

# Avian salmonellosis

(*Salmonella* spp.)

## in Alberta

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### Common name

salmonella, salmonellosis

### Scientific name

various species of *Salmonella* bacteria but usually *Salmonella typhimurium*

### What's Bugging Wild Critters?

Fact sheet #3:  
Avian Salmonellosis



### Significance

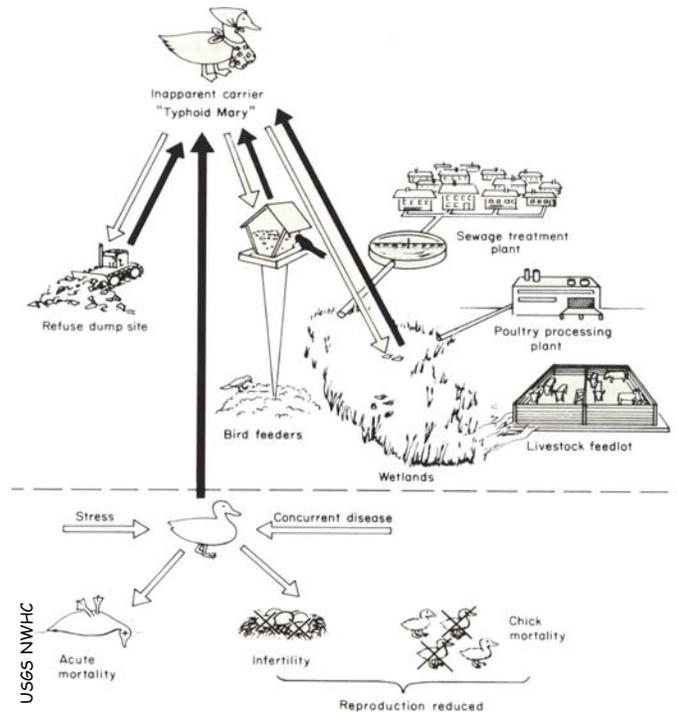
*Salmonella* bacteria are benign inhabitants of soil around the world. They also can live harmlessly in many vertebrate species. Occasionally mortality occurs in birds, and is most often seen at bird feeders.

### What? Where? How?

Salmonellosis occurs when animals are concentrated in large flocks or in small feeding areas. These situations can lead to social stress in individuals and unsanitary accumulations of contaminated faecal material. The extent of mortality is not well documented; however, sporadic outbreaks have been reported. Infected birds tend to be weak, "fluffed up" and relatively inactive. They sit on the feeder or on the ground and are reluctant to move. Some individuals die quickly; others linger. In many cases, finding dead birds is the first indication of a problem. The bacteria reside in the oesophagus and gut and infections often result in diarrhoea.

### Transmission Cycle

*Salmonella* bacteria occur in the soil and on vegetation. They are inadvertently swallowed as birds feed or groom. In most individuals, the bacteria are not associated with disease; however, when birds are concentrated or stressed, infections may become active and spread rapidly to other individuals. Bacteria are shed in the faeces and may survive in the environment for many months.



### Distribution in Alberta

A few cases of mortality at individual bird feeders are reported each year throughout the province. Generally, only a few birds are involved at any one feeder. Mortality has been documented in various species of perching birds that occur in large flocks, including house sparrows, black-capped chickadees, common redpolls, pine siskins, and evening grosbeaks. Through the late 1990s, most cases involved chickadees or redpolls. In the winter of 2001-2002 and 2002-2003, there were noticeable increases in the mortality of house sparrows at feeders in the Edmonton area.

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## Importance for Wildlife Management

The impact on local bird populations is negligible. However, this disease has a high



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profile with the bird-feeding public, and each year Fish and Wildlife Division staff respond to local problems with information and advice.

## Public Significance

Mammals, including humans, are susceptible to many species of *Salmonella*. Fortunately, outbreaks at feeders are not associated with infections in humans and rarely occur in cats. However, caution is advised when handling sick birds or cleaning bird feeders. Wear gloves or avoid directly handling the bird. Cats should not eat dead birds.

## Prevention/Control

Regular maintenance and disinfection of bird feeders, particularly platform feeders, may reduce the risk of salmonellosis. Weak household bleach should do the job. Feeders should be designed so that birds cannot sit among the seeds that other birds will eat. Hulls of shelled seeds on the ground or feeder should be removed regularly to avoid accumulation of bacteria. Once mortality occurs, sick or dead birds should be removed, all feeders and birdbaths should be thoroughly cleaned with mild disinfectant (e.g., chlorine bleach), and the seeds and hulls beneath the feeder removed. Moving the feeder to another location may also help. If necessary, discontinue feeding for 10 to 14 days to let the birds disperse. Avian salmonellosis should not be confused with Avian conjunctivitis.

There is no known treatment for sick birds, and once the clinical signs are noticeable the infection is likely to be fatal.



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## Summary

*Each winter, avian salmonellosis is a problem at some bird feeders. Control is achieved by regular cleaning and/or relocation of feeders. Care should be taken to avoid possible human infection.*

## Additional Information

*Infectious Diseases of Wild Mammals, Third Edition.* Edited by Elizabeth S. Williams and Ian K. Barker. 2001. Chapter 28 - Miscellaneous Bacterial Infections.

Alberta Agriculture, Food and Rural Development: <http://www1.agric.gov.ab.ca/app21/rtw/selcat.jsp>

U.S.G.S. National Wildlife Health Center: <http://www.nwhc.usgs.gov/facts/salm.html>

Cornell Lab of Ornithology: [http://www.birds.cornell.edu/cfw/challenges/bird\\_diseases.html](http://www.birds.cornell.edu/cfw/challenges/bird_diseases.html)