A new surveillance effort includes testing waterfowl that could potentially carry this disease from Europe or Asia.

Avian Influenza in Wild Birds

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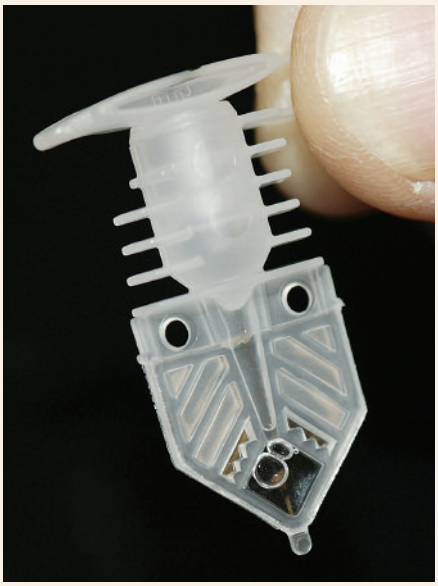
Many public health, agriculture and wildlife officials are concerned about the possibility that wild birds could bring avian influenza to North America during migration. There are 144 subtypes of avian influenza and the bad news is that some of them have been found on our continent, both historically and recently. However, the good news is that the form of greatest concern, Asian H5N1, has not been found in North America to date.

Low pathogenic avian influenza viruses regularly circulate in wild birds, primarily shorebirds and waterfowl. Rarely do these viruses cause symptoms of sickness or death in wild birds. But if low pathogenic forms are passed to poultry and are permitted to circulate in the new host, they may mutate into a highly pathogenic form that can cause extensive mortality in poultry.



"As natural carriers of the virus, wild birds usually show little, if any, signs of illness, and we aren't likely to see large numbers of wild birds die," Colleen O'Keefe, Doctor of Veterinary Medicine and manager of the Illinois Department of Agriculture (IDOA) Division of Food Safety and Animal Protection explained. "It is when the virus is transferred to domestic birds that large-scale die-offs could occur."

A high pathogenic strain which has recently emerged, Asian H5N1, is of particular concern because it has the ability to pass from poultry to wild birds and humans. This strain has caused mortality in wild birds in Asia and Europe, and the deaths of approximately 141 humans. No person is known to have contracted the disease from wild birds, and all human cases are believed to be a result of close contact with infected poultry, poultry products or surfaces. Public health officials are concerned that Asian H5N1 could mutate into a form which could be passed easily between humans and cause the next human influenza pandemic. However, there is no guarantee that Asian H5N1 will be the cause of the next human pandemic.

At present little is known about the virulence of, persistence of and degree to which Asian H5N1 can spread in wild birds.

Samples collected from domestic poultry and wild birds will be tested by Illinois Department of Agricultural virologist Greg Fritz (above).

Captive-reared game birds, such as those at Department of Natural Resources propagation centers, will be monitored for the virus.

While most of the dispersal of Asian H5N1 throughout Europe and Asia has been attributed to the movement of poultry, poultry products and captive birds, the possibility that wild birds could bring the disease to North America can not be completely dismissed. Because of this uncertainty, federal and state agencies have embarked on a cooperative surveillance effort for the early detection of Asian H5N1 in wild birds. The national surveillance plan outlines five surveillance strategies for wild birds: 1) investigation of mortality events, 2) live bird surveillance, 3) hunter-harvested bird surveillance, 4) use of sentinel species and 5) environmental sampling.

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In Illinois, IDOA and the Department of Natural Resources (DNR) are conducting Asian H5N1 surveillance in domestic poultry and wild birds respectively. IDOA will be monitoring poultry and captive-reared game birds for Asian H5N1.

"Being proactive in our approach and monitoring captive-reared game birds is important because this is big business and a lot of Illinois-reared birds are shipped to other states," O'Keefe said of the active surveillance process being implemented this fall.

DNR's primary responsibility is to sample waterfowl live-trapped during migration, collected during major mortality events and harvested by hunters during the hunting season. The National Strategic Plan calls for DNR to sample 750 birds. Additionally, the U.S. Department of Agriculture's Wildlife Services program will be sampling 800 wild birds within the state. The avian influenza sampling in Illinois and the additional nationwide sampling will assist in the early detection of Asian H5N1 should it arrive in North America.

At some locations during this hunting season, hunters will be asked to allow their harvested ducks and geese to be sampled for avian influenza. Sample collections only takes a minute to complete and consist of a swab of the cloacal area. Illinois hunters have a long history of cooperating with and supporting DNR on many different aspects of wildlife management, including disease surveillance. Hunter cooperation is vital to avian influenza surveillance efforts in Illinois and is greatly appreciated by not only wildlife officials, but the general public as well.

Terri Howard, office manager at the IDOA Galesburg laboratory, will maintain a log of all samples tested for avian influenza.

Roy Domazlicky is the Department of Natural Resources urban waterfowl project manger and based in Bartlett.

Handling game

It is important for hunters and the general public to be aware that wild birds can carry diseases besides avian influenza which can be transmitted to humans. Because of the potential for disease transmission, the National Wildlife Health Center has issued the following guidelines for hunters when handling game:

- Do not handle or eat sick game.
- Wear rubber or disposable latex gloves while handling and cleaning game. Wash hands thoroughly with soap and water and thoroughly clean knives, equipment and surfaces that come in contact with game. Common household disinfectants such as detergents, 10 percent bleach, alcohol and other commercial disinfectants also will deactivate avian influenza viruses.
- Do not eat, drink or smoke while handling animals.
- All game should be thoroughly cooked (well done or 160˚ F).