M Pybus Fish & Wildlife Alberta SRD

Rabbit blisters

(*Taenia pisiformis*)

in Alberta

Common name

rabbit blisters, rabbit cysticercosis, taeniasis

Scientific name

a tapeworm (cestode), *Taenia pisiformis*

What's Bugging Wild Critters?

Fact sheet #15: Rabbit blisters

Significance

This tapeworm is a harmless inhabitant of the body cavity and viscera of hares and rabbits. Adult worms live in the gut of a variety of wild carnivores that eat hares and rabbits. It does NOT survive in humans or livestock.

What? Where? How?

As with *Taenia hydatigena* and *T. ovis krabbei*, *Taenia pisiformis* makes use of predator/prey relationships in order to maintain its population. Adult worms are thin, flat, ribbon-like critters that live in intestines. Larvae (cysticerci) are clear or opaque pea-sized blisters filled with clear watery fluid and a small white blob of tissue. The white tissue is actually the head of the future adult tapeworm. The blisters are attached to connective tissues or the surface of organs in the abdominal cavity of the hare or rabbit. Although often few in number, there can be up to about 100 cysticerci in some heavily infected animals.

Transmission Cycle

The life cycle of *T. pisiformis* involves a herbivore and a carnivore—a common feature of many tapeworm survival strategies. Adults live in the small intestines of wolves, coyotes, red fox, gray fox, lynx, and bobcat as well as domestic cats and dogs. The eggs leave the carnivore's body along with the faeces and are picked up by rabbits and hares (and, rarely, some small rodents) when they eat vegetation or faeces contaminated with eggs.

The eggs then set off on a marvellous journey. They hatch in the intestine and larvae burrow into the intestinal wall, where they enter blood vessels. In as little as 40 minutes the larvae find themselves in the liver, and two weeks later, in the body cavity, where they form round pea-sized cysts. The cyst is a dormant or resting stage and the larvae stay this way until eaten by an appropriate carnivore. Once inside a suitable predator, the cysts are activated and the larvae develop into adults in the intestine.

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Distribution in Alberta

This tapeworm has a well-established population in wildlife in Alberta. Larvae can be very common in snowshoe hares, living in more than 50% of some populations, although this differs from year to year. Lynx, which eat lots of snowshoe hares, provide excellent habitat for the adult worms, and there are reports of the tapeworm in up to 40% of a local lynx population. Adults also are common in coyotes and some wolves.

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Importance for Wildlife Management

Taenia pisiformis is a tiny tapeworm that does nothing more than take up space in the intestines of some carnivores and the body cavity of some hares. It is not a management concern.

Public Significance

Taenia pisiformis is NOT infective to humans. It can establish harmless populations in domestic dogs and cats.

Prevention/Control

The presence of *Taenia pisiformis* cannot be prevented or controlled in natural ecosystems. Carcasses containing larvae should not be fed to dogs or cats. Regular de-worming is always a good idea for dogs and cats that hunt or scavenge wildlife.

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Summary

This tapeworm is a common inhabitant of many areas of Alberta. However, it is conspicuous only as larvae in the body cavity of snowshoe hares and jackrabbits. The worm is harmless to people, livestock, and wildlife.

Additional Information

Parasitic Diseases of Wild Mammals, Second Edition. Edited by William M. Samuel, Margo J. Pybus and A. Alan Kocan. 2001. Chapter 7 – Taeniasis and Echinococcosis.

University of Northern British Columbia: http://www.unbc.ca/nlui/wildlife_diseases/taenia_pisiformis.htm

Newfoundland and Labrador Agriculture: http://www.gov.nf.ca/agric/pubfact/ssharecyst.htm

For more information on wildlife diseases in Alberta: http://www3.gov.ab.ca/srd/fw/diseases/index.html

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