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Morphological Analysis Of *Moniezia* Sp. (Cestoda: Anaplocephalidea) A Parasite Of The Domestic Goat *Capra Hircus* (L.) In Beed District (M.S.), India

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ABSTRACT

Moniezia Sp. (Cestoda: Anaplocephalidea) is collected in the intestine of *Capra hircus*, Linnaeus, 1758 (Family: Bovidae) from Beed district (M.S.), India. The present Cestode i.e. *Moniezia* Sp. differs other all known species is having the scolex large, globular, mature proglottids almost two to three times broader than long, testes small in size, oval to rounded, 120-150 in number, cirrus pouch oval, ovary compact in size, inter proglottidal glands 28-32 in number.

Keywords: Anaplocephalidea, *Capra hircus*, Beed, India, *Moniezia*.

INTRODUCTION

The genus *Moniezia* was established by Blanchard, 1891. Skrjabin and Schulz (1937) divided this genus in to three subgenera as follows:

- 1) Inter proglottidal glands grouped in rosettes-----*Moniezia*.
- 2) Inter proglottidal glands arranged lineally-----*Blancharia*.
(Some time absent)
- 3) Inter proglottidal glands absent-----*Baeriezia*.

The present worm agrees in all characters with subgenus *Blancharia*. Skrjabin and Schulz, 1937 includes having two species *M. (B.) benedeni* (Moniez, 1879), Skrjabin and Schulz, 1937 and *M. (B.) pallida*, Monnig, 1926. In India Shinde *et al.*, 1985 added two species of the genus i.e. *M. (B.) aurangabadensis* and *M. (B.) bharalae* from *Ovis bharal* in Aurangabad district, (M.S.), India. Later on Patil, *et al.*, 1997 described *M. (B.) warnanagarensis* from *Capra hircus* (L.). In 1999 Nanware, *et al.* erected *M. (B.) kalawati* and Kalse, *et al.* erected *M. (B.) murhari* from *Capra hircus* (L.). In 2004, Pawar *et al.* added *M. (B.) Shindei* and Tat and Jadhav B. V. added *M. (B.) hircusae* from *Capra hircus* (L.). Pokle, *et al.*, added *M. (B.) caprai* from *Capra hircus* (L.). Borde, *et al.*, 2007 erected new species i.e. *M. (B.) rajalaensis* from *Capra hircus* (L.). *M. (B.) caprae* is added by Nanware S. S. 2010. Padwal, *et al.* 2011 added *M. (B.) govindae* from *Capra*

hircus (L.). Later Humbe, *et al.* erected four more species i.e. *M (B.) babai*, 2011, *M (B.) ovisae*, 2011, *M (B.) osmanabadensis*, 2012 and *M (B.) devraoi*, 2013. Later on Barote, *et al.* added two more species i.e. *M (B.) shegaonesis*, 2013 and *M (B.) shivajiraovae*, 2014. Recently Ravi Solunke, 2015 erected *M (B.) sureshi* and Amol Thosar, *et al.*, 2015 erected *M (B.) jadhavii* from *Capra hircus* (L.).

The present communication, deals with the redescription of species, *Moniezia (B) rajalaensis*, Borde, *et al.*, 2007 collected from the *Capra hircus* (L.) at Aurangabad district (M.S.) India, in the month of May-2022.

DESCRIPTION

Ten specimens of the Cestode parasites were collected from the intestine of *Capra hircus* (L.) at District Beed (M.S.) India, during the period of May 2022. These cestodes were preserved in 4% formalin and stained with Acetocarmine or Harris Haematoxylin passed through various alcoholic grades, cleared in xyline, mounted in D.P.X. and drawings are made with the aid of Camera Lucida. All measurements are given in millimeters, otherwise mentioned.

The Cestodes are long consisting scolex, neck and proglottids. Proglottids are immature, mature and gravid.

The scolex is small in size, almost Globular in shape and measures, 1.689 (1.521-1.857) in length and 1.649 (1.243-2.056) in width. The Suckers are large, oval to round in shape, four in numbers, arranged in two pairs and measures, 0.532 (0.474-0.590) in length and 0.495 (0.439—0.551) in width.

The neck is long and measures, 7.74 (7.68-7.79) in length and 0.936 (0.825-1.047) in width.

Mature proglottids are broader than long, nearly two to three time broader than long, in each proglottids with a double set of reproductive organs and measures, 2.92 (2.67-3.17) in length and 6.34 (5.69-6.98) in width. The testes are small, round to oval in shape, 120-150 in numbers, scattered all over the segment in between longitudinal excretory canal and measures, 0.082 (0.066-0.099) in diameter. The vas-deference is long, thin tube, measures, 1.072 (1.017-1.126) in length and 0.049 (0.033-0.066) in width. The Cirrus pouch is small, oval in shape, situated in the middle margin of the segments and measures, 0.511 (0.445-0.576) in length and 0.312 (0.256-0.368) in width. The Cirrus is thin, large, inside the cirrus pouch, slightly curved and measures, 0.492 (0.425-0.559) in length and 0.049 (0.033-0.066) in width.

The Ovary large, compact, two in numbers, on each lateral side of the segments with big acini, and measures, 0.578 (0.559-0.597) in length and 0.568 (0.546-0.589) in width. The Vagina posterior to cirrus pouch, long tube reaches to the ootype and measures, 1.195 (1.123-1.267) in length and 0.082 (0.066-0.099) in width. The Ootype is small, oval to rounded, anterior to the ovary and measures, 0.236 (0.234-0.238) in length and 0.228 (0.212-0.243) in width. The Genital pores large, oval, marginal, bilateral, protruded outside, middle in position and measures, 0.211 (0.197-0.225) in length and 0.152 (0.124-0.179) in width. The Vitelline gland large, rounded, post-ovarian, near the con-cavity of the ovary and measures, 0.202 (0.176-0.228) in diameter.

The Inter-proglottidal glands present in between two proglottids, they are large, oval to round, arranged lineally in two rows in between longitudinal excretory canals, 28-32 in numbers and measures, 0.145 (0.097-0.192) in diameter. The longitudinal excretory canals are thin, present on both the sides of segments along the body lengths and measures, 0.227 (0.129-0.324) in width.

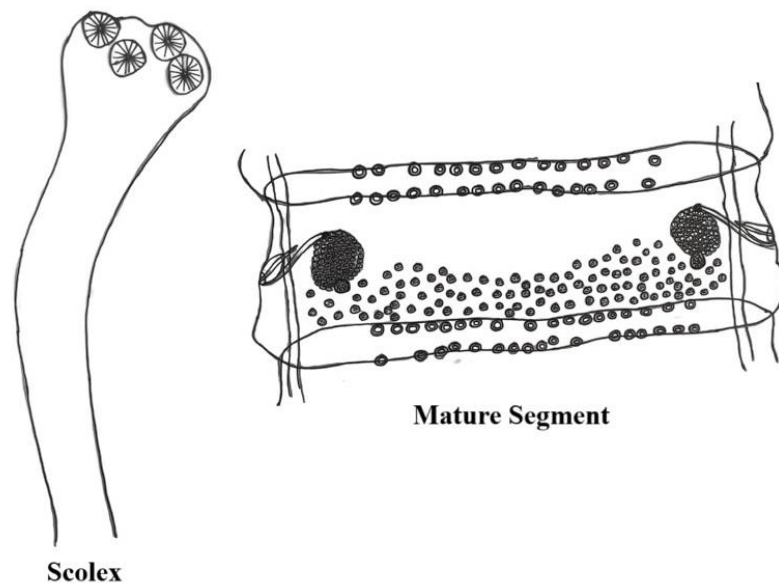


Fig. *Moniezia (B) rajalaensis*, Borde, et al., 2007

RESULTS AND DISCUSSION

The genus *Moniezia* was established by Blanchard, 1891. It is exclusively a parasite of mammals and worldwide in distribution after going through the literature the present worm comes closer to the *Moniezia rajalaensis*, Borde, et al., 2007 in having all the essential morphological characters i.e. Scolex globular, Mature segment broader than long, cirrus pouch large, oval, elongated, cirrus is thin, inside cirrus pouch, Vitelline gland large, rounded, inter- proglottidal gland 28-32 in number, vagina posterior to cirrus pouch. But differs from it in the following character i.e. Number of testis 120-150 Vs 250-260, ovary compact Vs Horse-shoe shaped.

As the character are minor it is redescribed here as *Moniezia rajalaensis*, Borde, et al., 2007.

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