

On a new Tapeworm *Aliezia caprai* Sp.Nov.(Cestoda : Nematotaeniidae) from *Capra hircus* at Islampur, District Sangli, M.S.,India

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Abstract— The genus *Aliezia* is erected by Shinde G. B. in 1967 with its species *Aliezia indica* from sheep. The present communication deals with the description of a new species *Aliezia caprai* n.sp. which is having the scolex simple, almost quadrangular in shape, mature segments broader than long, testes 5-8 in number, almost round in shape, in two groups on each side, The ovary is distinctly bilobed, lobes oval, small in size, situated in the posterior half of the segments, vagina posterior to cirrus pouch, vitelline gland is absent The genital pores are bilateral, small in size, oval in shape and host *Capra hircus*.

Index Terms—Tapeworm Cestode *Aliezia caprai* *Capra hircus* new species

INTRODUCTION

The genus *Aliezia* is erected by Shinde G. B. in 1967 with its species *Aliezia indica* from sheep. He also recorded a new species *Aliezia indica* minor from the same host. Later on Ali and Deshpande redescribed the same genotype in 1971, from deer. One more species *Aliezia aurangabadensis* is added by G. B. Shinde, B. V. Jadhav and Miss S. S. Kadam in 1979.

The present from, is reported from a goat *Capra hircus*. As the present from is having many distinct characters, is reported here as a new species as *Aliezia caprai* n. sp. collected at Islampur, dist. Sangli, M.S. India.

MATERIALS AND METHODS

Numerous specimens, of the cestode parasites, were collected from the intestine of goat, *Capra hircus* at Islampur, Dist. Sangli, M.S., India; in the month of August, 1988. They were preserved in 4% formalin, stained in Harri's Haematoxyline, dehydrated through alcoholic grades and mounted in DPX. The figures were drawn with the aid of Camera Lucida. All measurements are in millimeters.

DISCUSSION

The worms were long, with scolex, immature and mature segments.

The scolex is simple, almost quadrangular in shape, large in size, slightly wider than neck and measures 0.715 to 0.829 in length and 0.817 to 1.056 in width.

The suckers are four in number, large in size, oval in shape, arranged in two pairs, one pair in each half of scolex, overlapping on each other in each pair and measure 0.341 to 0.375 in length and 0.327 to 0.386 in width. The rostellum is large in size, round in shape and measure 0.715 in diameter.

The neck is elongated, slightly narrower than scolex and measures 4.351 in length and 0.386 to 0.659 in width.

The mature segments are broader than long, almost fifteen times broader than long, each having a double set of reproductive organs, one on each side, with convex lateral margins and measure 2.033 to 2.079 in width and 0.1361 to 0.159 in length.

The interproglottidal glands are small in size, round in

shape, present on either side of the proglottids, at their lateral corners, at the intersegmental region; 7-8 in number, arranged in one row on each side.

The testes are small in size, almost round in shape, 5-8 in number, in two groups on each side, arranged posterior to vagina and lateral to ovary and measure 0.159 to 0.2045 in diameter.

The cirrus pouch is long, cylindrical in shape, curved, situated in the anterior half or the posterior half of the segments and measures 0.0568 to 0.0795 in length and 0.0225 to 0.03409 in width. The cirrus is thin, slightly coiled, muscular, unarmed, contained within the cirrus pouch and measures 0.0568 in length and 0.01134 in width.

The vas deferens is short, slightly coiled, extends beyond the longitudinal excretory canals and measures 0.1249 in length and 0.01134 in width.

The genital pores are bilateral, small in size, oval in shape, situated at 2/3rd from anterior margin of the segments and measures 0.03409 in length and 0.0225 in width.

The ovary is distinctly bilobed, lobes oval, small in size, situated in the posterior half of the segments, in between the testes and measures 0.0795 to 0.0909 in length and 0.3409 to 0.0454 in width.

The vagina is a thin tube, starts from the genital pore, situated posterior to cirrus pouch, extends, reaches and opens in to the ootype and measures 0.3272 in length and 0.01134 in width.

The ootype is small in size, round in shape, situated posterolateral to the ovary and measures 0.0225 in diameter.

The vitelline gland is absent.

The gravid segments are not available.

DISCUSSION

The genus *Aliezia* is erected by Shinde G. B. in 1967 with its species *Aliezia indica* from sheep. He also recorded a new species *Aliezia indica* minor from the same host. Later on Ali and Deshpande redescribed the same genotype in 1971, from deer. One more species *Aliezia aurangabadensis* is added by G. B. Shinde, B. V. Jadhav and Miss S. S. Kadam in 1979.

The present from, is reported from a goat *Capra hircus*. As the present from is having many distinct characters, is reported here as a new species as *Aliezia caprai* n. sp. Collected at Islampur, dist. Sangli, M.S. India.

1. The present form, in the size of the scolex differs from *A. indica* (0.715 - 0.829 x 0.817-1.056 as against 1.22 x 0.96), from *A. indica* minor (0.715 - 0.829 x 0.817 -1.056 as against 0.95 x 1.22), from *A. indica*, s. m. Ali and G. T. Deshpande (0.715 -0.829 x 0.817-1.056 as against 0.78 x 1.00) and also from *A. aurangabadensis* G. B. Shinde, B. V. Jadhav and Miss S. S. Kadam (0.715 - 0.829 x 0.817-1.056 as against 1.67 -1.74 x 1.14 - 1.17).
2. It differs in having a definite number of testes on each side of the proglottis, from *A. indica* (5-8, in two groups on each side as against 4-6 on each side), from *A. indica* minor (5-

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- 8, in two groups on each side as against 4-5 on each side), from *A. indica* Ali and Deshpande (5-8, in two groups on each side as against 4-7) and from *A. aurangabadensis*_ (5-8, in two groups on each side as against 4) .
3. It differ from *A. indica* and *A. indica minor* in total number of interproglottidal glands at the corners in each segment (7-8, in one row on each side as against 10-12 in two rows, on each side) from *A. indica* Ali and Deshpande (7-8, in one row on each side as against 10-14 in two rows , on each side) and also from *A. aurangabadensis* (7-8, in one row on each side as against 16-20 in two rows , on each side.)
 4. It differs in breadth of the mature proglottids from *A. indica* 2.033-2.079 as against 1.67 from *A. indica minor* (2.033-2.079 as against 1.62, from *A. indica* Ali and Deshpande (2.033 -2.079 as against 1.28-1.30)
 5. It differs from *A. indica* in the position of cirrus pouch (situated in the anterior half or posterior half of the segment as against at anterior margin of the segment) , from *A. indica minor* (in the anterior half or posterior half of the segment as against in the anterior half, at 1/3rd) and from *A. indica* Ali and Deshpande (in the anterior half or posterior half as against in the anterior half , at 1/4th).
 6. The host of present form is goat , *Capra hircus* , where as the same of *A. indica* and *A. indica minor* sheep, *Ovis bhara* and *A. indica* Ali and Deshpande is deer, *Cervus* sp. Hence, it is regarded as a new species and is named as *A. caprai* n. sp. after the generic name of the host.

Comparative chart of Genus *Aliezia* Shinde , G. B., 1969.

Characters	<i>Aliezia indica</i>	<i>Aliezia indica minor</i>
Length	Numerous proglottids	15-20 segments collected
Scolex	Small, rounded , 1.22 mm by 0.96 mm	Small , 0.95 mm in length and 1.22 mm breadth.
Rostellum	Small	Much reduced , suckers 0.30mm x 0.43 mm to 0.43 x 0.47 mm.
Neck	Fairly neck long	Long neck , 0.54 width.
Nature segments	Much broader than long, 1.67 by 0.09 mm. double set of reproductive organs.	0.09 mm length and 1.62 mm in breadth , double set of reproductive organs.
Inter proglottidal glands	On either side of proglottids , at anterior corners , in two rows and vary in number from 10-12 on each side.	On either side of proglottids , at anterior corners, in two rows , 10-12 on each side.
Testes	In two groups, 4-6 on each side , 0.036 in diameter.	In two groups, 4-5 on each group , 47 u-62u in diameter
Vas deferens	Short and coiled.	Fairly thick , coiled.
Cirrus pouch	Oval , elongated , 0.11 mm in length , situated near the anterior margin of the segments and opens at 1/4 th from anterior margin.	Well developed , 0.09 mm in length and 0.03 mm in breadth , situated at anterior half , at 1/3 rd .
Ovary	Rounded, internal to testes , 0.08 mm in diameter.	Almost compact, with one or two acini, 0.073 -0.095 in length and 0.043 – 0.047 in breadth.
Par-uterine organs	Par-uterine organs present posterior to ovary.	A pair of par-uterine organs , one on each side.
Vagina	Narrow tube , opens posterior to cirrus pouch.	Short tube , opens posterior to cirrus pouch.
Host	<i>Ovis bhara</i>	<i>Ovis bhara</i>

Characters	<i>Aliezia aurangabadensis</i> G.B. Shinde, B. V. Jadhav And Kadam S.S. 1979	<i>Aliezia caprai</i> n.sp.
Length	Long with numerous proglottids	Long with numerous proglottids
Scolex	1.67 to 1.74 in length and 1.14 to 1.17 in breadth.	Large quadrangular , 0.716/5-0.829 in length and 0.817 -1.056 in breadth.
Rostellum	Small	Large in size, round.
Neck	Long	Elongated , 4.351 in length and 0.386-0.659 in width.
Nature segments	Much broader than long, 0.17-0.18 in length, 1.28-1.30 in breadth , double set of reproductive	Almost fifteen times broader than long , 2.033-2.079 in breadth and 0.136 to 0.159

	organs.	in length, double set of reproductive organs.
Inter proglottidal glands	Present in groups , at anterior side in each proglottid, arranged in two rows , 16-20 in number.	On either side of proglottids, at anterior lateral corners of segments in one row , 7-8 on each side.
Testes	Rounded in two groups, 4 in number on each side , 0.034-0.038 in diameter.	Small, round, 5-8 in number, in two groups, on each side, 0.159-0.204 in diameter.
Vas deferens	Short and coiled	Short , slightly coiled , extend beyond longitudinal excretory canals.
Cirrus pouch	Oval, elongated , 0.09 in length and 0.06 in breadth , situated in anterior half of the proglottids.	Long, cylindrical, curved , extend beyond longitudinal excretory canals.
Ovary	Rounded, internal to testes , 0.12-1.13 in length and 0.12-0.17 in breadth.	Distinctly bilobed , lobes oval, in between testes , 0.0795 in length and 0.0340 in breadth.
Par-uterine organs	Two par-uterine in each proglottid lateral to ovary, anteriorly directed.	-
Vagina	Narrow tube opens posterior to cirrus pouch	Thin tube, opens posterior to cirrus pouch
Host	<i>Capra hircus</i>	<i>Capra hircus</i>

A key to the species of the genus *Aliezia* Shinde , G. B. , 1969.

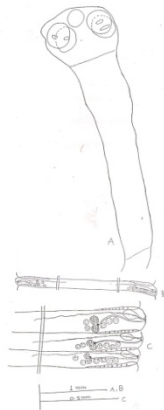
Vas deferens coiled	---	1
Vas dererens uncoiled	---	<i>A. caprai</i>
Testes 4 in number	---	<i>A. aurangabadensis</i>
Testes 4-5 in number	---	<i>A. indica (minor)</i>
Testes 4-6 in number	---	<i>A. indica</i>

As the characters are so distinct, there is no other way to author , than to erect a new species , to accommodate these worms and hence the name *Capra hircus* n. sp. is proposed , after the locality.

Plate :

Aliezia caprai n. sp.

- A) Scolex
- B) Entire Mature segment
- C) Half part of mature segments.



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