A report of new mammalian tapeworm *Moniezia osmanabadensis* from *Capra hircus* at Osmanabad district (M.S.) India

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Abstract  
The present communication deals with the occurrence of a new mammalian tapeworm *Moniezia (B) osmanabadensis* n.sp. from *Capra hircus* (L) in Osmanabad district (M.S.) India. It comes closer to all the known species of the genus *Moniezia* but differs from all the known species of the genus *Moniezia* in having the scolex globular, elongated, mature proglottids Craspedote, testes medium in size, rounded scattered posterior to segment, 170-200 in numbers, cirrus pouch oval, ovary compact, bean shaped, vitelline gland post ovarian.

**Keywords:** Mammalian tapeworm / *Moniezia (B) osmanabadensis* n.sp. *Capra hircus*, Osmanabad.

INTRODUCTION

The genus *Moniezia* was established by Blanchard [2]. Skrjabin and Schulz [15] divided this genus in to three subgenera as follows:

1. Inter proglottid glands grouped in rosettes - *Moniezia*.
2. Inter proglottid glands arranged linearly- *Blanchariezia*.  
   (Some times absent)
3. Inter proglottid glands absent - *Baeriezia*.

The present worm agrees in all characters with subgenus Blanchariezia. Skrjabin and Schulz [16] having two species as *M. (B.) benedeni* [16] and *M. (B.) pallid* [9]. Later on two more species were added by Shinde [15] from the host Ovis bharal as *M. (B.) aurangabadensis* and *M. (B.) bharalaee* at Aurangabad, M.S. India. Later on Patil [12] added *M. (B.) warananagaresis* from *Capra hircus* L. In [10] Nanware erected *M. (B.) kalawati* from *Capra hircus* L. Kalse added [7] *M. (B.) murhari* from the same host, Pokale, [14] added *M. (B.) caprai* from *Capra hircus* (L.). Pawar [13] added *M (B) shindei* from *Capra hircus*. Lastly *M. (B) hircusae* is added by Tat [17]. Later on species is added to this genus. Borde [4] added *Moniezia (B) rajaalensis* from *Capra hircus* (L.) and Padwal [11] added one new species *Moniezia (B) govindae* in 2011, Humbe Atul [1]. added two new species *M. (B) babai* from *Capra hircus* (L.) and *Moniezia (B) Ovisae* from Ovis bharal (L.) Later on no species is added to this genus. The present communication, deals with the description of a new species, *Moniezia (B) Osmanabadensis* Sp.Nov. Collected from the *Capra hircus* (L.) at Osmanabad district (M.S.) India.

MATERIAL AND METHODS

Cestode parasites were collected from the intestine of *Capra hircus* (L.) at Osmanabad district (M.S.) India, during the period of June, 2008 to May, 2010. These cestodes preserved in hot 4% formalin and stained with Harris haematoxylin and Borax carmine, passed through various alcoholic grades, cleared in xylene, mounted in D.P.X. and drawings are made with the aid of camera lucida. All measurements are given in millimeters. The identification is made with the help of Systema Helminthum [19].

DESCRIPTION

Fifty two cestode parasites were collected from the intestine of *Capra hircus* (L.) at Osmanabad District (M.S.) India during the period of June, 2008 to May, 2010. All the cestodes are long consisting scolex, neck, immature, mature and gravid proglottids. The scolex is large in size, globular in shape and measures 1.10 (1.02-1.19) in length and 0.84 (0.68-1.01) in width. Suckers are large, rounded, four in numbers, arranged in two pairs and measures 0.94 (0.84-1.04) in diameter. The neck is long and measures 1.46 (1.43-1.50) in length and 0.40 (0.36-0.45) in width. The mature proglottids are broader than long, nearly five times broader than long, craspedote, each segment with a double set of reproductive organs and measures 1.42 (1.35-1.49) in length and 6.41 (6.36 - 6.47) in width. The testes are small in size and rounded in shape, 170 to 200 in numbers scattered all over the proglottids in between the two excretory canal and measures 0.24 (0.21 - 0.28) in diameter. The cirrus pouch is large in size, oval in shape, situated in the middle margin of the proglottids and measures 0.42 (0.34-0.50) in length and 0.21 (0.17-0.25) in width. The cirrus is thick, large, inside the cirrus pouch and measures 0.36 (0.36-0.36) in length and 0.16 (0.11-0.22) in width. The vas deferens is small and thin, extending up to the longitudinal excretory canals and measure 0.21 (0.21-0.21) in length and 0.14 (0.11-0.17) in width. From the ootype, ovarian follicles with big acini, on both the side forming bean shaped ovary, measures 0.84 (0.73-0.96) in length and 0.50 (0.45-0.56) in width. Vagina posterior to cirrus pouch and forms receptaculum seminis, long tube reaches to the ootype which is rounded. Vagina measures,
0.46 (0.46-0.46) in length and 0.32 (0.32-0.32) in width. Pair of glands known as inter-proglottidal glands, arranged in double line, in between the two proglottids there are some oval to rounded ovarian, measures 0.31 (0.28-0.34) in length and 0.22 (0.19-0.26) in width. The vitelline gland oval, post genital pore, marginal, elongated, measures 0.28 (0.28-0.28) in length and 0.01 (0.01-0.01) in width. Ootype is present cestode differs from earlier described parasiticus and reported from the Calves and Lambs. The present form differs from Moniezia (B) warnanagarensis, [12], which is having squamous testes, ovary compact, inter proglottidal glands arranged in two rows, small in size, 38-44 in number and reported from Ovis bharal (L.) The present form differs from Moniezia (B) bharalae [15] which is having testes rounded, 190-200 in numbers, vas deferens short, elongated, fusiform, genital pores bilateral, sub marginal, ovary compact, inter proglottidal glands arranged in two rows, small in size, 38-44 in number and reported from Ovis bharal (L.) The present form differs from Moniezia (B) warnanagarensis, [12], which is having squamous testes, ovary compact, inter proglottidal glands arranged in two rows, small in size, 38-44 in number and reported from Ovis bharal (L.) The present form differs from Moniezia (B) warnanagarensis, [12], which is having squamous testes, ovary compact, inter proglottidal glands arranged in two rows, small in size, 38-44 in number and reported from Ovis bharal (L.)

DISCUSSION

The genus Moniezia was erected by Blanchard in 1891. The worm under discussion is having the scolex globular, elongated, mature proglottids Craspedote, testes medium in size, rounded scattered posterior to segment, 170-200 in numbers, cirrus pouch oval, ovary compact, bean shaped, vitelline gland post ovarian. The present worm differs from Moniezia (B) benedeni [16], which is having numerous proglottids broader than long, posterior proglottids fleshy, testes 500 in numbers, arranged in two groups, cirrus pouch short and wide, vas deferens with 2-3 coils, ovary compact, in the centre of the segments, eggs well developed, inter proglottidal glands liner and close to the posterior margin of the segments, arranged transversely and reported from the Calves and Lambs. The present cestode differs from Moniezia (B) pallida [9], which is having the uterus external, dorsal and ventrally over excretory canals, the inter proglottidal glands varying in size and reported from the host horse in South Africa. The present parasite differs from Moniezia (B) aurangabadensis [15] which is having the scolex quadrangular, testes small, 1100-1200 in numbers, vas deferens coiled, cirrus pouch cylindrical, oval with some rounded acini, gravid proglottids broader than long, uterus reticulate, inter proglottidal glands 12-15 in numbers and reported from Ovis bharal (L.) The present tapeworm differs from Moniezia (B) bharalae [15] which is having testes rounded, 190-200 in numbers, vas deferens short, elongated, fusiform, genital pores bilateral, sub marginal, ovary compact, inter proglottidal glands arranged in two rows, small in size, 38-44 in number and reported from Ovis bharal (L.) The present form differs from Moniezia (B) warnanagarensis, [12], which is having squamous testes, ovary compact, inter proglottidal glands arranged in two rows, small in size, 38-44 in number and reported from Ovis bharal (L.) The present form differs from Moniezia (B) warnanagarensis, [12], which is having squamous testes, ovary compact, inter proglottidal glands arranged in two rows, small in size, 38-44 in number and reported from Ovis bharal (L.) The present form differs from Moniezia (B) warnanagarensis, [12], which is having squamous testes, ovary compact, inter proglottidal glands arranged in two rows, small in size, 38-44 in number and reported from Ovis bharal (L.)

The above differentiating characters are valid enough to erect a new species for these cestodes and hence the name Moniezia (B.) osmanabadensis Sp.Nov. is proposed after the locality of the host.
Taxonomic Summary

Genus: Moniezia Blanchard, 1891
Species: Moniezia (B) osmanabadensis Sp.Nov.
Type host: Capra hircus (L.)
Habitat (Site): Intestine
Type locality: India, Maharashtra Osmanabad.
Holotype and: Deposited in the Helminthology Research Lab., Department of Zoology, Dr. B.A.M. University, Aurangabad, (M.S.) India.
Date of collection: June, 2008-May, 2010.
Etymology: Named after the locality.

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