

## One new Aquatic Leech *Placobdella devkuntai* from Rajasthan, India

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**Abstract – *Placobdella devkuntai* is described as a new species from Rajasthan. Short elongated body. *Placobdella devkuntai* which was collected from Devkunt Sagar, Bikaner district, Rajasthan (total of 77 examples) were all found to belong to a new species. It attacks human beings. This is the first record of human sucking glossiphonid leech in the world. The total length of the body is 8.5 mm. Breadth 3mm. anterior sucker 1 mm in diameter, posterior sucker 1.8mm in diameter. Posterior sucker is almost round, anterior sucker almost round. One pair of eyes, almost triangular in shape. Nine pairs semi-branched crop caecae. Egg number is 37. Number of ring is 91.**

**Index Terms – *Placobdella devkuntai* sp. nov. Hirudinea, Glossiphonidae, Rajasthan, short elongated body.**

### I. INTRODUCTION

According to Siddall 700 species (510 Freshwater, 100 marine and 90 terrestrial) of leeches (Annelida: Hirudinea) are in the world, distributed in 91 genera and 7 families (Sket and Trontelj, 2008), with one family, Americobdelidae, endemic to America. Harding and Moore (1924, 1927) contributed to description of many new species of leeches found in India. Soos (1965) has done pioneer work in Taxonomy of leeches of world. This was followed the valuable contributions from Soota (1977), Chandra (1983) and Ghosh (1998) with regard the taxonomy of leeches of India. Mandal (2004a, 2004b, 2013, 2015a and 2015b) contributed some aquatic leeches from India). Nesemann Hasko and Sharma Gopal, 2012 worked on a new species of the leech family Salfidae. Till to date, 70 leech species under 25 genera and 6 families have been recorded from India (Mandal and Misra, 2017). Among the aquatic leeches, the family Glossiphonidae is represented by seven genera and 29 species in India

(Mandal 2013). The genus *Placobdela* Blanchard, 1893 comprise 22 species in the world (www.gni.globalnames.org on 22.11.2016) with eight species known from India alone (Mandal 2013). The genus *Placobdela* is characterized in having one pair of eyes and crop with seven pairs of branching diverticula. During recent survey, one interesting species of leech has been collected from Rajasthan which is identified as new to science and described herewith as *Placobdella devkuntai sp. nov.* in the family Glossiphonidae.

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## II. MATERIAL AND METHODS

One specimen from Devkunt Sagar, Bikaner district, Rajasthan (28°18' N, 73°39' E) has been collected during recent faunistic survey carried out by Zoological Survey of India. After making the collection, leeches were sorted out and cleaned. They were placed in a tray with a small quantity of water and were slowly killed by the anaesthetizing with drop-wise addition of alcohol allowing them to expand before death. Just after death, the leeches were kept in 70% alcohol for permanent preservation. The measurements were taken by dial calipers with 0.1 mm accuracy. The identified specimens are deposited with the National Zoological Collections of the General Non-Chordata Section, Zoological Survey of India, Kolkata.

*Placobdella devkuntai sp. nov.:*

*Holotype:*

Z.S.I. An 4193/1, 1ex, Devkunt Sagar, Bikaner district, Rajasthan (28°18' N, 73°39' E), India, C.K. Mandal, 11. Xi. 2014.

*Paratype:*

An 4717/1, 6 ex, collection details same as Holotype.

*Other material:*

An 4718/1, 70 ex, collection details same as Holotype.

Fig. 1. *Placobdella devkuntai* (Egg bearing)Fig.2. *Placobdella devkuntai* (Ventral)Fig. 3. *Placobdella devkuntai*  
(attacks human beings)Fig. 4. *Placobdella devkuntai*  
(showing crop caeca)**Diagnosis:**

*Placobdella devkuntai* which was collected from Devkunt Sagar, Bikaner district, Rajasthan (total of 77 examples) were all found to belong to a new species. It attacks human beings. This is the first record of human sucking glossiphonid leech in the world. One pair of eyes. Nine pairs semi-branched crop caeca. Egg number is 37. Number of ring is 91.

**Description of the species (Fig. 1, 2, 3 and 4):**

Greyish green in living condition, fade up at preserved state. Body is small, flattened and elongated, distinct head region. The total length of the body is 8.5 mm. Breadth 3mm. anterior sucker 1 mm in diameter, posterior sucker 1.8mm in diameter. Posterior sucker is almost round, anterior sucker almost round. One pair of eyes, almost triangular in shape. Presence of nine pairs of semi-branched crop

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caecae. Number of ring is 91 from anterior sucker to posterior sucker. Breeding season is August to November. Number of eggs are 17-19. It lives in the vegetation of lotus, waterlily, Valisnaria and another aquatic grasses. Sticks on the molluscs and dipped earthen pots in the waterbody.

*Host and habitat:*

It is found in lake, sucks the blood of human beings (Fig. 3), cattle and molluscs.

*Distribution:*

Bikaner district, Rajasthan, India.

*Etymology:*

The specific name is proposed after the name of the type locality.

*Remarks:*

The present described species *Placobdella devkuntai* is somewhat similar to *Placobdella emydae* in body shape. It is distinguished from *P. emydae* in its eye colour, number of rings and semi branched crop caeca in the body (Table. 1). Numbers of eyes are same in *P. godavariensis* and *P. devkuntai* but eyes and crops are completely different in these two species. *P. ceylanicas* clearly distinct in having three pairs of eyes. *P. indica*, *P. undulata* differs from this new species in having 70 or 71 body rings. *P. devkuntai* 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. bistriata*, *P. hollensis*, *P. mexicana*, *P. montifera*, *P. nuchalis*, *P. multilineata* etc. by the body pigmentation pattern, disposition of eye spots and arrangement of papillae on the body. There is late rainy season in Rajasthan and due to this reason breeding season (August-November) of leeches is also late.

### III. COMPARATIVE MATERIALS

*Placobdella fulva* –An 2762/1, 3 exs., Calcutta, 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.

#### IV. SUMMARY

*Placobdella devkuntai* is described as a new species from Rajasthan. Due to having one pair of eyes, it belongs to the genus *Placobdella*. It is distinguished in possessing the following characters. Body is flattened and elongated. Eyes are one pair, almost comma shaped. 9 pairs of caeca (semi branched) are present in the body. Stripe like one line papillae is found on the mid- dorsal area of the body, two on dorsal and 2- 6 Lines of obscure papillae on the dorsal area. Anterior sucker almost round. Number of ring is 91. The leech is grayish green in living. Length of a full-grown preserved specimen is 8.5 mm. and width is 3 mm. Posterior sucker is 1.8mm (Round in shape) in diameter and anterior sucker (almost round) measures 1 mm diameter. A living specimen becomes almost double in length in full extension. This leech attacks human beings. It is a remarkable character.

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