

## HELMINTHS OF RABBITS AND OPOSSUMS AT MOUNTAIN LAKE, VIRGINIA

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## BRIEF REPORTS AND COMMENTS

HELMINTHS OF RABBITS AND OPOSSUMS  
AT MOUNTAIN LAKE, VIRGINIA

It is of zoological interest to know the helminths of wild mammals in any region, and for didactic reasons particularly, it is desirable to have such knowledge of the area surrounding a biological station. Such information may also be of value in a wildlife management program. In conducting a survey of the helminths in wild non-game mammals during the summers of 1954, 1955 and 1956, ten cottontail rabbits, *Sylvilagus transitionalis* (Bangs), and two opossums, *Didelphis marsupialis virginiana* (Kerr), were examined. Since that time two additional opossums, one each collected from Roanoke County in 1957 and from Craig County in 1962 have been examined. Except for these two opossums, all of the animals were trapped within the roughly rectangular area formed by Bald Knob, Wind Rock, Brushy Top and Butt Mountain in Giles County, Virginia. The animals were trapped in various ecological situations ranging in elevation from 3,174 to 4,363 feet.

Standard methods of trapping and examining the animals and in preparing the helminths for microscopic study were employed.

Dr. Allen McIntosh and Mrs. M. B. Chitwood, Animal Disease and Parasite Research Branch, U. S. D. A., verified the identification of helminths, and Dr. William H. Burt, Museum of Zoology, University of Michigan, verified the identification of the cotton-

tail rabbits. This study was supported in part by awards from the National Science Foundation administered by the Mountain Lake Biological Station, University of Virginia.

*Worms in Opossums.*

*Brachylaema virginiana* (Dickerson, 1930). Seven specimens of this species were recovered from two immature hosts trapped in the study area. The number of worms ranged from 3 to 4 per host. The worms were recovered from the small intestine.

*Cruzia americana* Maplestone, 1930. This oxyuroid nematode was recovered from all four opossums examined. The number of worms ranged from 3 to 38, with a mean of 20.5 worms per host. The worms were recovered from the large intestine.

*Physaloptera turgida* Rudolphi, 1819. Fifteen specimens of this species were recovered from a host collected in Craig County. Specimens of this polydelphis nematode were recovered from the liver, stomach and intestine.

*Worms in Rabbits*

*Cittotaenia variabilis* (Stiles, 1895). Worms identified as belonging to this cestode species were found in seven of nine rabbits examined. The number of worms ranged from 1 to 3 with a mean of 1.4 per host.

*Taenia pisiformis* (Bloch, 1780). The bladder worms (cysticerci) of this cestode were removed from the liver and mesenteries. Two of eight rabbits examined were in-

fected; there was one cyst in each rabbit.

*Passalarus nonanulatus* Skinner, 1931. This species of nematode was recovered from two of eight rabbits examined. One host harbored 6 worms and the other 56. The worms were removed from the large intestine.

*Dermatorys veliger* (Rudolphi, 1819). This species of oxyuroid nematode was encountered in 1 of 9 rabbits examined. Specimens of this species, recovered from *Sylvilagus transitionalis* in the study area, were donated to the author by Mr. Robert Gillespie (Virginia Episcopal School, Lynchburg, Virginia), and consequently the number of worms recovered from the large intestine is not known.

*Obeliscoides cuniculi* (Rudolphi, 1819). Representatives of this trichostrongylus nematode, the "stomach worm" of rabbits, were found in three of eight rabbits examined. The number of worms ranged from 1 to 98 per host, with a mean of 38.

*Trichostrongylus calcaratus* (Ransom, 1911). This species of trichostrongylus nematode was encountered in two of eight rabbits examined. The number of worms ranged from 37 to 47 per host.

Alicata (Alicata, J. E. 1929. The occurrence of *Dirofilaria scapiceps* in rabbits. Jour. Parasitol. 15: 287) reported the presence of *Dirofilaria scapiceps* (Leidy, 1886) from *Sylvilagus floridanus mallarus* (Thomas) collected in 1916 from Woodford, Virginia and Llewellyn and Handley (Llewellyn, L. M. and C. O. Handley 1945. The cottontail rabbits in Virginia. Jour.

Mammal. 26: 379-390) reported approximately a 2% infection of seventy-five cottontails from Virginia with this nematode. This species was not encountered during this study since blood smears were not taken and leg joints were not dissected.

In addition, Llewellyn and Handley (op. cit.) recorded the following helminths from the intestinal tract of one rabbit from Virginia: *Haastilesia tricolor* (Stiles and Hassall, 1894), heavy infection; *Cittotacnia* sp., one worm; *Obeliscoides cuniculi*, a few specimens; *Trichuris leporis* (Froelich, 1789); and 16 specimens of *Dermatorys veliger*.

To the list of helminths known from the cottontail rabbits in Virginia now may be added *Cittotacnia variabilis*, *Passalarus nonanulatus*, and *Trichostrongylus calcaratus*.

The only species of helminth known from the opossum in Virginia prior to this study was *Brachylacma virginiana* (Dickerson, 1930) described from opossums collected in Albemarle County, Virginia. To this list now may be added *Cruzia americana* and *Physaloptera turgida*.

The foregoing is not meant to be a definitive list of helminths which parasitize opossums and rabbits in Virginia. Much is yet to be learned concerning the helminth parasites of these hosts and of wildlife in general in Virginia.

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