



**ORIGINAL RESEARCH PAPER**

**Zoology**

**REDESCRIPTION ON *RAILLIETINA (RAILLIETINA) COLINIA* (WEBSTER, 1944) (CESTODA: DAVAINAEIDAE) IN THE INTESTINE A COMMON HOUSE CROW OF FROM LATUR DISTRICT (M.S.), INDIA**

**KEY WORDS:** *Corvus splendens splendens*, Latur, *Raillietina (Raillietina) colinia*.

**R . V. Solunke**

Department of zoology and fish. sci., Dayanand science college

**ABSTRACT**

*Raillietina (Raillietina) colinia* (Webster, 1944) cestode parasite of a common house crow, *Corvus splendens splendens* (vieillot) at Dhanore, Tq. Nilanga, Dist. Latur, M.S., India. The Present worm resemble with *Raillietina (Raillietina) colinia* (Webster, 1944) in having morphological characters i.e. scolex medium, oval in shape, neck medium, mature proglottids broader than long, testes small in size, oval in shape. But the same differ due to number of hooks on rostellum, number of testies, and structure of ovary, hence it is redescribed.

**INTRODUCTION**

The genus *Raillietina* was named in 1920 in honour of a French veterinarian and helminthologist, Louis-Joseph Alcide Railliet. *Raillietina (Raillietina) colinia* is a endoparasite, and this tapeworm belonging to the class Cestoda. This is avian gastrointestinal parasite of family Davaineidae (Cestoda: Cyclophyllidea), and are the most important species in terms of prevalence and pathogenicity among wild and domestic birds. The genus *Raillietina* is responsible for 'nodular tapeworm disease.'

The present communication deals with the redescription on *Raillietina (Raillietina) colinia* (Webster, 1944) found in the intestine of the common house crow, *Corvus splendens splendens* at Dhanore, Tq. Nilanga, Dist. Latur, M.S., India.

**DESCRIPTION**

Eleven specimens, of the cestode parasites, were collected, from the intestine of a common house crow, *Corvus splendens splendens* (vieillot) at Dhanore, Tq. Nilanga, Dist. Latur, M.S., India; in the month of February 2018 All the cestodes were long, with thick musculature, white in colour, with scolex, numerous immature and mature proglottids. These worms were flattened, preserved in 4% formalin, stained with Harri's haematoxylin, passed through various alcoholic grades, cleared in xylol, mounted in DPX and whole mount slides were prepared, for further anatomical studies.

The scolex is medium in size, oval in shape, slightly broader than long, broad in the middle, narrow at both the ends and measures 0.393 to 0.456 in length and 0.296 to 0.451 in breadth. The rostellum is medium in size, oval in shape, situated at the tip of the scolex, armed with rostellar hooks and measures 0.150 to 0.223 in breadth. The rostellar hooks are 120-130 (126) in number, small in size, single pronged, arranged in a single circle, broad at the base, pointed at the apex and measures 0.012 to 0.018 in length and 0.001 to 0.002 in breadth. The four suckers are medium in size, oval in shape, placed obliquely, arranged in two pairs, one pair in each half of the scolex, suckers overlapping on each other in each pair, 7 to 8 spines in a transverse row, on the sucker margins and measures 0.160 to 0.180 in length and 0.112 to 0.131 in breadth. The neck is of medium length and width, broad anteriorly, slightly narrow posteriorly, with regular lateral margins and measures 1.165 to 1.180 in length and 0.330 to 0.340 in breadth.

The testes are small in size, oval in shape, in two lateral fields, in the central medulla, 38 in number, 11 poral, 27 aporal, bounded laterally by the longitudinal excretory canals and measures 0.022 to 0.048 in length and 0.022 to 0.045 in breadth. The cirrus pouch is medium in size, oval in shape, obliquely placed, anteriorly directed, situated in the anterior 1/3<sup>rd</sup> region of the segments, not extending beyond the longitudinal excretory canals and measures 0.090 to 0.102 in length and 0.034 to 0.068 in breadth. The cirrus is thin, slightly curved, contained within the cirrus pouch and measures

0.090 in length and 0.011 in breadth. The vas deference is long, transversely placed, anteriorly directed, curved, extending beyond the longitudinal excretory canals, extends anteriorly and measures 0.375 in length and 0.011 in breadth.

The ovary is medium in size, indistinctly bilobed, aporal in position, mostly in the anterior half of the segments, follicular, each lobe with 3 to 5 long, finger like, separate acini and measures 0.259 to 0.386 in length and 0.034 to 0.375 in breadth. The vagina is thin, long, posterior to the cirrus pouch, runs transversely, slightly wavy and crosses the longitudinal excretory canals, reaches and opens into the cotype and measures 0.590 in length and 0.011 in breadth. The ootype is small in size, oval in shape, at the centre of the ovary, and measures 0.045 to 0.056 in length and 0.022 to 0.034 in breadth.

The genital pores are small in size, oval in shape, unequal, unilateral, situated at the anterior 1/3<sup>rd</sup> region of the segments and measures 0.045 in length and 0.022 in breadth. The longitudinal excretory canals are medium in width and measures 0.011 in breadth. The vitelline gland is medium in size, triangular in shape, with irregular margine, post ovarian, near the posterior margins of the segments, placed in the concavity of the ovarian lobes and measures 0.352 in length and 0.068 to 0.113 in breadth. The gravid segments were not available.

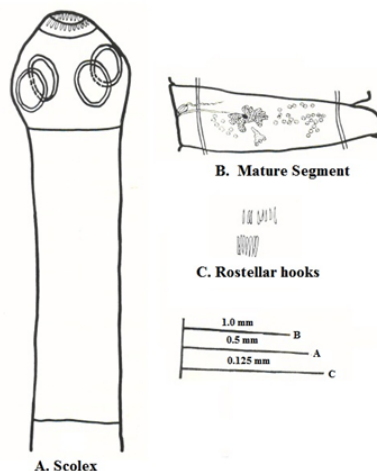


Fig. *Raillietina (Raillietina) colinia*, Webster, 1944.

**DISCUSSION**

The genus *Raillietina* was erected by Fuhrmann, 1920 and subgenus *Raillietina (Raillietina)* Fuhrmann, 1920. The species *Raillietina (Raillietina) Colinia* was erected by Webster in the year 1944 from *Colinus virginianus* from Texas, U.S.A.

After going through the literature, the worm under discussion, on having the number of testes 35-40(38), comes closer to

*Raillietina (Raillietina)* Colinia Webster, 1944. The present worm resembles it, in many characters, but differs from

The same, in few characters, which are as follows:

1. The present cestode, differs from *Raillietina (Raillietina)* Colinia in the number of rostellar hooks (120-130 (126) vs. 100-108).
2. The present tapeworm, differs from it, in the number of testes (35-40 (38) vs. 29-30).
3. The present form, differs from the same, in the structure of the ovary (indistinctly bilobed, each lobe with 3-5, long, finger like acini vs. bilobed, slightly poral).

As the characters are minor, it is redescribed here, as *Raillietina (Raillietina)* Colinia Webster, 1944, which is reported from *Colinus virginianus* from Texas, U.S.A., where as the present worms, are being reported from *Corvus splendens splendens*, at Dhanora, Tq. Nilanga, Dist. Latur, M.S., India.

#### REFERENCES

1. Bact, Sene T, Marchand B., 1995. Scanning electron microscope examination of scale-like spines on the rostellum of five Davaineinae (Cestoda, Cyclophyllidae). Parasite 2:63-67.
2. Butboonchoo, P., Wongsawad, C., Rojanapaibul, A. and Chai, J.Y. 2016. Morphology and molecular phylogeny of *Raillietina* spp. (Cestoda: Cyclophyllidae: Davaineidae) from domestic chickens in Thailand. The Korean Journal of Parasitology. 54(6):777-786.
3. Challam M, Roy B, Tandon V., 2010. Effect of *Lysimachia ramosa* (Primulaceae) on helminth parasites: motility, mortality and scanning electron microscopic observations on surface topography. Vet Parasitol 169: 214-218.
4. K. Lalchandama, 2009. On the structure of *Raillietina echinobothria*, the tapeworm of domestic fowl. Sci Vis 9(4):174-182.
5. Moghe, M.A., 1929. Four new species of Avian cestodes from India, Parasit, 25:333-341.
6. S. S. Nanware, S. M. Shinde and D. B. Bhure, 2012. Studies on Avian Tapeworm *Raillietina rostellata*, sp. Nov, (Cestoda: Davaineidae) from *Gallus gallus* domestics. Journal of Environment and Sociobiology. Volume-9 Issue 2.
7. Sambhaji S. Shinde, 2019. Redescription on *Raillietina (Raillietina)* *Microscolecins* (Fuhrmann, 1908) (Cestoda: Davaineidae) in the intestine of pied crested cuckoo from Aurangabad (M.S.), India. Indian Journal of Applied Research. Volume-9, Issue-8, page no.18-19.
8. Sawada, I., 1964. On the genus *Raillietina*, Fuhrmann, 192 (Journal of Nara Gakugei, University, 12:19-26.
9. Skrjabin, K. J. and R. I. Schulz, 1937. Helminthology Miskow, 2nd Ed. PP. 418
10. Waghmare, S., Sherkhane A. S, Chavan, R., 2014. Redescription on *Raillietina echinobothrida* (Pasquale, 1890) (Cestoda: Davaineidae) and study of conserved domain across divergent phylogenetic lineages. Journal of Veterinar and technology
11. Wardle, R. A. 1974. Advances in the Zoology of tapeworms, 1950-1970, Univ. of Minnesota Press Minneapolis, 1-274.
12. Yamaguti, S., 1959. Systema Helminthum, Vol. II, The Cestodes of vertebrates, Interscience Pub. INC, New York London, 1-860.