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Wildlife Diseases
FACTSHEET

Salmonella in Songbirds

Introduction

Salmonella is a type of bacterium found in the gut of many species of birds both domestic and wild. During periods of stress it can cause outbreaks of sickness and death. Its importance in songbird populations generally and the occurrence of outbreaks in this province specifically are discussed in this factsheet.

Types of *Salmonella*

Salmonella bacteria are common normal inhabitants of the gut of many wild and domestic birds. There are thousands of types (serotypes) though the most important in songbirds is called *Salmonella typhimurium*. It is possible to even further identify the bacteria into "phagetypes". This "fingerprinting" helps to show whether illness in different species of birds or in different geographical areas may be related.

Common Redpolls

House Sparrows

In the outbreak that occurred across Atlantic Canada in the winter of 1997-98, the most common phagetype was called *Salmonella typhimurium* phagetype 40. In the smaller outbreak in Central Newfoundland in February-March 1999, the phagetype identified was *Salmonella typhimurium* phagetype 160.

Salmonellosis as a Disease

Birds carry these bacteria as normal inhabitants of their gut. Disease can occur in susceptible segments of the population when stresses increase. Usually the youngest and oldest birds are the most vulnerable but large segments of the population can be affected when events occur such as ice storms, failure in important food sources, etc. The stress of low nutrition, the higher concentrations of birds around available food (such as feeders) and the resultant ease in spread of disease from one bird to another contribute to large scale outbreaks.

Sick birds will often appear uncomfortable, with heads drooped, wings out, feathers fluffed up, and may appear to be breathing heavily. Their behaviour may change from the normally shy habits of small birds to indifference. This type of behaviour leaves them more susceptible to predation by larger birds or cats and leaves them more exposed to poor weather.

Evening Grosbeak

Pine Siskin

American Goldfinch

Outbreaks in Newfoundland

In the winter of 1997-98, a large outbreak of Salmonellosis was witnessed across eastern North America. Sick and dead birds were seen in at least 15 eastern and midwest US states and all Canadian provinces from Manitoba eastwards. The total number of birds that died will never be known but it would easily be in the thousands. The species of birds affected included the Common Redpoll, Pine Siskins, Evening Grosbeaks, Purple Finches and American goldfinches.

In Newfoundland we confirmed this disease in Evening Grosbeaks, Common Redpolls and Pine Siskins. We saw it in communities as far apart as Wabush, Goose

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Bay, St. George's, Gander and Portugal Cove (see map). With such a wide distribution there were surely many points in between that also saw this disease.

In addition, we saw a smaller outbreak of *Salmonella typhimurium* in House Sparrows in Howley (February 1999) and Carmanville (March 1999) . In the case of the deaths in Carmanville it was indicated that out of approximately 40 birds seen flocking together, 30 had died over a two week period. It is suggested that house sparrow outbreaks tend to be more localized due to their feeding habits.

Impact on other animals and humans

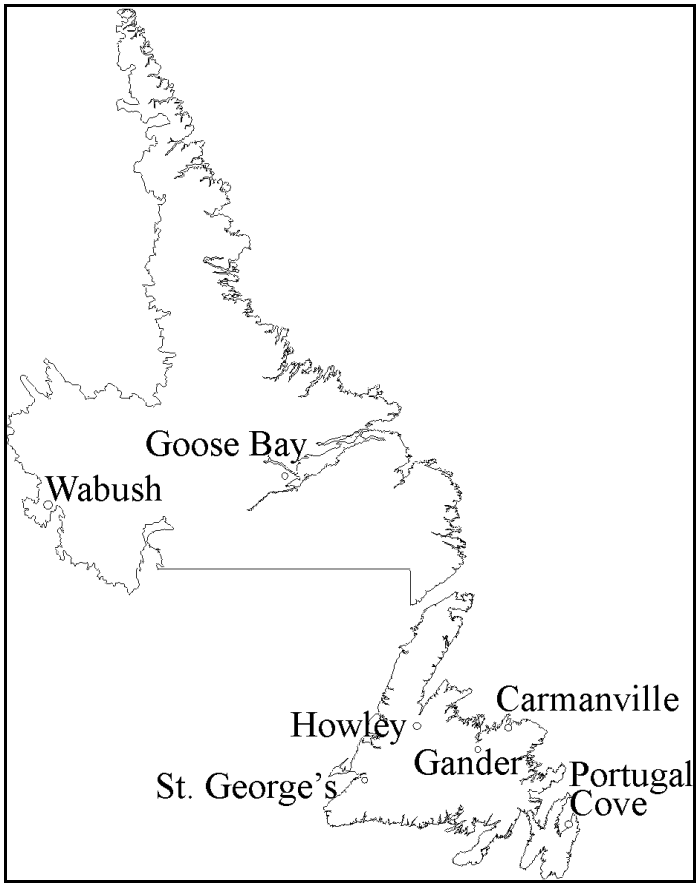
Though these outbreaks are mostly of importance to the bird species affected they can also affect other types of animals including humans. Cats that attack sick songbirds can pick up the illness and possibly pass it on to the humans that are caring for it. In addition, humans that pick up sick or dead birds or clean up contaminated feeders may become infected. In one case in this province, a mouse died that ate feed that fell from a feeder where sick birds had been recovered. This mouse had the same type of *Salmonella* as the sick birds.

Precautions for minimizing the spread of *Salmonella*

For people who put out feed for birds in the winter, it is advisable to monitor these feeders to make sure that they don't become a source of infection. This would include making sure the feeders are clean before they are first put out and that feed with no apparent signs of mold is used. Feed that may have gotten damp during storage could contain dangerous molds. Once in the feeders the seeds are usually safe if they are protected from dampness and contamination.

If the winter is warm and there are periods of rain this could allow bacteria and molds to grow. In particular, if there is spilled feed on a feeding tray that has fecal contamination on it which is then subjected to damp warm weather this could become a serious source of infection. It would be important then to clean trays regularly during warmer weather. Once spring comes, birds usually don't need feeders so they can be taken down. Before putting them away for the season they should be properly washed including the use of a disinfectant.

If sick birds are seen near your feeder, make sure the feeder is regularly cleaned. As birds can become dependent on you for food during the winter, the complete removal of the feeders might not be advisable. For personal safety, use gloves and wash hands if handling sick or dead birds. Dispose of dead birds so that they won't spread disease.



More Information

For more information on diseases of wild animals please contact your Regional Veterinarian, Conservation Officer, the author or visit our website.

References

P.-Y. Daoust et al. Salmonellosis in songbirds in the Canadian Atlantic provinces during winter-summer 1997-98. Can. Vet. Journal, volume 41, pp. 54-60, January 2000.

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