



Common name

ringworm,
dermatomycosis

Scientific name

a fungus, *Trichophyton verrucosum*

What's Bugging Wild Critters?

Fact sheet #19:
Ringworm of deer



Significance

Various fungi can survive in the skin of mammals and birds. In Alberta, ringworm fungi are fairly common inhabitants of the skin of domestic cattle. Occasionally the fungus also lives on deer and humans. In most cases, ringworm infections cause only mild skin problems.

What? Where? How?

When is a worm not a worm??? When it is ringworm—a fungus, not a worm! The name actually comes from the outward growth of the fungus from a central core. As the inner area heals, it is surrounded by a ring of active tissue damage.

Ringworm as a disease has a worldwide distribution and can be associated with a number of different fungal species. Some fungi have narrow habitat requirements and survive only on/in a limited number of species. The usual ringworm in humans, for example, does not do well in other animals. However, the most common ringworm fungus on wildlife is not so picky and can survive in a wide range of species, including humans. In Alberta, cattle and mule deer provide the premium habitats for ringworm, although ringworm in northern pocket gophers has been documented, and it is likely that other small rodents also provide suitable habitat for ringworm in the province.



Ringworm of deer

(*Trichophyton verrucosum*)

in Alberta

Transmission Cycle

Like most fungi, the fungi of ringworm produce resistant spores that are adapted to withstand environmental stresses of moisture and temperature. The dormant spores survive for long periods in soil and can only enter an animal if there are pre-existing cuts or abrasions in the skin. Once the spores get below the skin surface, they germinate and spread out as tiny branched threads (hyphae) typical of many fungi. These threads can enter hair follicles and weaken each individual hair until it breaks or falls out of the follicle. This activity can be associated with thin dry flakes or scabs on the skin as well as mild to severe loss of hair, often on the face and lower legs. The hyphae also produce spores that stay on the skin surface or drop to the ground and have the potential to infect another mammal with an open wound. Lastly, the spores can pass directly during contact with an infected individual, often a carrier animal that does not have any signs of ringworm.

Distribution in Alberta

Sporadic cases of ringworm in wildlife occur in areas where deer share range with infected cattle. In the last 10-15 years there has been a steady increase in the number of cases of ringworm submitted to the Fish and Wildlife diagnostic lab. Mule deer seem to provide the best habitat, although the fungus can survive on white-tailed deer, as well. Most of the cases come from areas south of Hanna and Oyen as well as south and west of Calgary and Sundre.

Ringworm of deer in Alberta

(*Trichophyton verrucosum*)

Importance for Wildlife Management

Ringworm generally is limited to mild infections and small areas of hair loss on the face, muzzle, and lower legs of mule deer. However, it is not common in deer in Alberta and probably has no effect on the population. Ringworm occurs only in the skin and thus does not affect the meat.



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Public Significance

Common ringworm in humans is not the same species as the ringworm in wildlife. However, the species in wildlife is mildly infective to humans and can cause a local mild skin rash. Anyone who thinks they may have ringworm, regardless of where it came from, should consult a physician.

Cattle are considered the primary source of ringworm in deer. Occasionally, pets and caged birds can provide suitable habitat for ringworm fungi.

Prevention/Control

Prevention or control of ringworm in deer is impractical and not warranted. However, to avoid human infection, gloves should be worn whenever animals with skin conditions are handled. Suitable topical skin creams and systemic medicines are available to combat fungal diseases in people.

Summary

Ringworm in deer is caused by a fungus. It is uncommon in Alberta and not a significant problem for wild deer. Ringworm can infect people and caution should be taken when handling infected deer.

Additional Information

Infectious Diseases of Wild Mammals, Third Edition. Edited by Elizabeth S. Williams and Ian K. Barker. 2001. Chapter 29 - Mycotic Diseases.

University of Northern British Columbia: http://www.unbc.ca/nlui/wildlife_diseases_bc/ringworm.htm

Merck Veterinary Manual - Online: <http://www.merckvetmanual.com/mvm/index.jsp?cfile=htm/bc/171110.htm&word=ringworm>

University of Illinois, College of Veterinary Medicine: <http://www.cvm.uiuc.edu/petcolumns/showarticle.cfm?id=80>

USGS National Wildlife Health Center: http://www.nwhc.usgs.gov/pub_metadata/field_manual/field_manual.html