



ORIGINAL ARTICLE

Report of Nematode Parasite of Genus *Spinitectus* (Fourment, 1883) from *Mastacembelus armatus***Dhanraj Balbhim Bhure¹, Sanjay Shamrao Nanware¹ and K.M. Shaikh²**¹ Post Graduate Department of Zoology, Yeshwant Mahavidyalaya, Nanded-431602 (M.S.) India² Department of Zoology, Poona College, Pune.Email: drajbhure82@gmail.comReceived: 5th April 2017, Revised: 29th April 2017, Accepted: 2nd May 2017**ABSTRACT**

Present study deals with taxonomic observation of nematode *Spinitectus indica* Bhure and Nanware, 2013 of freshwater fish *Mastacembelus armatus* (Lacepede, 1800) from Nanded district of M.S. India. It comes closer to *Spinitectus indica* Bhure and Nanware, 2013 in having body medium, having annulations, annula bearing spines, Males smaller than females, spicules unequal, tail curved in male, two ovaries, situated at one anterior and other posterior one, Caudal Papillae nine pairs, out of them five pairs are pre-anal while four pairs are post-anal in position, vulval opening in front of the anus, tail pointed in females. But differs due to morphometric variation hence redescribed.

Key words: *Mastacembelus armatus*, Morpho-taxonomic Study, Report of Nematode parasite, *Spinitectus indica* Bhure and Nanware, 2013

INTRODUCTION

Genus *Spinitectus* was established by Fourment, 1883. The genus *Spinitectus* Fourment, 1884 includes a large number of species described mainly from freshwater and marine fishes (Moravec *et al.* 2002). Holl, 1928 described *S. carolini*; Travassos *et al.*, 1928 reported *S. yorkeri*; *S. corti* reported by Moorthy in 1938; Robin Overstreet, 1970 described *S. bevaeri*; Petter added *S. pachyuri* in 1984 and *S. multipillatus* in 1987; Wang *et al.*, 1993 added two species in this genus viz. *S. yuanjiangensis* and *S. bagri*; Choudhury and Perryman 2003 described *S. osorioi*; Later on Moravec *et al.*, reported two species in 2004 i.e. *S. petrowi* (Belous, 1965), *S. gigi* (Fujita, 1927) and in 2009 *S. tabascoensis* (Moravec *et al.*, 2004), *Spinitectus indica* added by Bhure and Nanware, 2012.

MATERIAL AND METHODS

Nematodes were collected from the intestine of a freshwater fish, *Mastacembelus armatus* from Nanded district of M.S. India. Collected nematodes parasites are preserved in hot 10% glycerol, cleared in lactophenol, mounted in glycerin jelly and drawings are made with aid of camera lucida. Photomicrographs were taken by Research microscope. All measurements are recorded in millimeters.

RESULTS (DESCRIPTION BASED ON FIGURE1-2)

Nematode is mediam, Cuticle thin, provided with series of annulations with spines. First three annulation bear 26 spines and next annulation bears 28 spines. This number is constant till first post-oesophageal annulation. Mouth situated at apex., Lips absent. Mouth leads into thin walled, short, funnel shaped vestibule. Oesophagus consists of two parts. Posterior part of oesophagus joins to intestine. Intestine leads into rectum.

MALE CHARACTERS:

Males smaller than females, 3.80 × 0.90 mm. Buccal capsule medium, 0.112 × 0.080 mm. Nerve ring surrounding the muscular portion of oesophagus and lies at 0.31 mm from anterior extremity. Excretory pore lies at 0.345 mm from anterior extremity. Oesophagus consisting muscular and glandular parts, 0.680 mm. nine pairs of caudal papillae, five pairs are pre-anal and four pairs are post-anal in position. Spicules unequal, Right spicule short, 0.092 mm, left spicule long, 0.34mm. Tail curved, 0.098 mm.

Fig. 1: Micro Photoplate of *Spinitectus indica* Bhure and Nanware, 2013. **(A):** Anterior region of male, **(B):** Posterior region of male, **(C):** Anterior region of female **(D):** Posterior region of female

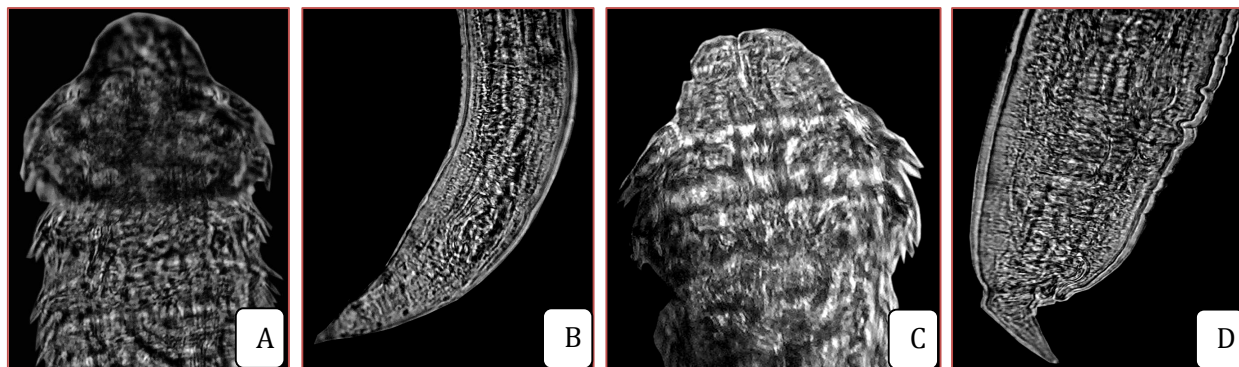
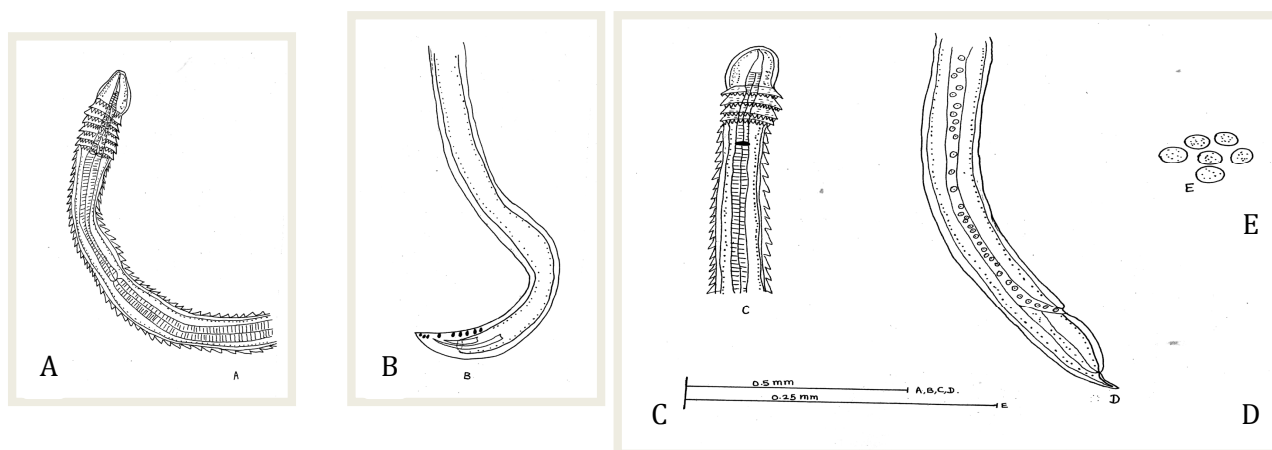


Fig. 2: Camera lucida diagram of *Spinitectus indica* Bhure and Nanware, 2013 **(A):** Anterior region of male **(B):** Posterior region of male, **(C):** Anterior region of female and **(D):** Posterior region of female **(E):** Eggs



FEMALES CHARACTERS:

Females longer than males, 4.9 × 0.98 mm. Buccal capsule medium, 0.183 × 0.096 mm. Nerve ring surrounding muscular portion of oesophagus and lies at 0.421 mm from anterior extremity. Excretory pore lies at 0.397 mm from anterior extremity. Oesophagus consisting muscular and glandular parts, 0.826 mm. Vulval opening in front of anus at 0.35 mm from posterior extremity. Narrow vagina runs foreword from it. Ovaries two, one anterior while other posterior. Tail pointed, 0.143 mm.

DISCUSSION

Genus *Spinitectus* was established by Fourment, 1883. After going through the literature the present worm comes closer to known species *Spinitectus indica* Bhure and Nanware, 2013 in having all the essential morphological characters i.e. body medium, having annulations, annula bearing spines, oesophagus divided into two parts i.e. muscular anterior and glandular posterior one, thin cuticle and spicules unequal. But it differs due to following characters.

1. First three annulation bear 26 spines and next annulation bears 28 spines. Vs. First three annulation bear 24 spines and next annulation bears 26 spines.
2. Variation in Morphometrics.
3. Buccal capsule Medium Vs. Long.

As the characters are minor, it is therefore identified and redescribed here as *S. indica* Bhure and Nanware, 2012. The present form is collected from *Mastacembelus armatus* at Nanded (M.S.) India.

Whereas *S. indica* Bhure and Nanware, 2012 is collected from *Mastacembelus armatus* at Nanded (M.S.).

TAXONOMIC SUMMARY:

Genus : *Spinitectus* Fourment, 1883
Species : *S. indica* Bhure and Nanware, 2013
Host : *Mastacembelus armatus*
Habitat : Intestine
Locality : Nanded District M.S., India

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