
Highly Pathogenic Avian Influenza in Wild Birds in 2022

Michael Persia, PhD – Virginia Tech

Current Reports in United States



Henrico County, VA Jan 26

Surry County, VA Jan 26

Hide County, NC Jan 19

**Pamlico/Beaufort County,
NC Jan 27**

Bladen County, NC Jan 27

Colleton County, SC Jan 14

Our Friends to the North

Avian Flu detected in geese on hobby farm outside Halifax, owner 'devastated'

By Amber Fryday · Global News

Posted January 31, 2022 5:55 pm · Updated January 31, 2022 5:59 pm

The Canadian Food Inspection Agency has confirmed the death of a Canada Goose as a result of Avian Influenza — H5N1.

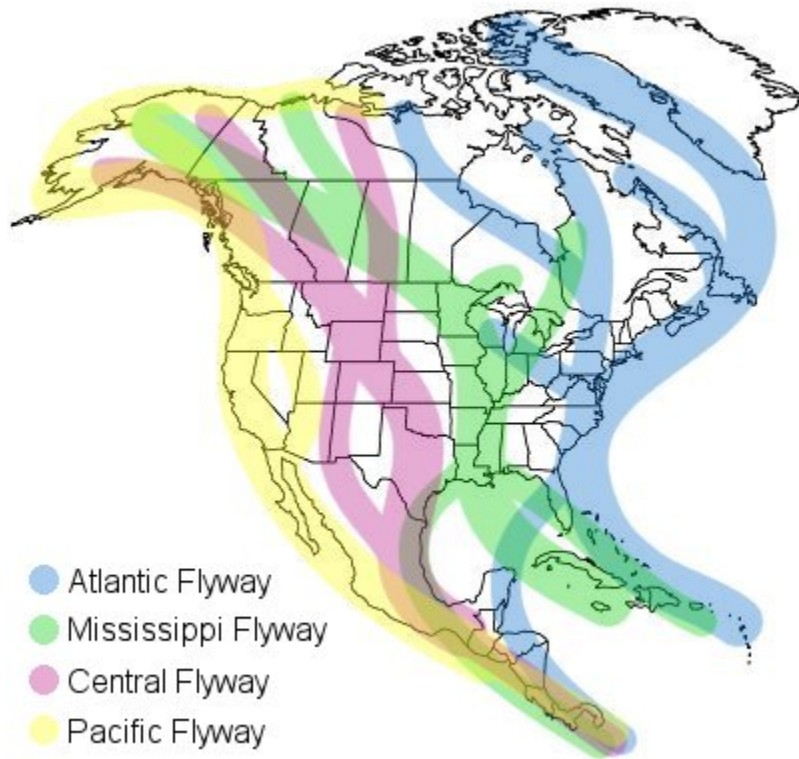
The CFIA is now advising poultry farmers to be vigilant and to apply biosecurity measures at all times.

Since the confirmation of the case, a hobby farm located in Porters Lake has lost nearly their entire flock — 59 of 60 birds within the past week.

"I'm devastated by this. They were my pets." says Vikki Winkler, the owner of the small hobby farm located outside of Halifax.

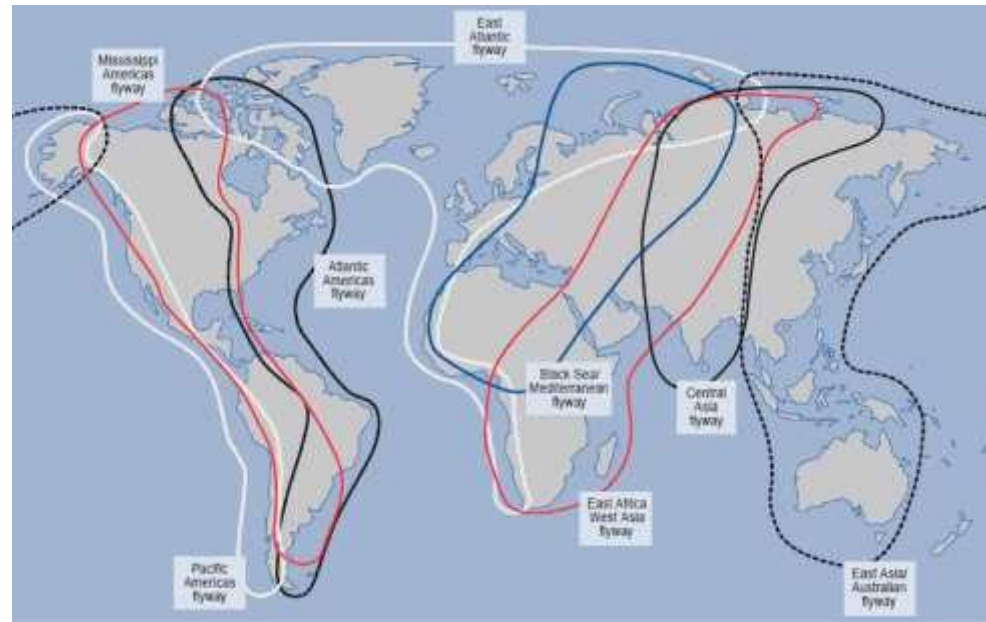
<https://globalnews.ca/news/8584192/avian-flu-detected-in-geese-on-hobby-farm-outside-halifax-owner-devastated/>

Migration of water fowl



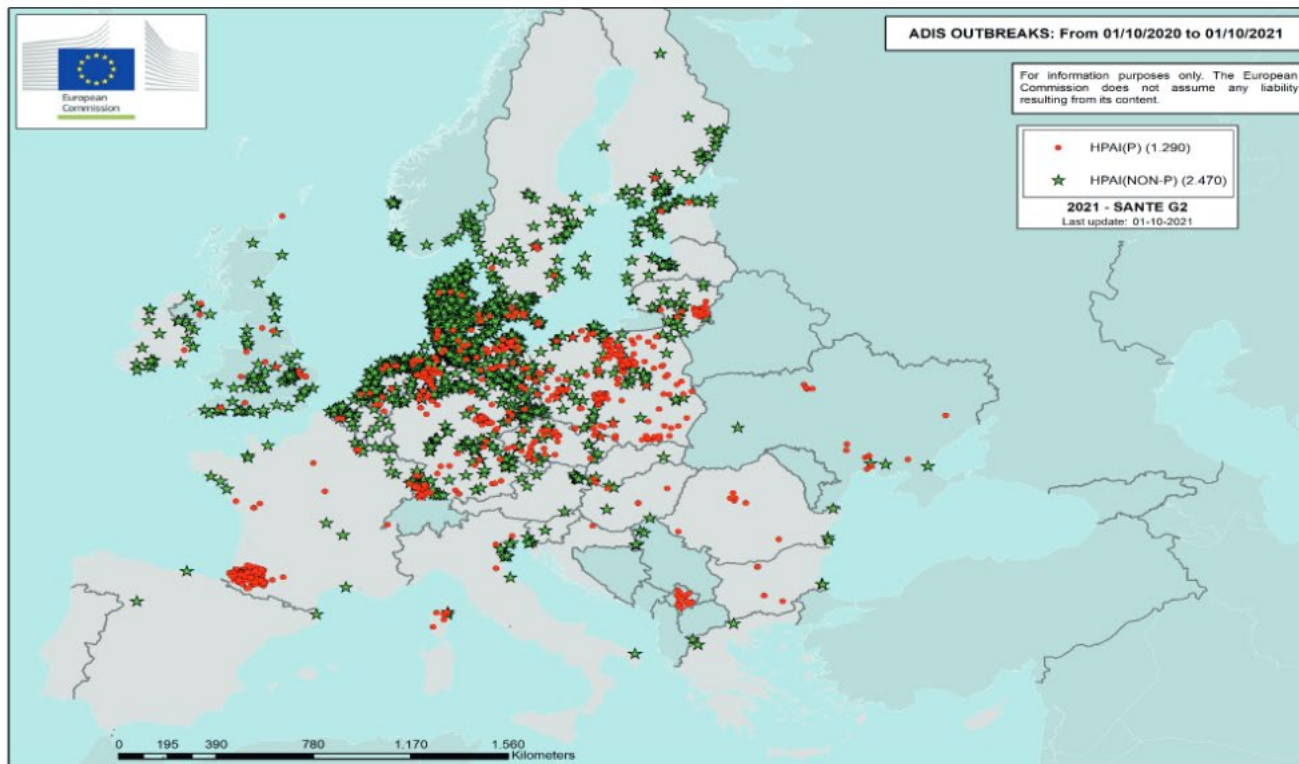
<http://birding.about.com/od/birdingbasics/ss/North-America-Migration-Flyways.htm>

<https://flutrackers.com/forum/forum/flutrackers-high-pathogenic-h5n1-h1n08-h5n8-h5n6-h5n3-tracking-outbreaks-spread/migration-flyways/3059-world-flyways>



Our Friends to the East

Geographical distribution of HPAI in epidemic season 2020/2021



Health and Economic Outcomes - EU

Overview of HPAI in 2020/2021 season

HPAI in wild birds:

- **25 MSs detected cases** in wild birds
- **75 affected species**, most affected: *Mute swan*, *Barnacle goose*, *Greylag goose*(11%)
- the **highest concentration** of infected wild birds in the **North-West part of EU**
- **virus circulation persisted over the summer** in wild birds in Northern part of EU

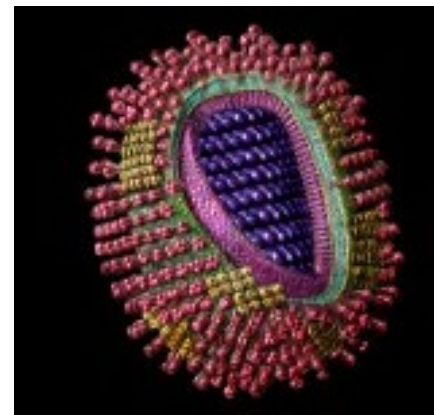
HPAI in poultry:

- **18 MSs confirmed outbreaks** in poultry
- all among those who detected HPAI in wild birds
- more than **23 million poultry** in affected farms
- **clusters** in several areas with **high density of poultry production**
- **turkeys and ducks** sectors **more susceptible** to get infected **due to particular production practices or housing**

HPAI viruses:

- **six identified serotypes**
- **H5N8**, the predominant serotype (almost 90% of detections), followed by H5N1 and H5N5
- **all in a single group** within **clade 2.3.4.4B**
- **cluster together with HPAI H5 viruses detected in Kazakhstan and Russia** since summer 2020
- **NO increased risk for public health**

Avian Influenza



- Orthomyxovirus: enveloped RNA virus
- Survive 35+ days in manure, soil, water
- Survive 3+ months in cold weather

High Path
Avian Influenza
The Latest Scoop

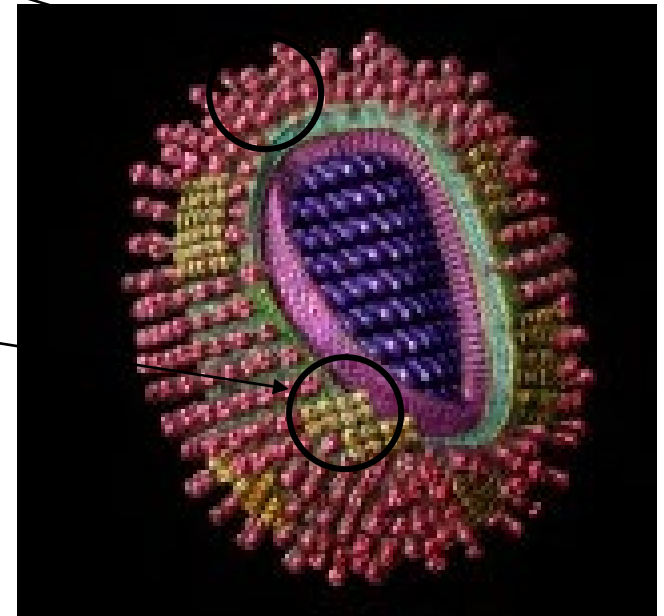


Rob Porter, DVM, PhD
Minnesota Veterinary Diagnostic Lab
Department of Population Medicine
College of Veterinary Medicine
St. Paul, MN



Orthomyxovirus

- Hemagglutinin (H-16)
 - responsible for binding the virus to the cell that is being infected
- Neuraminidase (N- 9)
 - promotes the release of progeny viruses from infected cells



16 x 9 = 144 possible combinations

High Path
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Signs of HPAI

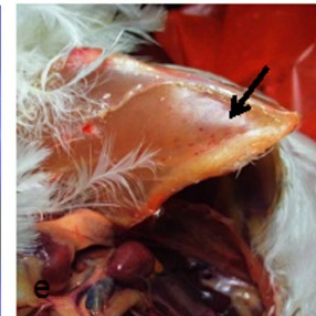
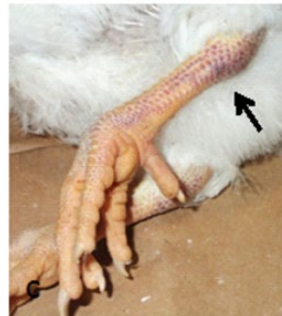
- High mortality without signs
- Decreased activity and feed intake
- Decreased egg production/misshapen eggs
- Swelling head, eyelids, comb, wattles and hocks
- Purple discoloration (cyanosis and hemorrhage) of wattle, comb and legs
- Nasal discharge, coughing, sneezing
- Lack of coordination- wing droop
- Diarrhea

What to recommend? Biosecurity!

- Addresses measures that should be taken to keep any diseases from a flock. (In)
- Reduces the transmission of diseases to neighboring flocks. (Out)
- Promotes human health by the reduction of zoonotic pathogens

Practice Good Management

- Daily Inspections
 - Know your poultry



- Signs
 - Reduction in feed and water intake
 - Sudden increase in mortality
 - Drop in egg production

Wild Birds

- Hardest to control in open system
 - If at all possible keep birds inside!
- Discourage their presence in the immediate vicinity of poultry
 - Do not use bird baths/wild bird feeders around poultry
- Prevent access to decorative ponds or open water
 - Important for waterfowl
- Do not feed or water poultry outside



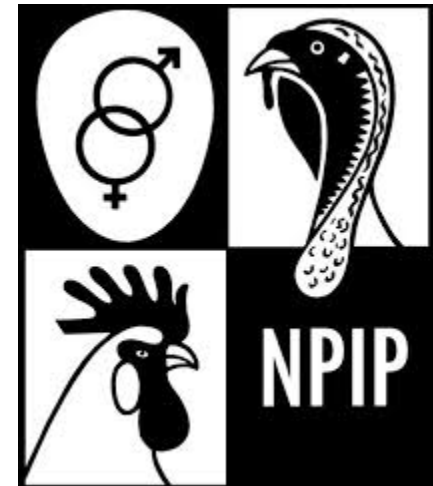
Humans (You, Family and Guests)

- Wash hands
 - Extremely important if handling birds
- Dedicated footwear
 - boot covers
 - disinfectant
- Clean Clothing

Keep Visitors to a minimum
**72 hour Bird and Swine
free**

New Birds to Flock

- Purchase poultry only from reliable, certified disease-free sources that have records of appropriate vaccinations.
 - USDA List Participants by State
 - Avoid Swap Meets
 - Currently would not recommend to move new birds into flock unless absolutely needed



Hunting!!

- If hunting, make sure to clean and disinfect all possible vectors including equipment, dogs and humans

<https://dwr.virginia.gov/wildlife/diseases/bird-mortality-reporting-form/>



If you see signs contact VDACS!!

- HPAI is a reportable disease need to act quickly for all bird safety in Virginia
- Call State Veterinarian at 804-692-0601
- Email vastatevet@vdacs.virginia.gov
- Call USDA at 866-536-7593