Legworms in Cervids

Fall 2021

Significance

Hunters occasionally see this critter between the underside of the hide and the meat when they are skinning moose. This may lead to questions about the edibility of the meat or lead to illegal and unnecessary abandonment of the carcass. Legworms are NOT infective to people and pose little or no threat to infected wildlife.

What? Where? How?

Legworms are properly known as filarial nematodes (roundworms) that live under the skin on the legs and feet of various members of the deer family.

Moose in Europe, Asia, and parts of North America, including Alberta, provide the best places for legworms to live. However, the species of legworms in North America differ from those in Europe.

In addition, white-tailed deer and black-tailed deer in western Canada and the United States can provide suitable habitat for legworms. And woodland caribou in the mountains and northern forest regions of British Columbia, Alberta, and southern Alaska also share their lives with legworms.

The adult nematodes occur as long slender white threads located in connective tissue beneath the skin, mainly on the lower front legs. But they can occur anywhere in tissues of the legs between the hide and the meat. They can be quite inconspicuous as they look like thin white spaghetti snaking through the connective tissues. Sometimes the worms are easier to see after the carcass hangs and the surface dries out a bit.

Transmission Cycle

Adult worms produce microscopic larvae (meaning, you cannot see them) called microfilariae that live in tissues of the skin. The microfilariae are picked up by biting insects, generally blacklies, when they feed on infected moose.

WM Samuel Univ of Alberta

Once in a blackfly, the larvae develop into a different larval stage that moves into the mouthparts of the infected flies. The cycle is completed when larvae are introduced into another moose that is bitten by the same blackfly.

Distribution in Alberta

Onchocerca cervipedis is relatively common. In one survey, the majority of moose examined from the western and northern parts of the province, particularly the Swan Hills, were providing habitat for legworms. However, moose from Elk Island National Park or the Cypress Hills were not. This distribution probably reflects the range of the blackflies that carry legworm larvae from one moose to another.

Importance for Wildlife Management

Legworms are a part of our northern and western ecosystems and are not harmful to moose or deer. They live a benign existence in the connective tissues and rarely are associated with even local tissue damage.

https://www.alberta.ca/wildlife-diseases-in-alberta.aspx

Public Significance

Legworms are designed to live in moose and deer. They are NOT infective to people and have no adverse effect on the meat.

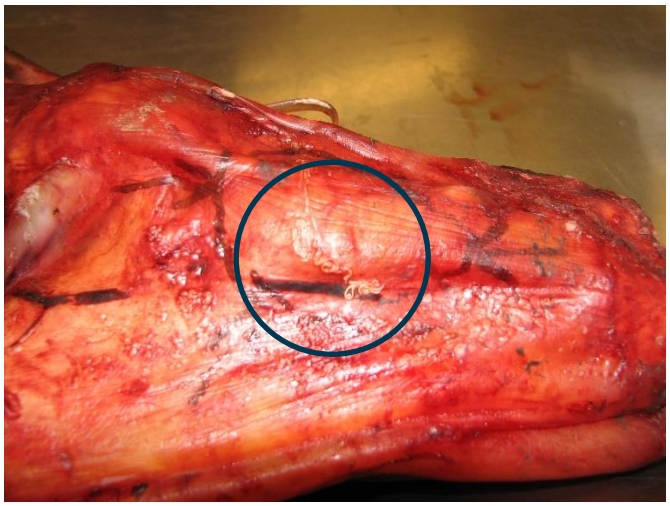
Hunters who encounter legworms sometimes question whether they should eat the meat from infected individuals. The answer is YES! *Onchocerca cervipedis* is found only beneath the skin and is not actually in the meat/muscles. And does not infect people.

Prevention/Control

There is no need, nor techniques available, to control legworms in moose. It is a natural part of the biodiversity of the province.

Summary

Legworms are long thin nematodes that live beneath the skin of moose and deer, most often between the skin and the muscles and tendons of the lower legs. This animal is harmless to moose and people.



Additional Information

Pledger, D.J., Samuel, W.M. and Craig, D.A., 1980. Black flies (Diptera, Simuliidae) as possible vectors of legworm (*Onchocerca cervipedis*) in moose of central Alberta. Alces 16: 171-202.