

Placobdella rampurai sp. nov. (Clitellata: Octochaetidae): A New Leech from Bihar, India

C. K. Mandal, R. S. Mridha, Md. Nurul Hasan, Mintu Ghosh
Zoological Survey of India, FPS Building, Kolkata-700016.

Abstract:- *Placobdella rampurai* is described as a new species from Bihar. Small body. 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 angle shaped. 11 pairs of caeca (branched) are present in the body. Number of ring is 73. The leech is brownish in living. Length of a full-grown preserved specimen is 9 mm. and width is 2.8 mm. Posterior sucker is 1.5 mm. (Round in shape) in diameter; anterior sucker (almost round) measures 1 mm diameter. A living specimen becomes almost double in length in full extension. This leech sucks blood of molluscs and fishes.

Index Terms:- *Placobdella rampurai* sp. nov. Clitellata, Octochaetidae, Bihar, oyster shaped, caeca, lake, parasitic.

I. INTRODUCTION

More than 700 species of leeches are in the world. In India only 69 leech species of leeches are recorded so far Mandal (2015). This new species has been collected from Rampurai, West champaran, Bihar during recent faunistic survey carried out by Zoological survey of India. In addition to this many new records have also recorded along with this. It attacks molluscs. Harding and Moore (1924, 1927), have described number of new species from India. Mandal (2004, 2015) has described six new species from West Bengal. Soos (1965) is the pioneer in Taxonomy of leeches. Bandyopadhyay (2004), Mandal (2004), Raut and Saha (1986, 1986b, 1987) have done some work on taxonomy and ecological work of leeches in West Bengal. Soota (1977), Chandra, M (1983), Ghosh G.C. (1998) contributed a lot on the taxonomy of leeches which are most valuable for future workers.

II. MATERIAL AND METHODS

After making the collection, leeches were sorted out. Then the cleaned leeches were placed in a tray with a small quantity of water and were slowly killed by anaesthetizing with alcohol. Leeches usually die in an extended condition by the process. Just after death, the leeches were kept in 70% alcohol for permanent preservation. As fixing fluid 4% formalin may be used.

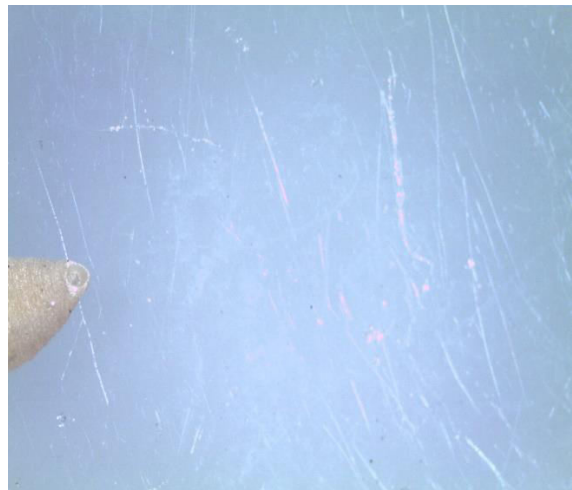
III. *PLACOBDELLA RAMPURAI* SP.NOV.

Holotype: Z.S.I. Reg. No. An4768/1 1ex. Coll. C. K. Mandal. 04. x. 2016, *Placobdella rampurai*, Rampur, West Champaran (Latitude 26°31'15" N and Longitude 86°16'40"E) Bihar, India.

Plate. 1



Placobdella rampurai (Ventral)



Placobdella rampurai (Anterior sucker)



Placobdella rampurai (Posterior sucker)



Placobdella rampurai (Eyes on head region)

*Placobdella rampurai* (Ventral)*Placobdella rampurai* (Dorsal)

IV. DIAGNOSTIC CHARACTERS

Body shape is oyster like which is different from another leeches. So it is named oyster leech. Sucks blood of molluscs and fishes. Colour brownish in living condition, fade up at preserved state. The total length of the body of *Placobdella rampurai* is 9 mm. Breadth 2.8 mm. Colour Whitish brown. Anterior sucker 1 mm. in diameter, posterior sucker 1.5mm. in diameter. Posterior sucker is almost round, anterior sucker almost round. One pair of eyes, almost triangular in shape. Eleven pairs of branched caeca which is absent in any other leeches of the genus. Body contains 73 segments. Breeding season is June- July of the year.

Habit and habitat:

It is found in lake, sucks the blood of mollusc and fishes. Lives in the lake where aquatic grasses and water hyacinth are found.

Distribution:

Bihar, India.

Etymology:

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

Remarks:

The present described species *Placobdella rampurai* is somewhat similar to *Placobdella kagdepekapi* in body shape. It is distinguished from *P. kagdepekapi* in its eye colour, number

of rings and branched crop caeca in the body. Numbers of eyes are same in *P. godavariensis*, *p. devkuntai* sp. nov. but eyes and crops are completely different in these two species. *P. ceylanicais* 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. bistrinata*, *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.

V. 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., 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 undulate :

An 2791/1, 1 ex. Burdwan, West Bengal;

An 2827/1. 1 ex. Nadia, West Bengal.

ACKNOWLEDGEMENT

We are grateful to Dr. Kailash Chandra, Director, Zoological Survey of India, for lucid suggestions during the study of the leeches, and our special thanks to Dr.Ch. Satyanarayana O/C General Non-Chordata Section, Sri S.S. Mihsra Scientist “C” Marine Fish and deep gratitude to the officers and staffs, General Non-Chordata section for their valid suggestions.

REFERENCES

- [1] Bandyopadhyay, P.K. and Mandal, C.K. 2004. On the occurrence of five leeches, *Barbronia weberi*, *Glossiphonia annandalei*, *Glossiphonia heteroclitia*, *Glossiphonia reticulata* and *Placobdella undulata* in West Bengal. *Rec. Zool. Surv. Ind.* **105** (part 3-4): 93-101.
- [2] Chandra, M.1983. A check-list of leeches. *Rec. Zool. Surv. India.* **80(3&4)**: 265-290.
- [3] Ghosh, G.C. 1998. Leech fauna of West Bengal. State Fauna Series 3. *Zool. Surv. India* Part 10: 227-249.
- [4] Mandal, C.K. 2004. Checklist of the Hirudinea (Leech) of India. *Rec. Zool. Surv. India:* **102** (Part1-2): 41-46.
- [5] Mandal, C.K. 2004a. *Paraclepsis gardensi* (Hirudinea: Glossiphonidae) a new species of Leech from West Bengal, India. *Rec. zool. Surv. India:* **103** (Part1-2): 111-114.
- [6] Mandal, C.K. 2004b. *Placobdella harasundarai* (Hirudinea: Glossiphonidae) a new species of Leech from West Bengal, India. *Rec. zool. Surv. India:* **103** (Part1-2): 99-102.
- [7] Mandal, C.K. 2004c. Endemic leech fauna of India. *Rec. Zool. Surv. India*, 103 (Part12): 103-110.
- [8] Mandal, C.K. 2004d. Leeches. Fauna of Arunachal Pradesh, State fauna series. *Zool. Surv. India:* 13(part-2): 47-48.
- [9] Mandal, C.K. 2005. Annelida: Hirudinea (Non-coastal districts). State Fauna Series 5: Fauna of Andhra Pradesh (part-5), *Zool. Surv. India, Kolkata:* 319-338.
- [10] Mandal, C.K.2010a. Annelida: Leeches. Fauna of Uttarakhand, State Fauna Series, 18 (Part-3). *Zool. Surv. India, Kolkata:* 193-197.
- [11] Mandal, C.K, Dhani, S, Mitra, Santanu and Misra, A. 2010. Annelid fauna of some selected wetlands.Fauna of Uttarakhand, State Fauna Series. *Rec. Zool. Surv. India.* 18 (Part 3), 173-180.
- [12] Mandal, C.K.2013. *Placobdella gauripurensis* **sp. nov.** (Hirudinea: Glossiphonidae). A new leech from West Bengal. *Rec. zool. Surv. India:* **113** (Part-1): 211-213.
- [13] Mandal, C.K. 2005. Leech Fauna of Bibhuti Bhusan National Park, west Bengal, India. *Rec. Zool. Surv. India:* 114 (part-3): 587-591.

- [14] Mandal, C. K. 2015a. A new leech from Jharkhand, India. *Paraclepsis jorapariensis sp. nov.* (Hirudinea: Glossiphinidae) *Rec. Zool. Surv. India*: **115** (Part-3): 263-267.
- [15] Mandal, C. K. 2015b. *Placobdella godavariensis sp. nov.* (Hirudinea: Glossiphinidae) A new leech from Maharashtra, India. *Rec. Zool. Surv. India*: **115** (Part-3): 269-272.
- [16] Moore, J.P. and Harding, W.A.1927. *Fauna of British India, Hirudinea*. Tailor and Francis, London.
- [17] Moore, J.P. 1924. Notes on some Asiatic Leeches. Principally from China. *Proc. Acad. Nat. Sec. Philad.* 76: 343-388.
- [18] Raut, S.K. 1986. Parental care of leech *Hemiclepsis marginata marginata*. *Environ. And Ecol.*, 4:150.
- [19] Raut, S.K. and Saha, T.C. 1986b. Growth rate of leech *Hemiclepsis marginata marginata*. *Environ. and Ecol.*, 4: 292-294.
- [20] Raut, S.K. and Saha, T.C. 1987. Life history of sanguivorous leech *Hemiclepsis marginata marginata* (Muller). (Annelida: Glossiphonidae). *J. Anim. Sci.*, 57: 970-972.
- [21] Mark Siddall, 2008. "Myth Busters: Leech Anaesthetic". Bdeellanea. Retrieved December 15, 2013.
- [22] Soos, A.1965. Identification key to the leech (Hirudinoidea) genera of the World, with a Catalogue of the species. 111-1V. *Acta. Zool. Acad. Hung.* **11**(3-4): 415-464.
- [23] Soota, T.D. and Ghosh, G.C. 1977. On some Indian Leeches. *Newsl. Zool. Surv. India*: 3(6): 359-360.