

*Hymenolepis scotophili* sp. n. (Cestoda: Hymenolepididae) from  
a Lesser Yellow House Bat, *Scotophilus kuhli* in Taiwan

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**Abstract**

*Hymenolepis scotophili* sp. n. is described from Taiwanese lesser yellow house bat, *Scotophilus kuhli*. This new species closely resembles *Hymenolepis rashomonensis* Sawada, 1972, but differs from it in the larger rostellum, the position of genital pores and the longer embryonic hooks.

**Key words:** Hymenolepidid cestode, house-dwelling bat, Taiwan

**Introduction**

Only three papers have been published on the cestode parasites of Taiwanese bats. Sawada (1984) described *Vampirolepis taiwanensis* from *Miniopterus schreibersii fuliginosus* and *V. macrostrobiloides* from *Hipposideros armiger terasensis*. Sawada and Harada (1988a and 1988b) described *V. isensis* from *Rhinolophus monoceros*, and *V. brachysoma* from *H. armiger terasensis*. This time, the digestive tract of a house-dwelling bat, *Scotophilus kuhli* (syn. *S. temminkii consobrinus*) was donated by Mr. Lu Dau-Jye. This paper is concerned with a cestode parasite from *S. kuhli*.

**Materials and Methods**

A specimen of lesser yellow house bat, *Scotophilus kuhli* was captured in a house at Hsinchu City by Lu Dau-Jye, on October 11, 1987. The bat was autopsied immediately at the collecting site and the digestive tract was fixed in Carnoy's fluid and sent to us. After being soaked in 45% acetic acid for five hr for expanding, the digestive tract was cut open in

70% alcohol and examined for cestodes. Three specimens of cestodes obtained were stored in 70% alcohol. The scoleces, eggs and a part of mature segments were mounted unstained and observed under an interference contrast light microscope. The strobilae were stained with alcohol-hydrochloride-carmin, dehydrated in alcohol, cleared in xylene, and mounted in Canada balsam. Measurements are given in millimeters.

*Hymenolepis* Weinland, 1858

*Hymenolepis scotophili* sp. n.

(Figs. 1–4)

**Description:** Medium-sized hymenolepidid; strobila 22–25 in length and 0.6–0.7 in maximum width. Metamerism distinct, segment margins serrate. All segments wider than long. Scolex globular, distinctly set off from neck, measuring 0.175–0.210 long by 0.210–0.231 wide. Rostellum fusiform, possessing salient glandular structure, 0.133–0.147 long by 0.056–0.063 wide. Rostellar sac absent. Suckers discoid, 0.105–0.112 long by 0.084–0.098 wide. Neck 0.49–0.53 long by 0.12–0.08 wide.

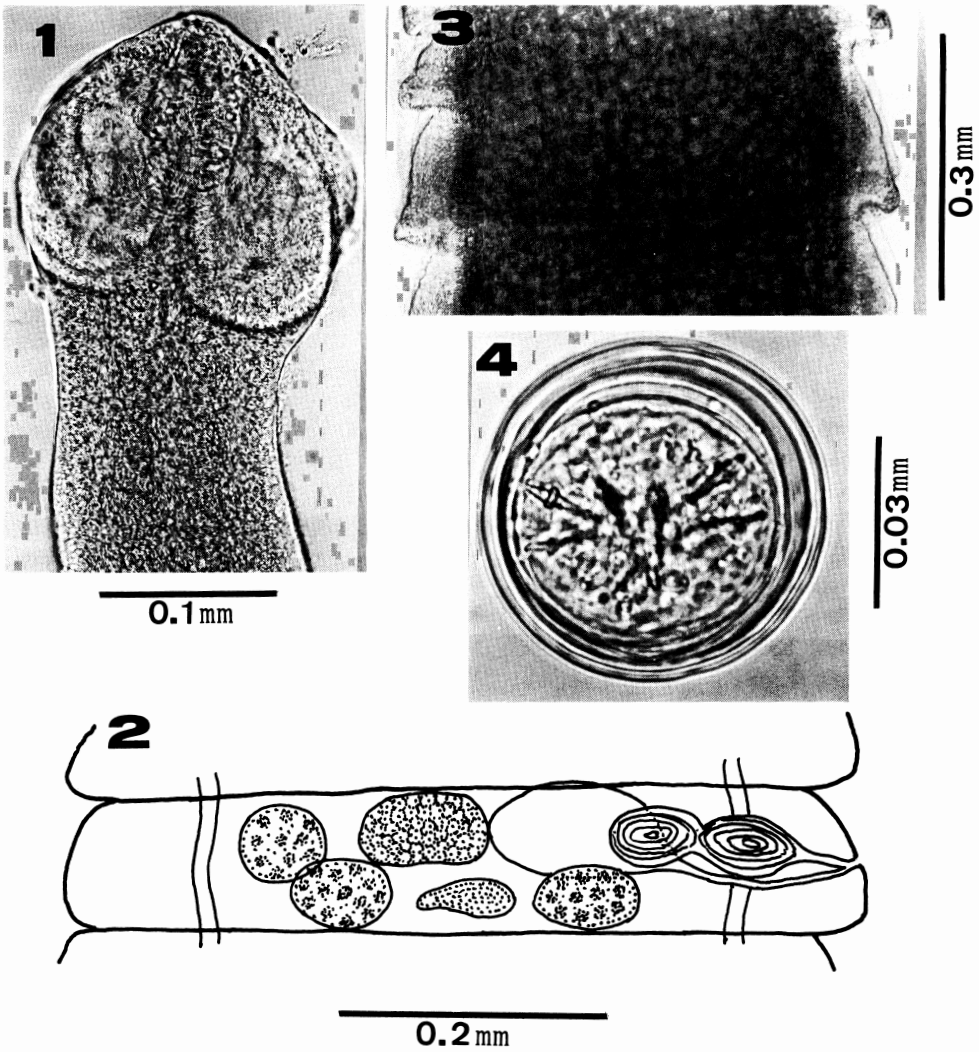
Genital pores unilateral, located a little posterior to the middle of segment margins. Testes three in number, ovoid, 0.077–0.098 long by 0.042–0.056 wide, arranged in a form of triangle, one poral and two aporal, not in

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Figs. 1-4. *Hymenolepis scotophili* sp. n. - 1: Scolex, 2: Mature segment, 3: Gravid segment, 4: Egg.

contact with longitudinal osmoregulatory canals laterally. Cirrus sac pyriform, 0.133-0.147 long by 0.035 wide, expanding beyond longitudinal osmoregulatory canals. Internal seminal vesicle 0.084 long by 0.035 wide, occupying almost whole of cirrus sac. External seminal vesicle oval, 0.084-0.154 long by 0.049-0.056 wide, directly dorsal to seminal receptacle, situated in anterior half of segment. Vagina initially posterior to cirrus sac, gradually expanding into seminal receptacle measuring

0.133-0.175 long by 0.078-0.084 wide. Ovary subspherical, 0.084-0.091 long by 0.070 wide. Vitelline gland irregularly lobate, 0.056-0.084 long by 0.035-0.056 wide. Eggs oval or spherical, 0.049-0.060 by 0.053-0.060, surrounded by four thin envelopes; outermost chorion pretty thick. Onchospheres spherical, 0.039-0.042 in diameter; embryonic hooks 0.018 long.

*Host: Scotophilus kuhli* Hill and Thonglonya.

*Site of infection:* Small intestine.

*Locality and date:* Hsinchu City; October 11, 1987.

*Type specimen:* Holotype: NSU Lab. Coll. No. 8815; Paratype No. 8816.

### Discussion

So far as the authors know, eleven unarmed species of the genus *Hymenolepis* have been recorded hitherto from chiroptera. These are *H. moniezi* Parona, 1893 from *Pteropus medius*, *H. minimedius* Johri, 1960 from *P. medius*, *H. procera* Janicki, 1904 from *Myotis terrestis*, *H. angusta* Prudhoe et Manger, 1969 from *Rhinolophus* sp., *Kerivoula* sp. and *Tylongcterin* sp., *H. parva* Sawada, 1967, *H. odaensis* Sawada, 1968, *H. subrostellata* Sawada, 1970, *H. iriei* Sawada, 1972a, *H. rashomonensis* Sawada, 1972b, *H. tsuzurasensis* Sawada, 1972c and *H. nishidai* Sawada, 1982 from *R. ferrumequinum nippon*.

Of these, the present new species most closely resembles *H. rashomonensis* in the size of strobila, the arrangement of testes and possessing a fusiform rostellum. However, the former differs from the latter in the following characteristics; (1) the larger rostellum (0.133–0.147 long by 0.056–0.063 wide vs. 0.063–0.070 long by 0.035–0.042 wide); (2) the position of genital pores (located a little posterior to the middle vs. a little anterior to the middle); (3) the longer embryonic hooks (0.018 vs. 0.014).

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