

Sampling for BIRD FLU

By Mike Szymanski

North Dakota Game and Fish Department biologists have completed round one of a surveillance program designed to provide early detection of highly pathogenic strains of avian influenza in wild birds in North America.

Worldwide, there are 144 known strains of avian influenza. These are designated as either highly pathogenic or low pathogenic. The strains scientists were looking to uncover in 2006 were highly pathogenic H5 or H7 strains. As expected, none of the birds sampled in North Dakota tested positive for the culprit highly pathogenic strains. Ongoing surveillance in other states and countries did not detect highly pathogenic avian influenza anywhere in North America.

Different strains of avian influenza actually are fairly common in wild birds, especially waterfowl. Just like in people, birds carry various influenza viruses, and they always will.

There is no conclusive evidence that wild birds can move the highly pathogenic H5N1 virus over great distances. However, Alaska is thought to be the most likely migratory pathway for entry into the United States if

infected wild birds can move the virus from continents where H5N1 occurs. Therefore, the Department focused sampling on species that were likely to have Alaskan or Siberian connections, and species most likely to mix with them, such as tundra swans, lesser sandhill cranes, pintails, and several species of shorebirds. Other species sampled were mallards, wigeon, gadwall, green-winged teal, shovelers and scaup.

Department biologists sampled 941 birds in 35 North Dakota counties from late July through early November. Hunters were very cooperative in letting Department biologists sample their birds. Swan hunters are especially thanked for calling biologists to schedule sampling, and also for those who stopped at designated offices to have their birds sampled. Game and Fish really only fell short of its sampling quota on one species – swans – but was also a couple of samples short for cranes. However, given the difficulty in getting samples for these species, and that a strong cold front pushed most birds out of the state by Halloween, the program was deemed successful.



Many different bird species were tested for avian influenza in 2006 in North Dakota.



RON WILSON

Sandra Hagen, Department nongame biologist, shows a sample taken from a shorebird during avian influenza surveillance work in 2006.

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Although highly pathogenic avian influenza hasn't been found in North America, hunters should always follow common sense guidelines when handling wild game.

- Do not harvest or handle game that appears to be sick.
- Do not eat or drink while cleaning game.
- Wash hands and utensils thoroughly.
- Cook game to a minimum of 165 degrees Fahrenheit.
- Wear rubber or latex gloves when cleaning game.

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Bird Flu Strains

In the bird community, researchers have identified many kinds of avian influenza. Only one of those, a subtype called H5N1, is a concern.

H5N1 and similar avian influenzas come in two forms, a low pathogenic strain, and a high pathogenic strain. The low pathogenic strain produces mild or no symptoms in chickens, is known to circulate in migratory birds, and is not a danger to humans.

Highly pathogenic avian influenza, H5N1 subtype, or HPAI H5N1, is the subtype that has been fatal in humans in a few isolated cases where the virus was spread from domestic birds to humans. However, at this point, the virus does not transfer well between human hosts.

HPAI H5N1 can cause wild bird mortality; however, mass mortality of wild birds is rare, having been reported in only a couple of locations. However, HPAI H5N1 appears to be highly lethal in poultry, including chickens, turkeys, and in some cases domestic ducks and geese. Mortality can exceed thousands of birds in just a short time, because these isolated flocks do not have immunity.

HPAI H5N1 virus was first identified in birds in 1996 in China, but didn't appear on the global scene until 1997 when an outbreak in Hong Kong resulted in 18 human infections and six fatalities.