

# Biosystematic studies on *Raillietina (R.) domestica* (Davaineidae, Fuhrmann, 1908) from *Gallus gallus domesticus*

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The present investigation deals with taxonomic observation of avian tapeworm of genus *Raillietina (R.) rostellata* sp. Nov. collected from *Gallus gallus domesticus* at Ahmedpur, Dist. Latur. It comes closer to all the known species of the genus *Raillietina (R.)* in general topography of organ but differs due to scolex triangular, well marked from strobilae, rostellum lies at anterior region of scolex with 55-58 hooks, which is arranged in double rows, neck long, testes 30-35 in numbers, scattered throughout the segment, cirrus pouch small, oval, genital pore small, marginal, unilateral, Vagina posterior to cirrus pouch, Ovary bilobed, vitelline gland postovarian and gravid proglottid contains 44-48 egg capsules.

**Key words :** Biosystematic study, *Gallus gallus domesticus*, *Raillietina (R.) domestica* Sp.Nov., Taxonomic study

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## INTRODUCTION

Livestock animals like domestic fowl, *Gallus gallus domesticus* have a great socio-economic importance than other animals domesticated by humans. It is an important item of human food as well as the source of income due to the production of meat, fibre and other substances. Farmers of Marathwada Region used fertilizer which is formed from domestic fowl in their fields to increase soil fertility. But these domestic fowl are infected with helminth infection which is responsible for mortality and economic losses in a number of instances. causes many diseases to human beings. The cestode parasites are found in birds throughout world.

The genus *Raillietina* was erected by Fuhrmann (1920) with its type species (*R. tetragona* (Molin, 1858, Syn. *Taenia bothrioplitis*) which harbours *Gallus*, *Numida*, *Francolinus*, *Pavo*, *Lagopus*, *Colinus* as their hosts. Later on Linstow (1877) added *Raillietina (R.) friedbergeri* from *Pycnonotus cafer*. Then Fuhrmann (1908) added three species in this genus i.e. *R.(R.) micracantha*, *R.(R.) paucitesticulata* and *R.(R.) cryptacantha* collected from *Columba delegouei*. Kotlan (1921) described *R.(R.) polychali*. Then *R.(R.) weissii* added by Joyeux, 1923. Later on Meggitt (1931) reported *R.(R.) fragilis* collected from *Columba Punica*. Then *R.(R.) sequens* added by Tunabngui and Masilungan (1937). Reid and Denis Nugara, (1965) described *R.(R.) georgiensis* collected from *Meleagris*

*gallopavo silvestris*, *Meleagris gallopavo domesticus* Later on *R. (R.) waltirensis* added by Kolari *et al.* (1985) from *Streptopelia chinensis suratensis*. Recently, Nanware *et al.* (2010) added *R.(R.) microscolecina* (Fuhrmann, 1908) collected from *Gallus gallus domesticus*.

## RESEARCH METHODOLOGY

Seven specimens of the cestode parasites were collected from the intestines of *Gallus gallus domesticus* at Nanded (M.S.) India. These cestode parasites were preserved in 4 per cent formalin, dehydrated in ascending grades of alcohols stained with borax carmine and Harri's Haematoxyline, cleared in xylene, mounted in D.P.X. and drawing were made with the aid of camera lucida. All measurements were recorded in millimeters.

## RESEARCH FINDINGS AND ANALYSIS

The findings of the study have been discussed in detail as under:

**Description (Based on 07 specimens) *Raillietina (R.) domestica* Sp. Nov.** (Fig. 1 and 2):

All the tapeworms are medium in size, long, creamy white in colour with scolex, numerous immature, mature and gravid