

An Occurrence of New Tapeworm *Skrjabinotaenia Sunitii* N.sp. From the Intestine of A White Rat, (*Rattus Norvegicus*) at Yeotmal District, Maharashtra State, India



Science

KEYWORDS : Mammalian Diseases, Cestodes, Tapeworm *Skrjabinotaenia sunitii*, n.sp. Intestinal parasites, white rat, *Rattus norvegicus*.

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ABSTRACT

The genus *Skrjabinotaenia* was erected by Akhumian, 1946 from *Meriones shawi shawi* in Algeria. Later on *Skrjabinotaenia lobata* was added to this genus by spassky, 1951; from *Apodemus sylvaticus* in Armenia. Mikhail and Fahmy in 1968 have added one new species as *S. psammoni*, from *psammomys obesus obesus*, in Egypt, U.A.R. Pierre Hunkele in 1961, have added two more species as *S. occidentis occidentis* and *S. occidentis parotidis*. Nine worms were collected from the intestine of a white rat, *Rattus norvegicus*, in the month of March, 1985, at Yeotmal, Maharashtra State, India. Five were stained with Harris haematoxylin and made whole mount slides for anatomical studies and rest were preserved in 4 % formalin.

Introduction

The genus *Skrjabinotaenia* was erected by Akhumian, 1946 from *Meriones shawi shawi* in Algeria. Later on *Skrjabinotaenia lobata* was added to this genus by spassky, 1951; from *Apodemus sylvaticus* in Armenia. Mikhail and Fahmy in 1968 have added one new species as *S. psammoni*, from *psammomys obesus obesus*, in Egypt, U.A.R. Pierre Hunkele in 1961, have added two more species as *S. occidentis occidentis* and *S. occidentis parotidis*.

The present communication deals with the new species of the genus *S. sunitii* n.sp., collected from Yeotmal district, Maharashtra State, India.

Description

Nine worms were collected from the intestine of a white rat, *Rattus norvegicus*, in the month of March, 1985, at Yeotmal, Maharashtra State, India. Five were stained with Harris haematoxylin and made whole mount slides for anatomical studies and rest were preserved in 4 % formalin.

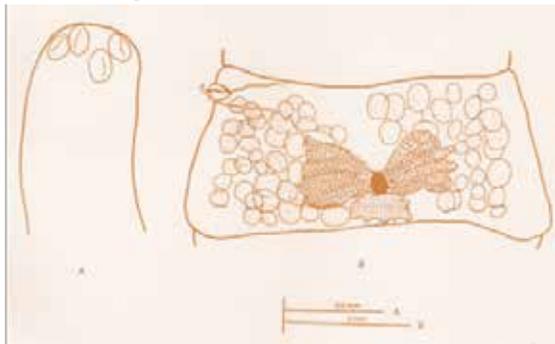


Fig.1. Camera Lucida drawing of the Tapeworm *Skrjabinotaenia sunitii* n.sp. from the intestine of a white rat, (*Rattus norvegicus*) (A-Scolex, B-Mature segment)

The scolex is large, almost club shaped, elongated, simple, which is armed with four suckers. The scolex measures 1.0674 x 0.485 in length and breadth. The suckers are four in number, simple, small, oval in shape and occur in pairs, at anterior side of the scolex and measure 0.140 x 0.097 to 0.174 x 0.116 in length and breadth. The neck is absent.

The mature segments are craspedote, broader than long, almost two and half times broader than long and measure 1.136-1.310 x 2.323-2.818 in length and breadth. The testes are 60-65 in number, small and large, oval in shape, on either side of the ovary, arranged almost in two lateral fields, few anterolateral and posterolateral to ovarian lobes. The testes at the poral side are 35 in number while on antiporal side are 25 to 30 in number and measure 0.121 x 0.098 to 0.295 x 0.242 in length and breadth. The cirrus pouch is small, oval, protruded, transverse, just at the anterior margin of the segment, almost at 1/6 to 1/7 from anterior margin of the segment and measures 0.045 x

0.128 in length and breadth. The cirrus is thin, curved or coiled protruding from cirrus pouch and measures 0.280 x 0.015 in length and breadth. The vas-deferens is short, thin, a slightly coiled tube, at anterior side of the segment and measures 0.416 x 0.007 in length and breadth. The genital pores are irregularly alternate, oval, at the tip of cirrus pouch and measure 0.015 x 0.007 in length and breadth.

The ovary is of medium size, fan-shaped, follicular, lobulated, with 5 to 6 acini, each lobe, located almost in the center, slightly in posterior half of the segment and transversely situated. The acini are cylindrical elongated and blunt at the distal end. The ovary measures 1.242 x 0.507 in length and breadth.

The vagina is thin, wide, posterior to cirrus pouch, slightly curved, runs straight upto 1/3 of its length, runs obliquely, turns to middle posterior region of segment, reaches and opens into the ootype and measures 1.348 x 0.015 in length and breadth. The vagina forms receptaculum seminis, which is spindle shaped, anterior to the poral lobe of ovary and measures 0.275 x 0.075 in length and breadth. The ootype is large, oval in shape in the middle of the isthmus, placed anteroposteriorly and measures 0.189 x 0.121 in length and breadth. The vitelline gland is large, having irregular margin and is located posterior to the ovary, near the posterior margin of the segment, which measures 0.454 x 0.196-0.242 in length and breadth.

Discussion

The genus *Skrjabinotaenia* was erected by Akhumian in 1946 as a type species of *S. oranensis*, from *Meriones shawi shawi*. Later on following species are added to this genus :

1. *S. lobata* (Baer, 1925) Spassky, 1951.
2. *S. psammont* Mikhail and Fahmy, 1968.
3. *S. occidentalis occidentalis* Pierre Hunkeler, 1961.
4. *S. occidentalis pramidis* Pierre Hunkeler, 1961.

1. The worm under discussion is having scolex large, club shaped, elongated, simple; suckers oval in shape, occur in pairs; neck absent, mature segments craspedote, broader than long, almost two and half times broader than long; testes 60-65 in number, small and large oval in shape, arranged almost in two lateral fields, few anterolateral and posterolateral to ovarian lobes; cirrus pouch small, oval, protruded, transverse, just at anterior margin of segment; cirrus thin, curved or coiled protruding from cirrus pouch; vasdeferens short, thin, a slightly coiled tube; genital pores irregularly alternate, oval; ovary of medium size, fan shaped, follicular, lobulated, with 5 to 6 acini, in each lobe, located almost in centre, acini cylindrical, elongated and blunt; vagina posterior to cirrus pouch, vagina forms receptaculum seminis, which is spindle shaped and anterior to ovary; ootype large, oval, in the middle of isthmus; vitelline gland large, with irregular margin, located posterior to the ovary, near posterior margin of the segment.

2. The present cestode differs from *S. oranensis* is not having scolex rounded and oval, neck present, mature segments with poorly expressed velum, testes in two lateral groups, lie in a sin-

gle layer, 180 in number, poral group containing 80 testes and the aporal containing 100; ovary Catenotaenia type, consisting of numerous long lobules, vitellaria biwinged, antiporal wing more developed than the poral and seminal receptacle elliptical in position.

3. The present worm differs from *S. lobatea* in not having scolex round in shape, mature segments 45-61 in number, testes 200-229 in number, round, lie posteriorly and laterally; ovary in anterior portion of segment, multilobed, asymmetrical, with very long, numerous lobules, vitelline gland multilobed, transversely elongated, in centre of the ovary and receptacle seminars absent.

4. The present worm differs from *S. psammoni* in not having non-raostellar scolex, with unarmed suckers, rounded in shape, mature segments wider than long, strobula with 10 to 17 segments; testes 500 or more in number, lateral to ovary, ovary dendrite type, vitelline gland deeply lobed, seminal receptacle round in shape, genital pores regularly alternate, although irregularly alternate in few segments.

5. The worm under discussion differs from *S. occidentalis* in not having mature segment longer than broad, with 25 to 55 segments, testes 160-200 in number, ovary lobed, nearly 40 to 60 extremities at each lobe, lobes long, vitelline gland poral, much lobed, seminal receptacle round in shape.

6. The present worm differs from *S. occidentalis praomidis* in not having scolex of large size, mature segments longer than broad, with 30 proglottids, testes 120-160 in number, ovary lobed, anterior in position, each lobe with 10-12 extremities.

In view of the differences discussed above, the present worm is regarded here to constitute a new species, for which the name *Skrjabinotaenia sunitii* n.sp. after author's wife Mrs. Sunita Sawarkar, as she has given constant encouragement for the completion of this work.

Type species : *Skrjabinotaenia sunitii* n.sp.
Host : *Rattus norvegicus*
Habitat : Intestine
Locality : Yeotmal, M.S., India.

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