

NSW Arbovirus Surveillance and Mosquito Monitoring 2024-2025

Environmental Health Branch, Health Protection NSW

Weekly Update: Week ending 25 January 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 25 January 2025.

Mosquito Isolates

• In the week ending 25 January 2025, Ross River virus was detected in mosquito samples trapped at Albury (20 January 2025) and Griffith (21 January 2025).

Mosquito Abundance

Inland

- **Low:** Albury, Balranald, Barham, Bourke, Cootamundra, Forbes, Goulburn, Grong Grong, Leeton, Moama, Moree, Murrumbidgee, Young
- **Medium:** Macquarie Marshes, Wagga Wagga, West Wyalong, Yass
- **High:** Deniliquin, Griffith

Coastal

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

Sydney

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

Environmental Conditions

Climate

- In the week ending 25 January 2025, rainfall was average or below average across NSW.
- In the coming week, 1 February to 7 February 2025, rainfall is expected to be lower than average across the state.
- Minimum and maximum temperatures are expected to be average or higher than average across NSW, especially in Murrumbidgee, Western NSW and Far West LHDs.

Tides

- High tides over 1.8 metres are predicted for 28 January 2025 - 2 February 2025, 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

Ten probable cases were notified in the week ending 25 January 2025.

Barmah Forest Virus

Three probable cases were notified in the week ending 25 January 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 25 January 2025

In the week ending 25 January 2025, there were no arbovirus detections in chickens.

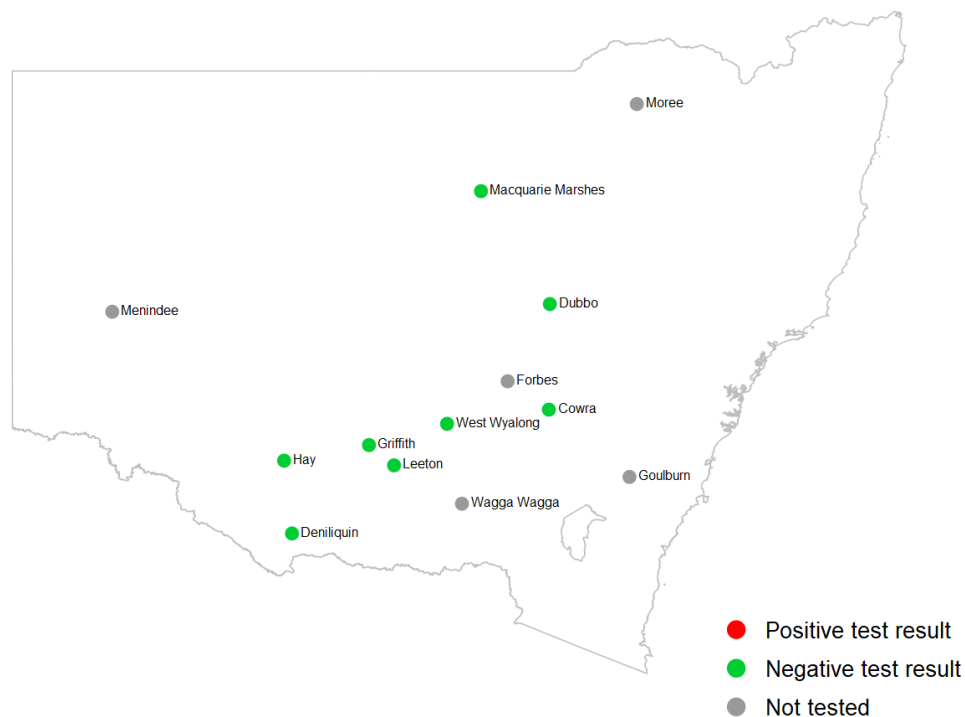


Table 1: Positive test results in the 2024-2025 surveillance season.

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

Mosquito isolates

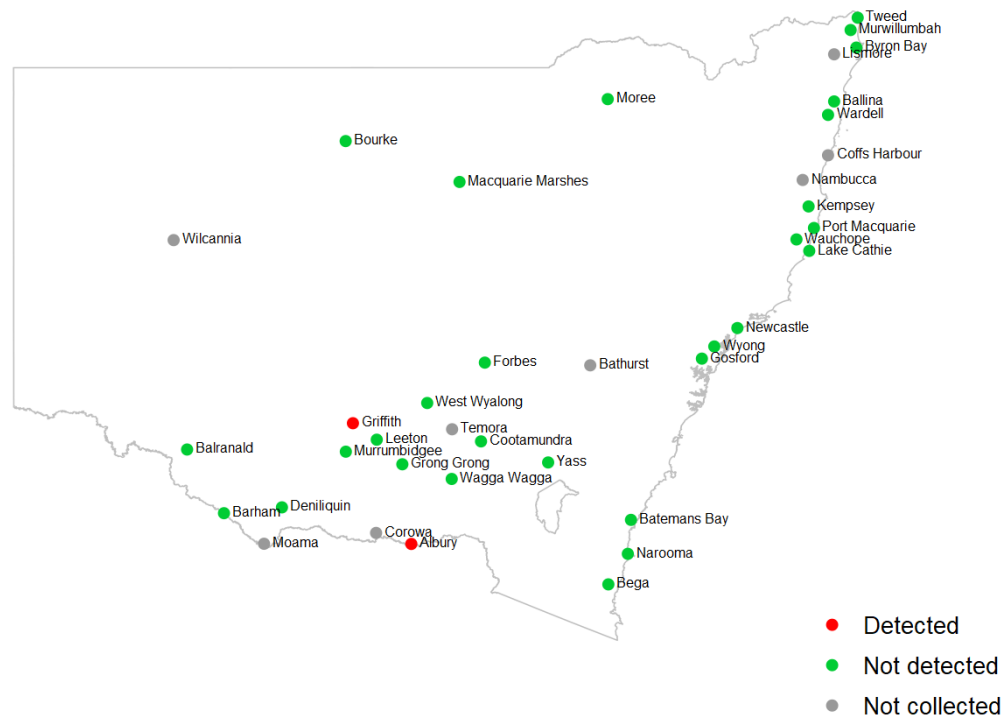
Whole grinds of collected mosquitoes are tested for arbovirus nucleic acids to determine the presence of arboviruses in mosquitoes. Test results for detections of Murray Valley encephalitis virus, Japanese encephalitis virus, Kunjin virus, Ross River virus and Barmah Forest virus for the past week are 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 25 January 2025

In the week ending 25 January 2025, Ross River virus was found in mosquitoes trapped in Albury (sample date 20 January 2025) and Griffith (sample date 21 January 2025).

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.

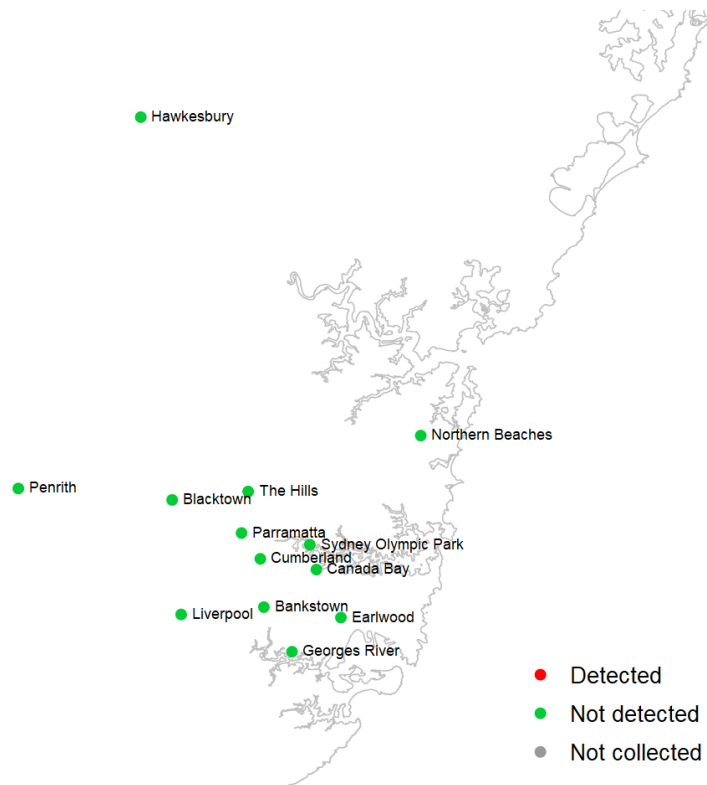
Date of sample collection	Location	Virus
2024-12-03	Griffith	Japanese encephalitis
2024-12-18	Griffith	Ross River
2024-12-22	Moree	Japanese encephalitis

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

Date of sample collection	Location	Virus
2025-01-14	Batemans Bay	Barmah Forest
2025-01-20	Albury	Ross River
2025-01-21	Griffith	Ross River

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.



There have been no arbovirus detections in Sydney sites during the 2024-2025 arbovirus season.

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.

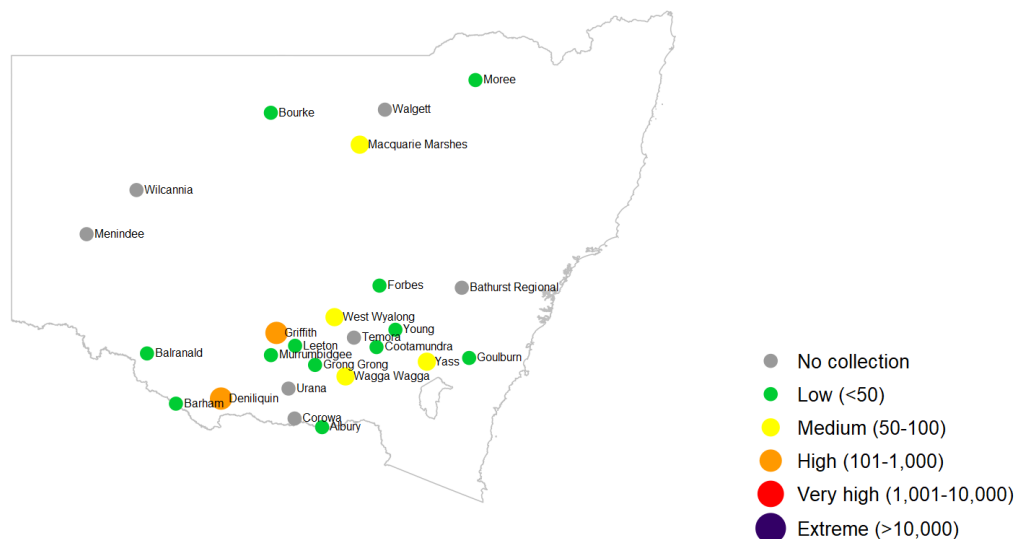
Culex annulirostris and *Aedes vigilax* are vectors of interest for Ross River virus and Barmah Forest virus, *Culex annulirostris* is also a vector for Japanese encephalitis virus.

Mosquito counts

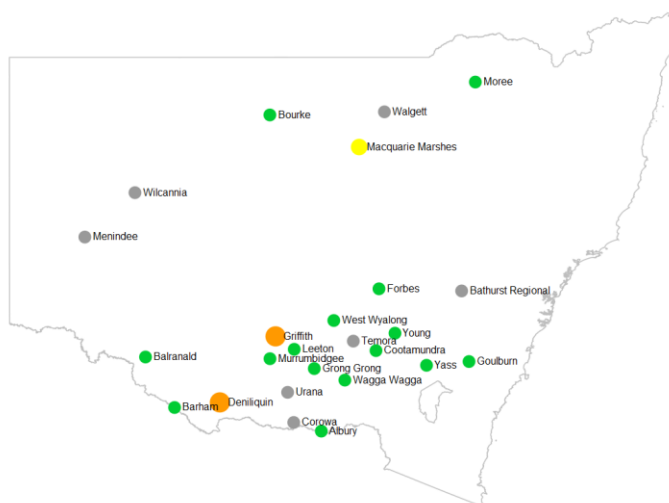
Mosquito counts (average per trap per location) for mosquito trapping sites reported in the week ending 25 January 2025

Inland sites

Total mosquito counts

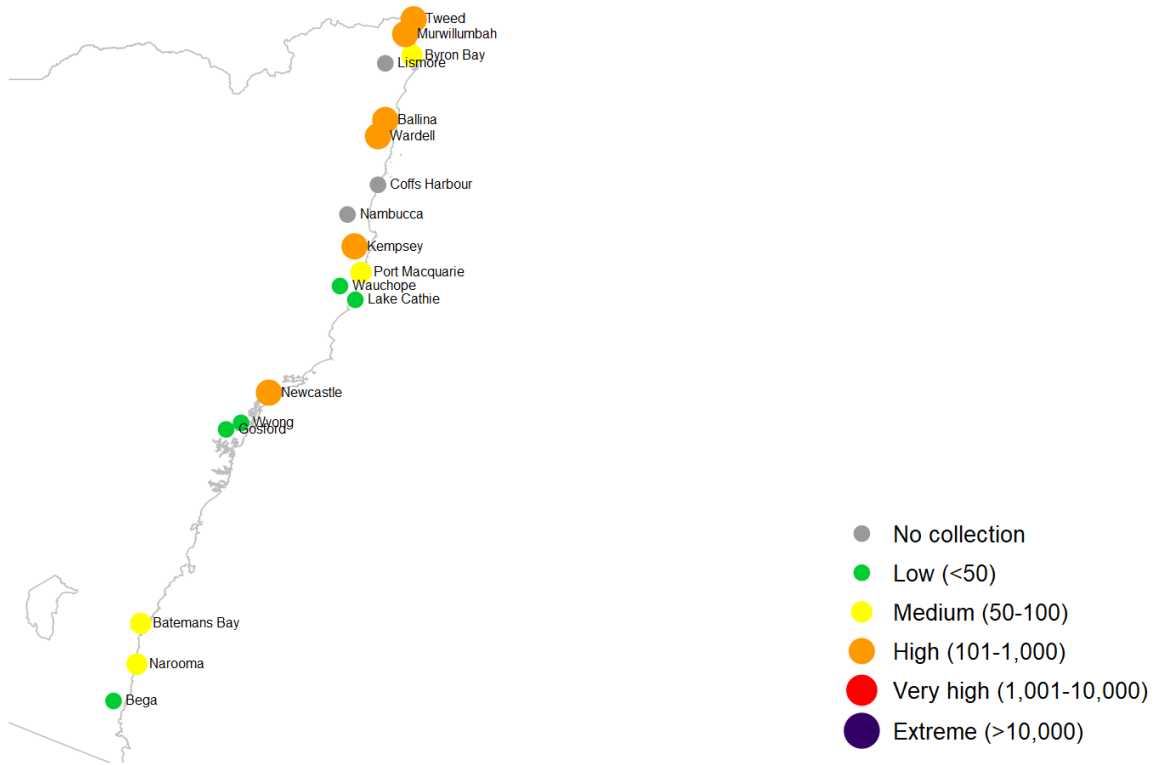


Culex annulirostris counts

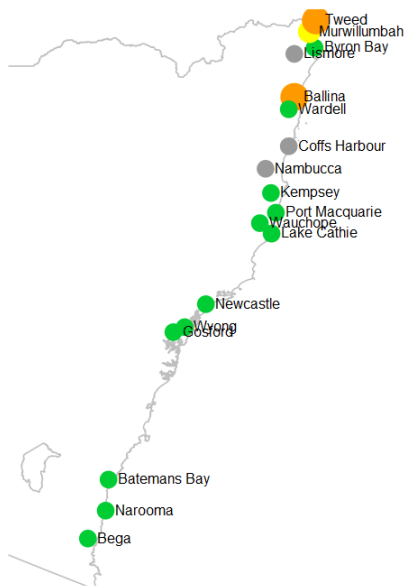


Coastal sites

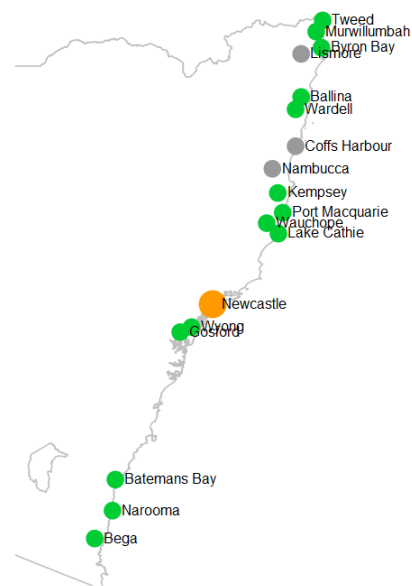
Total mosquito counts



Culex annulirostris counts

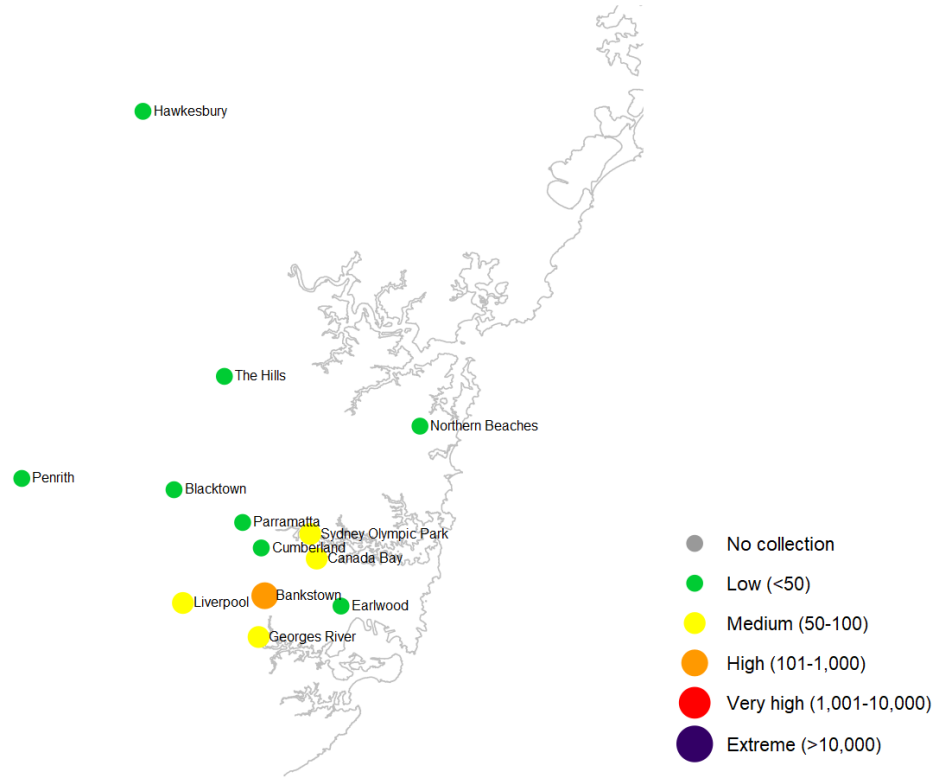


Aedes vigilax counts



Sydney sites

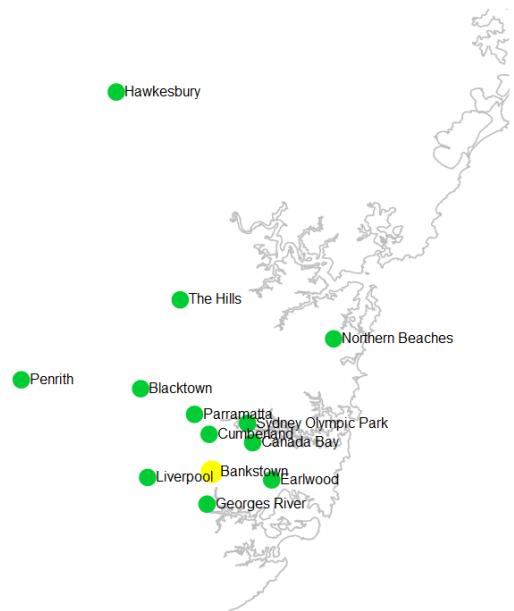
Total mosquito counts



Culex annulirostris counts



Aedes vigilax counts



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Human arboviral disease notifications

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

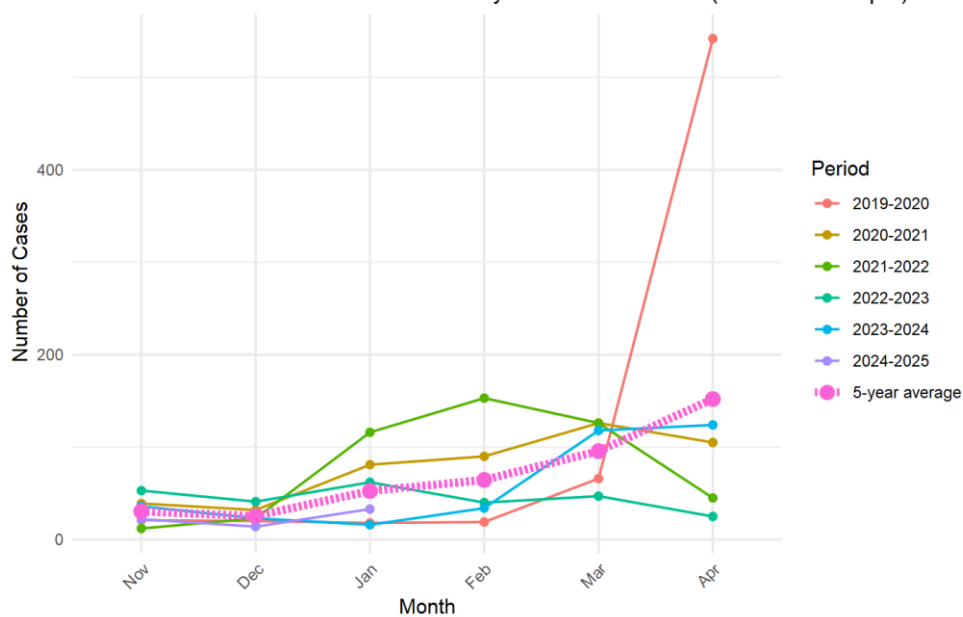
Recent notifications of Ross River virus and Barmah Forest virus infections in humans (by date of case report received)

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](#).

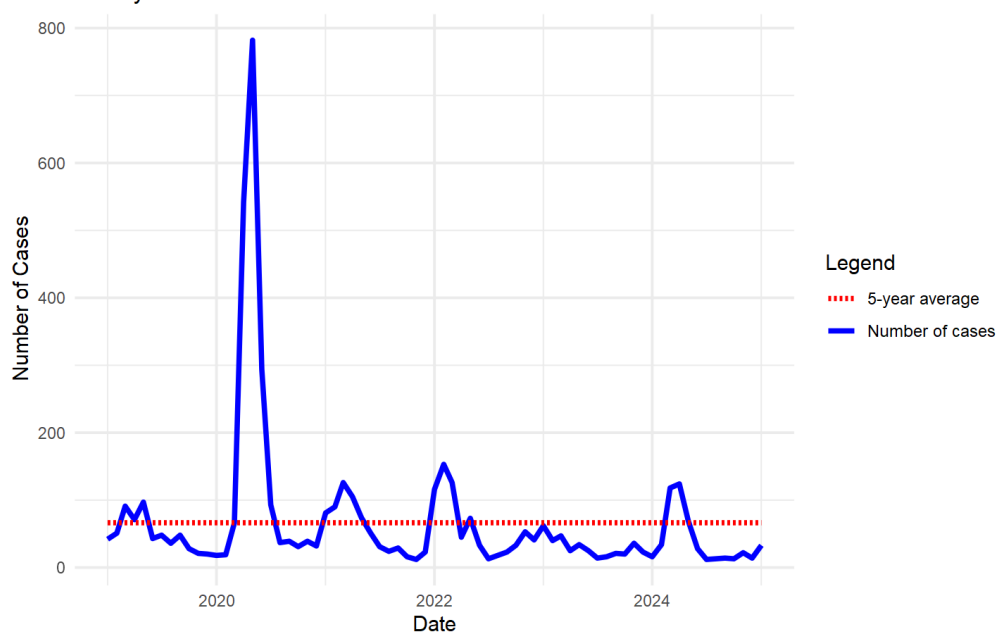
The following figures show notifications for the current NSW Arbovirus Surveillance and Mosquito Monitoring season (2024-2025), and the same period in the previous four years.

Ross River virus

Ross River virus notifications in NSW by month since 2019 (November - April)

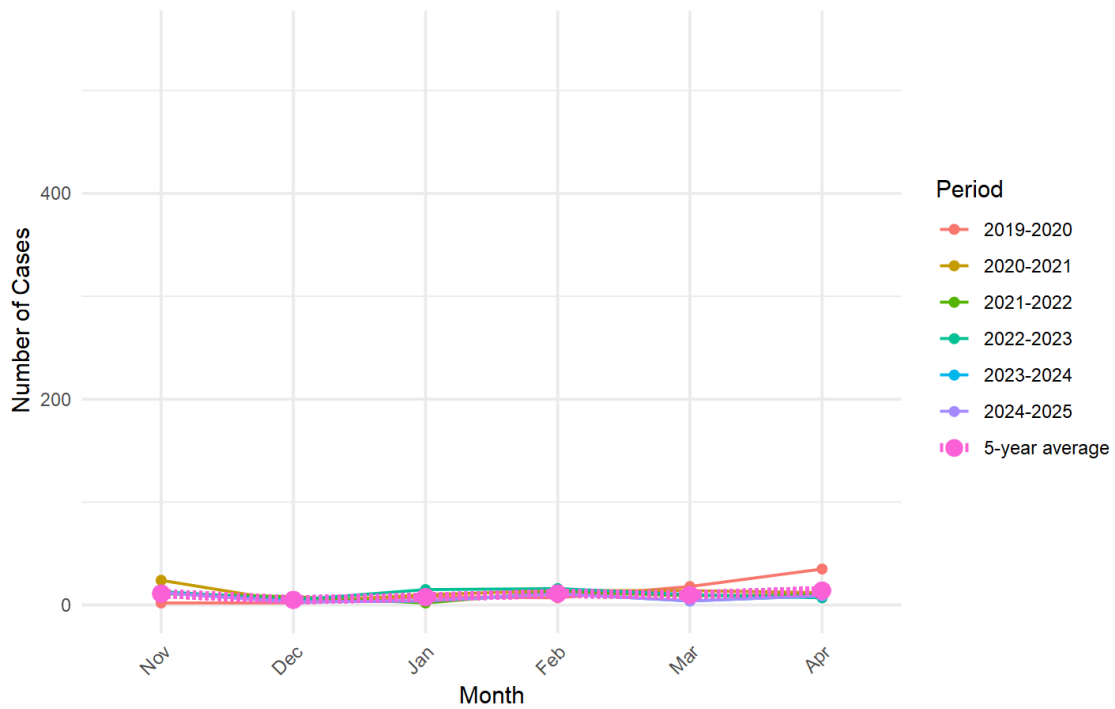


Yearly Ross River virus notification trends in NSW since 2019

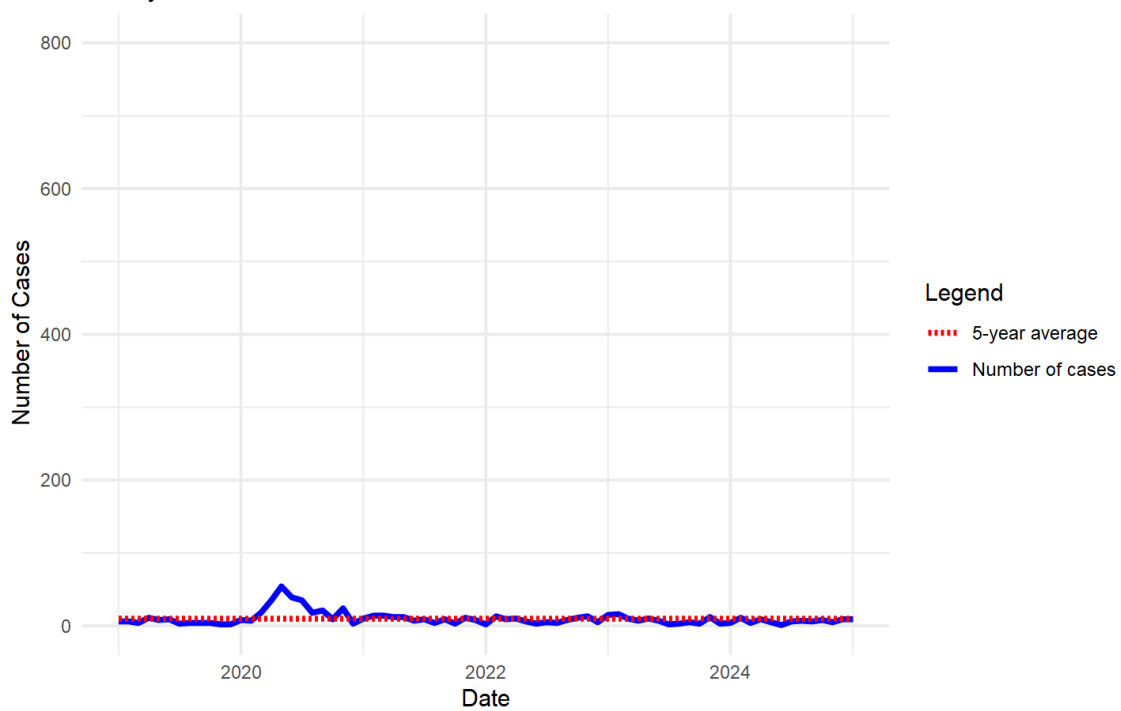


Barmah Forest virus

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.