On A New Species of Moniezia (Blanchard, 1891) (Cestoda: Anaplocephalidae) in Capra Hircus (L.) from Latur Dist. (M.S.) India

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ABSTRACT
The present communication deals with new species of Moniezia (Blanchard, 1891) from intestine of Capra hircus (L.) from Latur Dist. (M.S.). The description of new species Moniezia sureshi sp. nov. is having scolex almost quadrangular, mature proglottids four to five times broader than long, testes small in size, rounded, in a single field, 180-185 in numbers, cirrus pouch oval, ovary horse-shoe shaped, vitelline gland post ovarian.

INTRODUCTION
The present cestode differs from Moniezia (B) benedeni, Moniezia (B) bharalae, Moniezia (B) varnemagnagarensis, Moniezia (B) kalawati, Moniezia (B) murhari, Moniezia (B) caprai, Moniezia (B) shindei, Moniezia (B) hircusae, Moniezia (B) rajaenabeni, Moniezia (B) govinade, Moniezia (B) caprae, Moniezia (B) ovissaesp. Nov., Moniezia (B) osmanabadensissp. Nov., described Moniezia (B) devrao sp. Nov. and Moniezia (B) babai sp. Nov. in shape of scolex, number and shape of testes, shape of cirrus pouch, shape of ovary, mature segment, position of vitelline gland.

The present communication deals with the description of a new species, Moniezia (B) sureshi sp. Nov. Collected from the Capra hircus from AusaDist Latur (M.S.) India.

MATERIAL AND METHODS
Cestode parasites were collected from the intestine of Capra hircus at Ausa Dist Latur (M.S.) India. These cestodes preserved in hot 4% formalin and stained with Harris haematoxylin, 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.

DESCRIPTION
Seven specimens of the Cestode parasites were collected from the intestine of domestic goat, Capra hircus at Ausa, Tq- Ausa Dist- Latur, M.S., India in the month of month December 2012.

All the cestodes are long consisting scolex, neck, immature, mature and gravid proglottids. The scolex is large in size, wider than long, almost quadrangular in shape, broad anteriorly, narrow posteriorly and measures 0.397 to 0.454 in length and 0.806 to 0.943 in breadth. Suckers are medium in size, oval in shape, four in number, arranged in two pairs, one pair in each half of the scolex, not overlapping on each other and measures 0.236 to 0.315 in length and 0.225 to 0.281 in breadth. The neck is short, slightly broader than long, broader anteriorly, narrow posteriorly and measures 0.613 to 0.681 in length and 0.397 to 0.703 in width. The mature proglottids are almost four to five times broader than long, with short, blunt projections at the anterior or at the posterior corners of the proglottids, with convex or concave, irregular lateral margins, uneven in length, craspedote, each segments with double set of reproductive organs and measures 10124 to 1.178 in length and 4.140 to 4.337 in breadth. The testes are small in size, oval in shape, 180 to 185 in numbers, in single field, in the central medulla, unevenly distributed, presents anterior lateral to ovary, bounded laterally by the longitudinal excretory canals and measures 0.017 to 0.035 in length and 0.017 to 0.035 in width. The cirrus pouch is medium in size, oval in shape, slightly elongated, situated in the irregular obliquely placed margin of the proglottids and measures 0.071 to 0.125 in length and 0.035 to 0.053 in width. The cirrus is thin, straight, slightly curved, inside the cirrus pouch and measures 0.071 in length and 0.017 in width. The vas deferens on each side, thin tube, elongated, extends beyond longitudinal excretory canal and measure 0.695 to 0.874 in length and 0.017 to 0.35 in width. The ovary is medium in size, horse-shoe shaped in appearance, a single mass, with irregular margin, having numerous short, blunt, round acini, situated in the centre of the segments, on each side, or 1/5th from the lateral margin of the segments, uneven in size and shape, the distal ends of the ovary directed posteriorly, laterally, medially and measures 0.142 to 0.320 in length and 0.071 to 0.089 in width. Vagina posterior to cirrus pouch, thin tube, curved proximally, runs obliquely crosses the longitudinal excretory canal, turn posteriorly reaches and open into ootype. Vagina measures 0.731 to 0.749 in length and 0.017 in width. Ootype is large in size, rounded in shape, situated ventral to the ovary and measures 0.071 to 0.089 in length and 0.053 to 0.071 in width. Vagina and cirrus pouch open through a pore, genital pore are medium in size, oval in shape placed at 1/4th to 1/5th from the anterior margin of the segments, marginal, bilateral and measures 0.071 in length and 0.035 to 0.053 in width. The vitelline gland medium in size, oval in shape, post ovarian, measures 0.053 to 0.071 in length and 0.053 to 0.053 in width. In between the two proglottids there are some oval to rounded glands known as inter-proglottidial glands, arranged in 1-2 row, in between the excretory canal, 18-19 in each proglottids, measures 0.017 to 0.035 in length and 0.053 to 0.142 in breadth. Pair of excretory canal is present on both the sides.

RESULTS AND DISCUSSION
The genus Moniezia was erected by Blanchard in 1891. The worm under discussion is having the scolex almost quadrangular, mature proglottids four to five times broader than long, testes small in size, rounded, 180-185 in numbers, cirrus pouch oval, ovary horse-shoe shaped, vitelline gland post ovarian. The present worm differs from Moniezia (B) benedeni, Moniezia, 1879, Moniezia (B) aurangabadensis, 1926, 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 center of the segments, eggs well developed, inter proglottidal glands linear 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) bharalaeJadhav B. V. et al. 1985, 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 parasite differs from Moniezia (B) aurangabadensisJadhav B.V. et al. 1985 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 Ovisbharal (L.). The present form differs from Moniezia (B) war-
The present cestode differs from *Moniezia* (B) *shivajiraovae*, Barote et al., 2013 in having scolex globular, mature segment four to five times longer than long, testes 190-220 in numbers, small in size, rounded in shape, ovary horse-shoe shaped, inter proglottidal glands 40-42 in number, oval, rounded and cirrus pouch on each side.

The present cestode differs from earlier described *Moniezia* (B) *shegaonesis*, Barote et al., 2013 in having scolex globular, mature segment four to five times longer than long, testes 190-220 in numbers, small in size, rounded in shape, ovary horse-shoe shaped, inter proglottidal glands 40-42 in number, oval, rounded and cirrus pouch on each side.

The above differentiating characters are valid enough to erect a new species for these cestodes and hence the name *Moniezia (B) sureshi* Sp. Nov. is proposed, in honor of after Dr. Kunwar Suresh Singh, renowned scientist in cestodes and Ex-head, IVRI, Izatnagar (U.P.).

**Key to the Species of the genus Moniezia Blanchard, 1891.**

- Mature segments broader than long - 1
- Mature segments Squarish - M. (B.) pallid, Moning, 1926
- Mature segments Craspedote - 2

**Testes below 100 in numbers-M.(B.)Caparae, Nanware.et.al.,2010**

- Testes in between 100-150 in number- M.(B.) govinde,Pawale.et al. 2007

- Testes in between 150-200 in numbers- 3
- Testes in between 200-300 in numbers- 4
- Testes in between 300-400 in numbers- M. (B.) warnanagarenisis, Patil.et.al., 1997

- Testes in between 400-450 in numbers- M. (B.) mwarhiKalseet, et.al. 1999
- Testes in between 450-500 in numbers- M. (B.) benedeni, Moneiz, 1879, Skrajen et al., 1937
- Testes in between 1100-1200 in numbers- M. (B.) aurangabadensis, Shinde.et.al., 1985

- Intermediate proglottidal glands between10-15 in number- M. (B.) hircusae,Tat and Jadhav, 2004
- Intermediate proglottidal glands between 16-20 in number- M. (B.) babai, Humbe.et.al., 2011
- Intermediate proglottidal glands between 20-25 in number- M. (B.) shivajiraovae,Barote et al., 2013
- Intermediate proglottidal glands between 30-35 in number - 5
- Intermediate proglottidal glands between 36-40 in number- M. (B.) osmanabadensishumbe et al., 2012
- Intermediate proglottidal glands above 50 in number- M. (B.) shindeiPaware,et.al. 2004
Scolex globular - M. (B.) bharalae, Shinde et al., 1985
Scolex squarish - M. (B.) capraei, Pokale et al., 2004
Scolex quadrangular - M. (B.) rajalaensis, Borde et al., 2007

Testes in between 50-100 in numbers - M. shivajiaroavae, Barote et al., 2014
Testes in between 150-200 in numbers - M. (B.) ovisae, Humbe et al., 2011

Ovary oval in shape - M. (B.) devraoi, Humbe et al., 2013
Ovary horse-shoe shape - M. (B.) sureshi Sp. nov.

REFERENCE