Wild Bird News

National Avian Influenza Wild Bird Surveillance Newsletter - Jun 2025 (interim version)


Little tern - Image Courtesy of Andrew Thornton

National Avian Influenza Wild Bird Surveillance Program

Avian influenza viruses are recognised as important One Health pathogens, with the potential to move between various host groups, including poultry, wild birds, wild and domestic mammals, and people. A comprehensive surveillance program should include surveillance for avian influenza viruses in wild bird populations (Figure 1). In Australia, this is coordinated through the National Avian Influenza Wild Bird (NAIWB) surveillance program, which is managed by Wildlife Health Australia with support from the NAIWB Steering Group. Data generated through this program contributes to risk assessments in support of the health of poultry industries, other domestic animals, wildlife, and people, and is obtained through two streams of activity:

- **Targeted surveillance** activities follow a structured surveillance program using samples collected from presumed healthy wild birds through collection of environmental faecal swabs or swabbing of live or hunter-shot birds, with a focus on species known to be reservoirs for AIVs (such as waterfowl and shorebirds). Samples then undergo testing to detect and characterise AIVs that may be present. These activities are conducted Australia-wide through 12 surveillance partners, with

Avian Influenza Virus

Avian influenza virus (AIV) is a member of the complex group of Influenza A viruses and can be classified according to their surface proteins. To date, 17 haemagglutinin (HA; H1-H16 + H19) and 9 neuraminidase (NA; N1-N9) subtypes are recognised in birds. AIVs are constantly evolving, with the emergence of new lineages and strains defined by genetic analysis and distribution by host species, location and time. **Waterfowl and shorebirds are the main natural reservoirs and rarely show signs of disease.** AIVs may demonstrate varying pathogenicity as determined by the severity of disease caused in poultry.

Of global concern is the capacity of AIV subtypes H5 and H7 to mutate from Low Pathogenicity (LPAI) into **High Pathogenicity (HPAI) forms which can cause significant losses in poultry and wildlife, domestic animals and people.** While previous outbreaks of HPAI overseas have resulted in deaths and mass mortality events in numerous avian species, **the recent global circulation of HPAI H5 clade 2.3.4.4b poses unprecedented risks to wildlife.**

AIV in Australia

As at 30th June 2025, Australia has experienced 12 outbreaks of HPAI in commercial poultry operations since 1976, all due to HPAI H7 viruses [1-8]. All have been successfully eradicated. A variety of LPAI viruses have also been detected in commercial poultry (Ausvetplan AI 5.3). Mortality due to AIVs have not been reported wild bird populations in Australia to date [9]. There have also not been any detections of HPAI H5. However, **various LPAI viruses have been detected in wild birds in Australia.**

Studies have shown that Australia's geographic isolation and unique ecology mean **assumptions about AIV epidemiology from studies in Asia, Europe or North America are less relevant in an Australia context.**

More info: WHA FACT SHEET

funding provided by the Australian Government Department of Agriculture, Fisheries and Forestry and significant in-kind support from partner agencies. Between July 2005 and June 2025, more than 156,000 samples have been tested through this component of the program.

- **General surveillance** of wildlife disease investigations – This program plays an essential role in the identification of disease outbreaks and detection of emergency and emerging diseases, supports emergency disease event responses, improves our understanding of the epidemiology of wildlife diseases, and generates data that can be used to inform biosecurity risk analysis and policy. Information is collected from investigations of significant or unusual morbidity and mortality events of wildlife, including captive populations such as within zoos. These investigations may include testing for avian influenza viruses and have occasionally found incidental detections. Data from these events are reported to WHA's national **Wildlife Health Information System (eWHIS)** by WHA Coordinators and sentinel surveillance partners in zoos, veterinary clinics and universities

Almost all LPAI virus HA subtypes (H1-H16, excluding H14 and H19) have been detected in wild birds in Australia without apparent signs of disease, including strains of H5 and H7 viruses. Importantly, there have been no detections of HPAI viruses in wild bird populations in Australia to date, including HPAI H5Nx 2.3.4.4b. Based on existing genetic analyses, it can be concluded that LPAI viruses in Australia tend to occur as distinct Australian lineages [12, 16, 22]. However, incursions of LPAI viruses into Australia from overseas do occur occasionally [12-14, 19, 23-27]. Recent research suggests these viruses may subsequently circulate among Australian wild bird populations, with some strains going extinct and a small number persisting [13, 14].

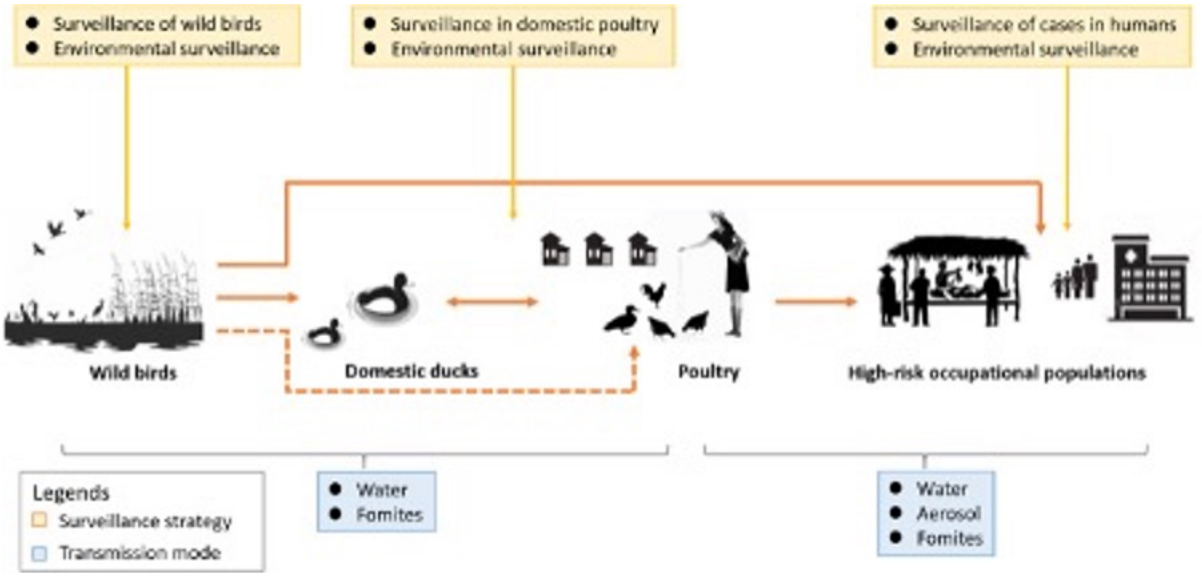
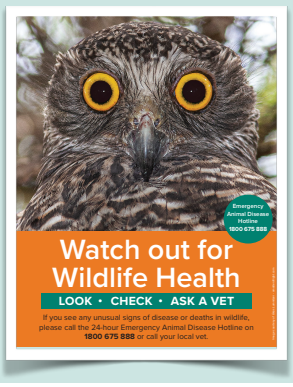


Figure 1: Components of a comprehensive avian influenza virus surveillance program include surveillance conducted on wild birds. From Duan et al 2023 [28].



AVIAN INFLUENZA IS A NATIONAL NOTIFIABLE DISEASE AND REQUIRES REPORTING TO THE CHIEF VETERINARY OFFICER (CVO) AT THE APPROPRIATE AUSTRALIAN STATE OR TERRITORY

If you would like information about Avian Influenza testing and sample collection, please seek advice from your local **WHA Coordinator** or call the **Emergency Animal Disease Hotline** (**1800 675 888**).

HPAI H7 Updates

As response activities to three separate outbreaks of HPAI in commercial poultry in 2024 were wrapped up with self-declaration of proof of freedom in poultry, another HPAI outbreak was detected in poultry in Victoria in February 2025. Testing identified the strain to be HPAI H7N8, though was different to the H7N8 virus responsible for the outbreak in NSW and ACT in 2024, and again likely arose as a separate spillover of LPAI virus from wild birds to poultry. This event was rapidly contained following implementation of biosecurity measures and has since been successfully eradicated [29]. Wild bird surveillance formed an important part of epidemiological analyses and response activities, demonstrating a lack of evidence of HPAI spreading from poultry to wild birds. Combined, the HPAI outbreaks in the last 12 months have had a significant impact on the poultry industry, affecting availability of eggs and threatening viability of businesses and job security for the people they employ (**https://www.australianeggs.org.au/news/egg-industry-recovery-continues-as-avian-influenza-stabilises**). They highlight the need to maintain high standards of biosecurity, as demonstrated in this story from **ABC's Landline program**.

New Zealand also experienced its first ever outbreak of HPAI in poultry, also involving an H7 strain (H7N6) that likely spilled across from wild birds [30]. This outbreak was also successfully eradicated following application of biosecurity measures [29]. Recent studies have demonstrated very limited exchange of avian influenza viruses between Australia and New Zealand [31].

Update on global H5 bird flu in wildlife and preparedness in Australia

H5 bird flu continued to impact a wide range of wild bird and mammal species around the world, as well as production animals and people [32]. Outbreaks in wild birds were reported across a range of regions, including ongoing mortalities through parts of Antarctica and sub-Antarctic territories in the southern Indian Ocean. H5 bird flu is now considered endemic in wild bird populations across much of the globe, making them key vectors in the global spread and maintenance of this virus, as well as innocent casualties of a disease that arose from human-driven intensive farming practices [33, 34].

Seabirds are one group that have been heavily impacted by H5 bird flu. A special edition of the journal **Bird Study**, presents several publications exploring this. Heavy impacts have been documented in some populations of European and North American seabirds, including great skua, northern gannets, common murres, Atlantic puffins, Sandwich tern and common tern, while others, such as the little tern, were barely affected [35, 36]. There are various factors thought to contribute to differences in species vulnerability to infection and subsequent potential disease and recovery from outbreaks. Factors may include density of breeding colonies, population structure, behavioural traits of different cohorts in the population (e.g. younger birds versus older birds), mixing with other species, and age of birds recruited into the breeding population [37], though detailed understanding of these factors across species is very limited. Although it is still very early days, there are some promising signs of recovery in some species, including reduced levels of mortalities during subsequent outbreaks and evidence of immunity in breeding birds [38, 39]. However, recovery may take years, even decades, for some of these species, particularly those that start breeding later in life and have a slow reproductive rate.

Seabirds have also been demonstrated to have played an important role in the global spread of H5 bird flu. Outbreaks of H5 bird flu were detected in poultry, gulls and other seabirds in eastern Canada in 2021, following years of no detections [40]. Genetic analysis revealed these new outbreaks were the result of virus moving across the Atlantic from Europe, most likely carried there by migrating seabirds [40]. Pelagic seabirds, such as brown skuas and southern giant petrel, are also thought to have played a role in the spread of H5 Bird Flu into Antarctica and islands in the sub-Antarctic region [41].

Australia has over 200 species of seabirds, including threatened species, such as the red-tailed tropicbird and shy albatross. These, and other species, could be at risk from H5 bird flu, which may compound impacts from other threatening processes. As at June 30th 2025, Australia continued to remain free from H5

bird flu. However, considerable effort continues with a range of stakeholders to best prepare for the arrival and potential impacts of this disease, including expanding surveillance efforts to screen seabirds through the NAIWB program (see **Wild Bird News Dec 2024**). Other activities included:

- **Investment of $35.9 million** to strengthen H5 bird flu preparedness and protective actions for wildlife populations through the Australian Department of Climate Change, Energy, Environment and Water.
- Development of H5 preparedness strategies by state and territory government agencies, such as the **Tasmanian Avian Influenza Readiness and Response Plan**.
- Provision of training and education programs for staff, volunteers, and the public through a range of organisations, including **Birdlife Australia**.
- The launch of **AviFluMap**, an online visual tool to enhance understanding of risks to Australian wildlife from H5 bird flu, **initiated by WHA** and developed by Deakin University and Birdlife Australia,
- Production of a range of policy and strategy documents by the Australian Department of Agriculture, Fisheries and Forestry, including development of a **National Management Agreement** to establish arrangements around costs for responding to H5 Bird Flu outbreaks in wildlife, as well as guidelines for the **emergency use of HPAI H5 vaccines** to protect priority native bird species.
- Attendance of the 11th **International Symposium on Avian Influenza** in Canada by Wildlife Health Australia and other NAIWB Steering Group partners. This meeting brought together scientists, biologists, veterinarians, medical researchers and professionals, and government regulators to discuss and share knowledge and experiences around a range of avian influenza issues, with a key focus centred on the H5 bird flu panzootic. It provided a very valuable opportunity to gain understanding of risks and potential actions to manage H5 bird flu in Australia.

Little penguins - Photo by Nate Biddle on Pexels

Targeted surveillance - Jan to Jun 2025

Sampling and testing for targeted surveillance activities continued at previously sampled sites to provide an understanding of variation in virus detections over time, as well as additional sites to adapt changes in risk. This includes sample collection conducted across parts of northern Australia and Australian External Territories (such as Ashmore Reef, Christmas Island, Cocos Islands, Norfolk Island and Coral Sea) by the Northern Australia Quarantine Strategy, collaborating with the Indigenous Ranger Biosecurity Program, First Nations communities, and Parks Australia.

Pied stilt - Photograph Siri Omberg

Samples were initially screened for the AIV M (matrix) gene using qRT-PCR laboratory test. Positive samples were subsequently tested for influenza A H5 and H7 subtypes using specific qRT-PCR tests. Positive samples were also dispatched to the CSIRO Australian Centre for Disease Preparedness (ACDP) for result confirmation and further testing, including subtyping and genetic analysis.

Targeted surveillance - Influenza A virus detections (Jan - Jun 2025)

State / Territory[a]	# Individual Swabs Collected and tested[a,b]	# Positives[c]	H5 LPAI	H5 HPAI	H7 LPAI	H7 HPAI	Other LPAI HA Subtypes[d]
ACT	150	0					
NSW	350	1	0	0	0	0	H6
NT	674	4	0	0	0	0	H1, H2
Qld	700	0					
SA	570	23	0	0	6	0	H1, H2, H10, H12
Tas	398	15	0	0	0	0	H12
Vic	763	16	4	0	3	0	H2, H4, H6, H9, H11
WA	650	12	2	0	0	0	H6, H9, H11
External Territories[e]	844	3	0	0	0	0	H6
Total	**5,099**	**74**	**6**	**0**	**9**	**0**	

[a] Sample collection in some jurisdictions is undertaken by multiple partner organisations/agencies

[b] Swabs include faecal environmental and cloacal swabs.

[c] A number of swabs were tested as a pooled sample (up to 3 swabs in one pool). A positive pool represents one AIV positive. A sample is considered AIV positive if either: a) Positive at original lab; b) Indeterminate at original lab and subsequently tested positive; c) Indeterminate at original lab and subtyped at any lab.

[d] When positive AIV samples (not identified as H5 or H7) are submitted for subtyping and successful.

[e] Includes samples collected in Ashmore Reef, Christmas Island, Cocos Island and Coral Sea.

Between January and June 2025, no HPAI viruses were identified through targeted surveillance activities. However, a wide range of low pathogenicity virus subtypes, including LPAI H5 and H7, continue to be detected.

There were no detections of H5 lineage 2.3.4.4.

Molecular analysis of AIVs detected through targeted surveillance activities contribute to: tracking Australian virus evolution and dynamics, maintaining currency of diagnostic tests, maintaining a virus sequence library allowing comparison of Australian and overseas strains. This information informs risk to industry and response to detections in poultry.

From January to June 2025, host species targeted for sampling were primarily from orders Anseriformes.

Other bird orders may have been present during sample collections. The great majority of samples collected during this period were faecal environmental swabs. A small proportion of cloacal from hunter-shot birds were also collected.

General surveillance - Jan to Jun 2025

Disease investigations of sick and dead wild birds are reported into Australia's wildlife health information system (eWHIS) via a network of state and territory WHA Coordinators and Environment Representatives, sentinel surveillance partners (zoo-based wildlife hospitals, wildlife veterinary clinics and universities), the Northern Australia Quarantine Strategy (NAQS), researchers, wildlife rehabilitators and the public. Relevant data from eWHIS is incorporated into the NAIWB surveillance program, as summarised below. In this reporting period, WHA received 333 reports of wild bird mortality or morbidity investigations from around Australia where AIV testing was conducted via Influenza A PCR. These events may involve a single animal or multiple animals and species (i.e. mass mortality event). Two events identified incidental infection with low pathogenicity avian influenza viruses and are described below.

There were no reports of HPAI or detections of H5 clade 2.3.4.4b in wildlife between January and June 2025.

General surveillance - wild bird mortality and morbidity events with Influenza A testing according to bird order (Jan - Jun 2025)

Bird Order	Common Names for Bird Order[14]	Number of Events AIV Tested via PCR[a]	Number of Events AIV Positive
Accipitriformes	Osprey, hawks and eagles	16	
Anseriformes	Magpie Goose, ducks, geese and swans	59	1[b]
Caprimulgiformes	Frogmouth and nightjars	9	
Charadriiformes	Shorebirds	25	1[b]
Columbiformes	Doves and pigeons	22	
Coraciiformes	Bee-eater and kingfishers	2	
Falconiformes	Falcons	2	
Galliformes	Brush turkeys and quails	4	
Gruiformes	Rails, coots and cranes	9	
Passeriformes	Passerines or perching birds	37	
Pelecaniformes	Ibis, herons and pelicans	22	
Phaethontiformes	Tropicbirds and frigates	2	
Podicipediformes	Grebes	1	
Procellariiformes	Petrels or shearwaters	42	
Psittaciformes	Parrots and cockatoos	46	
Sphenisciformes	Penguins	37	
Strigiformes	Owls	5	
Struthioniformes	Emu, cassowary	1	
Suliformes	Gannets and cormorants	18	
Unknown order	Unidentified	2	

[a] Disease investigations events may involve a single or multiple bird orders (e.g. mass mortality event). As such, some events may be recorded across multiple lines in this table due to the involvement and testing of multiple species from different bird orders. During the reporting period, 26 wild bird events involved AIV testing of birds from multiple orders (24 involved birds from two different orders, while two events involved testing birds for AIV from three different orders.

b Detections of AIV in wild birds are described in the next page. All cases were considered incidental findings..

AIV incidental detections – Jan to Jun 2025

Approximately 30 silver gulls were found moribund or dead in Stanley, Tasmania, in January 2025. Five gulls were submitted for exclusion of notifiable animal diseases, with a detection of avian influenza virus on PCR in one gull, but H5, H7 and H9 subtypes excluded. Further characterisation was not possible due to poor sample quality, though it is considered an incidental detection as there were no consistent findings of disease on histopathology. The cause of the event remains undetermined.

Six black swans were reported to have died in the Vasse region of Western Australia in February 2025. A sick subadult swan was brought into care but unfortunately died from complications due to *Aspergillus* infection. Disease screening detected an incidental infection with an LPAI H11N3 virus. This subtype has been previously detected in wild birds in Western Australia (see **Wild Bird News June 2022**).

Avian influenza was not confirmed as the cause of any wild bird morbidity or mortality event between January and June 2025 reported to eWHIS.

Photo by Maik Kleinert on Pexels

If you suspect a wild animal may be infected with H5 bird flu

AVOID contact with sick or dead wildlife and their environment. Observe from a distance and keep pets away.

RECORD what you see, the location the animal was found, and take photos or video if it is safe to do so.

REPORT any unusual sickness or mass mortality events in wildlife via the Emergency Animal Disease Hotline on 1800 675 888.

Avian influenza is a nationally notifiable disease meaning if you suspect an animal is showing signs of the disease, you must report it.

Disclaimer

This document was developed and approved by the National Wild Bird Avian Influenza (NAIWB) Steering Group for information purposes only. NAIWB Steering Group was established to ensure national coordination and collaboration of wild bird avian influenza surveillance activities. Wildlife Health Australia provides support to the NAIWB Steering Group and collates avian influenza surveillance data from wild birds sampled across Australia. Information contained in it is drawn from a variety of sources external to Wildlife Health Australia. Data is provided on an "as is" basis and may be changed periodically; these changes may or may not be incorporated in any new version of the publication. Although reasonable care was taken in its preparation, Wildlife Health Australia does not guarantee or warrant the accuracy, reliability, completeness, or currency of the information or its usefulness in achieving any purpose. To the fullest extent permitted by law, Wildlife Health Australia will not be liable for any loss, damage, cost or expense incurred in or arising by reason of any person relying on information in this document. You may download, display, print and reproduce this material in unaltered form only for personal, non-commercial use or use within your organisation, provided due acknowledgement is made of its source. For any other use of the material contained in this document (including, but not limited to any text, illustration, table, or any other material), written permission must be obtained with Wildlife Health Australia and the NAIWB Steering Group.

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