

On *Paraleptus komiyai* n. sp. (Physalopteridae Leiper, 1908 :  
Nematoda) from a fresh water fish, *Mastacembelus*  
*armatus* from Lucknow, India

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(Received for publication ; May 4, 1970)

### Introduction

Wu (1927) proposed the genus *Paraleptus* with *P. scyllii* Wu, 1927 as type species. Johnston & Mawson (1943) added another species, *P. australis* from Australia. Yamaguti (1961) considered that *P. australis* cannot be referred to *Paraleptus* as defined by Wu on account of very unequal and dissimilar spicules. The author disagrees with Yamaguti as the size and shape of spicules is a variable character within the genus.

### *Paraleptus komiyai* n. sp.

(Figs. 1-6)

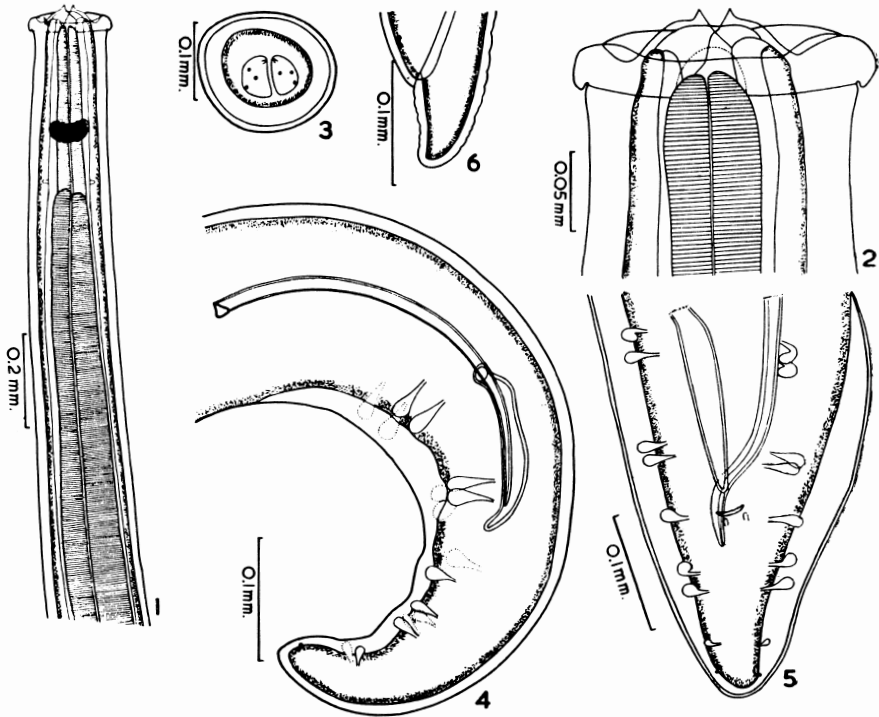
Numerous male and female specimens of this form were collected from the intestine of a fresh water fish, *Mastacembelus armatus* (Lacep.) from river Gomati at Lucknow.

Description: Body elongated, cylindrical, slight difference in size of two sexes. In end-on view, mouth elongated dorsoventrally, bounded by two simple lateral lips each bearing a conical tooth and three papillae of which two submedian and one lateral. Cuticular cephalic collar present. Oesophagus divided into two portions, a shorter narrow muscular anterior portion and a longer wide glandular posterior portion. Excretory pore slightly posterior to nerve ring. Lateral alae transversely striated, striations 0.002 to 0.004 mm apart in male and 0.003 to 0.005 mm apart in female.

Male: Body 19.47 to 24.11 mm long, 0.28 to 0.45 mm wide. Head 0.09 to 0.12 mm in

diameter. Two small cervical papillae at 0.30 to 0.37 mm from anterior extremity. Anterior muscular oesophagus 0.34 to 0.42 mm long, 0.06 to 0.07 mm wide; posterior glandular oesophagus 2.13 to 3.0 mm long, 0.13 to 0.16 mm wide. Entire oesophagus 2.5 to 3.34 mm long. Nerve ring at 0.25 to 0.31 mm and excretory pore 0.28 to 0.35 mm from anterior end. Tail blunt, 0.24 to 0.27 mm long. Caudal end curved ventrally and spirally coiled. Caudal alae well developed, 0.53 to 0.71 mm long, extending up to tip of tail. Nine pairs of anal papillae of which four pairs preanal, one pair adanal and four pairs postanal. Preanal papillae pedunculated, lie in two groups of two pairs each. Of postanal papillae, two pairs of anterior pedunculated papillae form one group and last pair sessile, lying near tip of tail. Spicules unequal, dissimilar and non-alate. Left spicule large, tubular, 0.42 to 0.54 mm long and right spicule smaller, more or less funnel-shaped, 0.19 to 0.25 mm long. Gubernaculum absent.

Female: Body 21.66 to 28.83 mm long, 0.37 to 0.57 mm wide. Head 0.10 to 0.15 mm in diameter. Two small cervical papillae at 0.33 to 0.41 mm from anterior extremity. Anterior muscular oesophagus 0.41 to 0.45 mm long, 0.07 to 0.09 mm wide; posterior glandular oesophagus 2.67 to 3.27 mm long, 0.15 to 0.18 mm wide. Entire oesophagus 3.08 to 3.72 mm long. Nerve ring at 0.27 to 0.31 mm and excretory pore 0.29 to 0.34 mm from anterior end. Vulva postequatorial, slightly posterior to middle of body, 12.46 to 16.89 mm from anterior end. Uterine



Figs. 1-6 *Paraleptus komiyai* n. sp.

- Fig. 1 Anterior region of male. Lateral view.  
 Fig. 2 Enlarged anterior region of male. Lateral view.  
 Fig. 3 End-on view.  
 Fig. 4 Male tail. Lateral view.  
 Fig. 5 Male tail. Ventral view.  
 Fig. 6 Female tail. Lateral view.

branches opposed. Tail blunt, 0.15 to 0.18 mm long. Eggs oval, thick-shelled, embryonated at deposition, 0.022 to 0.045 mm long, 0.015 to 0.025 mm wide.

Host: *Mastacembelus armatus* (Lacep.)

Location: Intestine

Locality: Lucknow.

Discussion: Due to the presence of one lateral and two submedian head papillae on each lip, followed by a cephalic collarette, in having oesophagus clearly divided into two parts, in the possession of well developed caudal alae, in the absence of gubernaculum and in having postequatorial vulva, the present form is referred to the genus *Paraleptus* Wu, 1927. The new form differs from *P. scyllii* Wu, 1927 in the absence of a row of spines of different sizes along inner margin

of lips, in the possession of cervical papillae, in the number and arrangement of anal papillae and in having unequal and dissimilar spicules. The new form can also be distinguished from *P. australis* Johnston and Mawson, 1943 in the number of teeth on the lips, in having well developed caudal alae, in the size ratio of spicules (1:10 in *P. australis*, 1:2.2 in *P. komiyai* n. sp.), in the possession of cervical papillae and in having pedunculated anal papillae instead of sessile papillae. Accordingly it is regarded as new with the specific name *P. komiyai* n. sp.

The new species is named in honour of Dr. Y. Komiya, Chief of Parasitology, National Institute of Health, Tokyo, Japan.

Key to the species of the genus *Paraleptus* Wu, 1927.

1. Lips with a row of spines along inner anterior margin.....*P. scyllii* Wu, 1927. Lips without a row of spines along inner anterior margin.....2
2. Caudal papillae sessile and spicule length ratio 1 : 10.....*P. australis* Johnston and Mawson, 1943. Caudal papillae pedunculated and spicule length ratio 1 : 2.2.....*P. komiyai* n. sp.

### Abstract

*Paraleptus komiyai* n. sp. from a fresh water fish, *Mastacembelus armatus* (Lacep.) has been described from Lucknow. A key to the species of the genus *Paraleptus* Wu, 1927 is given.

Part of thesis accepted for the degree of Doctor of Philosophy at the University of Lucknow, Lucknow.

The work has been carried out under the guidance of Dr. S. P. Gupta, Reader in Zoology, University of Lucknow, Lucknow. The author is greatly indebted to him for his invaluable help and encouragement. Thanks are also due to Prof. G. S. Thapar, F. N. I. for kindly going through the manuscript and giving useful suggestions.

Paratype and holotype specimens will be deposited in Dr. G. S. Thapar's Helminthological Collection, Lucknow, U. P.; India.

### References

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