

**ON A NEW SPECIES OF *STILESIA* RAILLIET, 1893 (CESTODA :
THYSANOSOMIDAE, FUHRMANN, 1907) FROM *CAPRA HIRCUS***

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The present paper deals with a new species of *Stilesia* Railliet, 1893 from goat (*Capra hircus*) at Dhule. It is differentiated from all known species of the genus in the shape of scolex circular, neck long, narrow, with no segmentation, mature segments wider than long, testes 10-12 in number (5+5 or 6+6 on each side) in each segment, cirrus pouch marginal, oval, small, cirrus thin, vas deferens coiled, ovary globular, near posterior margin, genital pores bilateral, vagina posterior to cirrus pouch, uterus first bilobed later replaced by two par uterine organs.

Key word : New species, genus *Stilesia* Railliet, *Capra hircus*.

The genus *Stilesia* was erected by Railliet in 1893 from *Ovis aries* in Europe, Asia and Africa as *Stilesia globipunctata* (Rivolta, 1874). Later *Stilesia hepatica* was added to this genus by Wolffhugel (1903) from sheep and goat in East Africa. *Stilesia vittata* was reported by Railliet in 1896 from *Camelus dromedaries* from Africa and India. *Stilesia okapi* was erected as a new species of this genus by Leiper (1936) from *Okapi* in Africa. It is regarded by Baer (1950) as a variety of *S. globipunctata*. The author agrees with Baer (1956) to regard *S. okapi* as a variety of *S. globipunctata*.

Later number of species were added to the genus *Stilesia* viz. *leiperi*, Kadam *et al.* (1980); *caballeroi*, Kalyankar *et al.* (1981); *southwelli*, Shinde *et al.* (1982); *aurangabadensis*, Majid *et al.* (1982); *garhwalensis*, Malhotra & Capoor (1983); *kotdwarensis*, Malhotra & Capoor (1983); *marathwadaensis* Shinde *et al.* (1985); *yavalensis*, Shinde & Kalse (1999) and *jadhavae*, Jadhav (1999).

Twenty-two specimens of cestode were collected from the intestine of *Capra hircus* at Dhule, district Dhule, Maharashtra, India. All cestodes were preserved in 4% formalin, stained in Harris-Haematoxylin. Drawings are made with the aid of camera lucida. All measurements are in millimeters.

***Stilesia hircusi* n.sp.**
(Figs. 1A & B)

Description : Scolex circular, distinctly marked off from the strobila, measuring 0.217 x 0.317, four suckers, oval, slightly overlapping on each other, measures 0.137 x 0.120; neck long, measures 0.306 x 0.172, followed by mature segments. Mature segments are wider than long and measures 0.023 x 0.551, with the presence of double set of reproductive organs. Testes rounded, 10-12 in number, measuring 0.010 x 0.010 in dia-

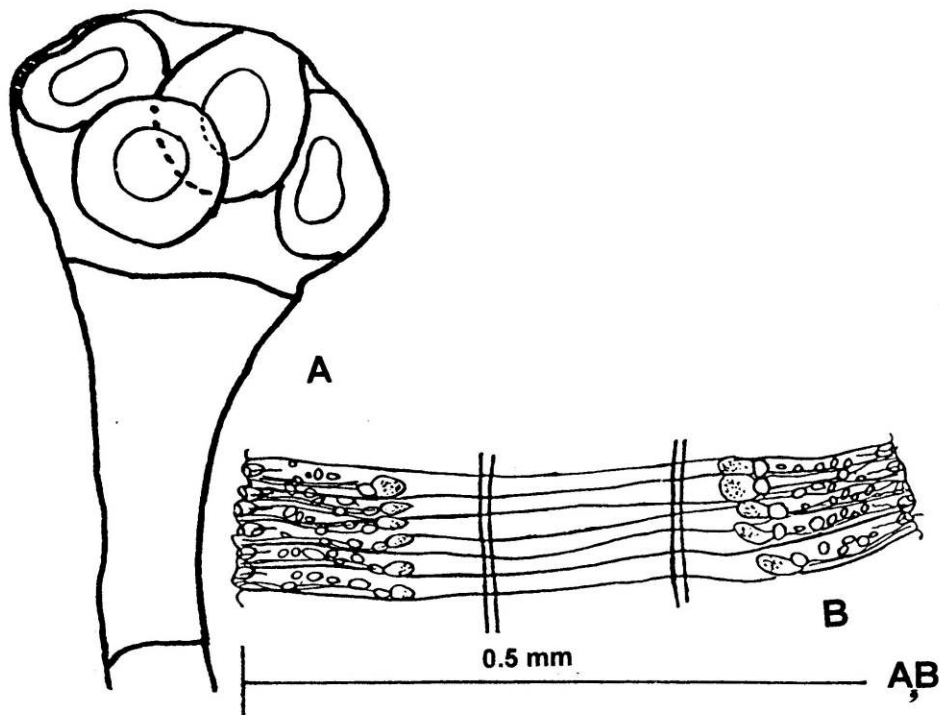


Fig. 1A-B : *Stilesia hircusi* n.sp. A. Scolex; B. Mature segment.

meter; cirrus pouch oval, measuring 0.017×0.010 , present at the margin of segment; ovary of medium size, globular, near the posterior margin of the segment, measuring 0.013×0.010 ; uterus first bilobed sac, later replaced by two paruterine organs.

DISCUSSION

- The present cestode *Stilesia hircusi* differs from *S. globipunctata* in the number of testes (10-12 vs 4-7), cirrus pouch (oval vs pyriform), vagina (posterior to cirrus pouch vs postero-ventral to cirrus pouch), genital pore (bilateral vs irregularly alternate).
- The present form differs from *S. vittata* in the shape of scolex (circular vs elongated), in the number of testes (10-12 vs 7), cirrus pouch (oval vs cylindrical).
- The present tapeworm differs from *S. hepatica* in the number of testes (10-12 vs 6-7), ovary (globular vs small, oval).
- The present cestode differs from *S. leiperi* in the number of testes (10-12 vs 5-6), cirrus pouch (oval vs cylindrical), ovary globular vs circular).
- The present form differs from *S. caballeroi* in the shape of scolex (large vs small), in the number of testes (10-12 vs 1-11).
- The present form differs from *S. southwelli* in the shape of scolex (circular vs quadrangular), in the number of testes (10-12 vs 4).
- The present tapeworm differs from *S. aurangabadensis* in the number of testes (10-12 vs 5), vas deferens (coiled vs straight), vagina (posterior to cirrus pouch vs postero-dorsal to cirrus pouch).

- The present cestode differs from *S. kotdwarensis* in the number of testes (10-12 vs 1-12), ovary (globular vs small, spherical), genital pore (bilateral vs irregularly alternate).
- The present form differs from *S. garhwalensis* in the number of testes (10-12 vs 0-9), ovary (globular vs small, spherical), genital pore (bilateral vs irregularly alternate).
- The present tapeworm differs from *S. marathwadaensis* in the number of testes (10-12 vs 5-7), vas deferens (coiled vs straight), ovary (globular near posterior margin vs oval in anterior half of the segment).
- The present cestode differs from *S. yavalensis* in the shape of scolex (circular vs quadrangular), in the number of testes (10-12 vs 2-3), vagina (posterior to cirrus pouch vs anterior to cirrus pouch), genital pore (bilateral vs irregularly alternate).
- The present form differs from *S. jadhavae* in the number of testes (10-12 vs 5-7), ovary (globular vs round), vagina (posterior to cirrus pouch vs anterior to cirrus pouch).

Hence the above noted characters are valid enough to erect a new species for these worms and the name *S. hircusi* n.sp. is proposed after the species name of the host.

Type species	: <i>Stilesia hircusi</i> n.sp.
Host	: <i>Capra hircus</i> L.
Habitat	: Intestine
Locality	: Dhule, District Dhule, M.S., India
Date of collection	: 26 th April, 2004

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REFERENCES

- BHALERAO, G.D. 1935. On occurrence of *Stilesia vittata* (Cestoda) in ovines in India. *Ind. J. Vet. Sci. Anim. Husb.* 5(1) : 28-29.
- GUPTA, N.K. & SINGLA, S.L. 1976. Studies on the tapeworms of the genus *Stilesia* Railliet, 1893 from India. *Res. Bull. Punjab Univ.* 27 : 129-134.
- JADHAV, B.V. 1999. The new species of tapeworms *Stilesia jadhavae* n.sp. from ovis bharal at Aurangabad, Rehavard F. Hend Centre 1998, PP Abstract. *Scientific Journal of the Union of the Iranian student.* Vol. I, No.1.
- KADAM, S.S., SHINDE, G.B. & JADHAV, B.V. 1980. On a new species of *Stilesia* Railliet, 1893 (Cestoda : Thysanosomatinae) Skrjabin, 1933 from sheep at Aurangabad. *Bio.* 2(3) : 33-36.
- KALYANKAR, S.D., DESHMUKH, A.L. & HATWALKAR, V.M. 1981. A new species of the genus *Stilesia* Railliet, 1893 (Anoplocephalidae : Cestoda) from a goat *Capra hircus* at Aurangabad. *Bio.* 3(1) : 51-52.
- MAJID, M.A., SHINDE, G.B. & JADHAV, B.V. 1982. On a new species of *Stilesia* Railliet, 1893 (Cestoda : Thysanosomatinae) Skrjabin, 1933 from sheep at Aurangabad. *Marath. Univ. J. Sci. (Nat. Sci.).* 14 : 37-39.

- MALHOTRA, S.K. & CAPOOR, V.N. 1983. On two new species of cestodes (Cyclophyllidae), *Stilesia garhwalensis* n.sp. from goat and *Stilesia kotdwarensis* n.sp. from sheep of Garhwal region, India. *Acta Parasit. Pol.* **28** : 399-406.
- RAILLIET, A. 1896. Sur quelques parasites du dromadaire. *Compt. Rend. Soc. Biol.* **48** : 489-492.
- SHINDE, G.B. & KALSE, A.T. 1999. On a new tapeworm *Stilesia yawalensis* (Cestoda : Thysanosominae, Fuhrmann, 1907) sp. nov. from *Capra hircus* in India. *Uttar Pradesh J. Zool.* **19**(1) : 89-91.
- SHINDE, G.B. & JADHAV, B.V. & PHAD, A.N. 1985. *Stilesia marathwadaensis* n. sp. (Cestoda : Thysanosomatinae) from *Capra hircus* at Aurangabad. *Riv. Parasit.* Vol. **II** (XLVI) : 213-215.
- SOUTHWELL, T. 1930. *The Fauna of British India including Ceylon and Burma. Cestoda*. Vol. I (p.391) & Vol. II (p.262). Taylor and Francis, Red Lion Court, Fleet Street, London.
- SPASSKII, A.A. 1951. Anoplocephalate tapeworms of domestic and wild animals Vol. I *Essentials of Cestodology* (Skrjabin, K.I. Ed.). The Academy of Science of the USSR, Moscow (I.P.S.T., 1961). pp.783.
- WOLFFHUEGEL, K. 1903. *Stilesia hepatica* nov.spec., ein Bandwurm aus den Gallengaengen von Schafen und Ziegen Ostafrikas, Berlin. *Tierarzt. Wochenschr.* **43** : 661-665.
- WARDLE, R.A., McLEOD, E.L. & RADINOVASKY, S. 1974. Advances in the Zoology of Tapeworms, 1950-1970. University of Minnesota Press, Minneapolis. pp. 1-274.
- YAMAGUTI, S. 1959. *Systema Helminthum*. Vol. II. the Cestodes of Vertebrates. Interscience Publishers, New York and London, INC. pp. 1-860.