

Research Paper

STILESIA KANEGAONENSIS N.SP. FROM OVIS BHARAL (SHEEP) AT. MURUM (M.S.) INDIA.

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ABSTRACT

The present communication deals with description of a new species stilesia kanegaonensis n.sp. is reported from ovis bharal (sheep) at kanegaon dist. Osmanabad. It differs from all known species of the genus, with the characters like scolex large, oval, elongated longer than broad, mature segment are thin, short, broader than long, testes 17-19 in number, medium, oval in two lateral groups, cirrus pouch small, cirrus thin, vasdeferens short, thin tube, ovary medium oval, compact, uterine cap small, elongated, vagina thin tube, ootype small, round, placed on the lateral side of the ovary.

Key words : Cestode, New species, Stilesia, Ovis bharal.

INTRODUCTION :

Genus Stilesia was erected by Railliet (1893), from Ovis aries in Europe, Asia and Africa as Stilesia globipunctata (Rivolta, 1874). Later on 19 species were added to this genus by different workers. The present communication deals with description of new species as Stilesia kanegaonensis n.sp.

MATERIAL AND METHOD :

Twelve specimens of the cestode parasites were collected from the intestine of Sheep, Ovis bharal at Kanegaon, Tq. Omerga, Dist. Osmanabad, India in the month of July 1995. All the worms were flattened, fixed in 4% formalin, stained with Harris haematoxylin, passed through various alcoholic grades and mounted in D.P.X. Drawings are made with camera lucida. All measurements are in millimeters.

DESCRIPTION :

All the worms were long with weak segmentation in the anterior region of the strobila, while with distinct segmentation in the posterior region of the same, with mature proglottids. The scolex is large, oval, elongated, longer than broad, broad anteriorly, narrow posteriorly, having slight constrictions at the anterior tip of it and measures 1.271-1.453 in length and 0.488-0.909 in width. The suckers are four in number, oval, obliquely placed, arranged in two pairs, one pair placed in each half region of scolex, suckers of one pair are slightly overlapping on each other, while suckers of another pair are not overlapping and measures 0.282-0.909 in length and 0.259-0.293 in breadth. The neck is of medium length and width, longer than broad, slightly broad anteriorly, narrow posteriorly and measures 0.840-0.963 in length and 0.247-0.425 in breadth.

The mature proglottids are thin, short in length, broader than long, 13-14 times broader than long, each with a single set of reproductive organs, with slight convex lateral margins, with or without projections at the anterior and posterior corners of the segments and measures 0.001-0.48 in length and 2.237-2.271 in breadth. The testes are 17-19 in number, medium, oval, in two lateral groups and measures 0.045-0.057 in length and 0.034-0.057 in breadth. The cirrus pouch is small, oval, in shape, situated in the anterior 1/3rd region of the segments, short, not reaching up to the longitudinal excretory canals, narrow proximally, broad distally, obliquely placed and measures 0.079 in length and 0.341-0.046 in width. The cirrus is thin, contained within the cirrus pouch, straight or slightly curved anteriorly and measures 0.079 in length and 0.011 in breadth. The vas deferens is short, thin tube, not reaches up to the longitudinal excretory canals, anteriorly directed and measures 0.205 in length and 0.011 in width. The ovary is medium, oval, divided into two pairs, separated one on each lateral side of the segments, perhaps these are the transitional segments, transversely placed, situated near to the longitudinal excretory canals, on its outer side and measures 0.057-0.068 in length and 0.079-0.102 in width. The uterine cap is small, elongated, narrow proximally, broad distally, situated to one side of the ovary, towards aporal side and measures 0.118 in length and 0.011-0.045 in breadth. The vagina is a thin tube, situated posterior to the cirrus pouch, runs obliquely with few curves, runs for a long distance, reaches and opens into the ootype and measures 0.443 in length and 0.011 in width. The ootype is small, round, placed on the lateral side of the ovary on its outer side and measures 0.023 in length and 0.023 in breadth. The genital pore small, oval, regularly alternate, marginal, situated in the anterior half at 1/3rd of the segment and measures 0.034 in length and 0.023 in breadth.

The longitudinal excretory canals are thin, straight and measures 0.045-0.057 in breadth.

testes in two groups, 5-6 on each side, post ovarian, ovary medium almost circular, compact, cirrus pouch elongated, vas deferens not closely coiled, vagina posterior to cirrus pouch.

· The worm under discussion differs from *S. caballeroi* which is having scolex small, testes 1-11 on each side, cirrus pouch oval, vas deference form a less dense bundle of convolutions, anterior to the testes.

· The present tapeworm differs from *S. southwelli* which is having scolex quadrangular, testes oval, small in to two groups, only 4 in each group, cirrus pouch large, sac-like, vas deference very much coiled, ovary medium, vagina posterior to cirrus pouch.

· The present worm differs from *S. aurangabadensis* which is having scolex large, testes rounded, in two lateral groups, 5 on eah lateral side, cirrus pouch elongated, cirrus coiled, vas deference straight, ovary medium, compact, vagina a thin tube, postero-dorsal to cirrus pouch.

· The worm under discussion differs from *S. garhwalensis* which is having the scolex large, mature segments broader than long, testes oval 0-9 in number, cirrus pouch oval, cirrus unarmed, vas deference coiled, ovary small, vagina posterior to cirrus pouch.

· The worm under discussion differs from *S. kotdwarensis* which is having the scolex large, mature segments broader than long, testes oval, 1-12 in number, cirrus pouch oval, vagina posterior to cirrus pouch.

· The present cestode differs from *S. marathwadaensis* which is having mature segments broader than long, testes rounded in two groups, 5-7 in number, vas deference straight, cirrus pouch oval, ovary medium, compact, vagina starts from posterior side of cirrus pouch.

· The present tapeworm differs from *S. jadhavae* which is having scolex globular, mature segments broader than long, testes rounded in two groups, 5-7 in number, cirrus pouch medium, oval, ovary rounded, vagina is a thin tube, present at the anterior side of the cirrus pouch

· The present cestode differs from *S. yawalensis* which is having scolex quadrangular, testes 2-3 in number, ovary globular, vagina anterior to cirrus pouch, genital pore just posterior to the middle of the segment.

· The present tapeworm differs from *S. alii* which is having scolex oval, mature segment squarish, testes 11 in number, genital pore regularly alternate.

· The present tapeworm differs from *S. caprai* which is having testes 8-9 in number, vas deference slightly curved, ovary anterior or posterior half region of the segment.

· The present cestode differs from *S. daulatabadensis* which is having testes 11 in number, vas deference slightly curved, vagina placed posteriorly or anteriorly to the cirrus pouch

· The present form differs from *S. jadhavi* which is having testes 14 in number, vas deference convoluted, ovary bilobed with several acini.

· The present cestode differs from *S. hircusi* which is having scolex circular, testes 10-12, ovary globular.

· The present tapeworm differs from *S. songirensis* which is having scolex globular, mature segments longer than broad, testes 7-8 in number, vas deference slightly coiled, ovary oval with prominent acini.

· The present form differs from *S. shrigondaensis* which is having scolex rounded, suckers large, oval, mature segments medium, rectangular, testes 10-12, cirrus pouch medium, oval, ovary medium, single mass with developing paruterine organ.

The above noteds characters are valied enough to erect a new species for the studied worms and hence the name *Stilesia kanegaonensis* n.sp. is proposed after the locality.

Type species : *Stilesia kanegaonensis* n.sp

Host : Ovis bharal

Habitat : Intestine

Locality : Kanegaon, Dist.Osmanabad, India.

Type specimens : Holotype and paratype are deposited in Helminthology Laboratory, Department of Zoology, Dr. B. A. M. University Aurangabad.

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REFERENCES

- [1] **A. Railliet (1893)**. Traite de zoologie medical et agricole. 2nd ed., Paris, P.736.
- [2] **A. Railliet (1896)**. Sur queiques parasites du dromadaire, compt. Rend. Soc. Biol., 48: 489-492.
- [3] **K. Wolffhuegel(1903)**. *Stilesia hepatica* no.sp.ein Bandwurm aus den Gallengaengen Von Schafen and Ziegen Ostafrikas Berlin, Tierarzt. Wochenschr., 43 : 661-665.
- [4] **S.S.Kadam, G.B. Shinde, and B.V. Jadhav(1980)**. On a new species of *Stilesia*, Railliet, 1893 (Cestode: Thysanosomatinae) Skrjabin, 1933 from Sheep at Aurangabad. Bio., 2(3) : 33-36
- [5] **S.D.Kalyankar, A.L. Deshmukh, and V.M.Hatwalkar(1981)**. A new species of the genus *Stilesia*, Railliet, 1893(Cestode: Anoplocephaloidae) from a goat *Capra hircus* at Aurangabad. Bio., 3(1): 51-52.
- [6] **G.B.Shinde, S.S. Kadam and B.V.Jadhav(1982)**. On a new cestode *Stilesia southwelli* n.sp. from goat at Aurangabad, India, Marath. Uni.J.Sci.
- [7] **M.A.Majid, G.B. Shinde and B.V. Jadhav(1982)**. On a new species of *Stilesia*, Railliet, 1892 (Cestode: Thysanosomatinae) Skrjabin, 1933 from Sheep at Aurangabad. Marath. Univ.J.Sci.(Nat.Sci.),14:37-39
- [8] **S.K.Malhotra and V.N. Capoor(1983)**. On two new species of the cestodes(Cyclophyllidae), *Stilesia garhwalensis* n.sp.from Goat and *Stilesia kotdwarensis* n.sp. from sheep of the Garhwal region, India. Acta Parasit.Pol., 28:399-406.

DISCUSSION :

The genus stilesia was erected by Railliet, 1823 as a type species *Stilesia globipunctata* from *Ovis aries*. Later on the following 19 species are added to this genus by different workers in the world.

Table I: Different Species added to genus *Stilesia* Railliet, 1823

Sr. No.	Name Of Species
1	<i>S. vittata</i> Railliet, (1896)
2	<i>S. hepatica</i> Walffhugel,(1903)
3	<i>S. okapi</i> Leiper, (1936)
4	<i>S. leiperi</i> Kadam et al.(1980) from <i>Ovis bharal</i>
5	<i>S. caballeri</i> Kallyankar et al. (1981) from <i>capra hircus</i>
6	<i>S. southwelli</i> Shinde et al. (1982) from <i>Capra hircus</i>
7	<i>S. aurangabadensis</i> Majid et al. (1982) from <i>Capra hircus</i>
8	<i>S. garhwalensis</i> Malhotra & Capoor, (1983) from <i>Capra hircus</i>
9	<i>S. kotdwarensis</i> Malhotra & Capoor, (1983)
10	<i>S. marathwadaensis</i> Shinde et al. (1985) from <i>Capra hircus</i>
11	<i>S. jadhavae</i> Jadhav, (1999) from <i>sOvis bharal</i>
12	<i>S. yawalensis</i> Shind and Kalse (1999) from <i>Capra hircus</i>
13	<i>S. alii</i> Borde and Shinde(1999) from <i>Capra hircus</i>
14	<i>S. caprai</i> Patil and Menkudle (2002) from <i>Capra hircus</i>
15	<i>S. daulatabadensis</i> Shelke and Shinde(2004) from <i>Capra hircus</i>
16	<i>S. jadhavi</i> Nanaware and Jadhav (2005) <i>Capra hircus</i>
17	<i>S. hircusi</i> Suryawanshi,Kalse and Naidu (2007) <i>Capra hircus</i>
18	<i>S. songirensis</i> Kalse, Patil & Patil (2008) from <i>Capra hircus</i>
19	<i>S. shrigondaensis</i> Pokale and Shinde (2008) <i>Capra hircus</i>

After going through the literature, the worm under discussion, is having Scolex large. oval, elongated longer than broad, broad anteriorly, narrow posteriorly, having slight constrictions at the tip of it. Mature segments are thin, short, broader than long, slight convex at the lateral margins. Testes 17-19 in numbers, medium, oval in two lateral groups. Cirrus pouch small, oval, cirrus thin. Vasdeferens short, thin tube, ovary medium, oval, compact. Uterine cap small, elongated. Vagina thin tube, ootype small, round placed on the lateral side of the ovary.

· The worm under discussion differs from *S. globipunctata* which is having scolex small, round, mature segments broader than long with distinct segmentation, testes in two groups 4-7 on each side, cirrus pouch small, pyriform, ventral to vagina, vas deferens not closely coiled between cirrus pouch and outer wall of the excretory vessels, ovary somewhat globular and vagina dorsal to cirrus pouch.

· The present cestode differs from *S. vittata* which is having the mature segments broader than long, segmentation not distinct, testes in two groups, 5-9 in each side, cirrus pouch elongated, cylindrical, cirrus armed, vas deference closely coiled. Ovary large, rounded, compact, situated between poral vessels, vagina posterior to cirrus pouch.

· The present form differs from *S. hepatica* which is having the mature segments broader than long, testes in two groups 5-7 on each side, cirrus pouch almost oval, vas deferens not closely coiled, ovary small, compact, oval, vagina anterior to cirrus pouch.

· The present tapeworm differs from *S. okapi* which is having testes 2-3 on each side in the laterl fields.,

· The present cestode differs from *S. leiperi* which is having the scolex circular, mature segments broader than long,

[9] G.B.Shinde, B.V. Jadhav and A.N.Phad (1985). *Stilesia marathwadaensis* n.sp. (Cestode: Thysanosomatinae) from *Capra hircus* at aurangabad. Riv. Parasit.,II(XLVI): 213-215.

