

NSW Arbovirus Surveillance and Mosquito Monitoring 2024-2025

Environmental Health Branch, Health Protection NSW

Weekly Update: Week ending 22 February 2025



Bottom left - Common banded mosquito, *Culex annulirostris* **Top and bottom right** - Saltmarsh mosquito, *Aedes vigilax* (Copyright 2020)

Weekly reports are available on [Mosquito-borne disease surveillance](#).

Please send questions or comments about this report to:

Surveillance and Risk Unit, Environmental Health Branch, Health Protection NSW: hssg-ehbsurveillance@health.nsw.gov.au

Testing and scientific services are provided by the Department of Medical Entomology, NSW Health Pathology, Institute of Clinical Pathology and Medical Research (ICPMR) for mosquito surveillance, and the Arbovirus Emerging Diseases Unit, NSW Health Pathology (ICPMR) for sentinel chicken surveillance.

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SPHN (EH) 241091

Summary

Arbovirus Detections

Sentinel Chickens

• There were no arbovirus detections in sentinel chickens for the week ending 22 February 2025.

Mosquito Isolates

• In the week ending 22 February 2025, mosquitoes trapped in the Newcastle tested positive for Barmah Forest virus. Stratford virus was detected in a mosquito sample from Wyong. Human cases of Stratford virus are very rarely reported in Australia and may present as a mild self-limiting febrile illness with body aches.

Mosquito Abundance

Inland

- **Low:** Albury, Balranald, Cootamundra, Deniliquin, Forbes, Goulburn, Moree, Murrumbidgee, Wagga Wagga, West Wyalong, Wilcannia, Yass, Young
- **High:** Griffith

Coastal

- **Low:** Batemans Bay, Murwillumbah, Wauchope, Wyong
- **Medium:** Bega, Byron Bay, Coffs Harbour, Narooma, Port Macquarie, Wardell
- **High:** Ballina, Gosford, Kempsey, Lake Cathie, Tweed
- **Very High:** Newcastle

Sydney

- **Low:** Blacktown, Cumberland, Earlwood, Northern Beaches, Sydney Olympic Park, The Hills
- **Medium:** Canada Bay, Hawkesbury, Liverpool, Penrith
- **High:** Bankstown, Georges River, Parramatta

Environmental Conditions

Climate

- In the week ending 22 February 2025, rainfall was average in some areas of Mid-North Coast and below average across the rest of NSW.
- In the coming week, 1 March to 7 March 2025, rainfall is expected to be average or lower than average across NSW.
- Minimum and maximum temperatures are expected to be higher than average across NSW.

Tides

- High tides over 1.8 metres are predicted for 26 February 2025 - 2 March 2025 and 27 March to 3 April 2025 which could trigger hatching of *Aedes vigilax*.

Human Arboviral Disease Notifications

Ross River Virus

Twelve probable cases were notified in the week ending 22 February 2025.

Barmah Forest Virus

One confirmed case and one probable case were notified in the week ending 22 February 2025.

Arbovirus Detections

This section details detections of Murray Valley encephalitis virus, Japanese encephalitis virus, Kunjin virus, Ross River virus and Barmah Forest virus in the NSW Arbovirus Surveillance and Mosquito Monitoring Program.

Sentinel chickens

Chickens are bled for detection of antibodies directed against Murray Valley encephalitis virus, Japanese encephalitis virus and Kunjin virus, indicating exposure to these viruses. Test results for the past week are shown in the map below. A positive test result indicates one or more chickens in a flock tested positive for the **first time** to antibodies directed against a particular virus, indicating newly acquired infection.

Sentinel chicken antibody test results for samples collected in the week ending 22 February 2025

In the week ending 22 February 2025, there were no arbovirus detections in chickens.

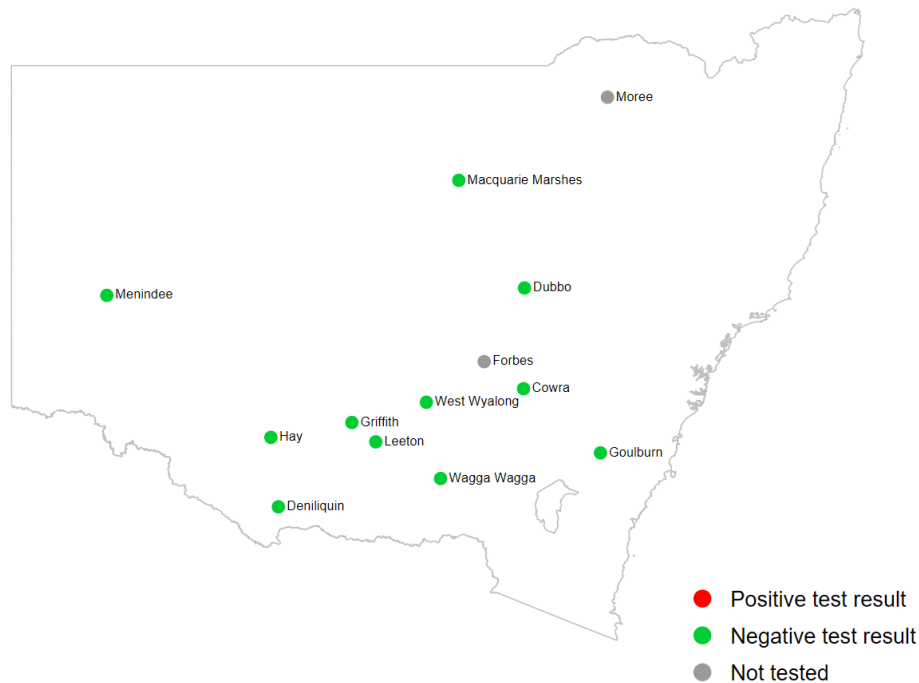


Table 1: Positive test results in the 2024-2025 surveillance season.

Date of sample collection	Location	Virus
2024-12-05	Cowra	Murray Valley encephalitis
2024-12-18	West Wyalong	Murray Valley encephalitis

Mosquito isolates

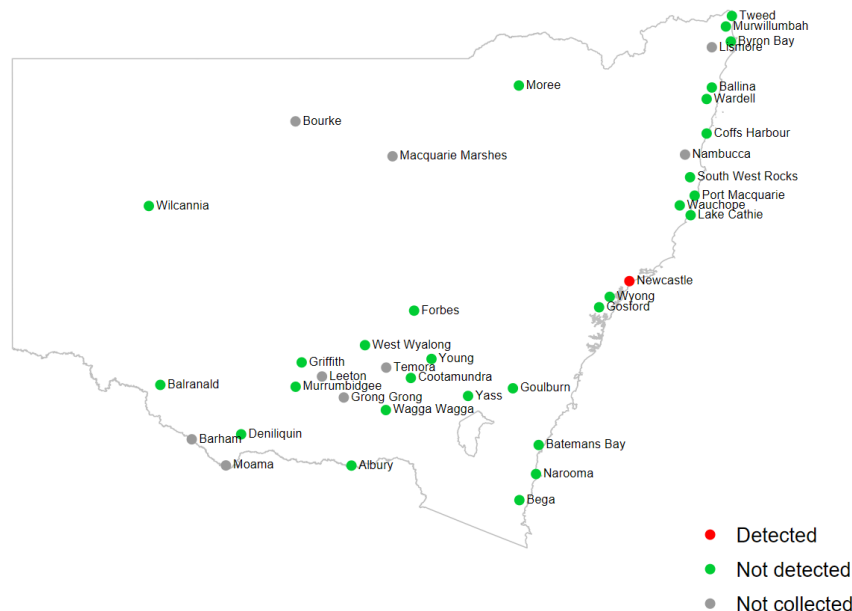
Whole grinds of collected mosquitoes are tested for arbovirus nucleic acids to determine the presence of arboviruses in mosquitoes. Test results for detections of Murray Valley encephalitis virus, Japanese encephalitis virus, Kunjin virus, Ross River virus and Barmah Forest virus for the past week are shown in the maps below. Detections of all arboviruses (including Edge Hill virus and Kokobera virus) for the season are detailed in the positive test results for the 2024-2025 surveillance season.

Test results for mosquito trapping sites reported in the week ending 22 February 2025

In the week ending 22 February 2025, mosquitoes trapped in the Newcastle tested positive for Barmah Forest virus. Stratford virus was detected in a mosquito sample from Wyong.

Inland and coastal sites

The map highlights detections of arboviruses that can cause human notifiable conditions, such as Murray Valley encephalitis virus, Japanese encephalitis virus, Kunjin virus, Ross River virus, and Barmah Forest virus. Detections of all arboviruses (including Edge Hill virus, Stratford virus and Kokobera virus) for the season are detailed in the positive test results for the 2024-2025 surveillance season.



Inland and coastal sites - positive test results in the 2024-2025 surveillance season.

Date of sample collection	Location	Virus
2024-12-03	Griffith	Japanese encephalitis
2024-12-18	Griffith	Ross River
2024-12-22	Moree	Japanese encephalitis
2025-01-14	Batemans Bay	Barmah Forest
2025-01-20	Albury	Ross River
2025-01-21	Griffith	Ross River

Inland and coastal sites - positive test results in the 2024-2025 surveillance season.

Date of sample collection	Location	Virus
2025-01-28	Wagga Wagga	Ross River
2025-02-18	Newcastle	Barmah Forest
2025-02-18	Wyong	Stratford

Sydney sites

The map highlights detections of arboviruses that can cause human notifiable conditions, such as Murray Valley encephalitis virus, Japanese encephalitis virus, Kunjin virus, Ross River virus, and Barmah Forest virus. Detections of all arboviruses (including Edge Hill virus, Stratford virus and Kokobera virus) for the season are detailed in the positive test results for the 2024-2025 surveillance season.



Sydney sites - positive test results in the 2024-2025 surveillance season.

Date of sample collection	Location	Virus
2025-01-29	Georges River	Stratford
2025-02-10	Georges River	Stratford

Mosquito abundance

This section details counts of mosquitoes in the NSW Arbovirus Surveillance and Mosquito Monitoring Program. Each location represents the count average for all trapping sites at that location for the most recent week that collections were provided prior to preparation of this report.

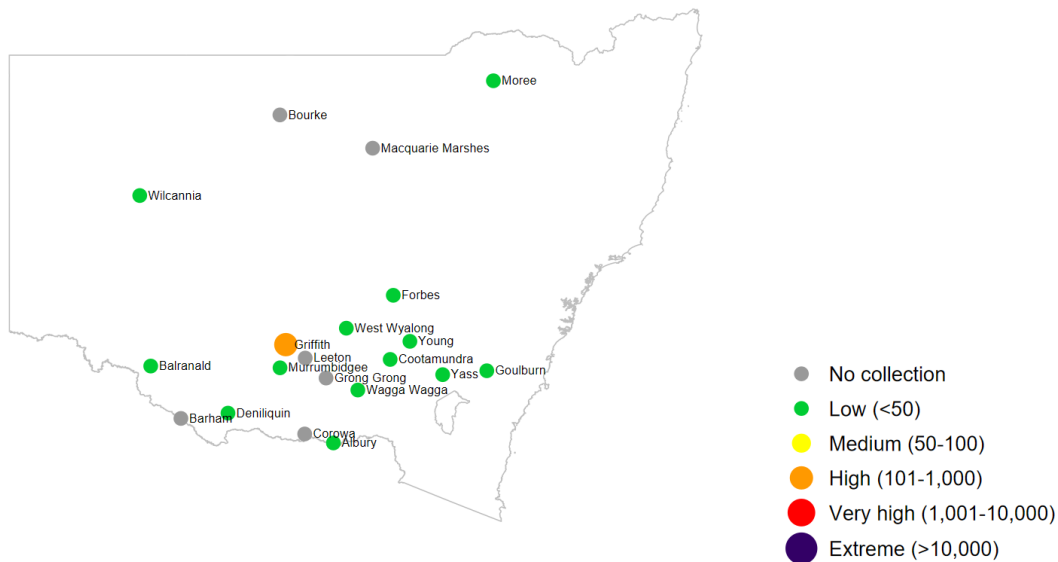
Culex annulirostris and *Aedes vigilax* are vectors of interest for Ross River virus and Barmah Forest virus, *Culex annulirostris* is also a vector for Japanese encephalitis virus.

Mosquito counts

Mosquito counts (average per trap per location) for mosquito trapping sites reported in the week ending 22 February 2025

Inland sites

Total mosquito counts

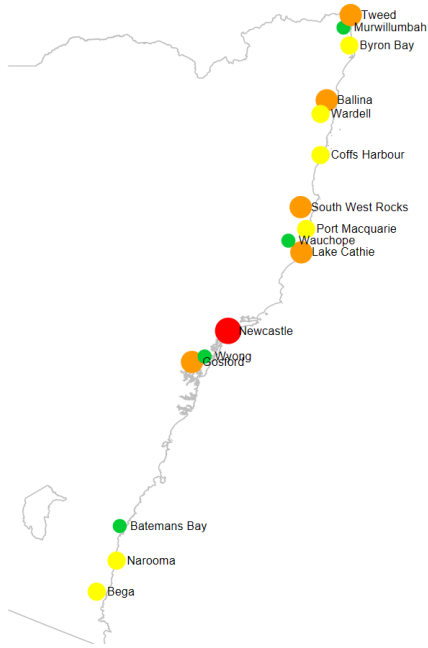


Culex annulirostris counts



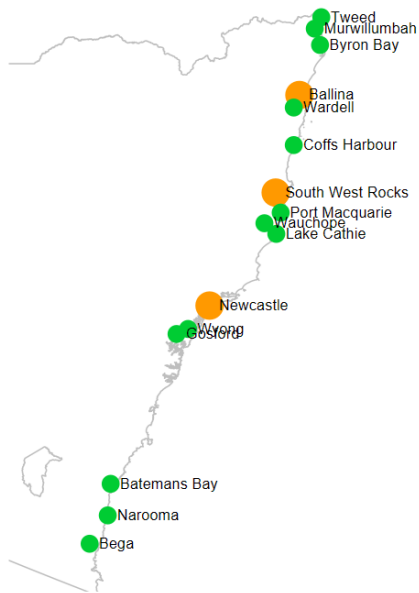
Coastal sites

Total mosquito counts

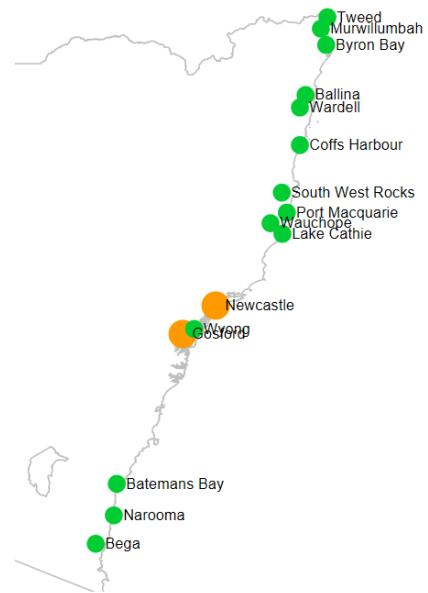


- No collection
- Low (<50)
- Medium (50-100)
- High (101-1,000)
- Very high (1,001-10,000)
- Extreme (>10,000)

Culex annulirostris counts

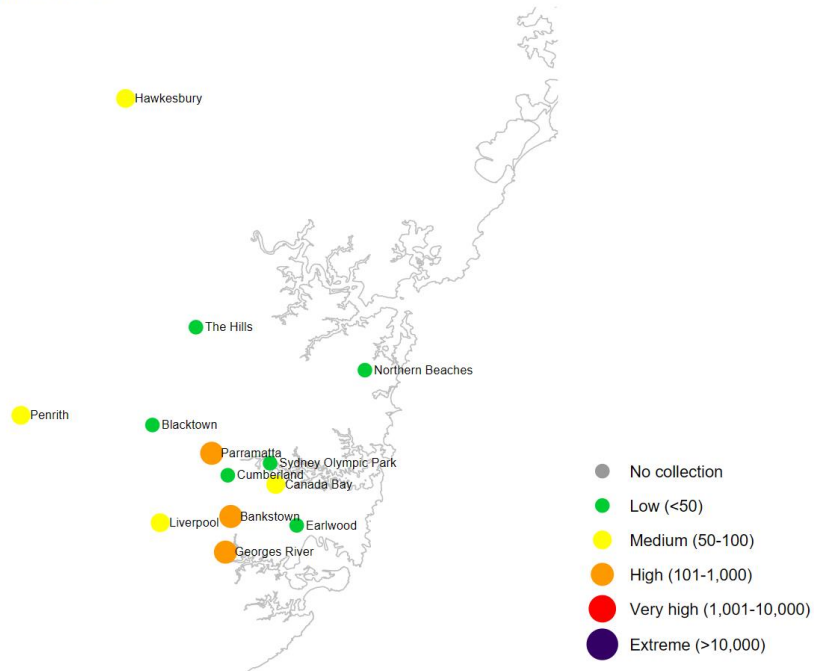


Aedes vigilax counts

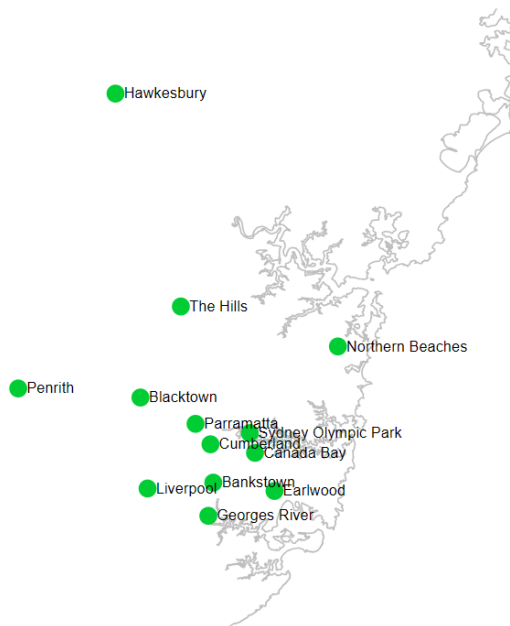


Sydney sites

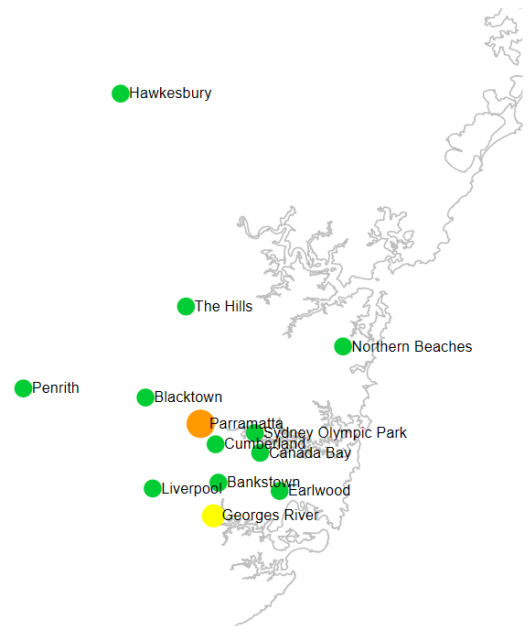
Total mosquito counts



Culex annulirostris counts



Aedes vigilax counts



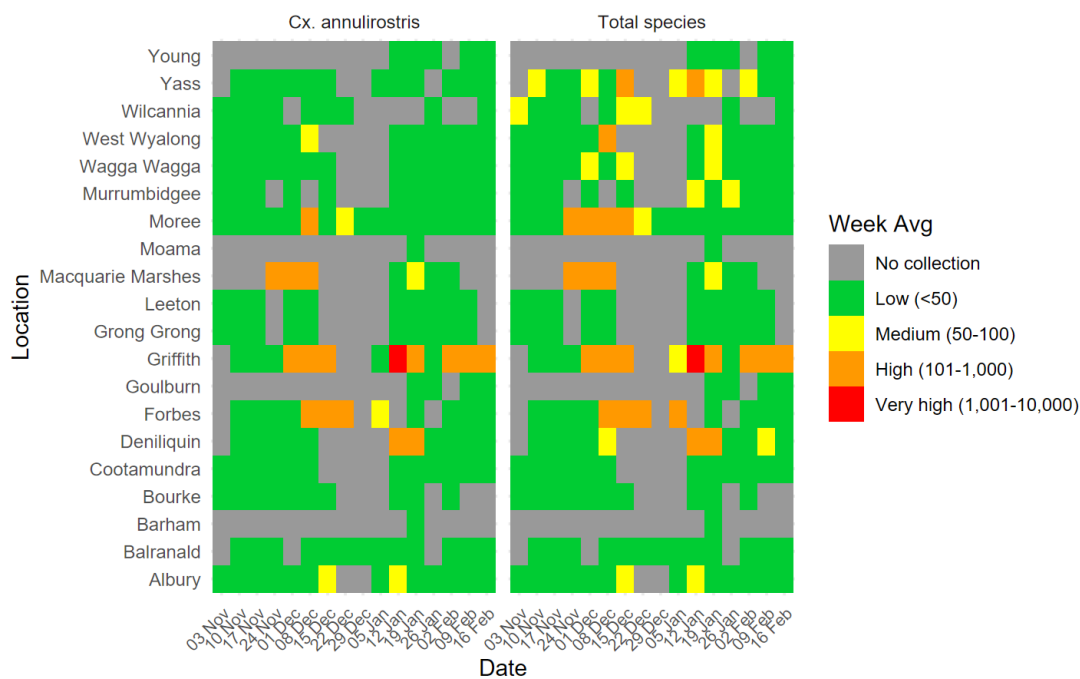
Mosquito abundance results for the 2024-2025 season

season

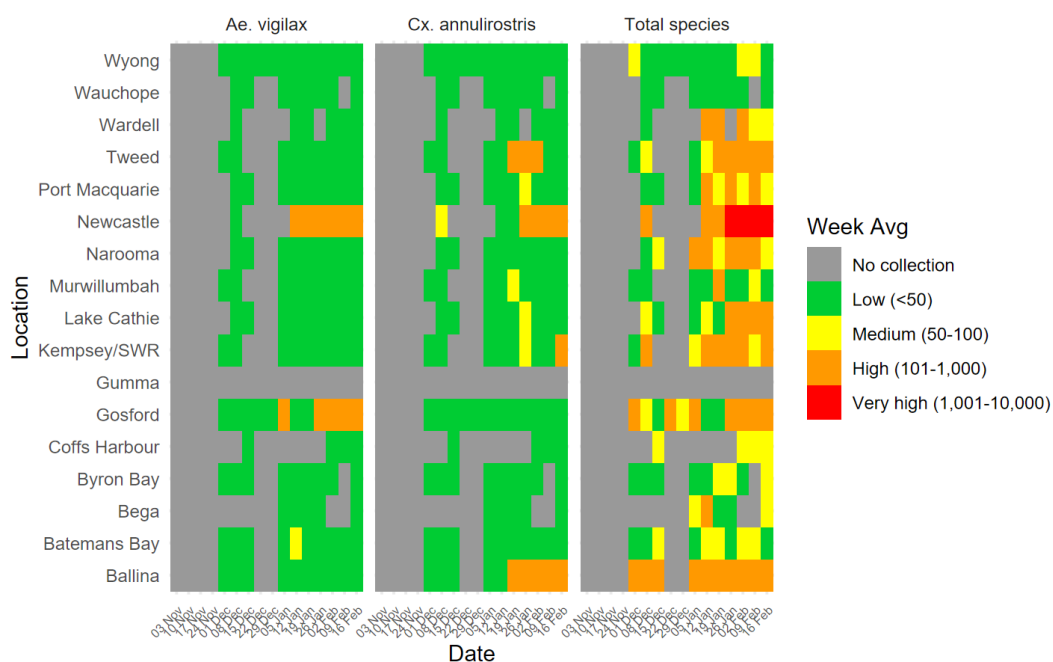
This section shows all mosquito trapping results by location and species type to date for the current arbovirus season.

Cumulative mosquito abundance tables

Number of mosquitoes trapped inland (weekly average)



Number of mosquitoes trapped along the coast (weekly average)



Human arboviral disease notifications

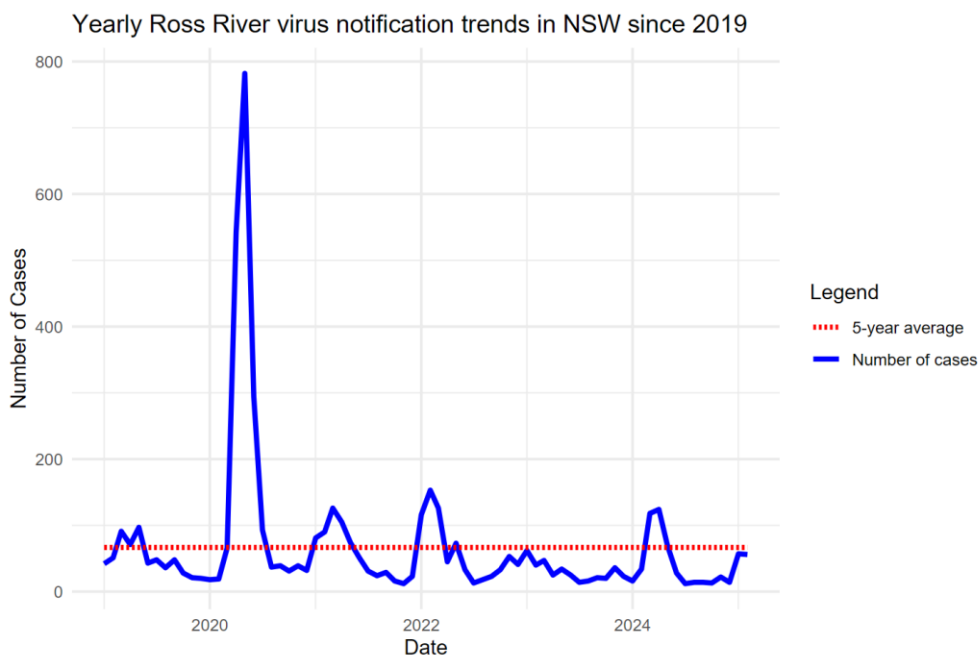
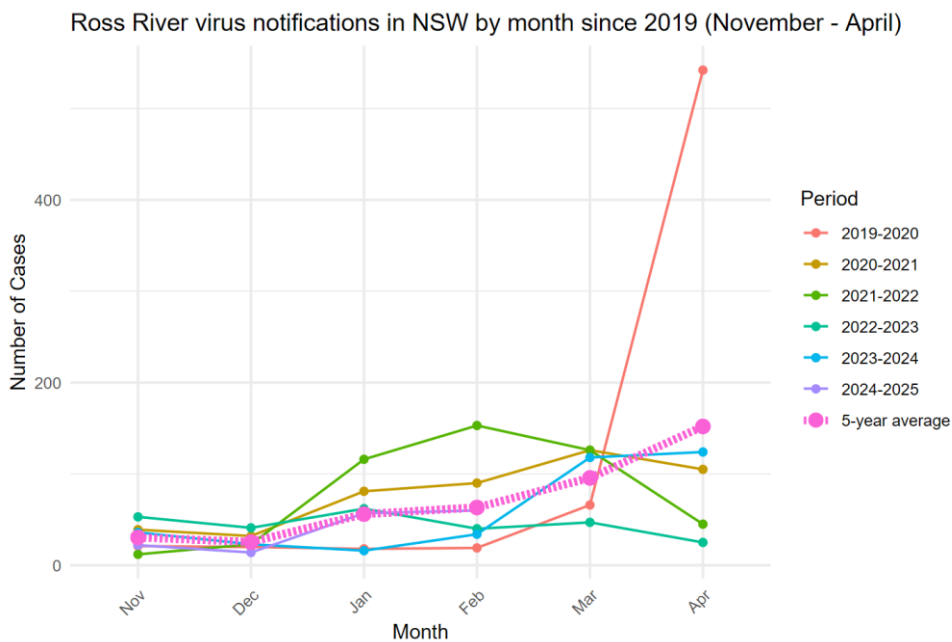
Under the *NSW Public Health Act 2010*, human arboviral infections are notifiable in NSW.

Recent notifications of Ross River virus and Barmah Forest virus infections in humans (by date of case report received)

Notifications of Ross River virus and Barmah Forest virus infections, by month of disease onset (the earlier of patient-reported onset or specimen collection date), are available online at the [NSW Health website - infectious diseases data](#).

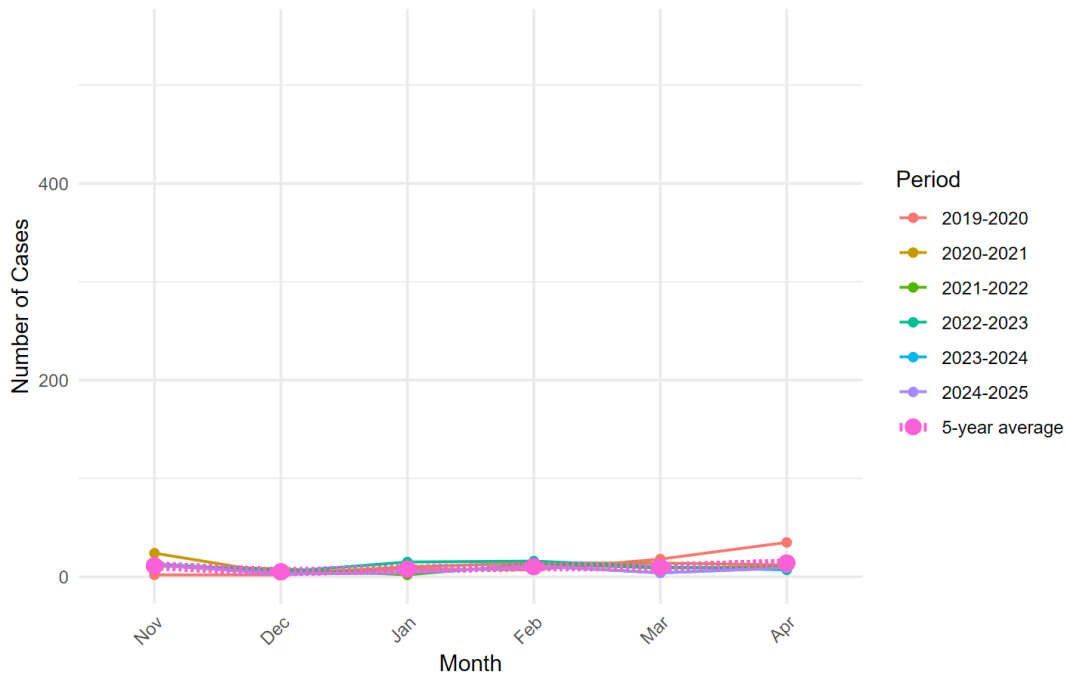
The following figures show notifications for the current NSW Arbovirus Surveillance and Mosquito Monitoring season (2024-2025), and the same period in the previous four years.

Ross River virus

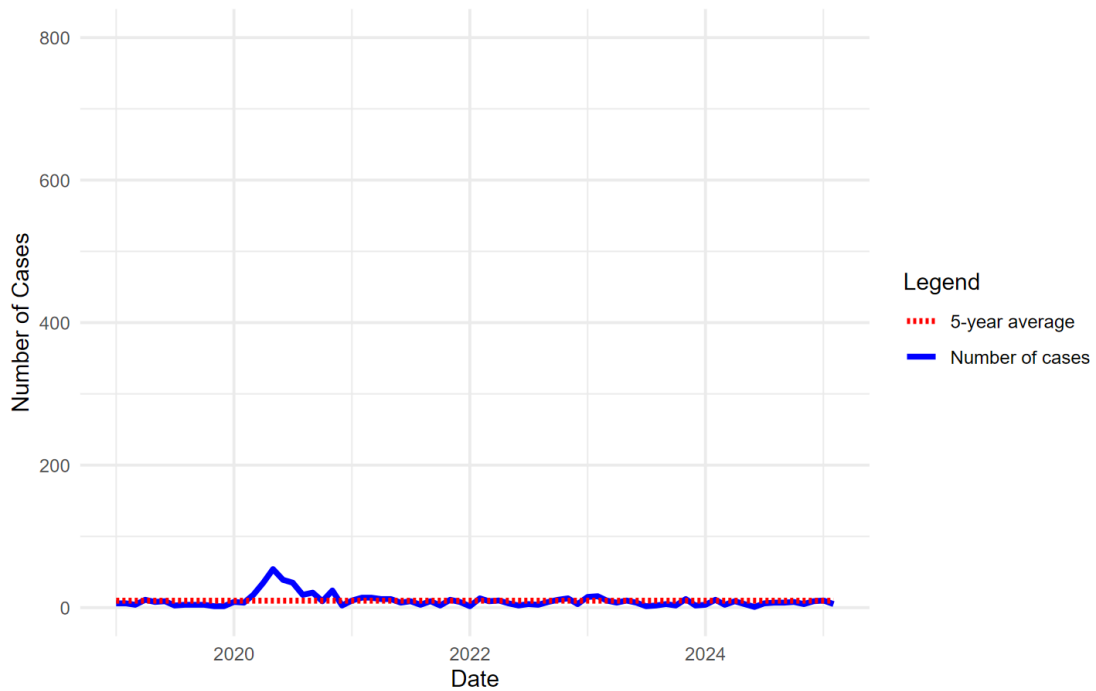


Barmah Forest virus

Barmah Forest virus notifications in NSW by month since 2019 (November - April)



Yearly Barmah Forest virus notification trends in NSW since 2019



Note: Presented human cases include both confirmed and probable cases.