

Octochaetona nurulai sp. nov. (Clitellata: Octochaetidae): A New Earthworm from Tamil Nadu, India

C.K. Mandal, Md. Nurul Hasan, Priyanka Talukder
Zoological Survey of India, FPS Building, Kolkata-700016, India

Abstract- *Octochaetona nurulai* is a new species of earthworm collected from Cooum river bank, Madras district (Latitude 20.0014° North and Longitude 73.7869° East), Tamil Nadu, India. Elongated robust body. This species belongs to Family Octochaetidae and genus Octochaetona. It has 15 species of Octochaetona genus in India. The total length of the body is 3.2cm. Breadth 3 mm. anal pore is .9 mm in diameter. Mouth is 1 mm in diameter. Total number of body rings is 123. Male and female pores open between the rings 18 and 14 respectively. Clitellar region reddish brown Medium sized. Two round shaped genital markings on 12th segment. Colour is brown in living condition. Colour fades up in preserved state. Lumbricine setal arrangement in the body.

Index Terms- *Octochaetona nurulai* sp. nov. Clitellata, Octochaetidae, Cooum river bank, Madras district, Tamil Nadu, India.

I. INTRODUCTION

Earthworms occur in diversified habitats from manure, compost, litter, humus, kitchen drainage, forest land, grassland, agricultural land, plant nursery, etc. They are omnivorous, but most of them derive nutrition from dead organic matter. The beneficial effect of earthworms in increasing soil fertility has been documented since the time of Darwin (1881). Because of the vast number of species available in India and also because of the economic value, understanding of the distribution, abundance and ecological condition of the species has become very important. Octochaetidae family has 26 genera in India (Julka, 1988). Halder (1998), Bandyopadhyay, Mandal and Mitra (2008) etc Indian authors and Baird (1869) foreign author worked on earthworms which are valuable for the future workers of taxonomy. There are more than 4400 species of earthworms in the world, where as in India 561 (Mandal et al. 2017).

II. MATERIAL AND METHODS

After making the collection, earthworms were sorted out and cleaned. Then the cleaned earthworms 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. Earthworms

usually die in an extended condition by this process. Just after death, the earthworms were kept in 70% alcohol for permanent preservation. This new species of earthworm *Octochaetona nurulai* has been collected from Cooum river bank, Madras district (Latitude 20.0014⁰ North and Longitude 73.7869⁰ East), Tamil Nadu, India during old faunistic survey carried out by Zoological survey of India in 19.10.1961. The new species is compared with the material of other species available in hand and information on other species is taken from literature.

Plate 1.

*Octochaetona nurulai* (Anterior postero part)*Octochaetona nurulai* (Genital part)*Octochaetona nurulai* (Lateral)*Octochaetona nurulai* (Anterior ventral)

Holotype:

Z.S.I. Reg. No. An 4983/1, 1 ex., Coll. P.P, 19.x.1961, Cooum river bank (Latitude 13°00'19" N and Longitude 80°14'31"E), Madras district, Tamil Nadu, India.

Diagnosis: Body (Plate 1):

Medium sized elongated body brownish in colour, ventral region reddish in colour. The total length of the body is 3.2cm. Breadth 3 mm. Middle part almost half of the body.

Mouth pore 1mm in diameter, anal pore 0.9 mm. Total number of body rings is 123. Male and female pores Open between the rings 18 and 14 respectively. Male pore is almost rectangular. Small to medium sized. Clitellar region reddish brown.

Habit & Habitat:

The species of earthworms live in the bush. It lives in the shadow place and beneath the half feet below of the soil. In the month of June -July due to rain it comes out from the soil in search of dry habitat, then collection becomes easy. Breeding season is June –July. It embraced to each other from opposite end at the time of breeding. Male pore is below the female pore which is opposite in leeches.

Distribution:

Tamil Nadu, India.

Etymology:

The specific name is proposed according to the name of the one of the author who found the specimen from the old collection of ZSI, Kolkata.

Remarks:

The present described species *Octochaetona nurulai* is somewhat similar to *Octochaetona surensis* in body shape. It is distinguished from *Eutyphoeus* in its colour, number of rings in the body (Plate 1). All the species of Octochaetidae family are different from the new species of the earthworm.

III. COMPARATIVE MATERIAL

Octochaetona Surensis:

An 3960/1, 20 ex., Balasore, Odisha.

An 4078/1, 18ex. Goalpara, Birbhum, West Bengal.

Octochaetona paliensis:

An 4011, 1 ex., Bhadrak, Odisha.

An 4792/1, 6ex. Mahavura college, Karnataka.

Octochaetona Beatrix:

An 4533/1, 5 ex. Biswanathpur, Kalahandi, Orissa.

An 4589/1, 5 ex. Baroda, Gujarat.

Octochaetona fermosi:

An 4593/1, 4 ex. Lahore, Pakistan.

An 4686/1, 1ex. Gangtok, Sikkim.

Octochaetona rosea:

An 4790/1, 8ex. Mahavura College, Karnataka.

Octochaetona berkudensis:

An 4820/1, 1ex. Odisha, India.

An 4825/1, 9ex. Odisha India.

Material examined:

Octochaetona nurulai:

1 ex. Cooum river bank (Latitude 13°00'19" N and Longitude 80°14'31"E), Madras district, Tamil Nadu, India.

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