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ANDRYA SCIURI N. SP., A CESTODE FROM THE NORTHERN FLYING SQUIRREL

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Among helminths taken from four northern flying squirrels (*Glaucomys sabrinus macrotis* Mearns) were two cestodes belonging to the genus *Andrya*. These represent an undescribed species.

The infected flying squirrels were collected in or near tamarack bogs during February, 1947, near Millston, Jackson County, Wisconsin.

Andrya sciuri n. sp.

Diagnosis: Length of strobila about 17 cm; maximum width 2 mm. Mature segments much broader than long, with a gradual increase in length toward posterior end of strobila, where maximum width is also attained. Ventral excretory canal averages 30 μ in diameter; dorsal and transverse canals much smaller. Scolex 380 μ in diameter; suckers weakly-muscled and inconspicuous, measuring about 150 μ in diameter. Slight segmentation evident immediately posterior to scolex. Genital *Anlagen* appear typically early. Genital pores nearly all dextral; situated in posterior third of segment. Genital ducts dorsal to excretory canals. Cirrus sac muscular; averages 200 μ long by 85 μ wide. Medial end of cirrus sac does not reach excretory canals. Internal and external seminal vesicles well developed; latter reaches size nearly equal to that of cirrus sac. Internal seminal vesicle enlarges toward posterior end of strobila; appears to persist throughout. Cirrus unarmed. Testes 100 to 110 in number; from 40 to 50 μ in diameter; not all in same plane. Testes pass lateral margins of excretory canals both porally and aporally; greater number of testes concentrated on aporal side of segment. Prostate gland absent. Vagina posterior, and at times partly ventral, to cirrus sac; large seminal receptacle appears medial to end of cirrus sac. Seminal receptacle reaches maximum size of about 420 μ long by 180 μ wide, after which it decreases in size, and gradually disappears. Ovary, with vitelline gland, situated at middle of segment. Development of uterus typical for genus. Terminal segments completely filled with eggs; latter measure from 52 to 56 μ . Embryo about 33 μ long. Pyriform apparatus strongly developed.

Host: *Glaucomys sabrinus macrotis* Mearns (Northern Flying Squirrel).

Locality: Millston, Jackson County, Wisconsin.

Habitat: Small intestine.

Type: Two slides containing an entire specimen have been deposited in the collection of the U. S. National Museum.

DISCUSSION

Of the species of cestodes previously attributed to the genus *Andrya*, at least eight appear to be valid. *Andrya sciuri* is readily differentiated from these by the number and distribution of the testes. *Andrya cuniculi* (Blanchard, 1891), *A. neotomae* Voge, 1946, and *A. monodi* Joyeux and Baer, 1930, have the testes confined to the area between the longitudinal excretory canals. *A. cuniculi* also reaches a large size not attained by other members of the genus. In addition to the difference in arrangement, the testes are fewer (60 to 74) in *A. neotomae* and (15) in *A. monodi*. *Andrya rhopalocephala* (Riehm, 1881), *A. cuniculi*, and *A. primordialis* Douthitt, 1915, all possess well-developed prostate glands; this structure is absent in *A. sciuri*. Moreover, *A. rhopalocephala* and *A. primordialis* have fewer

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testes (75 to 80, and 20 to 40, respectively), and their arrangement differs from that in *A. sciuri*. *Andrya macrocephala* Douthitt, 1915, is easily differentiated from the present species by the size of the ventral excretory canals. *Andrya macrocephala* has fewer testes (43 to 57), and these overlap the excretory canals only on the aporal side; the scolex is also more strongly developed. *Andrya africana* Baer, 1933,

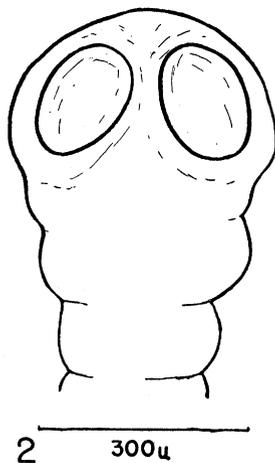
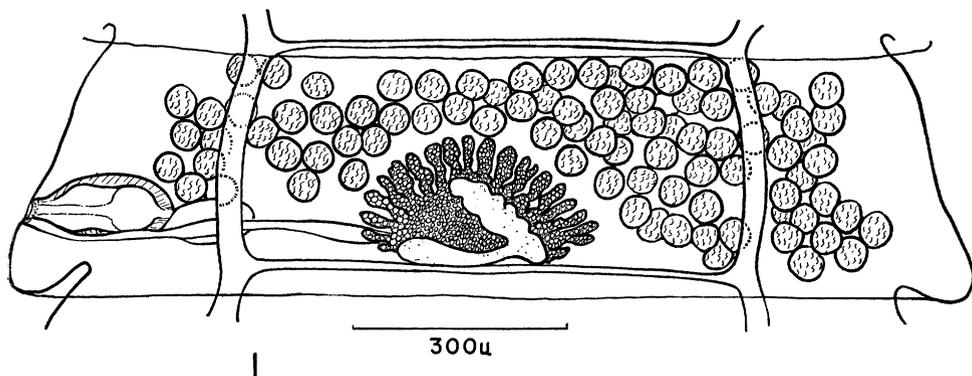


FIG. 1. A mature segment, ventral view, from *Andrya sciuri*.

FIG. 2. Scolex of *Andrya sciuri*.

has fewer testes (26 to 30) which nearly surround the ovary and vitelline gland, and the genital pores are unilateral. According to Baer (1927), Joyeux recognized a sub-species of *A. primordialis*, designated as *A. primordialis* var. *gundii*. This sub-species differs from *A. primordialis* only in number of testes (70 to 80) and in geographical location. The paper describing *A. caucasica* Kirschenblatt, 1938, was not available in the United States. The writer was advised by Dr. Charles Elton that this paper also is not available in the library of the Bureau of Animal Population, at Oxford. *Andrya caucasica* cannot therefore be considered in this discussion.

Two new host records have been added by the writer for cestodes of this genus: *A. macrocephala* was found to be a common parasite of the eastern meadow vole (*Microtus p. pennsylvanicus* Ord) in both Ohio and Michigan, and a single cestode of *Andrya* sp. was taken from a muskrat (*Ondatra z. zibethica* L.) in Ohio. It is hoped that additional specimens can be obtained from the latter host, since further study is desirable in order to establish specific identity.

A key has been prepared for cestodes of the genus *Andrya* found in North American hosts. Four species have been recorded, all of which are easily differentiated.

KEY TO THE NORTH AMERICAN SPECIES OF *Andrya*

1. Testes confined to the area between the longitudinal excretory canals 2
 Testes overlapping the longitudinal excretory canals 3
2. Testes 60 to 74 in number; prostate gland absent; ventral excretory canals not enlarged *A. neotomae*
3. Testes overlapping longitudinal excretory canals on both sides 4
 Testes overlapping longitudinal excretory canals on aporal side only 5
4. Testes 100 to 110 in number; prostate gland absent; ventral excretory canals not enlarged *A. sciuri*
5. Testes 20 to 40 in number; prostate gland present; ventral excretory canals not enlarged *A. primordialis*
 Testes 43 to 57 in number; prostate gland absent; ventral excretory canals greatly enlarged *A. macrocephala*

The writer wishes to take this opportunity to express indebtedness to Dr. E. W. Price for information from the files of the Bureau of Animal Industry, and to Messrs. Paul F. Springer and Alfred G. Etter, Department of Wildlife Management, University of Wisconsin, for aid in the collection of the animals from which this cestode was described.

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