



## Common name

avian pox, fowlpox, sorehead, bird warts

## Scientific name

avipoxviruses of the poxvirus group, probably *Poxvirus avium*

## What's Bugging Wild Critters?

Fact sheet #31 :  
Avian Pox



## Significance

Avian poxviruses cause conspicuous wart-like nodules in a wide range of bird species around the world, particularly perching birds and raptors. In some individuals the lumps may interfere with normal activities and lead to starvation or breathing problems. Occurrence in captive wild birds can be a problem in wildlife rehabilitation facilities.

## What? Where? How?

Poxvirus infections occur as raised dry dark crusty wart-like lesions or pale wet yellow cheese-like lumps primarily on the unfeathered skin of the legs, feet, head, and face. Small localized growths can occur individually or run together into a misshapen mass. When they occur in large numbers or over a significant amount of skin, they can cover the feet or face and prevent the bird from perching properly or, in the case of raptors, prevent the bird from hunting successfully. Sometimes the growths occur in the mouth, throat, windpipe and lungs. These are particularly dangerous for the bird and can interfere with swallowing or breathing.

Avipoxviruses occur around the world. The list of bird species that provide suitable habitats for avian pox is very long and includes various songbirds, upland game birds, waterfowl and marine birds, pets and domestic birds, as well as eagles and other raptors. Young birds are more likely to be infected and are more likely to have severe cases, in part due to a lack of immunity. Previously-affected birds develop an immunity that they carry for life.

# Avian Pox

(*Poxvirus avium*)

## in Alberta

## Transmission Cycle

The most likely means of transferring virus among birds is via mosquitoes. Poxviruses circulating in the blood of infected birds can be picked up and then transferred to the next bird bitten by the mosquito. Apparently the insects can carry the viral particles for up to a month before providing them to another bird - assuming the mosquito lives that long!

In other situations, avian poxviruses can be transferred directly by contact with infected birds or indirectly by contaminated objects such as food, perches, cavity nests, or sentinel posts. In these cases, the virus must find a previous wound in order to get into the skin. Minor cuts and scrapes often occur on the feet, legs, or face and thus provide an entry point for the virus. Once inside, the virus penetrates skin cells and causes them to grow at a faster than normal rate. The new cells pile up on top of one another resulting in the wart-like growths. They eventually dry and fall off. Previously-affected individuals are resistant to further infections.



# Avian Pox

(*Poxvirus avium*)

## Distribution in Alberta

Avian pox occurs throughout the province. Small passerines such as swallows and purple martins seem to be particularly susceptible, perhaps because of the increased bird-to-bird contact within colonies or nest boxes.

Over the years, we also have seen poxvirus outbreaks at a few bird feeders. However, we see most cases of the viruses in bald eagles and it probably occurs in goldens too. In these species the damage can be extensive on the face and around the eyes and may interfere with successful hunting behaviour. Cases are more often seen in late summer and early fall, particularly in years with high mosquito populations.

In addition, some wildlife rehabilitators have had limited problems of established pox infections in their facilities.

## Importance for Wildlife Management

Natural infections in wild birds generally are mild and self-limiting. Usually lesions are restricted to a few small growths that do not interfere with normal activity of infected birds. Even in severe cases the growths will eventually dry up and drop off over time. However, some individual birds become weak and lose body condition or perhaps starve if the lesions directly interfere with life-sustaining activities, such as hunting, eating, swallowing, breathing, or perching.



## Public Significance

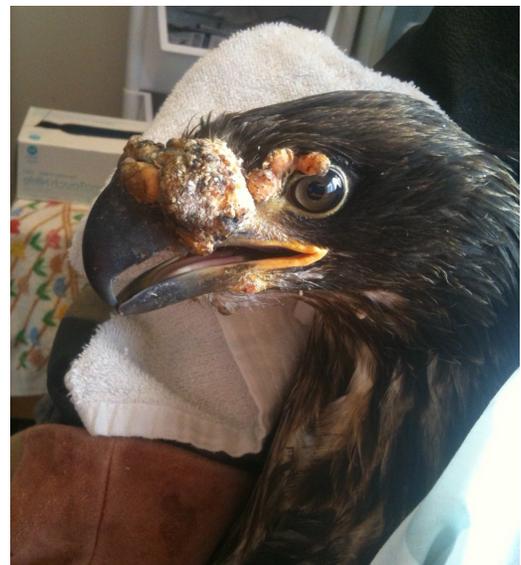
Although domestic poultry are susceptible to pox infections, they appear to be resistant to the forms that occur in most wild birds. However, in facilities where wild birds are held in captivity infection can spread rapidly and persist.

Avian poxviruses limit their habitat to birds and are NOT infective to humans; thus persons handling infected birds (e.g., rehabilitators and banders) are not at risk.

## Prevention/Control

Disrupting transmission is the most effective means of controlling avian pox. However, this is difficult if not impossible in the case of wildlife. Currently there are no programs to prevent or control avipoxviruses in the wild nor are any warranted.

Avian pox viruses are highly resistant to drying and can survive in dried scabs, dropped feathers, or debris for months or even years. Therefore contaminated areas in captive bird facilities must be thoroughly disinfected. A weak bleach solution (5% bleach) kills the virus. There is no known treatment; however, chickens can be vaccinated against avian pox.



## Summary

*Avian pox infections occur frequently in wild birds but generally are of little concern, except in individuals where the growths limit the ability of the bird to eat or breathe. Although not infective to humans, avipoxviruses can spread quickly among wild birds held in captivity.*



## Additional Information

Infectious Diseases of Wild Mammals, Third Edition. Edited by Elizabeth S. Williams and Ian K. Barker. 2001. Chapter 8 - Poxvirus Infections.

Diseases of Wild Waterfowl, Second Edition. By Gary A. Wobeser. 1981. Pp 50-51 - Poxvirus Infection.

University of Northern British Columbia:

[www.unbc.ca/nlui/wildlife\\_diseases\\_bc/avian\\_pox.htm](http://www.unbc.ca/nlui/wildlife_diseases_bc/avian_pox.htm)

Merck Veterinary Manual Online:

[www.merckvetmanual.com/mvm/index.jsp?cfile=htm/bc/204801.htm&word=avipoxvirus](http://www.merckvetmanual.com/mvm/index.jsp?cfile=htm/bc/204801.htm&word=avipoxvirus)

Michigan Department of Natural Resources:

[www.michigan.gov/dnr/0,4570,7-153-10370\\_12150\\_12220-26362--,00.html](http://www.michigan.gov/dnr/0,4570,7-153-10370_12150_12220-26362--,00.html)

National Wildlife Health Center:

[www.nwhc.usgs.gov/disease\\_information/other\\_diseases/avian\\_pox.jsp](http://www.nwhc.usgs.gov/disease_information/other_diseases/avian_pox.jsp)

USGS Field Manual of Wildlife Diseases:

[www.nwhc.usgs.gov/publications/field\\_manual/chapter\\_19.pdf](http://www.nwhc.usgs.gov/publications/field_manual/chapter_19.pdf)