

# Salmonellosis

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*Photo by Milton Friend*

Salmonellosis is a bacterial disease caused by a group of bacteria in the genus *salmonella*. All species of birds are susceptible to salmonella infection; the outcome of infection depends on a variety of factors, including age, stress, host species susceptibility, and bacterial virulence. Salmonellosis is a common cause of mortality in birds at birdfeeders.

There are many different strains of salmonella. Many different types of animals can carry salmonella, including rodents. The bacteria live in the intestines and pass out with the feces. The organism can be spread from bird to bird through direct contact, or through ingestion of food or water contaminated with feces from an infected bird or mammal. Carriers of the organism may appear healthy but shed the organism periodically in their feces.

## **Clinical/Field Signs**

There are no distinctive signs associated with salmonellosis in wild birds. Different species and ages may exhibit different signs even when infected with the same serovar (strain). Commonly reported signs include ruffled feathers, droopiness, diarrhea, and severe lethargy; chronically infected birds often appear severely emaciated. Sick birds may also be observed to seizure. Diagnosis requires laboratory isolation and identification of *Salmonella* sp. from infected tissues in conjunction with findings from a full diagnostic examination.

## **Lesions**

Types of lesions are highly variable; in acute cases, obvious lesions may be completely absent. Otherwise, livers often become swollen and crumbly with small reddened or pale spots. Paratyphoid nodules - small tan to white plaques best seen under a microscope - may develop in the liver and extend into the body cavity. Infected songbirds often have yellow, cheesy nodules visible on the surface of the esophagus.

### **Wildlife Management Significance**

Losses occur nationwide. No medical treatment is known to completely cure birds infected by this organism. There are medications that at least temporarily heal the bird, but the disease organism may persist in the host and be shed to other previously uninfected birds at a later time.

To reduce the spread of the bacteria, clean feeders with a 10% bleach and water solution, rinse well and dry. Don't put the feeders back up for one to two weeks, so that affected birds won't be concentrated in one location. Rake up waste seeds/droppings below the feeders. Bird feeders with rough surfaces, cracks, or crevices are difficult to sanitize and should not be used. When using feeders, the location should be changed at regular intervals. Addition of more feeders may reduce crowding and minimize opportunity for interaction and contamination. Birdseed should be stored in rodent proof containers.

If you have additional concerns regarding human or pet health, contact your physician, public health department or veterinarian for more information. If sick or dead birds are observed at bird feeders, contact the Wildlife division of your state Natural Resource Agency or Department of Conservation.