

On a new poultry cestode in India

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Abstract. A new cestode species belonging to the subgenus *Raillietina* Stiles and Orleman (1926) of the genus *Raillietina* Fuhrmann (1920) representing the family Davaineidae Fuhrmann (1907) was obtained from the intestine of a domestic fowl, *Gallus gallus domesticus* at Chandigarh, India.

Keywords. New species : *Raillietina (Raillietina) rybickae*.

1. Introduction

Cyclophyllideans are important cestode parasites infecting various poultry. They are found in the alimentary tract and cause varying degrees of pathological conditions. In the present paper a new species belonging to the genus *Raillietina* is described.

2. *Raillietina (Raillietina) rybickae* n.sp. (figures 1, 2)

2.1. Description (measurements in mm)

- 2.1a. *Strobila* : 80-85 long, 0.448 wide; proglottids longer than broad.
- 2.1b. *Scolex* : Pear shaped, 0.300 × 0.410 in size; rostellum small 0.026 in diameter; armed with a single row of 100 hooks, 0.006 long; suckers four, oval, 0.100 × 0.059 in size armed with 6 rows of about 0.003 long hooks.
- 2.1c. *Neck* : Long, 3.924 × 0.144 in size.
- 2.1d. *Proglottids* : 0.704 long, 0.448 wide; all proglottids longer than broad.
- 2.1e. *Reproductive system* : Genital openings unilateral situated at about the middle, or slightly anterior to it on the lateral margin. Cirrus sac oval, 0.100 × 0.042 in size, extending up to ventral longitudinal excretory vessel, walls of cirrus sac thin; vas deferens much coiled 0.014 in diameter; testes 20-25, each with a diameter of 0.060, spread across the intervascular field and sometimes extending beyond the excretory vessels. Vagina 0.012-0.014 wide, enlarges prior to its opening into the genital atrium; receptaculum seminis present; ovary 0.158 ×

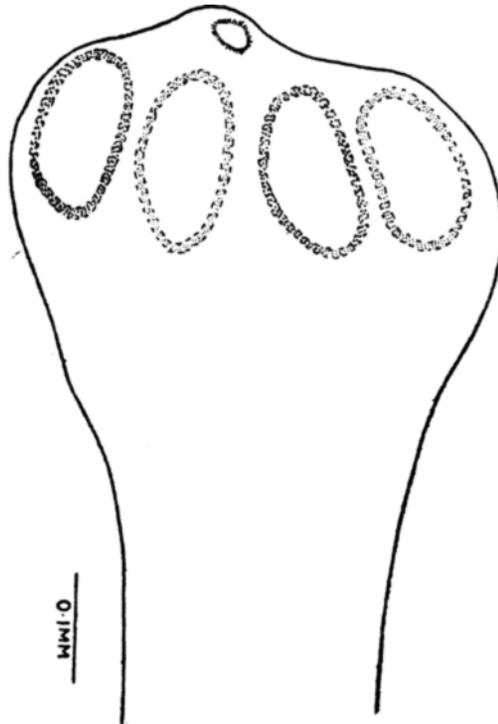


Figure 1. Scolex showing its structure.

0.104 in size stretched antero-posteriorly; vitelline gland post-ovarian, compact, 0.084-0.90 × 0.046-0.058 in size. Egg capsules contain 6-8 eggs per capsule.

Type host: *Gallus gallus domesticus*.

Location: Intestine.

Locality: Chandigarh (India).

Type material deposited with the senior author at Department of Zoology, Panjab University, Chandigarh.

2.2. Discussion

In possessing the following characters, viz., rostellum with single circle of hammer-shaped hooks, sucker margins with several circles of minute hooks; testes usually numerous; cirrus pouch small, extending to the excretory stem; genital pores unilateral; ovary median, vitelline gland postovarian and egg capsules containing several eggs, the present form has been assigned to the genus *Raillietina* Fuhrmann (1920), and to the subgenus *Raillietina* (*Raillietina*) Stiles and Orleman (1926).

Of all the known forms belonging to the subgenus *Raillietina* (*Raillietina*), the present form resembles *R. (R.) tetragona* (Molin 1858) Fuhrmann, (1924);

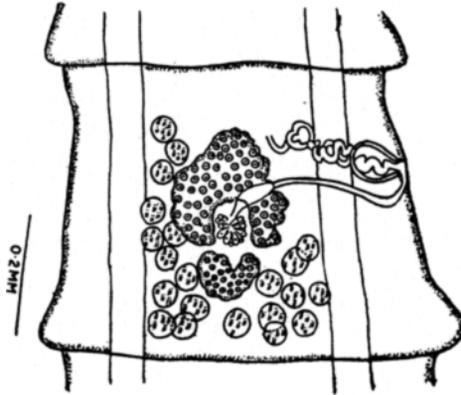


Figure 2. Mature proglottid showing its reproductive system.

R. (R.) steinhardti Baer (1925); *R. (R.) dattai* Sinha (1960); *R. (R.) friedbergieri* (Linstow 1878) Fuhrmann (1924); *R. (R.) debilis* (Baylis 1919) Fuhrmann (1924); *R. (R.) sartica* (Skrjabin 1914) Fuhrmann (1924) in having the same range of the number of rostellar hooks and the number of testes.

The present form differs from *R. (R.) tetragona* which has a larger strobila (250), the proglottids are all broader than long, scolex is small (0.175–0.350) as compared to body size, rostellum is more in diameter (0.050–0.070); suckers are armed with 8–10 rows of hooks, cirrus sac does not extend to the longitudinal excretory vessel, ovary is stretched transversely and gravid proglottids contain 6–12 eggs per egg capsule; from *R. (R.) steinhardti* in which the strobila has broader than long proglottids, rostellum is armed with 160 hooks, suckers are armed with 14–15 rows of hooks, cirrus sac does not extend to the excretory vessel and gravid proglottids contain egg capsules with 10–12 eggs.

It also stands apart from *R. (R.) dattai* in which cirrus sac is hour-glass shaped, rostellum is more (0.070) in diameter armed with numerous hooks 0.008–0.010 in size; from *R. (R.) friedbergieri* in which strobila is quite long (200), proglottids are broader than long, rostellum is armed with more (150) number of hooks (0.0122–0.0128 in size) arranged in two rows, suckers are armed with lesser (4–5) rows of hooks which decrease in size towards the middle of sucker; cirrus sac is not extending to longitudinal excretory vessel and each egg capsule contains lesser (2–3) number of eggs.

It also differs from *R. (R.) debilis* where strobila is short (45), sucker hooks are larger (0.012), rostellum is larger (0.080) in size, armed with numerous hooks which are shorter (0.003) in size; and from *R. (R.) sartica* in which the suckers are armed with more (12–15) rows of larger (0.011) sized hooks, rostellum is more (0.096) in diameter, rostellar hooks (200) and testes are more in number, cirrus sac does not extend to excretory vessel and egg capsules contain lesser (3–4) number of eggs.

In view of these differences the present form has been found to be new to science and has been named, *R. (R.) rybickae* after Dr K Rybicka from Texas, USA.

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