

Years 7 and 8

H5 Avian Influenza



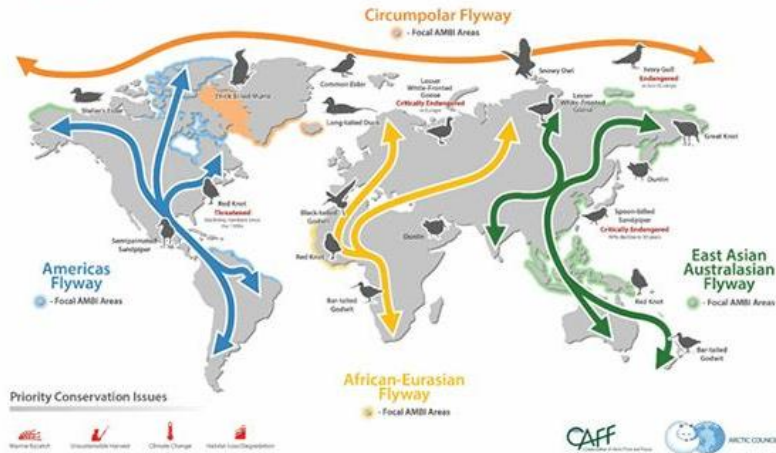


What do these images have in common?



The Arctic Migratory Birds Initiative (AMBI)

The Arctic Migratory Birds Initiative (AMBI) is a project under the Conservation of Arctic Flora and Fauna (CAFF) designed to improve the status and secure the long-term sustainability of declining Arctic breeding migratory bird populations. AMBI works with many partner countries and organizations to support and initiate actions that target priority species and conservation issues across a series of focal geographies. For more information please visit: www.caaff.ca/amb/





Imagine you are part of a biosecurity response team investigating a possible H5 avian influenza outbreak.

What evidence would you need to determine whether there is a disease outbreak?

- What evidence is available?
- What further information is needed?
- Who would be involved in the investigation?



HZAA – Community Biosecurity

Keeping our
community
safe

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Community Biosecurity

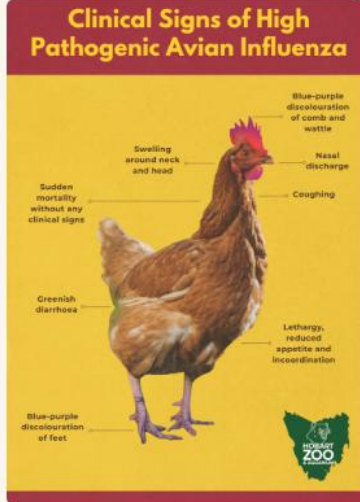
Welcome to Hobart Zoo and Aquarium's Community Biosecurity Hub.

This page is your first stop for trusted, up-to-date information on biosecurity issues that may affect wildlife, animals, and our local community. We regularly update this space with the latest advice, resources, and guidance on emerging biosecurity challenges, including Avian Influenza (bird flu).

By working together and staying informed, we can all play an important role in protecting Tasmania's unique wildlife and natural environment.

1. Understanding Avian Influenza (Bird Flu)

Clinical Signs of High Pathogenic Avian Influenza



Learn what Avian Influenza (Bird Flu) is, how it spreads, and why it is important for wildlife, poultry, farm animals, and our community.

2. What To Do If You Find a Sick or Injured Bird

We Want You to Be Safe

**AVOID**
Don't touch sick or injured birds

**RECORD**
Write down the date, time, location and species

**REPORT**
Call the Animal Disease Hotline on 1800 675 888

If you find a sick or injured bird, follow these simple steps to protect yourself, wildlife, and the wider community.



Learning Intention

We are learning to...

... understand how H5 avian influenza affects wildlife populations and ecosystems.

...investigate how diseases can spread between animals and environments.

...examine the role of biosecurity in preventing and managing disease outbreaks.

Success Criteria

We will be successful when we can...

...explain what H5 avian influenza is and how it can spread through animal populations.

...analyse how disease outbreaks can impact wildlife and ecosystems.

...communicate scientific information using appropriate scientific vocabulary.

...create a campaign to communicate key information to educate others on H5 avian influenza.





Reading –H5 Avian Influenza



Biosecurity - Measures used to reduce the risk of diseases, pests and harmful organisms entering, spreading within or leaving an environment.

1. Strong **biosecurity** measures help prevent diseases from spreading between wildlife and livestock.
2. Australia's **biosecurity** system protects agriculture, biodiversity and public health.





Reading – H5 Avian Influenza



Pathogen - A microorganism or infectious agent, such as a virus, bacterium, fungus or parasite, that causes disease.

1. H5 Avian Influenza is caused by a viral ***pathogen***.
2. Scientists investigate how ***pathogens*** move through animal populations.





Reading – H5 Avian Influenza



Surveillance - The ongoing monitoring and collection of information to detect and track diseases.

1. Wildlife **surveillance** helps experts identify disease outbreaks early.
2. **Surveillance** programs provide data that supports biosecurity planning.





I do

Reading – H5 Avian Influenza



Epidemiology - The study of how diseases spread through populations, including where diseases occur, how they are transmitted, and how outbreaks can be controlled.

1. Scientists used ***epidemiology*** to investigate how H5 avian influenza spread between bird populations along migration routes.
2. Evidence collected through ***epidemiology*** helped authorities identify high-risk areas and improve biosecurity measures.





H5 Avian Influenza (H5NI) in Australia: Protecting Ecosystems Through Biosecurity



H5 Avian Influenza is a disease caused by influenza A viruses. These viruses are pathogens, which are organisms that cause disease. H5 avian influenza mainly affects birds but can also infect other animals. In some cases, it can cause serious illness and death.

The disease spreads when a pathogen moves from one host to another. H5 avian influenza can spread through contact with infected birds, as well as contaminated water, droppings, feathers, and respiratory secretions. Migratory birds can carry pathogens over long distances, introducing the disease to new areas.





H5 Avian Influenza (H5NI) in Australia: Protecting Ecosystems Through Biosecurity



Scientists use epidemiology, the study of disease spread, to investigate outbreaks. They collect evidence through field observations, laboratory testing, wildlife monitoring, and tracking bird migration. By comparing different sources of evidence, scientists can identify patterns and make reliable conclusions about disease risks.

H5 avian influenza can affect ecosystems because birds play important roles such as pollination, seed dispersal, predation, and scavenging. Large declines in bird populations can disrupt food webs and ecological relationships. Disease outbreaks can also reduce biodiversity, making ecosystems less stable and less able to recover from future challenges.





H5 Avian Influenza (H5NI) in Australia: Protecting Ecosystems Through Biosecurity



To reduce disease risks, governments and scientists use biosecurity measures. Biosecurity includes actions that prevent diseases from entering, spreading within, or leaving an area. Examples include monitoring wildlife, cleaning equipment, limiting access to affected areas, and separating domestic poultry from wild birds.

An important part of biosecurity is surveillance, which is the ongoing monitoring of diseases and animal populations. Surveillance helps scientists detect outbreaks early, track disease spread and assess whether management actions are working.





H5 Avian Influenza (H5NI) in Australia: Protecting Ecosystems Through Biosecurity

Members of the public can assist by reporting sick, injured, or dead birds. People should follow the **Avoid, Record, Report** process: avoid contact with wildlife, record observations from a safe distance, and report the information **to the Animal Disease Hotline on 1800 675 888.**

Scientific evidence, biosecurity, and community surveillance are essential tools for protecting wildlife, biodiversity, and healthy ecosystems.

We Want You to Be Safe



AVOID

Don't touch sick or injured birds



RECORD

Write down the date, time, location and species



REPORT

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We do

What is a pathogen?



A) A type of migration route.

B) An organism that causes disease.

C) A method of tracking animals.

D) A way to improve biodiversity.





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Why do scientists use surveillance during disease outbreaks?



A) To increase bird migration.

B) To prevent birds from nesting.

C) To detect outbreaks early and monitor disease spread.

D) To reduce the number of bird species in an area.





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Why might a decline in bird populations affect other species in an ecosystem?



- A) Birds can play important roles in food webs and ecological relationships.
- B) Birds stop all plants from growing.
- C) Keeping pet birds separate from wild birds
- D) Birds are the only animal affect by disease.





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Why might a decline in bird populations affect other species in an ecosystem?



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Which statement best explains why biosecurity and surveillance work well together?



A) Surveillance only studies migration, whilst biosecurity studies ecosystems.

B) Biosecurity replaces the need for surveillance.

C) Surveillance finds disease outbreaks, and biosecurity helps reduce the spread.

D) Both are used only after a disease has disappeared.





We do

Which statement best explains why biosecurity and surveillance work well together?



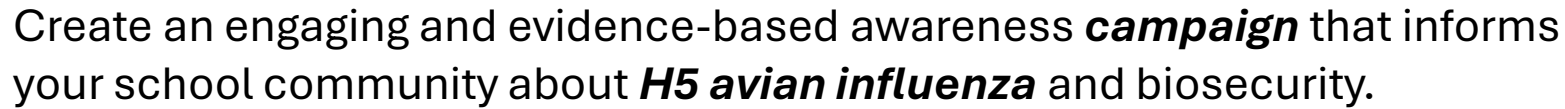
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- ***Explain*** what H5 Avian Influenza is and how it spreads.
- ***Define*** biosecurity using scientific language.
- ***Describe*** why surveillance and reporting are important.
- ***Explain*** the "Avoid, Record, Report" process.
- ***Include*** at least ***four evidence-based actions*** people can take to reduce disease spread and the Animal Disease Hotline number: 1800 675 888.



EXAMPLES

We Want You to Be Safe



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REPORT

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What is Bird Flu?



Bird flu is caused by some strains of influenza A



Migratory wild birds transmit bird flu



Any bird can be affected



Some strains spread easily from wild birds to poultry. The poultry can get very sick or die.



Australian farms have had bird flu outbreaks



Bird flu has spread to other animals overseas, including cattle, goats, cats and foxes

Bird flu **rarely infects people**, but it can happen, especially during animals outbreaks



Plenary



Share your campaign with a partner and explain:

- Why biosecurity is important for wildlife, agriculture and ecosystems.
- How evidence informs decisions made by scientists and governments.
- Why surveillance and reporting are critical during disease outbreaks.



We are prepared for H5 avian influenza in
Tasmania.

All you need to do to stay safe is...

**Avoid
Record
Report** – 1800 675 888

