

**A New Avian Cestode, *Raillietina (Raillietina) kaimonjiensis*  
n. sp. (Cyclophyllidea: Davaineidae) from a Pigeon,  
*Columba livia domestica*, of Beppu City, Japan**

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**Abstract**

A new cestode, *Raillietina (Raillietina) kaimonjiensis* n. sp. (Cyclophyllidea: Davaineidae), was described from the small intestine of a Pigeon, *Columba livia domestica*, captured at Beppu City, Japan. This new species most closely resembles *R. (R.) ceylonica* (Baczynska, 1914) Fuhrmann, 1924 in having 3 to 4 testes, a unilateral genital pore and spinous cirrus, but differs from it in having a larger strobila, more rostellar hooks, a smaller scolex, smaller suckers and a smaller cirrus pouch, lacking the neck, and the arrangement of testes.

**Key words:** avian cestode, *Raillietina (Raillietina) kaimonjiensis* n. sp., Pigeon, morphology

**Introduction**

(Figs. 1–6)

Fifty-five species of the subgenus *Raillietina* Stiles and Orleman, 1926 of the genus *Raillietina* Fuhrmann, 1920 have been recorded from birds of the family Columbidae. In Japan, *R. (R.) tokyoensis* Sawada, 1960, *R. (R.) kunisakiensis* Sawada and Kugi, 1979, *R. (R.) bungoensis* Sawada and Kugi, 1986, *R. (R.) beppuensis* Kugi, 1992, *R. (R.) kyushuensis* Kugi, 1992 and *R. (R.) japonensis* Kugi, 1992 have been reported from domestic pigeons. The present paper deals with the morphology of a new species of the subgenus from Japan.

**Materials and Methods**

Two cestode specimens were obtained from the small intestine of a pigeon, *Columba livia domestica*, at Beppu City on November 2, 1993. The specimens were fixed in 70% ethanol after pressed between two slides, stained with Heidenhain's hematoxylin, dehydrated in graded series of ethanol, cleared in xylene, and mounted in Canada balsam.

All measurements are given in millimeters.

**Description of the species**

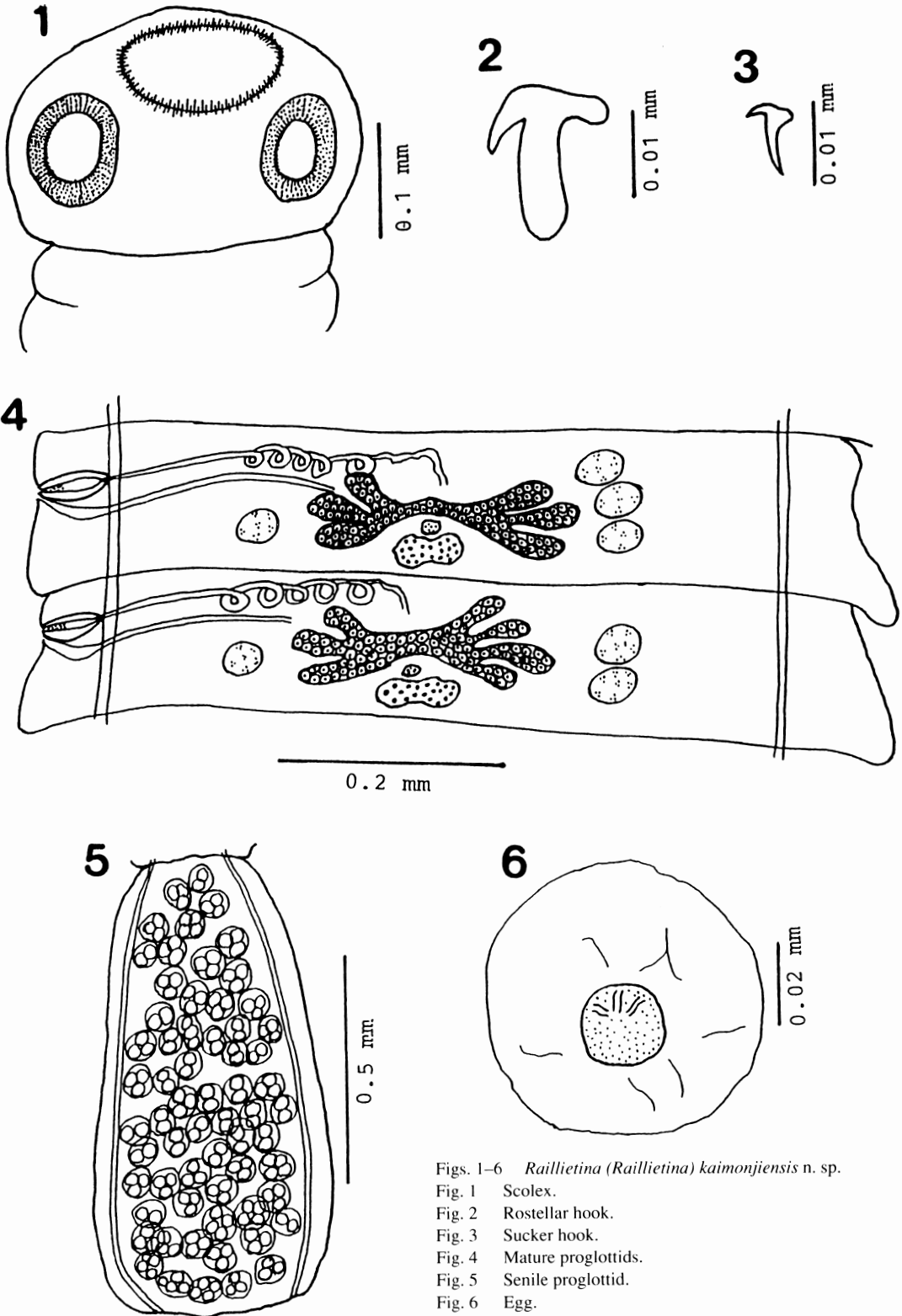
*Raillietina (Raillietina) kaimonjiensis* n. sp.

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Strobila craspedote, 104.2–105.8 in length, 1.0–1.1 in maximum width. Scolex 0.15–0.16 long by 0.22–0.23 wide. Rostellum 0.038 long by 0.13–0.15 wide, armed with 2 rows of 160–170 hammer-shaped rostellar hooks measuring 0.013–0.015 long. Suckers round, 0.040–0.045 in diameter, marginally armed with 5 rows of hooklets measuring 0.005–0.008 long. Neck absent. Immature proglottids wider than long; mature 0.17–0.18 long by 0.75–0.85 wide; young gravid widest, 0.30–0.35 long by 1.0 wide; old gravid longer than wide; senile 1.0 long by 0.3 wide, containing 60–80 egg capsules. Testes 3–4, 0.038–0.05 by 0.030–0.038, located to ovary in 2 groups on each side of proglottid; 1 poral and 2–3 aporal. Cirrus pouch pyriform, 0.068–0.075 long by 0.03 wide, reaching longitudinal osmoregulatory canal. Cirrus armed with numerous minute spines. Vas deferens coiled in anterior, submedian field of proglottid. Genital pore unilateral, located at junction of anterior and middle one-third of proglottid margin. Ovary bilobed, each lobe with 3–4 lobules, situated in central field of proglottid, 0.175–0.188 wide. Vitelline gland irregular-reniform, 0.038 long by 0.063–0.075 wide, situated just behind ovary. Shell gland 0.038 long by 0.018 wide, situated between ovary and vitelline gland.

Vagina opening posterior to male genital pore,



Figs. 1-6 *Raillietina (Raillietina) kaimonjiensis* n. sp.  
Fig. 1 Scolex.  
Fig. 2 Rostellar hook.  
Fig. 3 Sucker hook.  
Fig. 4 Mature proglottids.  
Fig. 5 Senile proglottid.  
Fig. 6 Egg.

swollen out in distal portion measuring 0.045 by 0.015.

Egg capsules arranged 2–4 eggs. Eggs spherical, 0.08–0.095 by 0.063–0.065, surrounded by a thin membrane. Onchosphere subspherical, 0.025 by 0.020; embryonic hooks 0.0075–0.008 long.

Host: Pigeon, *Columba livia domestica*.

Location: Small intestine.

Locality and date: Beppu City, Japan; November 2, 1993.

Type specimens: Holotype and paratype deposited at the Meguro Parasitological Museum, Tokyo, MPM Coll. No. 19598.

### Discussion

The present new species most closely resembles *R. (R.) ceylonica* (Baczynska, 1914) Fuhrmann, 1924 in having 3 to 4 testes, a unilateral genital pore and a spinose cirrus, but differs from it in a larger strobila (104–105 vs. 30–40), a smaller scolex (0.15–0.16 by 0.22–0.23 vs. 0.4 in diameter), more rostellar hooks (160–170 vs. 120), smaller suckers (0.04–0.045 vs. 0.13 in diameter), the absence of the neck (absent vs. 1.05 by 0.112), the arrangement of testes (one poral and 2–3 aporal vs. aporal), a smaller cirrus pouch (0.068–0.075 by 0.03 vs. 0.13 by 0.0312).

### Acknowledgments

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