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Morphotaxonomic Observation of a New Species of the Genus *Marsipometra* from *Carcharhinus laticaudus*

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Abstract: Present investigation deals with a new cestode *Marsipometra jadhavae* Sp.Nov. from *Carcharhinus laticaudus* at Bhatye, Kalambadevi, Harne, Mirya, Ratnagiri, West Coast of Maharashtra, India. The parasites collected in this study possessed scolex pyramidal, arrow shaped, apical disk narrower than base of scolex, suckers oval to rounded in shape, arranged in two groups, neck absent, Mature proglottids longer than broad, Testes oval, large, 4 in number, cirrus pouch oval, elongated, the vas deference short, genital pore marginal, vagina posterior to the cirrus pouch, ovary bilobed and granular vitellaria, arranged in two rows.

Keywords: *Carcharhinus laticaudus*, *Marsipometra*, Cestode

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Introduction

Capoor (1917) reported a new genus *Marsipometra* Linton, 1897 for the first time with its type species *M. hastate* from *Polydon spathula*, which was reported from USA. Jadhav *et al.* (2006) and Bhure and Nanware (2015, 2016) studied diversity of piscean cestode parasites from Maharashtra State, India. The present study deals with *Marsipometra jadhavae* Sp. Nov. which was collected from *Carcharhinus laticaudus* at Bhatye, Kalambadevi, Ratnagiri, West Coast of Maharashtra, India.

Materials and Methods

Specimens of the cestodes were collected from the spiral valve of *Carcharhinus laticaudus* at Bhatye,

Kalambadevi, Harne, Mirya, Ratnagiri, West Coast of Maharashtra, India during December 2003 to November 2005. Out of these, ten parasites were taken for taxonomical studies and others were used for histopathological studies. The parasites were preserved in 4% formalin, processed in various alcoholic grades and stained with borax carmine and mounted in D.P.X. for taxonomical studies. All measurements are in millimeters (mm) unless otherwise mentioned.

Results

The results of this study are based on description of ten specimens of *Marsipometra jadhavae* Sp. Nov. (Figs. 1, 2) which was collected from

Carcharhinus laticaudus. Scolex is approximately pyramidal, arrow shaped, apical disk narrower than base of scolex, measured 0.9733 mm (0.9241-1.0226 mm) in length and 0.7196 mm (0.5681-0.8711 mm) in width. Anterior region was represented by a pyramidal arrow shaped apical disk and the posterior region with four suckers. Suckers were oval to rounded in shape, arranged in two groups, measured 0.1249 mm (0.1136-0.1363 mm) in length and 0.1136 mm (0.09090-0.1363 mm) in width. The neck was absent.



Fig. 1: Microphotoplate of *Marsipometra jadhavae* Sp. Nov.

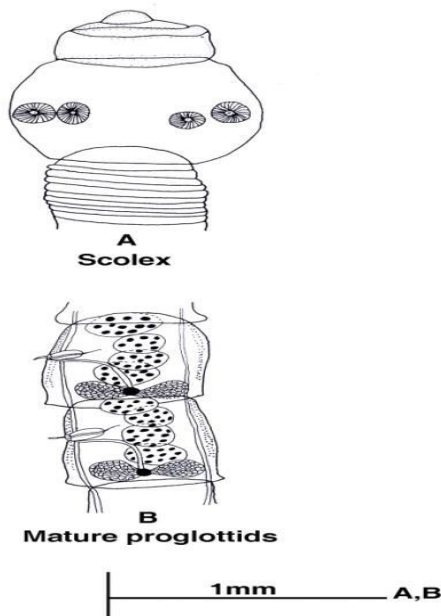


Fig. 2: Camera Lucida diagram of *Marsipometra jadhavae* Sp. Nov.

Immature proglottids were two times broader than length, while Posterior or mature proglottids were longer than broad, it measured 0.5946 mm (0.5454-0.6439 mm) in length and 0.5002 mm (0.4924-0.5681 mm) in width. Testes oval, 4 in number, very large, arranged in a rows, measured 0.1212 mm (0.09090-0.1515 mm) in length and 0.1666 mm (0.1515-0.1818 mm) in breadth. Cirrus pouch oval, elongated, transversely placed, opened through a common genital pore, measured 0.1287 mm (0.1212-0.1363 mm) in length and 0.05302 mm (0.04545-0.06060 mm) in breadth. Cirrus protrusible, thin, coiled tube, measured 0.1779 mm (0.1666-0.1893 mm) in length and 0.01514 mm (0.00757-0.02272 mm) in breadth. Vas deference thin, short tube, it measured 0.05302 mm (0.04545-0.06060 mm) in length and 0.01514 mm (0.0076-0.0023 mm) in breadth. Cirrus and vagina opened from a common pore known as genital pore, which was oval, marginal, measured 0.03095 mm (0.02272-0.03787 mm) in length and 0.01893 mm (0.01515-0.02272 mm) in breadth. Vagina started from the genital pore, tubular, situated posterior to cirrus pouch and measured 0.2196 mm (0.2121-0.2272 mm) in length and 0.01514 mm (0.0076-0.02272 mm) in breadth. Receptaculum seminalis enlarged tube, it measured 0.2045 mm (0.1969-0.2121 mm) in length and 0.01893 mm (0.01515-0.01893 mm) in breadth. Ovary bilobed, placed at the posterior margin of the proglottid in the medullary region and measured 0.1704 mm (0.1515-0.1893 mm) in length and 0.0871 mm (0.06060-0.01136 mm) in breadth. Ootype compact, oval to rounded, measured 0.04545 mm in diameter. Excretory canal situated on either side of proglottids, measured 0.5870 mm (0.5681-0.6060 mm) in length and 0.01514 mm (0.0076-0.0227 mm) in breadth. Vitellaria granular, arranged in two rows.

Discussion

A new genus *Marsipometra*. Linton, 1897 was erected by Capoor (1917) for the first time with its type species *M. hastate* from *Polydon spathula*, which was reported from USA. The specimens collected in the present study are closer to known

species of the genus *Marsipometra* Linton, 1897 (Capoor, 1917) in general topography of organ but differed from *M. hastate* Linton, 1897 in having neck present, vagina short, outside the cirrus pouch, cirrus unarmed, vagina anterior to cirrus pouch and Vitellaria follicular.

The above noted characters are valid enough to accommodate these worms as a new species and the named as *Marsipometra jadhavae* Sp. Nov. in honour of Late Prof. Babasaheb V. Jadhav, who was well known Helminthologist from India.

Taxonomic Summary:

Type species: *Marsipometra jadhavae* Sp. Nov.
 Host : *Carcharhinus laticaudus*
 (Muller Henle 1837)
 Habitat : Spiral valve.
 Locality: Bhatye, Kalambadevi, Harne,
 Mirya, Ratnagiri, West Coast of
 Maharashtra, India
 Period of collection: December 2003 to November
 2005.
 No. of specimen: 10
 Deposition: Cestodology Research
 Laboratory, Department of
 Zoology, DR. B. A. M.
 University, Aurangabad, India

Acknowledgements

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