

HYMENOLEPIS PITYMI N. SP., A HYMENOLEPIDID
CESTODE FROM THE PINE MOUSE¹

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Seventy-five cestodes were removed from the intestine of a pine mouse, *Pitymys pinetorum* (LeConte), on November 16, 1949. Thirty-two of the cestodes were fixed by shaking in Carnoy's fluid. After 16 hours, all Carnoy's fluid was replaced with 95 percent alcohol. The worms were mounted unstained (for study by phase contrast microscopy) after portions were removed for cross sections. Sections were made at 12 microns and stained in 0.5 percent iron haematoxylin and destained in picric acid (aqueous). Drawings were made with the aid of the camera lucida.

On the basis of a study of five of the thirty-two cestodes which appeared morphologically identical, I believe the five cestodes are of a new species, *Hymenolepis pitymi*.

My thanks are due to Dr. Arthur W. Jones who supplied the stained and mounted specimens and helpfully directed the study.

Hymenolepis pitymi n. sp.

Description: Length of strobila 19.6 ± 3.8 mm.; strobila contains approximately 350 proglottids. Scolex 0.133 by 0.159 mm.; suckers 79 ± 13 by 41 ± 4 microns; rostellum 47 by 73 microns, unarmed. Mature proglottids 87 by 354 microns. The three testes 43 by 57 microns are arranged in a triangle, one poral and two aporal. Yolk gland 30 by 37 microns, is ball shaped and is ventral to the ovary. Ovary is very much lobed and is almost divided. It lies median with a portion ventral to the seminal vesicle and the poral testis. The seminal receptacle is about one-half the width of the proglottid and terminates near the atrium as the vagina. The vagina is ventral and posterior to the cirrus. The gonopores are dextro-marginal opening to the exterior anterior to the mid-line of the proglottid. The cirrus sac 79 ± 8 by 27 ± 6 microns houses an internal seminal vesicle and a coiled cirrus. The cirrus is unarmed. External seminal vesicle is 77 by 53 microns; egg 28 by 31 microns; embryo 23 ± 3 by 20 ± 2 microns.

Host: *Pitymys pinetorum* (LeConte)

Locality: Knox County, Tennessee, U.S.A.

Type specimen and paratypes: in the possession of Dr. Arthur W. Jones, Zoology Department, The University of Tennessee.

DISCUSSION

An examination of the literature descriptive of the species of *Hymenolepis* reveals no form like that described above. Hughes (1941) gives no description of a cestode similar to *H. pitymi*. Other authors, Brock (1942), Polk (1942a, b), Shepard (1943), Webster (1947), Young (1950), Viguera (1941a), and Schiller (1950), describe new species of *Hymenolepis* found in birds, that do not resemble *Hymenolepis pitymi*. I have not seen the paper by Burt

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(1944) but feel safe in assuming that *Hymenolepis pitymi* would not normally be found in birds. As Hughes (1941) states, "... a first principal separation of the species into two groups on the basis of whether they parasitize birds or mammals seems justifiable . . . with one exception the species have been reported exclusively from birds or mammals, not both—the exception being the, probably purely incidental, finding of *Hymenolepis lanceolata* (an avian species) in man."

New species from mammals, described since the paper of Hughes (1941), can be distinguished from *H. pitymi* as follows: Macy and Rausch (1946), describe a new bat cestode, *Hymenolepis roudabushi*, as having 41-48 rostelller hooks and a 40-70 mm. strobila, unlike the present species in these respects. Rider and Macy (1947), describe a

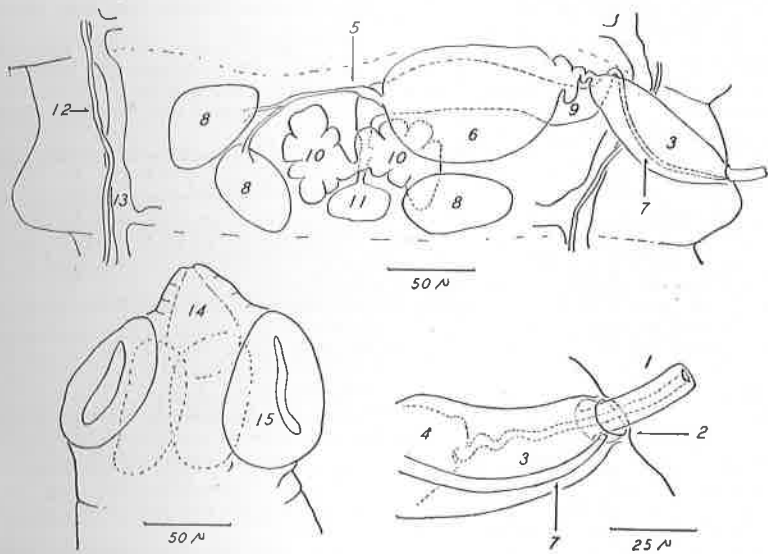


Fig. 1. Mature segment (dorsal view), scolex, and genital atrium (ventral view), of *Hymenolepis pitymi*. All figures were drawn at the indicated magnifications with aid of the camera lucida. 1. cirrus; 2. atrium; 3. cirrus sac; 4. internal seminal vesicle; 5. vas deferens; 6. external seminal vesicle; 7. vagina; 8. testes; 9. seminal receptacle; 10. ovary; 11. yolk gland; 12. dorsal excretory vessel; 13. ventral excretory vessel; 14. rostellum; 15. sucker.

new species, *Hymenolepis ondatrae*, with a single row of 8-10 hooks, scolex 0.250-0.280 mm., and suckers 0.120-0.190 mm. in length, clearly differing from the scolex and measurements for *H. pitymi*. Viguera (1941b), describes a new species of bat cestode, *Hymenolepis chiropterophila*, with 32-34 hooks, and much larger in the various necessary dimensions than the present cestode. Rausch and Kuns (1950), describe four cestodes from the shrew; *Hymenolepis blari-*

nae, *H. parva*, *H. schilleri*, and *H. falcitata*. These are differentiated from *H. pitymi* in that they all have rostellator hooks.

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