.

Type specimens : Collected by Dr. S. Khera in April, 1967. Holotype along with male paratype mounted on slide W 7193/1.

Eudorylaimus odhneri (Allgen, 1950) Andràssy, 1959

(Fig. 3 : A_1, A-B)

Measurements :

Female (1) : L=2.11 mm ; a=47 ; b=5.0 ; c=125 ; V= $^{18}49.5^{23.5}$

DESCRIPTION

Body irregularly curved upon fixation, tapering gradually towards both ends. Cuticle 2.5-5 μm thick (thickest on tail), finely transversely striated. Lateral chords about $\frac{1}{3}$rd of body-width near middle. Ventral, dorsal and lateral body pores not seen.

Lip region marked by a slight depression. Odontostyle 23 μm or about 1.5 lip region-widths long, aperture about 8 μm or about 35% of odontostyle length. Guiding ring 12 μm or 0,8 lip region-width from anterior

end. Odontophore 30 μm or about 1.3 times the odontostyle length.

Basal expanded part of oesophagus about 55% of oesophageal length. Oesophageal gland nuclei and their orifices not seen. Cardia short, rounded. Nerve ring 112 μm or about 25% of oesophageal length from anterior end. Prerectum about two anal body-widths long. Rectum 25 μm or 1.4 anal body-widths long.

Vulva a transverse slit. Vagina 22 μm or about half of corresponding body-width. Reproductive system amphidelphic. Uterus and oviduct separated by sphincter.

Tail bluntly rounded, 16.5 μm or 0.9 anal body-width long. Caudal pores not observed.

Habitat and locality : From the banks of stagnant freshwater tank, Surajkund, Lucknow, U. P.

Actinolaimus omercooperi Filipjev, 1931

(Fig. 4, C—E)

Measurements :

Female (1) : L = 2.80 mm ; a = 33 ; b = 5.0 ; c = 12 ; V = 45

DESCRIPTION

Body irregularly curved and tapering gradually towards both extremities. Cuticle 3-4 μm thick (thickest at tail), marked with longitudinal striae. Lateral chords $\frac{1}{7}$th of body-width near middle. Dorsal, ventral and lateral body pores not seen.

Lip region with amalgamated lips, almost continuous with body. Vestibule a sclerotized structure, armed with 4 onchia, denticles absent. Amphids stirrup-shaped, slits 8 μm wide and 12 μm from anterior end. Sensillar pouches 19 μm from amphidial slit. Odontostyle 27 μm or 1.2 lip region-widths long, aperture 11.5 μm or about 43% of the odontostyle length. Guiding ring 18 μm or 0.8 lip region-width from anterior end. Odontophore 33 μm or 1.2 times the odontostyle length. Anterior slender part of oesophagus and ellipsoidal swelling of odontophore region offset by a constriction at their junction. Basal expanded part of oesophagus occupying about 48% of the neck region. Position of the orifices of oesophageal glands as follows : DO = 51.7 ; S_1O_1 = 68 ; S_1O_2 = 72.5 ; S_2O = 6. Oesophageal gland nuclei not observed. Cardia bulntly rounded, enveloped by intestinal tissue. Prerectum 220 μm or about 6 anal body-widths long. Rectum could not be measured.

Vulva pore like. Length and shape of vagina not observed because of dorsoventral position of the specimen. Reproductive system amphidelphic, with all the usual parts.

Tail elongate conoid, 235 μm or 4.7 anal body-widths long.

Male : The reported male specimen not traced.

Remarks : Khera (1970) identified 3 females and 3 males as *Actinolaimus omercooperi* Filipjev, 1931 from Happy Valley, below Taragarh, Ajmer (Rajasthan) and Padakulam pond, Cranganore, district Trichur (Kerala). Only one badly flattened dorsoventrally mounted female on slide W 7194/1 from Ajmer was available for study, and it is correctly identified as *Actinolaimus omercooperi*.

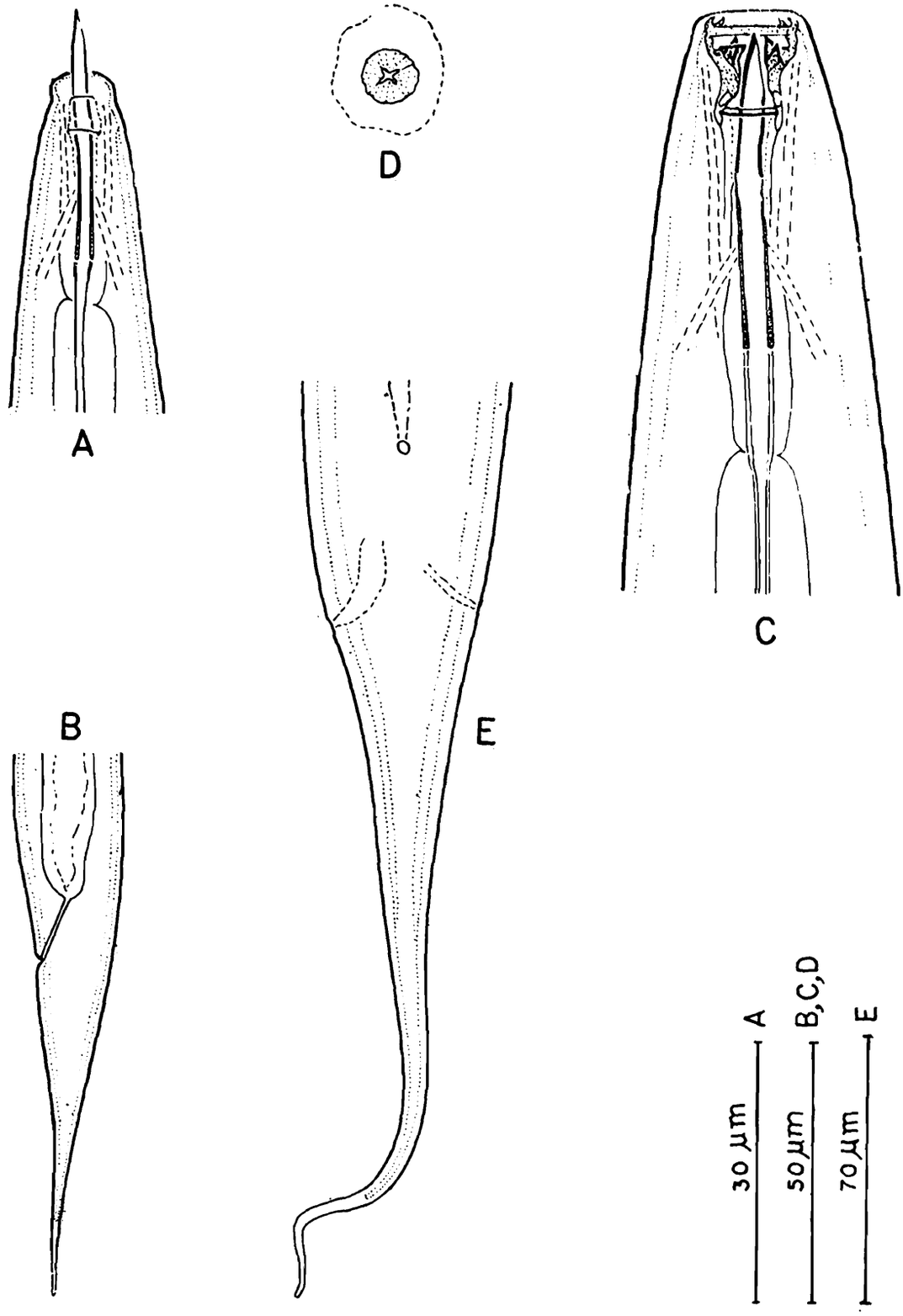

Fig. 4. A—B : *Mesodorylaimus* sp., A—Anterior end, B—Female tail. C—E : *Actinolaimus omercooperi* Filipjev, 1931, C—Anterior end, D—Vulva opening (dorso-ventral position), E—Female tail.

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