



**PLACOBDELLA GAURIPURENSIS SP. NOV.
(HIRUDINEA: GLOSSIPHONIDAE):
A NEW LEECH FROM WEST BENGAL, INDIA**

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INTRODUCTION

Out of 667 species of leeches known in the world, 64 species are recorded in India (Mandal, 2009). There are 26 species of leeches belong to the genus *Placobdella* Blanchard 1893 in the world. Sixteen species of the genus *Placobdella* are described from North America, one species from Europe, three species from South America and 6 species from Asia. Out of six species of this genus reported from India, five species are endemic. Soos (1965) 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 Harding and Moore (1924, 1927), Bhatia (1931). Mandal (2004a and 2004b) has described two new species, collected from West Bengal. Bandyopadhyay (2004 and 2005), Mandal (2004 and 2010), have done some work on ecology of leeches. Soota (1977), Chandra (1983), Ghosh (1998) also contributed considerably to the taxonomy of leeches of 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

Placobdella gauripurensis has been collected from Gauripur Kalibari, Birati (Latitude 22° 65' 92" North and Longitude 88° 43' 84" East), Kolkata, West Bengal, 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.

Placobdella gauripurensis sp. nov.

Holotype: Z.S.I. Reg. No. An 3626/1, 1 ex., Coll. C.K. Mandal, 15.viii.2008, Pond of Gauripur Kalibari, Birati, Kolkata, West Bengal, India.

Paratype: Z.S.I. Reg. No. An 3626a/1, 1 ex., collection details as of Holotype.

Diagnosis: *Body:* Flattened, beetle vine shaped body, head region distinct, Length and breadth almost equal. Papillae are seen on the mid ventral dorsal side. Four circular lines are seen laterally on the two sides of the body.

Length: The total length of the body is 4 mm inclusive anterior sucker and posterior suckers.

Breadth: 4 mm. Middle part of the body contains the maximum length.

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

Sucker: Anterior sucker 0.5 mm in diameter, posterior sucker 1mm. in diameter. Posterior sucker is almost round, anterior sucker almost round. Mouth is with muscular ridges but without jaws.

Table 1: Comparison of characters of different species of the genus *Placobdella* in India.

	<i>P. ceylanica</i>	<i>P. mydae</i>	<i>P. fulva</i>	<i>P. horai</i>	<i>P. indica</i>	<i>P. undulata</i>	<i>P. gauripurensis</i>
Body	Lanceolate	Elongated flattened body	Claviform	Ovate acuminate	Eliptic lanceolate	Eliptic lanceolate	Flattened and beetle-vine leaf shaped
Eyes	Three pairs	Single pair Almost round	Single pair	Single pair,	Single pair cup shaped	Single pair	Single pair, comma shaped
Caecae	Seven pairs branched	Seven pairs not branched	Seven pairs Most branched	Seven pairs branched	Seven pairs more branched	Seven pairs branched	Seven pairs, not branched
Ring	71	71	67	66	70	71	67
Colour	Brown	Grayish green	Reddish yellow	Brown	Greyish	Gray	Light green

Papillae: Papillae small, closely set along the dorsal line.

Eyes: One pair invited comma shaped on ring 2.

Rings: Total number of body rings is 67.

Crop: Crop is without any branch or caeca.

Male and female pores: Open between the rings 24/25 and 26/27 respectively. Small to medium sized.

Colour: Light green in living condition, fade up in preserved state. Two sides are white, yellow in the middle after preservation.



Photograph of *Placobdella gauripurensis* n. sp. (Dorsal view)

Host and habitat: The animal on which leech sticks on and suck blood for their food is called host. The mollusc which having operculum on the body to protect them and body is not divided into two parts called gastropod mollusc. *Placobdella gauripurensis* found in ponds and sucks the blood of gastropod molluscs (*Lymnea acuminate*) sticking on them.

Distribution: India: West Bengal.

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

Remarks: The present form *Placobdella gauripurensis* is somewhat similar to *Placobdella horai* in body shape. It is distinguished from *P. horai* in its eye shape, colour, number of rings and unbranched crop caeca in the body (Table. 1). Numbers of rings are same in *P. fulva* and *P. gauripurensis* sp. nov., but eyes and crops are completely different in these two species. *P. ceylanica* is clearly distinct in having three pairs of eyes. *P. indica*, *P. mydae* and *P. undulata* differs from the species under discussion in having 70 or 71 body rings. *P. gauripurensis* sp. nov. is different from the new world species and others, viz., *Placobdella* sp. (Brackish water leech of Spain), *P. maurica* (Freshwater leech of New Zealand), *P. parasitica* (fresh water species), *P. lamothei* (Mexican marine leech), *P. stuhlmanni* (American marine leech), *P. costata* (brackish water leech), *P. ornata* (Marine) and Marine turtle leeches *P. translucens*, *P. bistrata*, *P. hollensis*, *P. mexicana*, *P. montifera*, *P. nuchalis*, *P. multilineata* etc. by the body pigmentation pattern and disposition of eyespots.

Comparative material:

Placobdella emydae : An 2772/1, 1 ex., Howrah, West Bengal; An 2862/1, 1 ex., Jalpaiguri, West Bengal; An 2997/1, 1 ex. Krishna, Andhra Pradesh; An 3367/1, 1 ex., Mysore, Karnataka.

Placobdella fulva : An 2762/1, 3 exs., Kolkata, West Bengal; An 2767/1, 1 ex. Howrah, West Bengal; An 2782/1, 1 ex. Midnapur, West Bengal; An 2802/1, 1 ex. Bankura, West Bengal; An 2813/1, 1 ex. South 24 Parganas, West Bengal; An 2825/1, 1 ex. Nadia, West Bengal; An 2839/1, 1 ex. Murshidabad, West Bengal; An 2864/1, 1 ex. Jalpaiguri, West Bengal.

Placobdella horai : An 2783/1, 1 ex. Midnapur, West Bengal.

Placobdella undulata: An 2791/1, 1 ex. Burdwan, West Bengal; 2827/1. 1 ex., Nadia, West Bengal.

SUMMARY

The presented form has been collected from Gauripur, Birati, Kolkata from West Bengal. This

species is distinguished from other species by possessing the following characters. Body is beetle vine shaped. Eyes single pair and inverted comma shaped. 5-8 semicircular lines are found on the both side of the mid-dorsal line. Caeca is seven pairs, not branched. Mid dorsal papilla are also found. The leech is light green in colour when it is alive. Length of a full-grown preserved specimen is 4 mm and width is also 4 mm. Posterior sucker is 1mm in diameter; anterior sucker measures 0.5 mm in diameter. Both suckers are cylindrical. It can be easily identified by its flattened beetle vine shape.

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