

A New Cestode, *Mesocestoides paucitesticulus*, from a Badger, *Nyctereutex procyonoides*, in Japan

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A number of very slender tapeworms were obtained from the intestine of a badger from Ehime Prefecture on October 16, 1970. After examination of whole mounts, it was concluded that the present specimens belong to a new species of the genus *Mesocestoides*. The following description is based on about 8 specimens collected from the small intestine of the badger. All the specimens were removed in physiologic salt solution and then fixed in 5% formalin. The morphology of scolex and onchosphere was examined without staining. The strobiles were placed between the two glass slides and pressed enough so as to make them as flat and thin as possible and then, stained with Heidenhain's hematoxylin. All measurements are in millimeters.

Description: Strobila 150 to 270 long, containing about 470 to 500 segments; maximum width 0.71 to 1.5 in mature segment. Fully mature genital organs first visible in about the 196th to 248th segment. Width of mature segments about 1.3 times than length, 0.45 to 0.48 by 0.35 to 0.37; gravid segments about as wide as long. Scolex 0.401 to 0.415 by 0.360, massive, anteriorly truncated with slight apical depression. Suckers arranged in two pairs, 0.138 by 0.166. Neck very slender, 12.5 to 13.8 long and 0.124 to 0.138 wide. Testes, numbering 32 to 38, arranged in two disjunct, lateral field. Testes measure 0.056 to 0.063 by 0.042 to 0.045. Cirrus pouch, 0.105 to 0.133 in length and 0.063 to 0.070 in width,

located at posterior border near middle of segment.

Ovaries, consisting of two subspherical lobes, situated near posterior margin of segment, 0.111 to 0.124 by 0.069. Vitelline glands ovoid in dorsoventral view, 0.069 by 0.035, situated ventral to ovaries. No genital organs other than cirrus pouch visible in fully developed gravid segment. In gravid segment, when eggs are produced, the anterior bulb of the uterus, as well as the posterior one, enlarges. A large group of dark staining cells, the parauterine cells, surround the posterior bulb and give rise to the parauterine organs, which is evident in the subsequent segments. As the parauterine organ increases in size, the uterine bulbs decrease in size because of the migration of the eggs into the egg sac in the parauterine organ. In senile segment, the parauterine organ is spherical in shape and very conspicuous and develops into s-shaped caudal appendage. Egg capsule, 0.44 to 0.48 long and 0.32 to 0.33 wide, with a translucent wall. Enclosed egg mass, 0.24 to 0.25 wide and 0.26 to 0.29 long. Eggs subspherical to spherical, containing an ovoid onchosphere, 0.05 by 0.035; embryonic hooklet 0.013 in length.

Discussion: The present species closely resembles *Mesocestoides lineatus* in the formation of the parauterine organ and in most of the internal and external morphology. But, *M. paucitesticulus* differs from *M. lineatus* in the testis number, which has 60

to 75 in number as contrasted with 32 to 38 in *M. lineatus*, and in the size of cirrus pouch, which measures 0.105 to 0.133 by 0.063 to 0.070 as contrasted with 0.171 to 0.234 by 0.126 to 0.144 in *M. lineatus*.

Host: *Nyctereutx procyonoides*

Habitat: Small intestine

Locality and date: Ehime Prefecture; 16 October 1970

Type specimens are preserved in Biological Laboratory, Nara University of Education, Nara, Japan

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日本産タヌキ, *Nyctereutx procyonoides* に寄生していた *Mesocestoides paucitesticulus*

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1970年10月16日、愛媛県産タヌキの小腸内を調査したところ、繊細な条虫が多数寄生していた。圧片染色標本を作つて各部の形態を観察測定した結果、*Mesocestoides* 属に属する新種であることが判明した。本種で特に著しい特徴は頸部がきわめて長いことである。現

在まで報告されている *Mesocestoides* に属する種は約11種であるが、それらのおのおのと本種を比較したところ、*M. lineatus* と形態が類似しているが、精巣の数が少いことおよび陰茎のうが小型であることなどからして *M. lineatus* とは別種であると考えて新種とした。

Figs. 1-7 *Mesocestoides paucitesticulus* n. sp.

Fig. 1 Scolex (×100)

Fig. 2 Immature segments (×100)

Fig. 3 Mature segment (×140)

Fig. 4 Outline tracing of Fig. 3

Fig. 5 Gravid segment (×50)

Fig. 6 Senile segment (×60)

Fig. 7 Onchosphere (×1,000)

cp: cirrus pouch, gp: genital pore, o: ovary, t: testis, u: uterus,
vd: vitelline duct, vg: vitelline gland



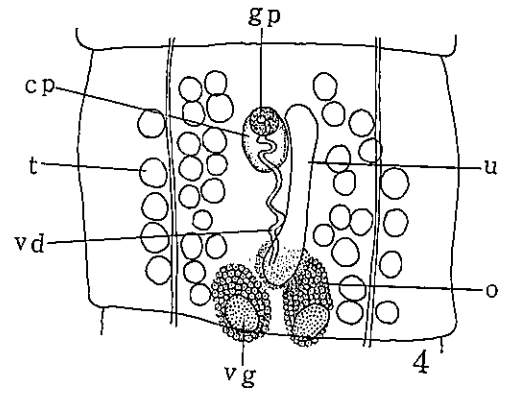
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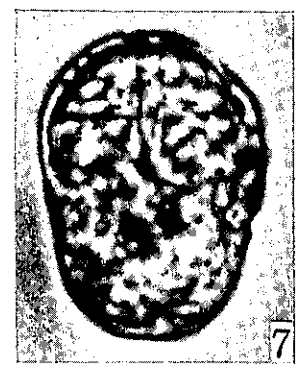
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