



NEW LOCALITY RECORD OF THE LEECH *POECILOBDELLA MANILLENSIS* FROM DARJEELING DISTRICT, WEST BENGAL, INDIA

C.K. MANDAL, S. DHANI AND M. CHAKRABORTY

Zoological Survey of India, 27, J. L. Nehru Road, FPS Building, Kolkata-700016

E-mail: mandalsucker@gmail.com

INTRODUCTION:

This paper deals with the new locality record of a leech (Class Hirudinea) *Poecilobdella manillensis* at Siliguri (Latitude 26° 84959N and Longitude 88° 44088 E), Darjeeling district. So far, 8 species of leeches under two families (Hirudidae and Haemadipsidae) are reported in the district of Darjeeling (Harding and Moore, 1927). Hirudidae family has two species (*Dinobdella ferox*, *Hirudo birmanica*) of leech found in the district. This leech forms the Third species of the family which has been collected recently. Harding and Moore (1927), Soota and Ghosh (1977), Ghosh (1998), Chandra (1976) worked on the records of leeches in India. Bandyopadhyay and Mandal (2005), Mandal (1996, 2000, 2002 and 2010) recorded several species of leech from West Bengal, Tamil Nadu, Andhra Pradesh, Karnataka, UttaraKhand, Arunachal Pradesh and Jharkhand of India.

MATERIALS AND METHODS

This leech specimen is collected from under a stone surrounded by grasses of the mountain spring near Gaiganga tea garden (Jhora) of Siliguri, district Darjeeling. Collection is made by hand having gloves in the hand. After collection the leech is kept in a wide mouth bottle and cleaned by fresh water. After cleaning the leech specimen is placed in a tray with little water and it is slowly killed by adding drops of 70% alcohol. Leeches usually die in an extended condition by the process and this extended body of the leech

helps in identification. After death, the leech is kept in 70% alcohol for permanent preservation.

Material examined: 1 ex., Gaiganga tea garden (Jhora) Siliguri, Darjeeling district, West Bengal, India, 16.09.2011, collected by Munmun Chakraborty.

Other materials examined: An 2754/1 2 exs., Lakhimpur, Uttar Pradesh, collected on 08.03.1990 by G.C. Ghosh; An 2812/1, 2 exs., South Dinajpur, West Bengal, India, collected on 24.03.1995 by Dr. C.K. Mandal; An2856/1, 2exs., Karandighi, South Dinajpur, West Bengal, India, collected on 24.03.1995 by Dr. C.K. Mandal.

Diagnostic characters: Body is elongated, attains a length of about 6.2 centimeter, Width 1.4 centimeter. The leech has two suckers. Anterior and posterior suckers are 6mm. and 8.5 mm. in diameter respectively. Colour is brown dorsally, light green ventrally in living form. Colour fades up in preserved state. There is no sign of green ventrally in preserved state. Dorsalside bears eleven black breaking chain stripes. Two blackish lines are nearer to marginal cream colour in preserved condition. Number of teeth is one hundred. There are 111 annuli in the body. Male and female pores separated by five annuli. Vaginal stalk is absent.

Distribution: India: Landour (U.P.); Andhra Pradesh; Assam; Bihar; M.P.; Maharashtra; Orissa; Tamil Nadu; Cachar (Assam); Karnataka; Cochin (Kerala); Calcutta, West Dinajpur, Bunkura, Birbhum, Burdwan, Coochbihar, Hooghly,

Photographs of a leech collected from Siliguri, Darjeeling, West Bengal:



Poecilobdella manillensis(V) *Poecilobdella manillensis*(D)
Howrah, Jalpaiguri, Malda, Purulia, South 24 Parganas, North 24 Parganas, Darjeeling, West Bengal.

Outside India: Pakistan; Sri Lanka; Myanmar; Borneo; Malaysia; Philippines and China.

Remarks: The present distributional record of this species may contribute to the result of climate change. It has been seen that increase in temperature of a region, particularly in aquatic habitats, compelled the ambient species to

migrate to cooler regions. Similarly, some species earlier could not invade the cooler region may now spread in to with conducive temperature rise. Meteorological data's (1994 and 1995) shows that within last ten years average temperature of some region of Himalaya, especially at Darjeeling is increasing. As a result, some places of the region becoming devoid of ice fall and it is well noticed by the local people. *Poecilobdella manillensis* has earlier been collected from the districts of Jalpaiguri and Cooch Bihar in lower parts of Bengal duars, but several faunal surveys failed to find this leech from Darjeeling district prior to the recent survey. It may be possible that *Poecilobdella amanillensis* now invaded the district with change of temperature that makes the environment conducive for its survival and established in the plains below the hills of the district.

SUMMARY:

Present study reveals the extended distribution record of leech *Poecilobdella manillensis*. So far it has not been reported from Darjeeling District. The present record from Siliguri in Darjeeling District may possibly due to climate change.

ACKNOWLEDGEMENTS

We are grateful to Dr. K. Venkataraman the Director, Zoological Survey of India, for lucid suggestions during the study of the leeches. Our special thanks to Dr. Ch. Satyanarayana, Sci-B and O/C General Non-Chordata Section and Sri. S. S. Mishra, Scientist-B for their inspiration and deep gratitude to Sri K.C. Gopi, Scientist-E and O/C Spirit Building for his valuable suggestions.

REFERENCES

- Bandyopadhyay, P.K. and Mandal, C.K. 2005. On the occurrence of five leeches *Barbronia weberi*, *Glossiphonia annandalei*, *Glossiphonia heteroclita*, *Glossiphonia reticulata* *Placobdella undulate* in West Bengal, India. *Rec. zool. Surv. India*: **105**(Part 3-4): 93-101.
- Chandra, M. 1976. On a small collection of leeches from Maharashtra state, India, *Rec. zool. Surv. India*, **69**(1-4) [1971]: 325-328.
- Ghosh G.C. 1998. Leech fauna of West Bengal. State fauna series 3. *Zool. Surv. India* Part **10**: 227-249.
- Harding, W.A. and Moore, J.P. 1927. Fauna British India. *Hirudinea*, London, pp. 1-302.
- Mandal, C.K. 1996. On the occurrence of the two Leeches; *Hemiclepsis marginata asiatica* and *Placobdella fulva* in West Bengal, *Sci. Cult.*, **62**(5-6).

- Mandal, C.K. 2000. On the occurrence and breeding season of the leech *Placobdella emydae* in West Bengal. *Sci. Cult*, **66**(7-8): 267-268.
- Mandal, C.K. 2002. *Checklist of the Hirudinea (Leech) of India*. *Rec.zool.Surv. India*: **102** (Part1-2) 41-46.
- Mandal, C.K. 2010. Diversity and distribution of aquatic leeches in wetlands of West Bengal. *J. Environ. and Sociobiol.* **7** (2): 209-211.
- Soota, T.D. and Ghosh, G.C. 1977. On some Indian Leeches. *Newsl. Zool. Surv. India*, **3**(6): 358-361.