International Journal of Advanced Research in Basic Engineering Sciences and Technology (IJARBEST) Vol.4 Issue.2 February 2018

New Record of an earthworm *Perionyx fulvus* from Malda and Howrah district, West Bengal India

¹Md. Nurul Hasan, ²Ujjal Das, ³C.K.Mandal ^{1, 2, 3} Zoological Survey of India, FPS Building, Kolkata-7000016

Abstract – *Perionyx fulvus* is an earthworm collected from Malda and Howrah district, West Bengal India. Elongated body. This species belongs to Family Megascolecidae (9 genus in India) and genus *Perionyx* has 42 species in India. Length 175 mm, diameter 2.5 – 4.56 mm, segments 178; colour yellowish brown, almost unpigmented; Prostomium epilobous. Perichaetine setal arrangement in the body. Racemose prostate gland.

Index Terms – New Locality, *Perionyx fulvus.*, Megascolecidae, Malda and Howrah, first record, West Bengal, Transport of soil.

I. Introduction

The paper deals with the new locality record of an earthworm (Class- Clitellata) *Perionyx fulvus* from Malda and Howrah West Bengal India (Malda:Latitude 25° 01' 39.0276" (N) and Longitude 88° 8' 27.9528". Howrah: Latitude 22° 35' 21" (N) and Longitude 88° 18' 37"). There are more than 6000 species of earthworms in the world, where as in India 560 and 61 in West Bengal and 18 in kolkata (Julka et al. 2009). *Perionyx fulvus* first recorded from Malda and Howrah West Bengal.

Bandyopadhyay et.al(2008) Earthworms of North 24 Parganas; Beddard (1883) works on some earthworms from India; Haldar et.al & Halder (2004, 1998) some earthworms present in unnamed collections of ZSI and earthworms, Fauna of West Bengal, respectectively; Julka (1988) Earthworm Fauna of India & the adjacent Countries; Mandal (2006, 2008) a report on earthworm species of Tarakeswar and Adjoining area of Hughly district, west Bengal with some ecological notes and Record and abundance earthworm Ballavpur wildlife sanctuary, Birbhum, west Bengal respectively; Paliwal and Mandal (2008) Earthworm fauna of Museum Tank. Stephenson (1916) on a collection of Oligochaeta belonging to the Indian Museum.

II. MATERIALS AND METHODS

This Earthworm specimen are collected from grassland of Howrah and Malda. Collection is made by Md. Nurul Hasan and Ujjal Das having gloves in the hand. After making the collection,

Md. Nurul Hasan et al.

© IJARBEST PUBLICATIONS

ISSN (Online): 2456-5717

International Journal of Advanced Research in Basic Engineering Sciences and Technology (IJARBEST) Vol.4 Issue.2 February 2018

Earthworms were sorted out and cleaned. They were placed in a tray with a small quantity of water and

were slowly killed by anaesthetizing with alcohol allowing them to expand before death. Just after death,

the leeches were kept in 70% alcohol for permanent preservation. For good dissection material were kept

in 4% formalin for 12 hours just after narcotization.

Material examined:

1ex. Howrah central, West Bengal. 30.12.2014. Coll. Ujjal Das. The specimens have been deposited

in the national collection of Z.S.I. Calcutta. Registration number is An 4405/1.

1ex. Malda, West Bengal. 15.08.2016. Coll. Md. Nurul Hasan. The specimens have been deposited in

the national collection of Z.S.I. Calcutta. Registration number is An 4951/1.

Other materials examined:

5 ex. from Kharagpur, Midnapur on 12.02.2014. Coll. Ujjal Das. The specimens have been deposited

in the national collection of Z.S.I. Calcutta. Registration number is An 4406/1.

13 ex. from Gossami dam, Medak, Andhra Pradesh India. 10.01.2001. The specimens have been

deposited in the national collection of Z.S.I. Calcutta. Registration number is An 4422/1.

40ex. from Poona Maharashtra India. 29.09.1959. Dr. T.D.Soota. The specimens have been deposited

in the national collection of Z.S.I. Calcutta. Registration number is An 4515/1.

Diagnostic characters (Fig. 1, 2, 3 and 4):

Length 175 mm, diameter 2.5 – 4.56 mm, segments 178; colour yellowish brown, almost unpigmented;

Prostomium epilobous. Tongue partly cut off behind by an in turning of the sides. Clitellum XIII-XVII.

Male pores very close together; Spermathecal pores on two pairs close together in 7/8 and 8/9. At B;

Gizzards in VI small and vestigial. Prostates small and confined to XVIII.

Remarks:

This is recorded for the first time from Howrah and Malda districts of West Bengal. The

species is also very common within the sanctuary, however, restricted to the moist humus mixed

soil.

Distribution:

India: Kolkata, West Bengal.

Outside India:

Myanmar.

Md. Nurul Hasan et al.

© I.JARBEST PUBLICATIONS

14

International Journal of Advanced Research in Basic Engineering Sciences and Technology (IJARBEST) Vol.4 Issue.2 February 2018



Fig 1. Perionyx fulvus (Ventral)



Fig. 3. Perionyx fulvus (Dorsal view)



Fig 2. Perionyx fulvus (Dorsal)



Fig. 4 Perionyx fulvus (Lateral view)

III. SUMMARY

This earthworm species is recorded for the first time from Howrah and Malda district West Bengal. Due to transportation of soil and stones from North India to all over India and global warming Species are sustaining not only in cold area but also in less cold area. So far some mountain species are found in plain land also.

International Journal of Advanced Research in Basic Engineering Sciences and Technology (IJARBEST) Vol.4 Issue.2 February 2018

ACKNOWLEDGEMENTS

We are grateful to Dr. Kailash Chandra, Director, Zoological Survey of India, for lucid suggestions during the study of the leeches and facilities. Our special thanks are due to Dr. Ch. Satyanarayana, O/C, General Non-Chordata Section for encouragement and guidance. We extend our deep gratitude to Sri S.S. Mishra, Scientist "C" Marine Fish Section for his valid suggestions and staffs of General Non-Chordata section for co-operation.

REFERENCES

- [1] Bandyopadhyay, P.K., Mandal C.K. and Mitra, A.K. 2008. Earthworms of North 24 Parganas Rec. Zool. Surv. India: 108(Part-3): 21-25.
- [2] Beddard, F.E. 1883. Note on some earthworms from India. Annals and Magazine of Natural history, (5) 12: 213-224.
- [3] Haldar, K. R. Dhani. S. And Mandal, C.K.2004. On some earthworms present in unnamed collections of ZSI. Rec.Zool.Surv.india.107 (part-3):79-93, 2007.
- [4] Halder, K.R. 1998. Annelida: Oligochaeta: earthworms, State Fauna Series 3: Fauna of West Bengal, part 10: 17-93.
- [5] Julka, J.M. 1988. Fauna of India & the adjacent Countries: Megadrile Oligochaeta (earthworms); Haplotaxida: Lumbricina: Megascolecoidea: Octochaetidae, 400 p.p. Zoological Survey of India, Calcutta.
- [6] Julka, J.M., Paliwal, R. and Kathireswari. P. 2009. Biodiversity of Indian Earthworms-overview.
- [7] In Proceedings of Indo-Us Workshop on Vermitechnology in Human Welfare, Edwards, C.A., Jayaraj, R. and Jayaraj, I.A. (Eds) Rohini Achagam, Coimbatore, India. 36-56.
- [8] Mandal, C.K. Misra. A. and Mitra.S.2006.a report on earthworm species of Tarakeswar and Adjoining area of Hughly district, west Bengal with some ecological notes. Rec. Zool. Surv. india. 106 (part-3).123-130.
- [9] Mandal, C.K., Misra. A., Roy, G.C. and Biswas. S, 2008. Record and abundance earthworm Ballavpur wildlife sanctuary, Birbhum, west Bengal. Rec.Zool.Surv.india.108 (part-3):97-108.
- [10] Mandal, C.K.2008. Earthworm studies of population in saline and non-saline soil of Midnapore and Bardwan district of West Bengal. Rec. Zool. Surv. india.108 (part-3).49-54.
- [11] R. Paliwal and Mandal, C.K. 2008. Earthworm fauna of Museum Tank. Rec. Zool. Surv. India, Occ. Paper No. 333, 46-48.
- [12] Stephenson, J. 1916. On a collection of Oligochaeta belonging to the Indian Museum. Records of the Indian Museum, 12: 299-354.