

## **PNEUMOSTRONGYLUS TENUIS FROM ELK (CERVUS CANADENSIS) IN MINNESOTA**

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Source: Bulletin of the Wildlife Disease Association, 2(3) : 79-80

Published By: Wildlife Disease Association

URL: <https://doi.org/10.7589/0090-3558-2.3.79>

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Moscow, 7.VII.64, ex *Procyon*  
*lotor* 1 ♀  
 Toronto, 13.VIII.64, ex *Pro-*  
*cyon lotor* 3 ♀ ♀  
 Barrie, 29.IX.64, ex *Procyon*  
*lotor* 1 ♀  
 Moffat, 6.IV.65, ex *Procyon*  
*lotor* 1 ♀  
 London, 30.IV.65, ex *Procyon*  
*lotor* 3 ♀ ♀  
 Weston, 13.V.65, ex *Procyon*  
*lotor* 18 ♀ ♀, 7LL  
 Winona, 20.V.65, ex *Procyon*  
*lotor* 1 ♀  
 Hyndford, 7.VII.65, ex *Vul-*  
*pes fulva* 1 ♀  
 Monkton, 21.VII.65, ex *Pro-*  
*cyon lotor* 1 ♀

The distribution of hosts, from which the ticks were collected, would indicate that this species is fairly well established in Southern Ontario. It is the purpose of this note to confirm the presence of *I. texanus* in this area.

The author expresses his appreciation to Dr. J. D. Gregson, Research Station, Canada Department Agriculture, Kamloops, B. C. for confirming the identification of this tick. The assistance of Mr. J.E.H. Martin and Miss I. S. Creelman, Research Branch, Ottawa, Ont. with regards to records is gratefully acknowledged.

W. A. WEBSTER

Animal Disease Research Inst.  
 Canada Dept. of Agriculture  
 Hull, Quebec, 25 February, 1966

**PNEUMOSTRONGYLUS TENUIS FROM ELK  
(CERVUS CANADENSIS) IN MINNESOTA**

A new host record for the parasitic nematode, *Pneumostrongylus tenuis* Dougherty 1945, has been established for Minnesota by the re-

covery of several first stage larvae from elk droppings collected on February 1, 1966, approximately nine miles north of Grygla, Marshall County, in northwestern Minnesota. The pellets were frozen at the time of collection and were kept frozen until February 5 when they were introduced into the Baerman apparatuses at the Winton Game and Fish Headquarters. Twenty apparatuses were in use.

After 48 hours five first-stage larvae were observed on 102 slides. After 72 hours a single larva was found on 94 slides and one larva was found after 120 hours on ten slides. Measurements of the larvae fell within the limits as described by R. C. Anderson in the Canadian Journal of Zoology 41:775-792. A photograph of one of these larvae is shown in Figure 1.

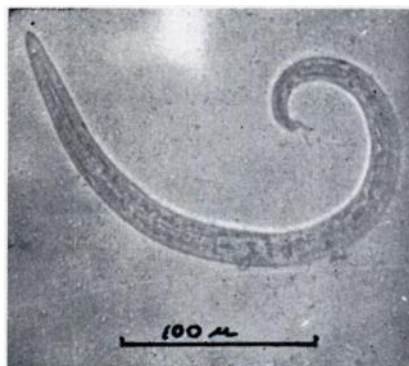


FIGURE 1. First-stage larva of *Pneumostrongylus tenuis* found in droppings of Minnesota Elk.

*P. tenuis* is common in the white-tailed deer (*Odocoileus virginianus borealis*) of this region, occurring in about 35 percent of the adult deer (Karns, unpublished data). It has also been reported

from moose of the general area by Loken *et al.* (1965) in the Bulletin of the Wildlife Disease Association 1(2):7 and has been established as the etiological agent of "moose disease" (Anderson, R. D. 1964 Pathologica Veterinaria 1:289-322 and Loken *et al.*, op. cit.; Smith *et al.*, Canadian Veterinary Journal 1964 5(11): 287-296). The pellets were collected in the vicinity of haystacks on which elk had been feeding. Incidence of the parasite in the herd has not been established. The pathology, if any, associated with the presence of this parasite in elk is unknown.

P. D. KARNIS

Minnesota Conservation Dept.  
Winton, Minn., 2 March, 1966

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**ENDOPARASITES OF THE RED-WINGED  
BLACKBIRD AGELAIUS PHOENICEUS L.  
IN COLORADO**

Eighty-seven Red-winged Blackbirds were obtained between February, 1962 and May, 1963. The majority was taken in the northeastern region of Colorado, including Larimer, Weld, Boulder, Adams and Denver counties. The remainder were collected in Mesa, Garfield and Jackson counties on the western slope.

One species of trematode, two cestodes, two nematodes, one acanthocephalan, and one mite were found. The names of the parasites are given below together with the incidence of occurrence and location within the host.

**Trematoda**

1. *Plagiorchoides noblei* (Park, 1936); 4.6 per cent infected; small intestine.

**Cestoda**

1. *Anonchotaenia mexicana* Voge and Davis 1953; 21.6 per cent infected; small intestine.
2. *Choanotaenia iola* Lincicome, 1939; 2.3 per cent infected; small intestine.

**Nematoda**

1. *Microtetrameres* sp. (females only) 2.3 per cent infected; proventriculus.
2. Spiruroid larvae; 1.1 per cent infected; proventriculus.
3. *Acuaria* sp. (female only) 1.1 per cent infected; ventriculus.

**Acanthocephala**

1. *Mediorhynchus papillosus* Van Cleave, 1916; 12.6 per cent infected; small intestine.
1. *Ptilonyssus (Paraneonyssus) icteridius* Strandtmann and Furman 1956; 5.7 per cent infected; turbinates.

Forty, or 46 per cent, of the 87 birds examined harbored parasites. The highest incidence of infection occurred during the summer months.

Although extensive examination of peripheral blood and bone marrow was made for haematzoa, only *Trypanosoma* was found. *Trypanosoma avium* was seen in a smear of bone marrow taken from a Red-winged Blackbird subsequent to this study.

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