



Common name

knemidokoptiasis, scaly-leg, scaly-leg disease

Scientific name

various species of mites in the genus *Knemidokoptes*

What's Bugging Wild Critters?

Fact sheet #8:
Scaly-leg mites



Significance

Scaly-leg mites are associated with conspicuous skin disease in a variety of wild birds. In Alberta, they are relatively common on evening grosbeaks and infestations can lead to loss of toes or partial amputation of a leg. Severely affected birds may subsequently die of starvation.

What? Where? How?

These tiny mites (microscopic relatives of ticks and spiders) live under the scales that cover the legs and feet of various species of perching birds. Active infestations can be seen as swollen red patches and thickened white crusty lesions on the legs and feet. These mites have a worldwide distribution. Robins, red-winged blackbirds, grackles, cowbirds, house sparrows, and a few finches in North America are known to provide suitable habitat. However, by far the majority of documented scaly-leg mites occur on evening grosbeaks. The mites have been associated with mortality in evening grosbeaks and robins.



D Prescott

Transmission Cycle

Scaly-leg mites spend their entire life in one habitat—under the skin of a bird's leg. They enter the skin through feather follicles and damaged skin cells and then form burrows and tunnels below the skin surface. Specific means of transmission are not known, but it appears that prolonged direct contact is needed for the mites to spread to other individuals.

Scaly-leg mites

(*Knemidokoptes* spp.)

in Alberta

Some individuals may be genetically resistant to infections. One theory suggests that birds may be infected early in life (as nestlings) and the mites may be dormant until some factor triggers their rapid growth and reproduction. This leads to increased opportunity for the mites to spread from heavily infested birds.

Distribution in Alberta

The primary habitat for scaly leg mites in Alberta is evening grosbeaks. Bird banders and winter feeder watchers often report seeing grosbeaks with swollen legs and missing toes. The population of mites on individual birds ranges from a few to thousands. Dr. Dave Prescott (Fish and Wildlife, Alberta Sustainable Resource Development) has handled numerous evening grosbeaks and estimates that at least 30% of the provincial population may carry the mites.

Importance for Wildlife Management

The impact of scaly-leg mites on evening grosbeak populations has not been studied. The number of infected birds seems to vary from year to year, as does the severity of damage. Severe infections can involve amputation of toes and even the entire foot. Such birds find it difficult to feed, perch, or maintain balance. In this situation, the birds use a lot of energy as they constantly flap their wings to avoid falling over. These birds tend to feed by themselves and may end up at the feeder after all the food is gone!

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Scaly-leg mites in Alberta

(*Knemidokoptes* spp.)

It is interesting that the number of evening grosbeaks has declined dramatically on local Christmas Bird Counts over recent years in central Alberta. There are undoubtedly a number of reasons for this, perhaps including the effects of scaly-leg mites.

Public Significance

Scaly-leg mites can survive on a variety of caged birds, including poultry; however, different mite species are involved and there is no known connection between infections on wild grosbeaks and infections in caged birds. *Knemidokoptes* mites cannot survive on humans, pets, or livestock.

Prevention/Control

Although a number of treatments are available for infections in caged birds, these are neither effective nor recommended for wild birds. The mite population is widespread throughout the province, and transfer among individual birds is probably continual.



Summary

Evening grosbeaks seem to provide optimal habitat for scaly-leg mites in Alberta. The mites can have significant effects on individual birds but their effects on the population are not known

Additional Information

University of Florida: <http://edis.ifas.ufl.edu/VM022>

The Merck Veterinary Manual Online: <http://www.merckvetmanual.com/mvm/index.jsp?cfile=htm/bc/204814.htm>



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