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A NEW NEMATODE, *MAMMANIDULA SIAMENSIS* N. SP., FROM THE MAMMARY GLAND OF *TUPAIA GLIS* AND *RATTUS SURIFER* OF THAILAND [1]

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Mammanidula siamensis n. sp. was obtained from the mammary gland of *Tupaia glis* and *Rattus surifer* at Khao Yai National Park, Thailand. In *M. siamensis* the number of longitudinal ridges of the cuticle is 22 in the male and 24 in the female. The spicules (0.545 and 0.518mm) are shorter than those of all other species of *Mammanidula* but *M. asperocutis*. The caudal bursa is asymmetric like all other *Mammanidula*-species but *M. mammovitae*.

Key words : *Mammanidula siamensis* n. sp., *Tupaia glis*, *Rattus surifer*, mammary gland

The genus *Mammanidula* SADOVSKAJA, 1952, comprises 4 species which are parasitic nematodes of the mammary gland : *M. asperocutis* SADOVSKAJA, 1952, from *Sorex* sp. in Primorskaya, USSR, *M. mammovitae* (DUBININ, 1953) from *Clethrionomys* spp. in the Far East, USSR, *M. hokkaidensis* (OHBAYASHI, ORIHARA et FUJIMAKI, 1968) from *Clethrionomys rufocanus*, *Apodemus speciosus*, *A. argenteus* and *Sorex* spp. in Hokkaido, Japan, and *M. melomyos* (MAWSON, 1961) from *Melomys lutillus* in Queensland, Australia.

In August 1982 at Khao Yai National Park, Thailand, the authors collected a number of helminth parasites of various small mammals, mainly murid ones, and out of these they obtained a species of the genus *Mammanidula* from the mammary gland of two out of six common tree shrews, *Tupaia glis* (DIARD), and one out of eight yellow rajah rats, *Rattus surifer* (MILLER), which is the first recorded finding of such in Southeast Asia. The specimens are preserved in the Department of Parasitology, Faculty of Veterinary Medicine, Hokkaido University, Sapporo, Japan.

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DESCRIPTION OF PARASITE

Mammanidula siamensis n. sp.

Materials : 2♂, 4♀ from *Tupaia glis*, ♀ (T 615 : Type host)
2♂, 2♀ from *T. glis*, ♀ (T 616)
2♂, 4♀ from *Rattus surifer*, ♀ (T 619)

Habitat : Mammary gland (in lactiferous state)

Locality : Khao Yai National Park, Thailand

Date : 1st August (*T. glis*) and 2nd August (*R. surifer*), 1982

Description : Small nematode. Body coiled. Cuticle with thin longitudinal ridges (aretes), 22 in number in male and 24 in female. All the ridges are almost the same in thickness, each ridge is engraved transversely like a rosary. The specimens from *T. glis* are larger than those from *R. surifer*.

Specimens from *T. glis*.

Male : Body length 7.27mm, maximal width 0.167mm. Cephalic vesicle 0.078mm by 0.051mm. Length of esophagus 0.327mm. Nerve ring at 0.236mm from anterior end. Spicules equal, filiform, distal ends fused, 0.545mm in length. Gubernaculum 0.045mm in length. Genital cone long and protruded. Caudal bursa asymmetrical. Ventral rays fused proximally, right ones thicker than left. Right lateral rays thicker than left ones excepting postero-lateral. Right lateral rays fused at proximal half ; antero-lateral and medio-lateral rays parallel, postero-lateral branching off rectangularly. Left postero-lateral ray thick, arises separately from other lateral rays, runs posteriad in parallel with left externo-dorsal ray. Left externo-dorsal ray thicker than right one. Externo-dorsal and dorsal rays arise from common base. Dorsal ray bifurcates distally, and each branch bifurcates again.

Female : Body length 15.0mm, maximal width 0.239mm. Cephalic vesicle 0.092mm by 0.065mm. Length of esophagus 0.386mm. Nerve ring at 0.276mm from anterior end. Posterior end bends ventrally at vulval region. Anus and vulva at 0.087mm and 0.217mm from posterior end. Monodelphic. Vagina short, length of vestibule, sphincter and trompe 0.126mm, 0.049mm and 0.256mm respectively. Eggs elliptical, thin-shelled, 0.0723～0.0802×0.0391～0.0401mm in size.

Specimens from *R. surifer*

Male : Body length 5.79mm, maximal width 0.136mm. Cephalic vesicle 0.071mm by 0.043mm. Length of esophagus 0.315mm. Nerve ring at 0.217mm from anterior end. Spicules and gubernaculum 0.518mm and 0.029mm in length respectively.

Female : Body length 7.95mm, maximal width 0.167mm. Cephalic vesicle 0.082mm by 0.043mm. Length of esophagus 0.323mm. Nerve ring and excretory pore at 0.236mm and 0.228mm from anterior end respectively. Anus and vulva at 0.071mm and 0.177mm from posterior end respectively. Length of vestibule, sphincter and trompe 0.102mm, 0.055mm and 0.213mm respectively. Eggs 0.0704～0.0763×0.0371～0.0391mm in size.

Discussion

The four known species of the genus *Mammanidula*, *M. asperocutis*, *M. hokkaidensis*, *M. melomyos* and *M. mammovitae*, are parasites of Insectivora (Soricidae) and Rodentia (Muridae and Cricetidae). The present species, *M. siamensis*, however, is parasitic in Primates (*Tupaia glis*) and Rodentia (*Rattus surifer*). *T. glis* is the first recorded of its kind as a primatial host of *Mammanidula*. *M. asperocutis*, *M. hokkaidensis* and *M. mammovitae* are recorded from northern Asia, and *M. melomyos* from Australia. Therefore, the discovery of *M. siamensis* from Thailand is interesting zoogeographically as it provides information on a new locality connecting known distributions of *Mammanidula*.

M. siamensis is similar to *M. asperocutis*, *M. hokkaidensis* and *M. melomyos* in the formula of the caudal bursa, which is remarkably asymmetric. The spicule of *M. siamensis* (0.545mm and 0.518mm), however, is shorter than that of *M. hokkaidensis* (0.810mm) and *M. melomyos* (0.704mm) but longer than that of *M. asperocutis* (0.399mm). In *M. mammovitae*, the esophagus is very long and the caudal bursa is almost symmetric.

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Explanation of plate

Plate I

Mammanidula siamensis n. sp. Figs. 1, 2, 5–9 : Specimens from *Tupaia glis*, 3 & 4 : Specimens from *Rattus surifer*

Fig. 1 Posterior end, female

Fig. 2 Anterior end, female

Fig. 3 Anterior end, female

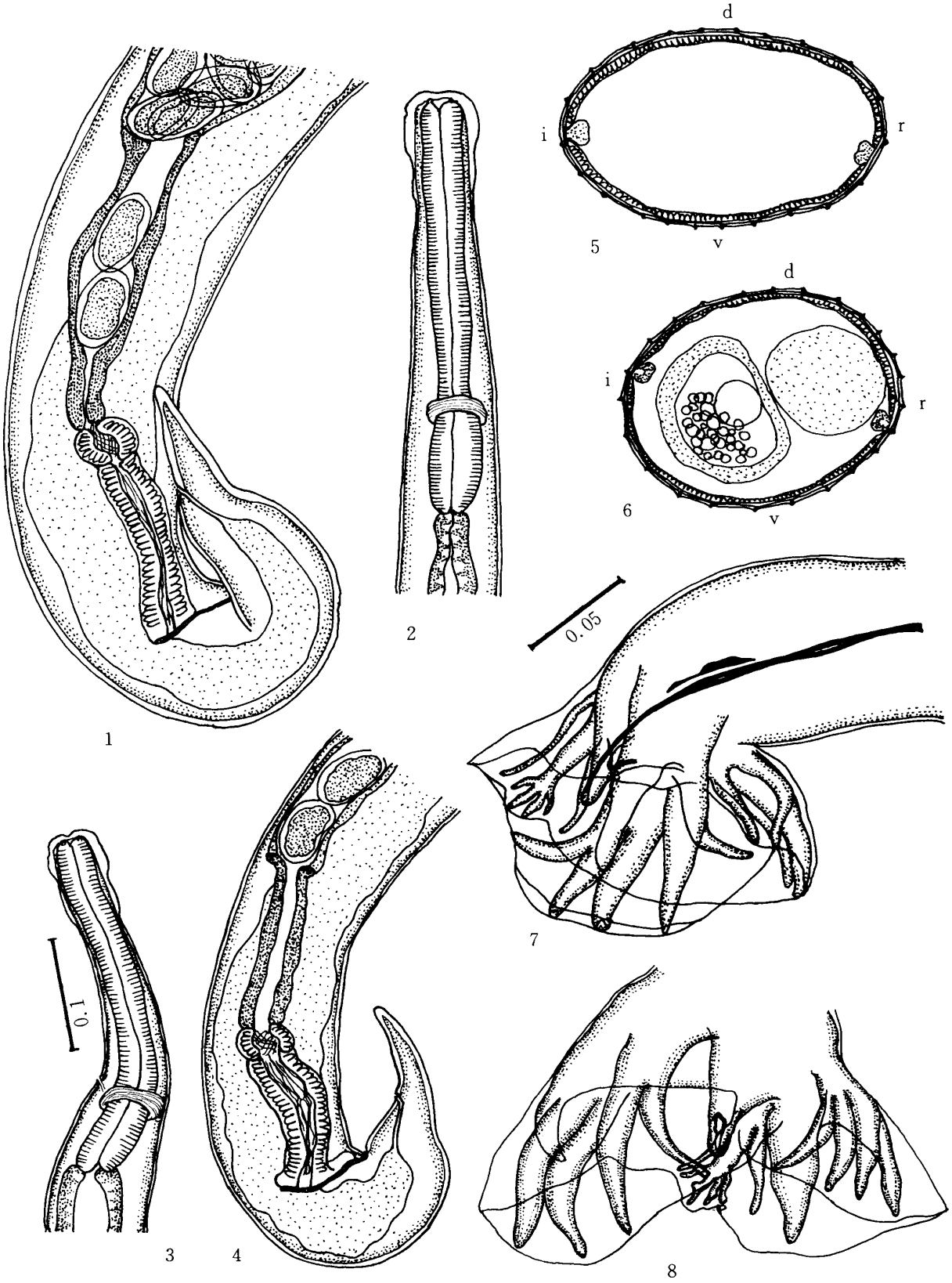
Fig. 4 Posterior end, female

Fig. 5 Transverse section, male

Fig. 6 Transverse section, female

Fig. 7 Posterior end, male, lateral view

Fig. 8 Posterior end, male, ventral view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8
0.1mm : 1−4, 6
0.05mm : 5, 7, 8