



**PARACLEPSIS JORAPARIENSIS SP. NOV. (HIRUDINEA :  
GLOSSIPHONIDAE) : A NEW LEECH FROM JHARKHAND, INDIA**

**C.K. MANDAL**

*Zoological Survey of India, FPS Building, Kolkata-700016*

E-mail: mandalsucker@gmail.com

### INTRODUCTION

Out of 667 species of leeches known in the world, 64 species are recorded in India (Mandal, 2009). There are 3 species of leeches belong to the genus *Paraclepsis* in the world (Harding, 1924). Soos is the pioneer in Taxonomy of leeches in the world. He has described a number of new species. Majority of the new species of leeches were described by Moore (1924), Moore and Harding (1927) and Bhatia (1931). Mandal (2004a, 2004b and 2009) has described three new species, two collected from West Bengal and one species from Tamil Nadu. Bandyopadhyay and Mandal (2006), described one new species from Tamil Nadu. Soota and Ghosh (1977), Chandra (1983), Ghosh (1998) also contributed considerably to the taxonomy of leeches of India. Soos (1965) contributed a model of leech taxonomy in the world. Now the author has an opportunity to describe a new species from jorapari, Girdih, Jharkhand, India.

### MATERIAL AND METHODS

After making the collection, leeches were sorted out and cleaned. Then the cleaned leeches were placed in a tray with a small quantity of water and were slowly killed by anaesthetizing with 70% alcohol by adding drop by drop at frequent intervals. Leeches usually die in an extended condition by this process. Just after death, the leeches were kept in 70% alcohol for permanent preservation. This new species *Paraclepsis jorapariensis* has been collected

from Jorapari, Girdih district (Latitude 24.1800° North and Longitude 86.3000° East), Jharkhand, India during recent faunistic survey carried out by Zoological survey of India. The new species is compared with the material of other species available in hand and information on other species is taken from literature.

*Paraclepsis jorapariensis* sp. nov.

*Holotype*: Z.S.I. Reg. No. An 3702/1, 1 ex., Coll. R. Paliwal and C.K. Mandal, 30.iii.2010, Jorapari, Girdih, Jharkhand, India.

*Diagnosis*: This leech is found in a pond near paddy field. It is not large. Length 15 mm. width 5mm. (Plate I). Anterior sucker 2mm. in diameter and posterior sucker is 1.5 mm in diameter (Plate II). Both suckers are almost round. Sensillae prominent. Seven greyish yellow stripes on the dorsal area. Colour brown dorsally and whitish ventrally. Eye four pairs. 1st pair smallest, 2<sup>nd</sup> pair largest, 3<sup>rd</sup> pair medium in size. These three pairs of eyes are dorso-medial. 4<sup>th</sup> pair of eyes are laterally arranged forming a little curve line. Seventy one rings. Eight pairs of branched caeca. Mid dorsal papillae are smaller than two pairs of lateral papillae.

*Length*: The total length of the body is 15 mm including anterior sucker and posterior suckers.

*Breadth*: 5 mm. Middle part almost half of the body.

*Head*: It is somewhat elongated, contains anterior sucker, mouth and four pairs eyes.

*Sucker*: Anterior sucker 2 mm in diameter, posterior sucker 1.5 mm. in diameter. Both suckers are round.

*Stripe*: Seven greyish yellow stripes on the dorsal area.

*Papillae*: Two most lateral sides bearing 11 yellow coloured prominent papillae in each line, another two lateral line bearing 17 in each and two mid dorsal lines bearing 14 in each. Mid dorsal papillae are smaller than two pairs of

lateral papillae. 2-3 yellow papillae are seen at mid-ventral position.

*Eyes*: Four pairs of eyes. 1st pair smallest, 2<sup>nd</sup> pair largest, 3<sup>rd</sup> pair medium in size. These three pairs of eyes are dorso-medial. 4<sup>th</sup> pair of eyes are laterally arranged forming a line from starting point of dorsal to towards dorsal.

*Rings*: Total number of body rings is 71.

*Crop*: Crop is with eight pairs of branched caeca.

Table showing comparison of *Paraclepsis jorapariensis* sp. nov. With the other three species of the genus *Haemadipsa* in India.

	<b>Paraclepsis jorapariensis</b>	<b>Paraclepsis gardensi</b>	<b>Paraclepsis praedatrix</b>	<b>Paraclepsis vulnifera</b>
Stripe	Seven greyish yellow stripes on the dorsal area.	Eighteen brownish sub parallel lines	Three dorsal lines and one mid ventral line	No stripe
Colour	Brownish dorsally and whitish ventrally (in living)	Reddish brown in living, greyish in preserved condition	Pinkish white (in living)	Black in colour(in living)
Body length	15mm.	7mm.-10mm.	7mm.-14.5mm.	6.5mm.-14mm.
Breadth	5mm.	4.3mm.-4.8mm.	2.1mm-4.4mm.	2.3mm-.4.5mm.
Breadth of anterior sucker	1.5mm.	.5mm-1mm.	7mm.-1.5mm.	.6mm.-1.4mm.
Breadth of posterior sucker	2mm.	.6mm-1.6mm.	1.2mm.-3.6mm.	1mm.-3.2mm.
Clitellum	Not prominent	prominent	–	–
Gonopores	Male pore between 21-22 ring, Female pore 25-26 rings	Male pore between 21-22 ring, Female pore 24-25	Male pore between 29-30 and 31-32 rings	Male pore between 27-28 rings
Breeding season	–	April- August	May-June	June -July
Eggs	–	6-7	–	–
Eyes	1st pair between I-II ring Dorsal 2 <sup>nd</sup> pair between II-III 3 <sup>rd</sup> pair on ring V 4 <sup>th</sup> pair on ring VIII (Lateral side)	1st pair on ring II 2 <sup>nd</sup> pair on ring III 3 <sup>rd</sup> pair on ring V	1st pair on ring III 2 <sup>nd</sup> pair on ring IV 3 <sup>rd</sup> pair on ring VII	1st pair on ring II 2 <sup>nd</sup> pair on ring II 3 <sup>rd</sup> pair on ring V
Caeca	More than seven pairs, branched	Seven pairs, most branched	More than seven pairs, branched	More than seven pairs, little branched
Ring	71	76	73	70
Reference	–	Mandal, 2004	Harding, 1924	Harding, 1924



PLATE I



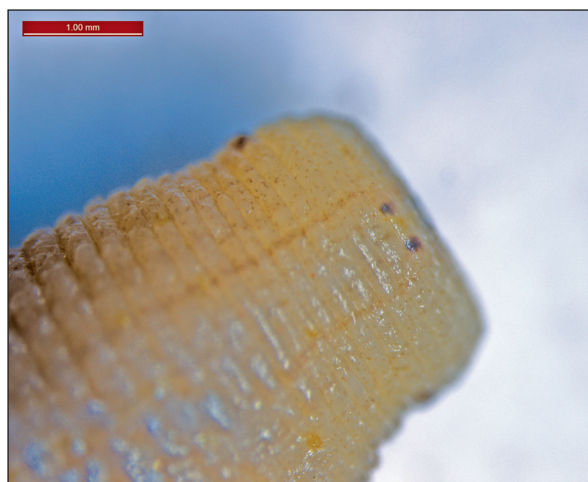
*Paraclepsis jorapariensis* (Lateral view)



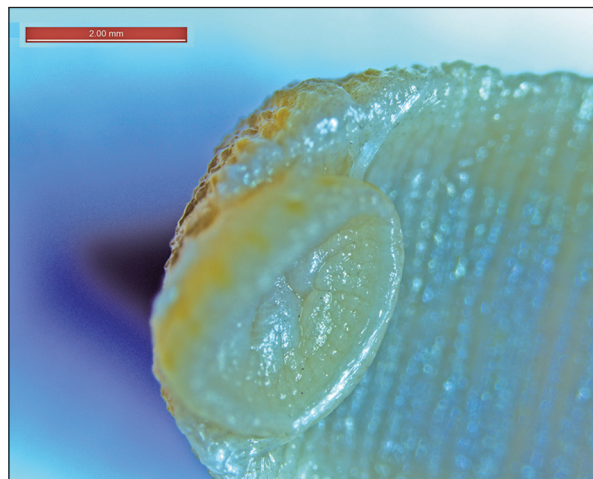
*Paraclepsis jorapariensis* (Dorsal view)



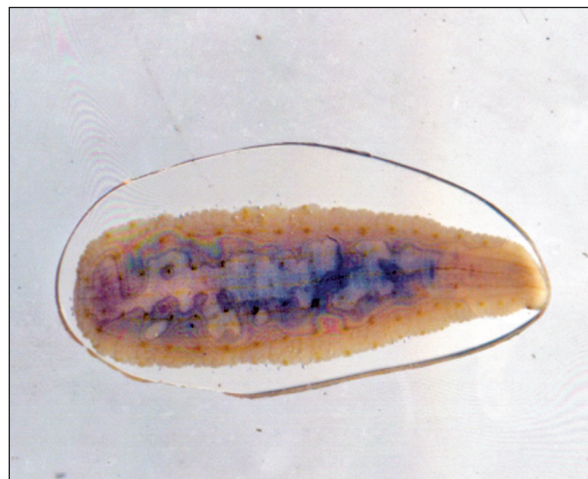
*Paraclepsis jorapariensis* (Ventral view)



Anterior end bearing 4 pairs eyes



Posterior end bearing posterior sucker with rays



Caecal arrangement of leech *Paraclepsis jorapariensis*

*Male and female pores:* Open between the rings 21/22 and 23/24 respectively. Male pore smaller than female pore (In case of earthworm female pores generally in 14th segment male pores in 18th segment and male pores larger than female pores).

*Colour:* Greyish yellow in living condition. Two sides are whitish in colour. Colour fades up in preserved state. Ventral region grey in colour.

*Host and habitat:* The animal on which leech sticks on and suck blood for their food is called host. *Paraclepsis jorapariensis* found in the water bodies of ponds, lakes and sucks blood of Mollusca.

*Distribution:* India: Jharkhand.

*Etymology:* The specific name is proposed according to the name of the place where from the first example was collected.

*Remarks:* Eye shape of the present described species *Paraclepsis jorapariensis* is somewhat similar to *Paraclepsis gardensi*. It is distinguished from *Paraclepsis gardensi* in its body shape, eye number, colour, number of rings and structure of caeca (Table. 1).

*Comparative material:* *Paraclepsis gardensi* An 3256/1, 2 exs. Pond near Birati Kali mandir Kolkata, West Bengal. An 2816/1,1 ex. Botanical garden, Shibpur, W.B. India.

*Paraclepsis praedatrix* - An 2847/1, 1 ex. Lal dighi, District Murshidabad, West Bengal, India.

### SUMMARY

This leech is found in a pond near Shiva Temple. It is not large. Length 15mm. width 5mm. Anterior sucker 2mm. in diameter and posterior sucker is 1.5mm in diameter. Both suckers are almost round. Sensillae prominent. Seven greyish yellow stripes on the dorsal area. Colour brown dorsally and whitish ventrally. Eye four pairs. 1st pair smallest, 2<sup>nd</sup> pair largest, 3<sup>rd</sup> pair medium in size. These three pairs of eyes are dorso-medial. 4<sup>th</sup> pair of eyes are laterally arranged forming a little curve line. Seventy one rings. Eight pairs of branched caeca.

*Distribution:* India: Jharkhand (Girdih).

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