

Mathevotaenia brasiliensis n. sp., a tapeworm from the squirrel monkey, *Saimiri sciureus*

GIRTI KUGI

Beppu City, Oita Prefecture, Japan

AND

ISAMU SAWADA

Biological Laboratory, Nara University of Education, Nara, Japan

(Received for publication; July 3, 1970)

This study deals with identification of a tapeworm collected by G. Kugi from the small intestine of squirrel monkey, *Saimiri sciureus* died in "Amazonland", Beppu City, Oita Prefecture, Japan. The squirrel monkey inhabits a forest and a thicket of assorted trees along a river in Central America and South America. It is reasonable to suppose that the monkey did not get infected with the tapeworms in Japan, but was imported to Japan after being infected with them in the natural habitat.

Description of the worm

The mature worm is 95 to 113 mm long and has a maximum width of 1.5 to 2.3 mm. The strobila is dorsoventrally compressed. The scolex is rounded in front and bears four unarmed suckers. It measures 0.350 to 0.490 mm long and 0.249 to 0.263 mm wide. The suckers are situated laterally so that on each side there are dorsal and ventral suckers. They are oval in shape, measuring 0.105 to 0.236 mm in diameter. Behind the scolex there is usually a distinct neck 0.490 to 0.520 mm in length and 0.105 mm in width. The strobila increases its width and thickness from the neck to the posterior end. The segmentation is distinct, the strobila consisting of 360 to 450 segments. The anterior segments are longer than broad.

The genital pores alternate irregularly and are situated in the anterior half of the segment margin, at the junction of the first

and the second fifths of the segment margin. The testes are situated in the medulla of the lateral and posterior fields to female reproductive organs, usually continuous behind the yolk gland. They are 130 to 150 in number, the number in the aporal half of the segment is slightly larger than that in the poral half and measuring 0.042 to 0.055 mm in diameter.

The cirrus pouch is transversely elongated, measuring 0.207 to 0.249 mm in length and 0.069 to 0.097 mm in width, extending to the ventral longitudinal canal. The vas deferens is moderately tortuous, running inward to an anteromedial position, then turning posterior, not traceable farther.

The two-winged ovary is 0.387 to 0.429 mm wide in the mature segment and each lobe consists of many finger-like projections; the aporal lobe lies slightly more anterior than the poral lobe. The vitelline gland is multilobed, located at the posterior field to the central part of the ovary, it measures 0.082 by 0.097 mm. The vagina opens posterior to the cirrus-pouch, passing inward from the genital pore as a nearly straight tube to an anteromedian position, then turning posterior, and eventually terminating at Mehlis's gland. The seminal receptacle is observed. The uterus spreads out over the entire segment in the gravid segment, and it almost immediately breaks down into uterine capsules, each capsule enclosing one egg. Egg with outer shell is 0.091 to 0.098 mm by 0.095 to 0.098 mm; the onchosphere including the embryonic shell is 0.035 by 0.032 to 0.042 mm; the middle embryonic

hooks measure 0.021 mm and the lateral ones 0.018 mm in length.

Discussion

So far as the authors can ascertain, the tapeworms belonging to the genus *Mathevotaenia* amount to 22 species. Of the 22 species, the species having 100 testes at the most are as follows; *Mathevotaenia ichneumontis* (Baer, 1924), *M. lemurs*, (Beddard, 1916), *M. marmosae* (Beddard, 1914), *M. megastoma* (Diesing, 1850) and *M. surinamensis* (Cohn, 1902). The testes observed in the mature segment of the present species are 130 to 150 in number. Accordingly, the number of testis is larger than that in anyone of the known species.

On the other hand, except the number of testis, the present species closely resembles *Mathevotaenia aethechini* Dollfus, 1954 from *Aethechimus algirus* in Morocco, but it differs from *M. aethechini* in the total length of worms, the width of scolex, the diameter of sucker and the form of ovary.

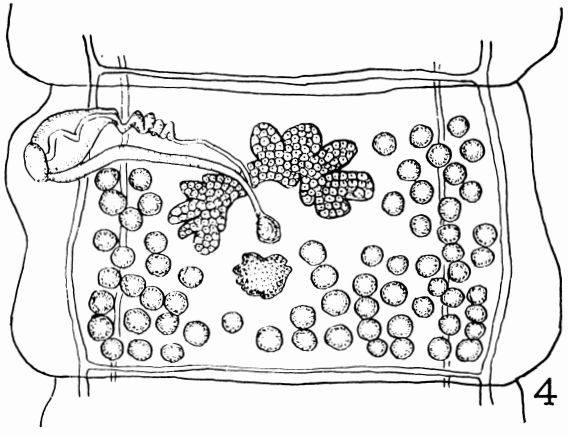
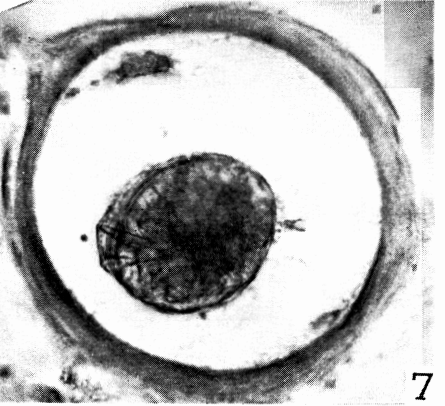
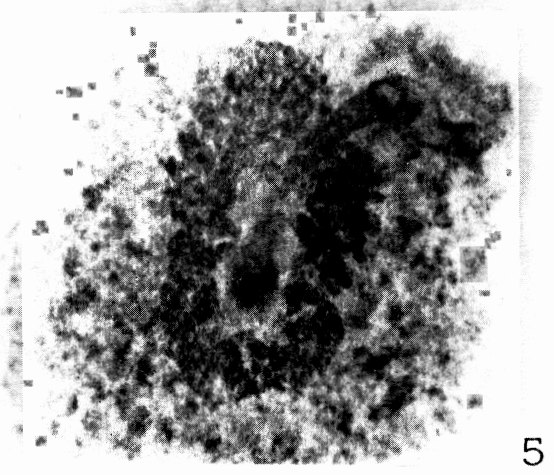
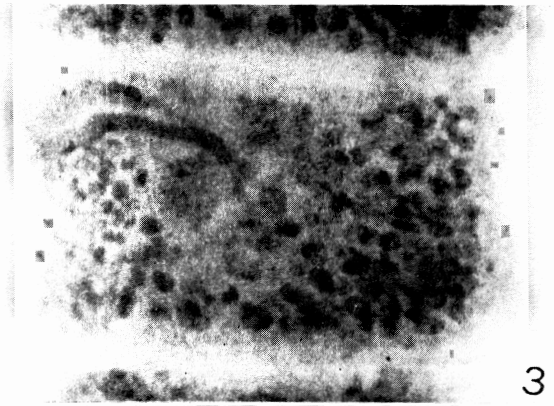
Host : *Saimiri sciureus*
Location : Small intestine
Locality : Brasil

References

- 1) Baer, J. G. (1924) : Contributions à la faune helminthologique sud-africaine. Note préliminaire. Ann. Par. 2, 239-247.
- 2) Beddard, F. E. (1914) : Contributions to the anatomy and systematic arrangement of the Cestoides. XIII. On two new species belonging to the genera *Oochristica* and *Linstowia*. Proc. Zool. Soc. London. 265-269.
- 3) Beddard, F. E. (1961) : ibidem. XIX. On two new species of cestodes belonging to the genera *Linstowia* and *Cotugnia*. Proc. Zool. London. 695-706.
- 4) Cohn, L. (1902) : Helminthologische Mitteilungen. Arch. Naturg. Jena. 69. J. 1, 47-68.
- 5) Diesing, K. M. (1850) : Systema helminthum. Vol. 1. i-xvi. 679 pp. Vienna.
- 6) Dollfus, R. (1954) : Miscellanea helminthologica marocana XVIII. Quelques cestodes du groupe *Oochristica aucutorum* récoltés du Maroc. Arch. Inst. Past. Maroc. 4, 657-711.

Explanation of Plate

- Fig. 1. Scolex ($\times 150$)
- Fig. 2. Immature segments ($\times 65$)
- Fig. 3. Mature segment ($\times 80$)
- Fig. 4. Outline tracing of mature segment (Fig. 3)
- Fig. 5. Gravid segment ($\times 80$)
- Fig. 6. Gravid segment ($\times 50$)
- Fig. 7. Onchosphere ($\times 600$)



リスザルに寄生していた新条虫 *Mathevotaenia brasiliensis* について

久 木 義 一

(別府市)

沢 田 勇

(奈良教育大学生物学教室)

著者の一人である久木は別府市にある“アマゾンランド”内にて病死したリスザル *Saimiri sciureus* を剖検したところ、小腸内に多数の中型条虫が寄生していることを発見した。これら条虫の染色標本をつくり、内外部形態を詳細に調査検討した結果、*Mathevotaenia* 属にぞくする新種であることが判明した。現在 *Mathevotaenia* に属する条虫は世界各地から約 22 種報告されて

いる。本条虫はそれら 22 種の条虫のいずれよりも辜丸が数が多く、また辜丸の数以外の諸形態ではハリモグラの一種 *Aethechinus algirus* に寄生していた *Mathevotaenia aethichini* Dollfus, 1954 に類似しているが、虫体の長さ、頭節の広、吸盤の大きさおよび卵巣の形態などが本種と著しく異っている。そこで本条虫を *Mathevotaenia brasiliensis* n. sp. として発表する。