



Title	TETRAGOMPHIUS MELIS N. SP. (NEMATODA : ANCYLOSTOMIDAE) FROM THE JAPANESE BADGER, MELES MELES ANAKUMA TEMMINCK
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Citation	Japanese Journal of Veterinary Research, 22(1-2), 43-46
Issue Date	1974-04
DOI	10.14943/jjvr.22.1-2.43
Doc URL	http://hdl.handle.net/2115/2040
Type	bulletin (article)
File Information	KJ00002371147.pdf



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***TETRAGOMPHIUS MELIS* N. SP. (NEMATODA :
ANCYLOSTOMIDAE) FROM THE JAPANESE BADGER,
MELES MELES ANAKUMA TEMMINCK**

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(Received for publication, July 26, 1973)

A new nematode, *Tetragomphius melis* n. sp., was obtained from the pancreatic duct of *Meles meles anakuma* TEMMINCK captured in Gifu, central Japan. This species differs from two known species of this genus in intermediate length of the spicules, small eggs, etc.

A case of the Japanese badger was captured in Gifu City, Gifu Prefecture, central Japan. Six days later, on November 9, 1972, one of the authors (SUZUKI) autopsied this animal. A number of nematodes were collected from the pancreatic duct of the left pancreatic lobe at the time, when formalin-fixed materials were examined for anatomical aid.

MATERIALS AND METHODS

About 30 nematode specimens including complete ones of 10 males and 1 female were collected. Histologically, the parasitized pancreatic duct was dilated, and its wall was thickened by fibrous tissue proliferation. Remarkable histiocytic accumulation was recognized, but few eosinophiles were detected. The mucosa was also hyperplastic.

The nematode specimens were preserved in formalin solution, and treated by lacto-phenol solution for parasitological examination. The specimens are deposited in the parasitological collection of the Department of Parasitology, Faculty of Veterinary Medicine, Hokkaido University.

DESCRIPTION AND DISCUSSION

Tetragomphius melis n. sp.

Host: *Meles meles anakuma* TEMMINCK

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Habitat: Pancreatic duct

Locality: Gifu, Japan

Description: Body whitish, rather soft. Mouth capsule with thick wall, directed antero-dorsally; length 0.120~0.132 mm, lateral width 0.100~0.136 mm, dorso-ventral width 0.100~0.112 mm. Oral opening pentagonal, with a pair of weakly developed ventral cutting plates. At base of mouth capsule, a pair of ventral tricuspid teeth and a pair of dorsal bicuspid teeth, the former longer than the latter. Cuticle thin, with fine transversal striations. Cervical papillae prominent, projecting posteriad.

Male Body length 12.00~12.40 mm, width 0.440~0.495 mm. Esophagus club-shape, 0.650~0.715 mm long and 0.144~0.152 mm wide. Nerve ring, excretory pore and cervical papillae at 0.280~0.360 mm, 0.344~0.480 mm and 0.304~0.496 mm from anterior end, respectively. Bursa rather small. Ventral rays equal and thinner, close together; lateral rays with common trunk, tip of anterolateral not reaching bursal edge. Externo-dorsal rays arise from trunk of dorsal ray; dorsal ray stout and long, about 0.150 mm long, bifurcating at about middle, each branch ending in three tips, of which external one longer than others. Genital cone not quite protruded. Spicules extremely long, filiform, and subequal, length 8.715~9.265 mm, distal end very thin.

Female Body length 15.76 mm in one complete specimen, body width 0.610~0.638 mm. Esophagus 0.759~0.874 mm long and 0.160~0.176 mm wide. Nerve ring, excretory pore and cervical papillae at 0.360~0.376 mm, 0.325~0.480 mm and 0.424~0.520 mm from anterior end, respectively. In one specimen, vulva and anus at 3.91 mm and 0.136 mm from posterior end, respectively. Eggs in vagina 0.064~0.072×0.032~0.036 mm in size. At caudal end, a minute spinous projection.

Discussion: Up to this time, there were two species in the genus *Tetragomphius*: *T. procyonis* BAYLIS et DAUBNEY, 1923, the type species, mostly from a fibrous tumor of the stomach of *Procyon* sp. in Culcutta Zoological Garden, and *T. arctonys* JANSEN, 1968, from the pancreatic duct of 2 cases of *Arctonyx collaris* in Emmen Zoological Garden, which had been imported from Bangkok. The habitat of *T. melis* is the same as that of *T. arctonys*. The authors consider that the normal habitat of *Tetragomphius* is the pancreatic duct of mustelid mammals, especially badgers. The genus *Tetragomphius* is characterized by the ventral tricuspid teeth, the dorsal bicuspid teeth and the ventral cutting plates of the mouth capsule, and extremely long spicules. In *T. melis*, the spicules are very long, 8.7~9.3 mm, but the length is in between those of *T. procyonis*, 7~8 mm, and *T. arctonys*, 8~15.5 mm. Female *T. melis* possesses a spinous projection at the caudal end, but no description in the other two species. The

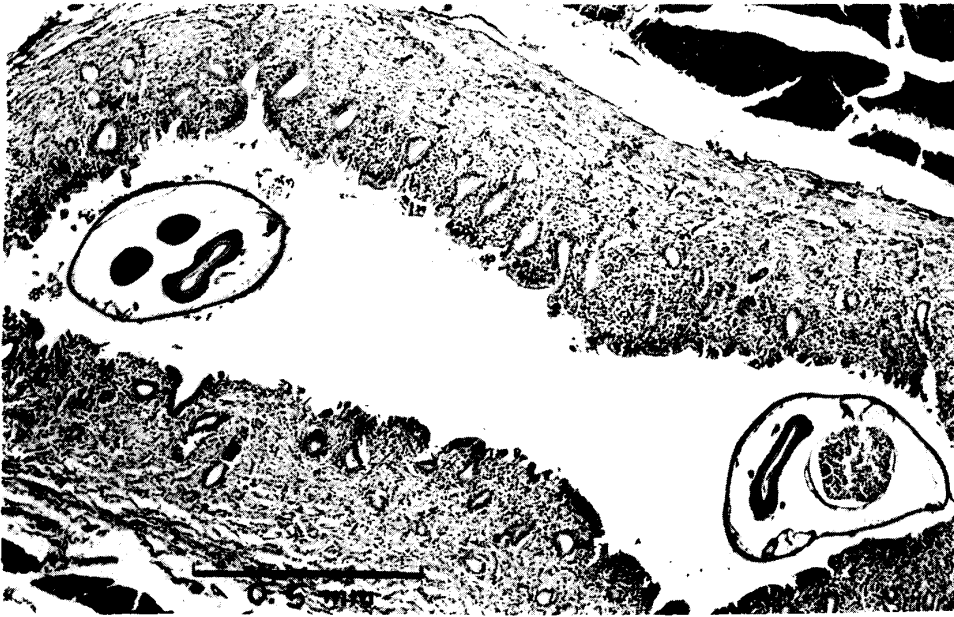
size of eggs in the vagina of *T. melis* is the smallest among 3 species: $0.076 \sim 0.082 \times 0.045 \sim 0.050$ mm in *T. procyonis* and 0.098×0.049 mm in *T. arctonys*. The formula of the dorsal and externo-dorsal rays of *T. melis* is similar to that of *T. arctonys*, although the former is more stout than the latter.

REFERENCES

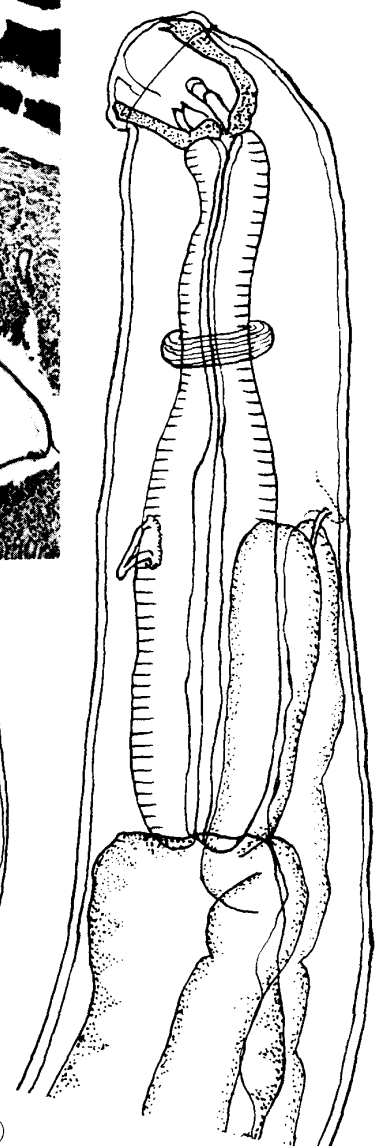
- 1) BAYLIS, H. A. & DAUBNEY, R. (1923): *Ann. Mag. nat. Hist.*, **11**, 333
- 2) BAYLIS, H. A. & DAUBNEY, R. (1923): *Rec. Ind. Mus.*, **25**, 551
- 3) JANSEN, J. (jr.) (1968): *J. Helminth.*, **42**, 53

EXPLANATION OF PLATE

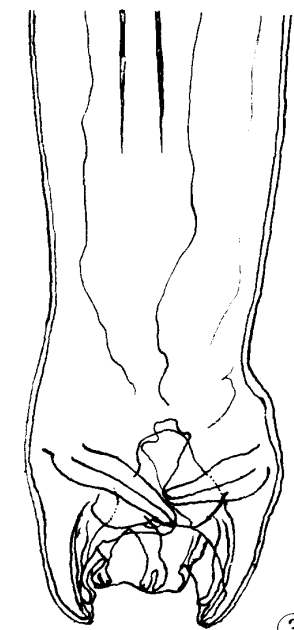
- Fig. 1 Histological view of the pancreatic duct, showing two sections of the nematode, chronic inflammatory changes of the duct-wall
- Fig. 2 Anterior extremity of male
- Fig. 3 Bursa, ventral view
- Fig. 4 Bursa, dorsal view
- Fig. 5 Bursa, lateral view
- Fig. 6 Genital cone
- Fig. 7 Anterior end of female, dorsal view
- Fig. 8 Posterior end of female



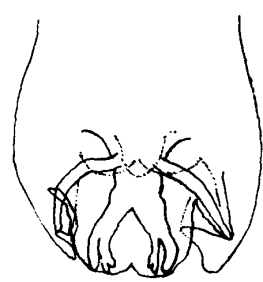
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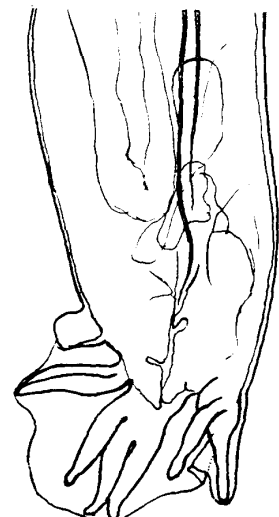
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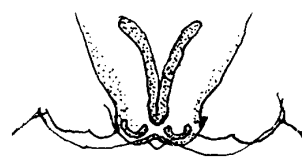
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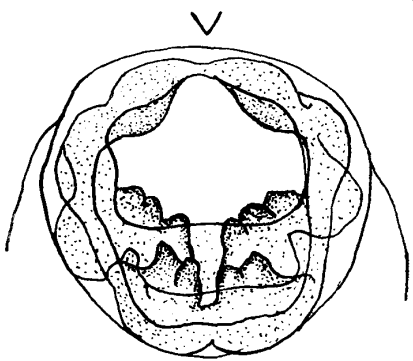
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D

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0.1mm : 6, 7

0.3mm : 2~5, 8