

RESEARCH PAPER

A new species of genus *Aliezia* Shinde, 1968 (Eucestoda : Avitellineidae) from *Bos indicus* Maharashtra, India

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Revised : June, 2009
Accepted : October, 2009

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ABSTRACT

A new species of cestode genus *Aliezia* Shinde, 1968 from host bull, *Bos indicus* Linnaeus 1758 is described taxonomically and anatomically. On a detailed examination of the specimens have allowed us to erect a new species of genus *Aliezia shivajiraoae* sp.nov. for to accommodate the worms. It shows the remarkable difference from all other new species of the genus *Aliezia shivajiraoae* sp.nov. in the size of the worm, shape and diameter of the scolex; testes number; size of mature segment; shape and size of suckers, shape, size and position of ovary and position of genital opening.

Key words : *Aliezia shivajiraoae* sp.nov. *Bos indicus*, Intestine

The genus *Aliezia* is erected by Shinde 1968 with its type species *Aliezia indica* Shinde, 1968 from sheep in India. He also reported a new species *Aliezia indica minor* Shinde, 1969 from same host. Later on Ali and Deshpande (1971) redescribed the same genotype from deer. One more species *Aliezia aurangabadensis* Shinde, 1969 is added. Further *Aliezia kaijensis* Lakhe et.al 2004 is added. Later no other species is added to this genus. The present form deals with description of new species of the genus *Aliezia shivajiraoae* sp.nov.

MATERIALS AND METHODS

Twenty specimens of cestode parasite were collected from the intestine of Bull, *Bos indicus* Linnaeus 1758. All were flattened, fixed, preserved in 4% formalin, few were stained with Harri's haematoxyline, passed through various alcoholic grades, cleared in xylene, mounted in DPX and whole mount slides were prepared for anatomical studies. All measurements are in millimeters. Slides are deposited in research laboratory.

Description:

(Based on Fig. 1 and 2)

Worms are long, whitish, thin, with scolex, neck, numerous immature and mature proglottids; scolex large, quadrangular, with 4 suckers, 1.839-1.482 x 2.347-1.446; suckers 4, large, oval in shape, in two pairs, not overlapping each other, equidistantly placed, distinct, larger and smaller, 1.160-1.071 x 0.946 – 0.767 ; scolex is followed by neck; neck is narrow, elongated, cylindrical, 3.298 x 1.303 – 0.811 ; neck is followed by immature

segments, many in numbers, 1.107 x 0.267; mature segments rectangular, with convex lateral margins, broader than long, with double set of reproductive organs, with one set in each side of the segment, 2.232 x 5.178; testes oval in shape, medium in size, lateral to ovary on both side, pre-ovarian and post-ovarian, 95 in numbers; 0.053x0.071; cirrus pouch oval; vas deferens coiled and opens into cirrus pouch by forming cirrus, 0.714 x 0.178; cirrus thin, coiled, which opens into common genital atrium, 0.303 x 0.124 – 0.089; ovary small, on both side, placed at the posterior margin of the segment, 0.232 x 0.410 – 0.392; vagina starts from genital atrium, takes a curve, dilates and forms a receptaculum seminis, runs posteriorly, posterior to cirrus pouch, reaches and opens into ootype, 1.196 x 0.089; Ootype small in size, round in shape, post- ovarian, on both side of the ovary 0.053 in diameter and a pair of longitudinal excretory canals thick and measures 2.006 x 0.089.

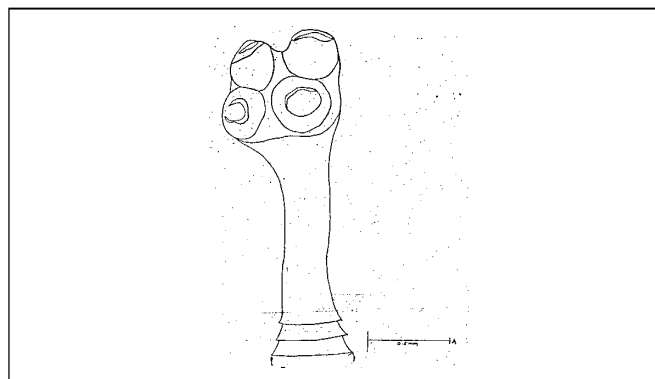


Fig. 1 : Scolex

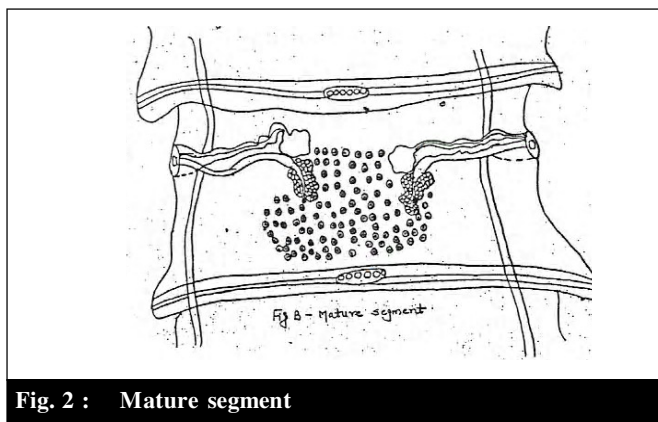


Fig. 2 : Mature segment

RESULTS AND DISCUSSION

The present worm in the size of scolex differs from *Aliezia indica* Shinde, 1968 (1.839-1.482 x 2.357-1.446 as against 1.22-0.06); from *A. indica minor* Shinde et.al 1969 (1.839 – 1.482 x 2.357 – 1.446 as against 0.078 x 1.00); from *A. aurangabadensis* Shinde et al., 1979 (1.839 – 1.482 x 2.357 – 1.446 as against 1.67 – 1.74 x 1.14 – 1.17); and also from *A. kaijensis* Lakhe et.al 2004 (1.839 – 1.482 x 2.367 -1.446 as against 1.011 – 1.351 x 0.909 – 1.499); it differs in definite number of testes on each side of segments from *A. indica* shinde et al., 1968 (95 as against 8-12); from *A. indica* Ali and Deshpande 1971 (95 as against 8-14); from *A. augangabadensis* Shinde et al., 1979 (95 as against 4) and from *A. kaijensis* Lakhe et al., 2004 (95 as against 10-16); it differs in breadth of mature segment from *A. indica minor* Shinde et al., 1969 (5.178 as against 1.62); from *A. indica* Ali and Deshpande 1971 (5.178 as against 1.30) from *A. aurangabadensis* Shinde et al., 1979 (5.178 as against 1.28 – 1.30) and from *A. kaijensis* Lakhe et al., 2004 (5.178 as against 1.158); it differs from *A. indica* Shinde, 1968 in the position of cirrus pouch (in anterior 1/3rd of segment as against anterior margin of the segment); from *A. indica minor* Shinde et al., 1969 (in the anterior 1/3rd of the segment as against in anterior of segments); from *A. indica* Ali and Deshpande 1971 (in anterior 1/3rd of segment as against anterior half or at 1/4th of the segment); from *A. aurangabadensis* Shinde et al. (1979) (in the anterior 1/3rd of the segment as against in the anterior half of the segment) and from *A. kaijensis* Lakhe et.al. 2004 (in the anterior 1/3rd of the segment as against situated anterior or posterior to the middle of segment); it also differs from reported host *A. indica* Shinde 1968, (*Bos indicus* as against *ovis bharal*); from *A. indica minor* Shinde et al., 1969 (*Bos indicus* as against *ovis bharal*) ; from *A. aurangabadensis* Shinde et al., 1979 (*Bos indicus* as against *capra hircus*) and

from *A. indica* Ali and Deshpande 1971 (*Bos indicus* as against *ovis bharal*).

As above distinguishing characters are enough valid to erect new species to these worms, hence name *Aliezia shivajiroae* sp.nov. is proposed after the name of research Guide who contributing much in our knowledge of Cestodology.

Taxonomic summary:

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|--------------------|---|
| Genus | : <i>Aliezia</i> Shinde, 1968. |
| Species | : <i>Aliezia shivajiroae</i> sp nov. |
| Type host | : <i>Bos indicus</i> Linneaus 1758. |
| Habitat | : Intestine |
| Date of Collection | : 21 st Aug., 2008. |
| Etymology | : The name is proposed to the species after the name of research guide. |
| Locality | : Slaughter house, Parbhani |

Acknowledgment:

The authors are thankful to the Principal Dr. P.L More and Dr. V.B Garad Head Department of Zoology and Fishery Science, Dnyanopasak College, Parbhani for providing laboratory facilities and encouragement during research work.

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