

A New Cestode *Raillietina* (*Skrjabinia*) *doggaddaensis* n. sp. from *Gallus gallus domesticus* (L.) from India*

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INTRODUCTION

The morphological studies of the collected specimens have been found to be referable to a new species of the subgenus *Skrjabinia* Fuhrmann(1920), genus *Raillietina* Fuhrmann(1920) of the family Davaineidae Fuhrmann(1907) (now Order Davaineidea Wardle, McLeod and Radinovsky, 1974 of the class Eucestoda Wardle *et al.*, 1974).

MATERIALS AND METHODS

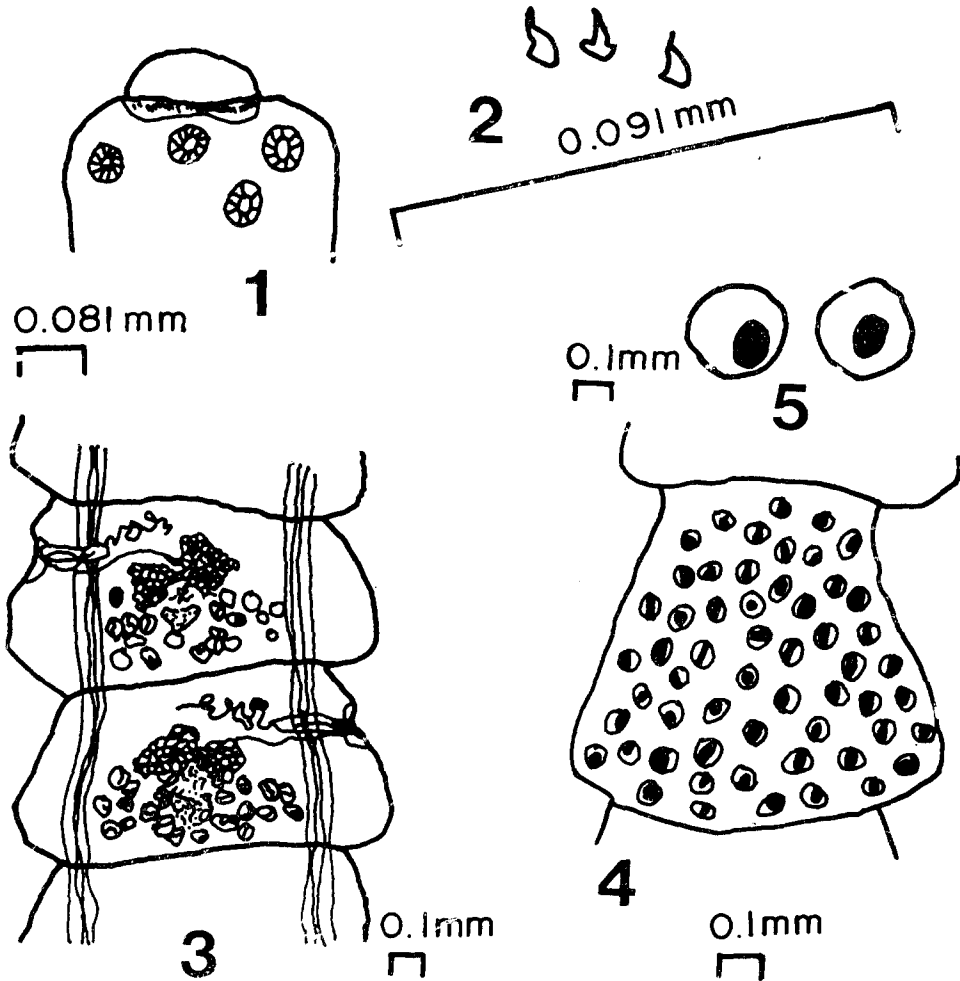
Seven out of 225 domestic fowls, *Gallus gallus domesticus* (L.) examined at Doggadda (Garhwal) (325 mASL), U.P., India revealed 20 interesting tapeworms. Worms were killed and stretched in lukewarm water; fixed in aqueous Bouin's solution; stained in haemalum; dehydrated through a series of alcohols; cleared in xylol and mounted in canada balsam. Camera lucida drawings were prepared. All measurements were recorded in millimeters unless otherwise stated and mentioned as ranges followed by mean in parentheses.

RESULTS

Worms, 68~73.5(70.16) long and 2.22 in

maximum width met within gravid proglottides. Strobila consists of 139~163(147) proglottides. Proglottides wider than long except in a few gravid proglottides which may be almost square. Scolex (Fig.1.), 0.225~0.341(0.29) × 0.398~0.57(0.46). Suckers, 0.02~0.07(0.05) × 0.05~0.06(0.06), unarmed. Rostellum, 0.09~0.13(0.12) × 0.22~0.23(0.22). Rostellum bears single row of hooks (Fig. 2) numbering about 126~141(132). Rostellar hooks, 0.007~0.01 long. Neck absent. Segmentation distinct. Proglottides craspedote. Immature, mature (Fig. 3) and gravid proglottides (Fig. 4) measure, 0.03~0.32(0.16) × 0.37~0.66(0.05); 0.27~0.87(0.54) × 0.69~1.22(0.95), and 0.84~2.22(1.47) × 1.28~2.24(1.61), respectively. Testes number 15~21(18) in each proglottid. Testes round to oblong, measure 0.015~0.09(0.05) × 0.015~0.08(0.04), distributed lateroposterior to ovary. Testes do not extend laterally beyond ventral excretory vessels. Cirrus pouch vase shaped, 0.125~0.30(0.22) × 0.01~0.06(0.04), extends beyond ventral longitudinal excretory vessel. Internal and external seminal vesicle absent. Vas deferens forms a few coils before entering into cirrus pouch. Cirrus unarmed, measure 0.005~0.01(0.008) in diameter. Female genitalia located in the middle of the proglottid. Ovary bilobed, 0.02~0.19(0.09) × 0.103~0.35(0.23). Vitelline gland compact and postovarian, measure 0.018~0.08(0.05) × 0.03~0.15(0.09). Vagina, 0.002~0.005(0.003)

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Figs. 1-5. *Raillietina (Skrjabinia) doggaddaensis* n. sp.

1. Scolex (×50), 2. Rostellar hooks (×400), 3. Mature proglottides (×10),
4. Gravid proglottid (×50), 5. Egg capsule (×10).

in diameter. Receptaculum seminis, 0.02~0.08 (0.03) × 0.01~0.06 (0.02). Ootype, 0.035~0.11 (0.07) × 0.03~0.09 (0.05). Genital atrium, 0.009~0.06 (0.03) deep and 0.01~0.07 (0.04) wide. Genital openings irregularly alternate, located in the anterior third to middle region of the proglottid margin. Uterus, in gravid proglottides, breaks up into egg capsules. Egg capsules numerous, approximately 621 in number, each containing single egg. Egg capsules, 0.03~0.06 (0.04) × 0.02~0.07 (0.03), extend even beyond the ventral excretory vessel. Each egg (Fig.5), 0.045~0.06 (0.05) in diameter. Oncosphere, 0.005~0.04 (0.02) × 0.005~0.03

(0.017).

DISCUSSION

The new species shows close resemblance to *Raillietina (Skrjabinia) dhuncheta* Sharma (1943), and *R. (S.) magnicoronata* Fuhrmann (1908). However, it differs from the former in possessing shorter but wider strobila; wider scolex and rostellum; lesser number of rostellar hooks and testes; unarmed suckers and longer cirrus pouch. The new cestode can also be differentiated from *R. (S.) magnicoronata* in larger strobila; larger scolex, rostellum and suckers; lesser number of

smaller rostellar hooks; a few proglottides not wider than long; longer cirrus pouch and unarmed cirrus.

Species Diagnosis:

Rostellum with single row of hammer shaped hooks. Sucker margin unarmed. Testes not numerous. Cirrus pouch crosses excretory vesels. Genital pores irregularly alternating. Ovary bilobed, median. Vitelline gland compact, post-ovarian. Receptaculum seminis present. Egg capsules containing single egg. Adults in birds. Host : *Gallus gallus domesticus* (L.)

Habitat : Small intestine

Locality : Doggadda (District: Pauri-Garhwal) (325 mASL), U.P., India.

Holotype : Holotype slide no. PCLS 021/79 and paratype slide no. PCLS 022/79 deposited with the Parasitological Collections, Department of Zoology, University of Garhwal, Srinagar (Garhwal), U.P., India.

SUMMARY

A new poultry cestode *Raillietina* (*Skrjabinia*) *doggaddaensis* n.sp. has been described from the domestic fowl *Gallus gallus domesticus* (L.). The new species has been compared with *R. (S.) dhuncheta* Sharma (1943) and *R. (S.) magnicoronata* (Fuhrmann, 1908).

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