NSW Arbovirus Surveillance and Mosquito Monitoring 2024-2025

Environmental Health Branch, Health Protection NSW

Weekly Update: Week ending 16 November 2024

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.

SPHN (EH) 241091

Summary

Arbovirus Detections

Mosquito Isolates

• There have been no arbovirus detections in mosquito samples.

Mosquito Abundance

Inland

LOW: Albury, Balranald, Cootamundra, Deniliquin, Forbes, Griffith, Grong Grong, Leeton, Moree, Murrumbidgee, Wagga Wagga, West Wyalong, Wilcannia.

MEDIUM: Yass.

Environmental Conditions

Climate

- In the week ending 16 November 2024, rainfall was higher than average in northern coastline areas of NSW and average or lower than average elsewhere.
- In the coming week, 21 November to 27 November 2024, higher than average rainfall is expected in western areas of NSW and average or lower than average rainfall is expected across the rest of NSW.
- Minimum temperatures are expected to be higher than average across most of NSW and average or lower than average in Hunter New England, Mid-North coast and Northern NSW.
- High temperatures are expected in the southern region of NSW along the Victoria border. Average or lower than average temperatures are expected across the rest of NSW.

Tides

- High tides over 1.8 metres are predicted for 16-19 November 2024 and 13-18 December 2024 which could trigger hatching of *Aedes vigilax*.

Human Arboviral Disease Notifications

Ross River Virus

Six probable cases were notified in the week ending 16 November 2024.

Barmah Forest Virus

Two probable cases were notified in the week ending 16 November 2024.

Arbovirus Detections

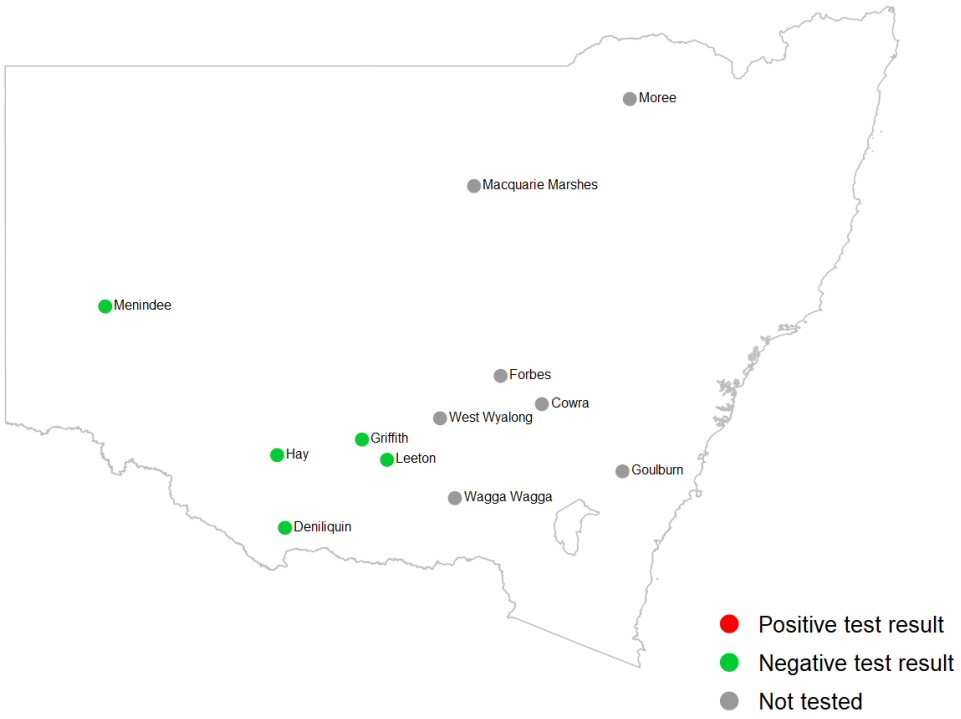
This section details detections of Murray Valley encephalitis virus, Japanese encephalitis virus, Kunjin virus, Ross River virus and Barmah Forest virus in the NSW Arbovirus Surveillance and Mosquito Monitoring Program.

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 16 November 2024

In the week ending 16 November 2024, there were no arbovirus detections in sentinel chickens.

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## There have been no arbovirus detections in sentinel chickens during the 2024-202
5 surveillance season.
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Mosquito isolates

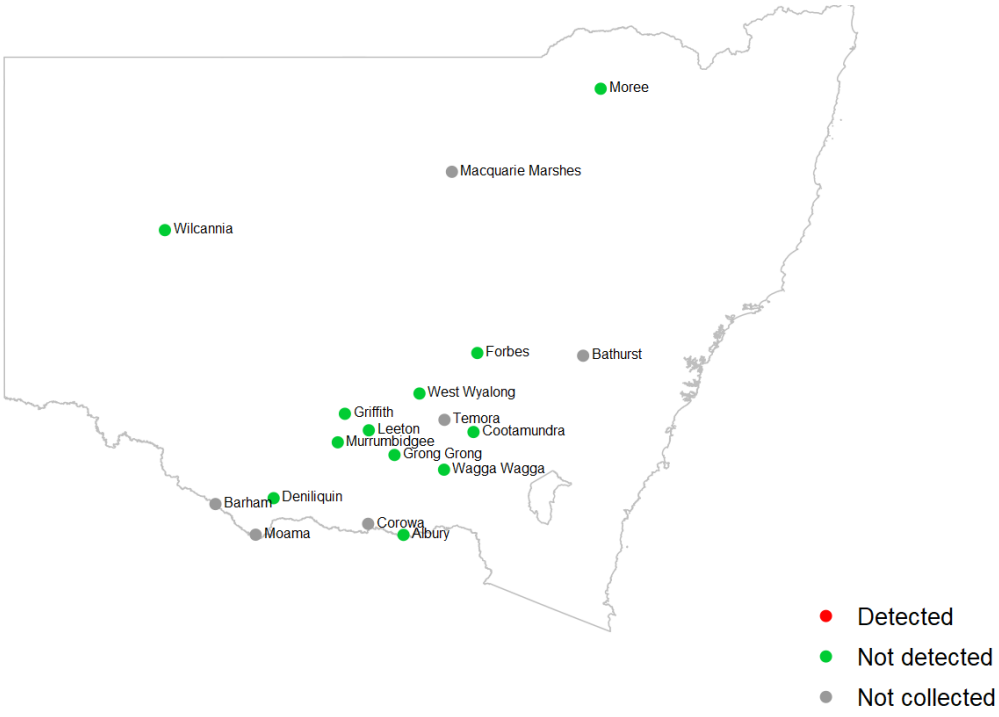
Whole grinds of collected mosquitoes are tested for arbovirus nucleic acids to determine the presence of arboviruses in mosquitoes. Test results for detections of Murray Valley encephalitis virus, Japanese encephalitis virus, Kunjin virus, Ross River virus and Barmah Forest virus for the past week are 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 16 November 2024

In the week ending 16 November 2024, there were no arbovirus detections in mosquitoes.

Inland 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 inland or coastal sites during the 2024-2025 surveillance 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.

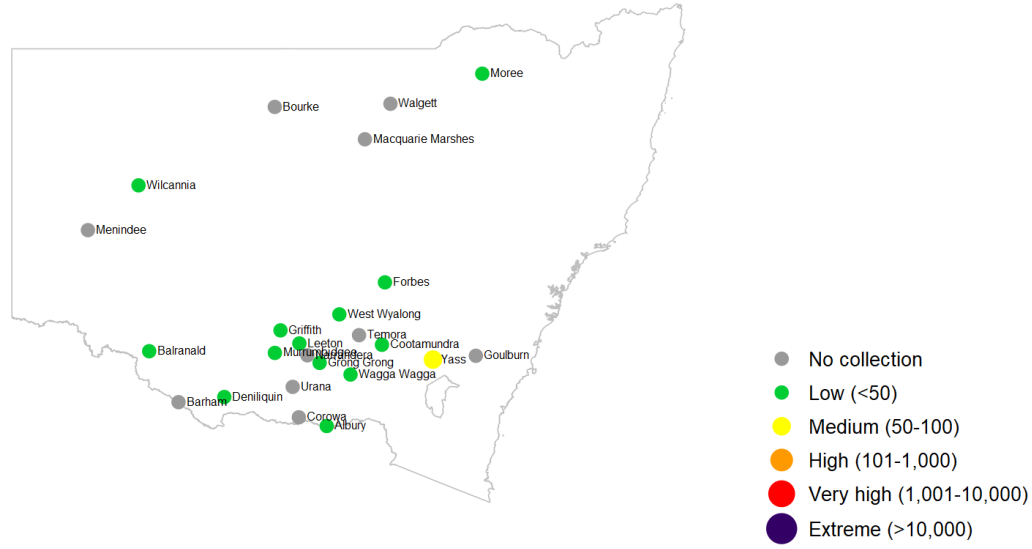
Culex annulirostris and *Aedes vigilax* are vectors of interest for Ross River virus and Barmah Forest virus, *Culex annulirostris* is also a vector for Japanese encephalitis virus.

Mosquito counts

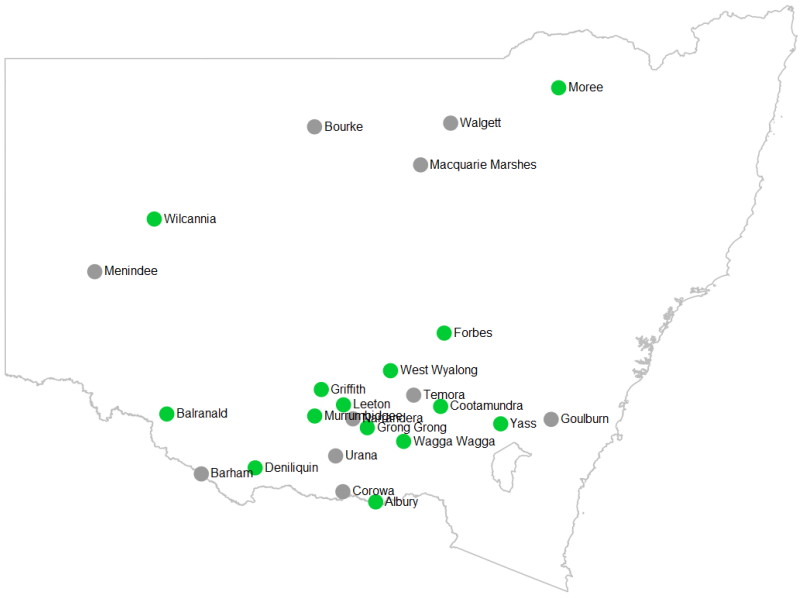
Mosquito counts (average per trap per location) for mosquito trapping sites reported in the week ending 16 November 2024

Inland sites

Total mosquito counts



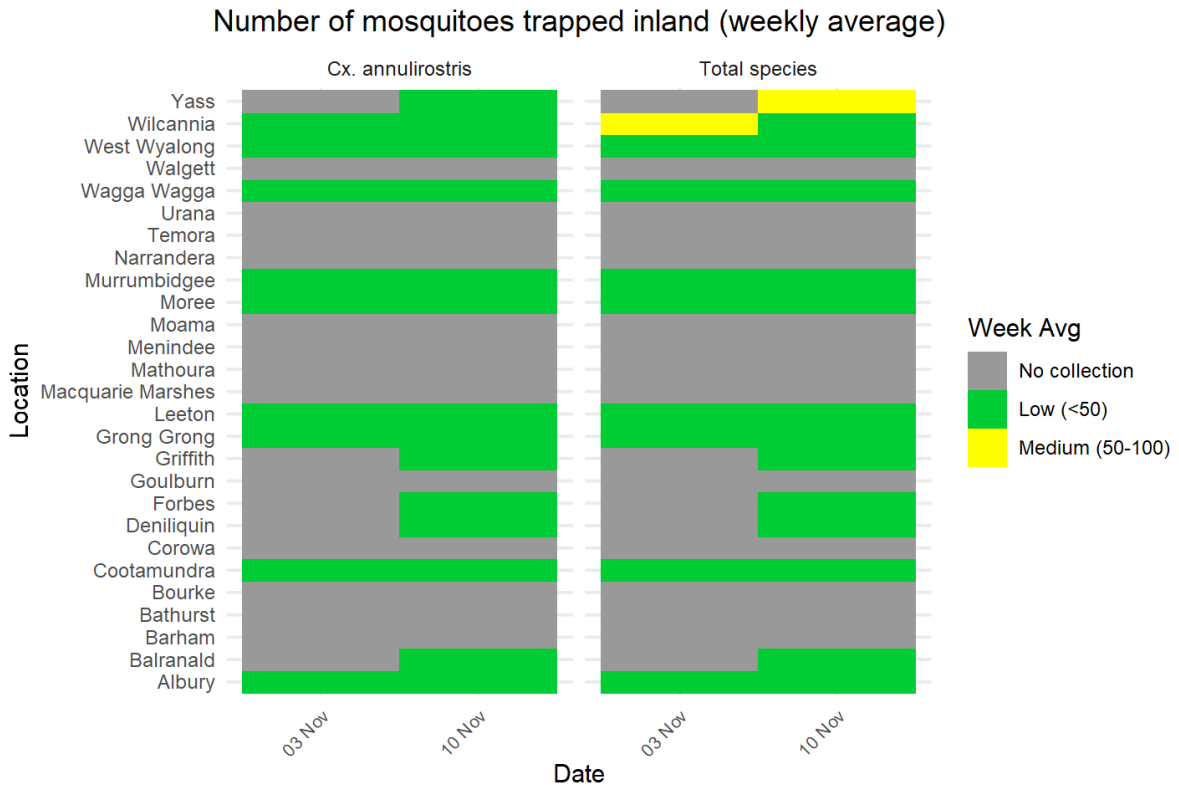
Culex annulirostris counts



Mosquito abundance results for the 2024-2025 season

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

Cumulative mosquito abundance tables



Human arboviral disease notifications

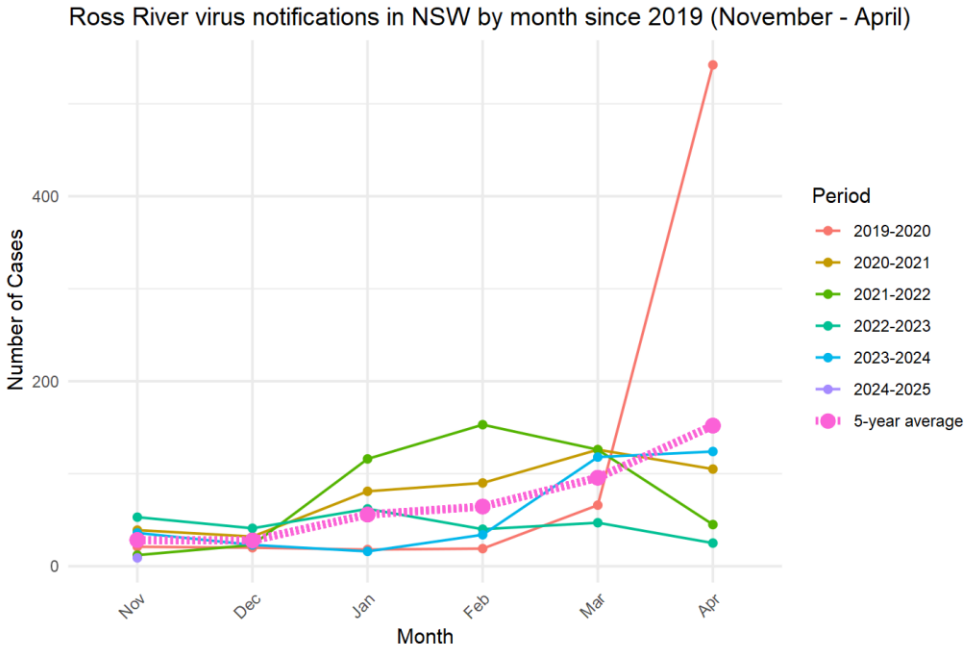
Under the *NSW Public Health Act 2010*, human arboviral infections are notifiable in NSW.

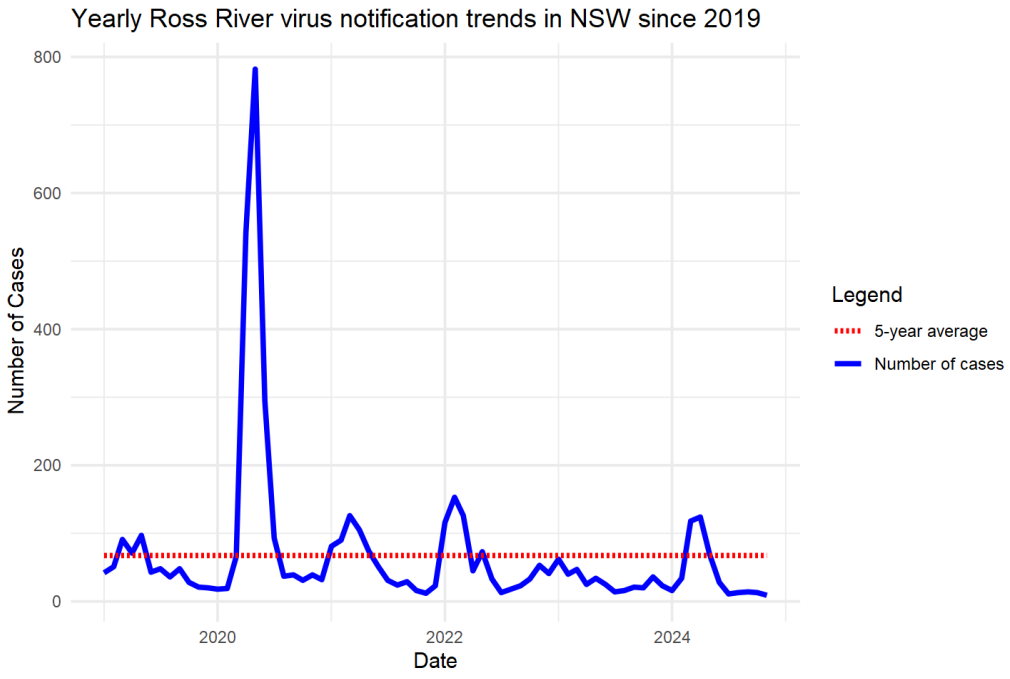
Recent notifications of Ross River virus and Barmah Forest virus infections in humans (by date of case report received)

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.

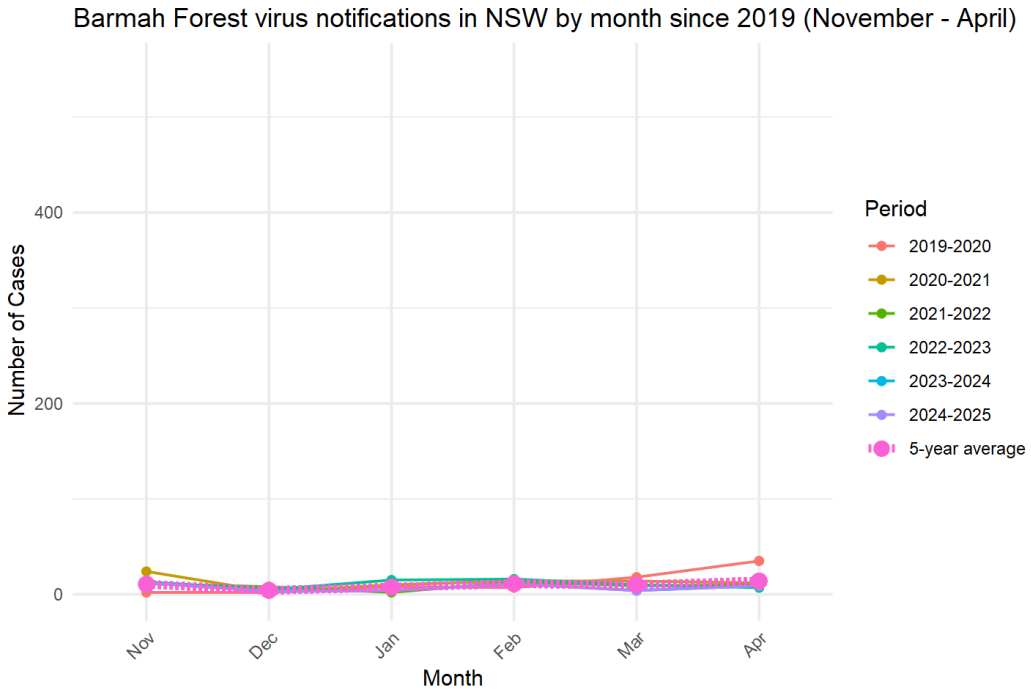
The following figures show notifications for the current NSW Arbovirus Surveillance and Mosquito Monitoring season (2024-2025), and the same period in the previous four years.

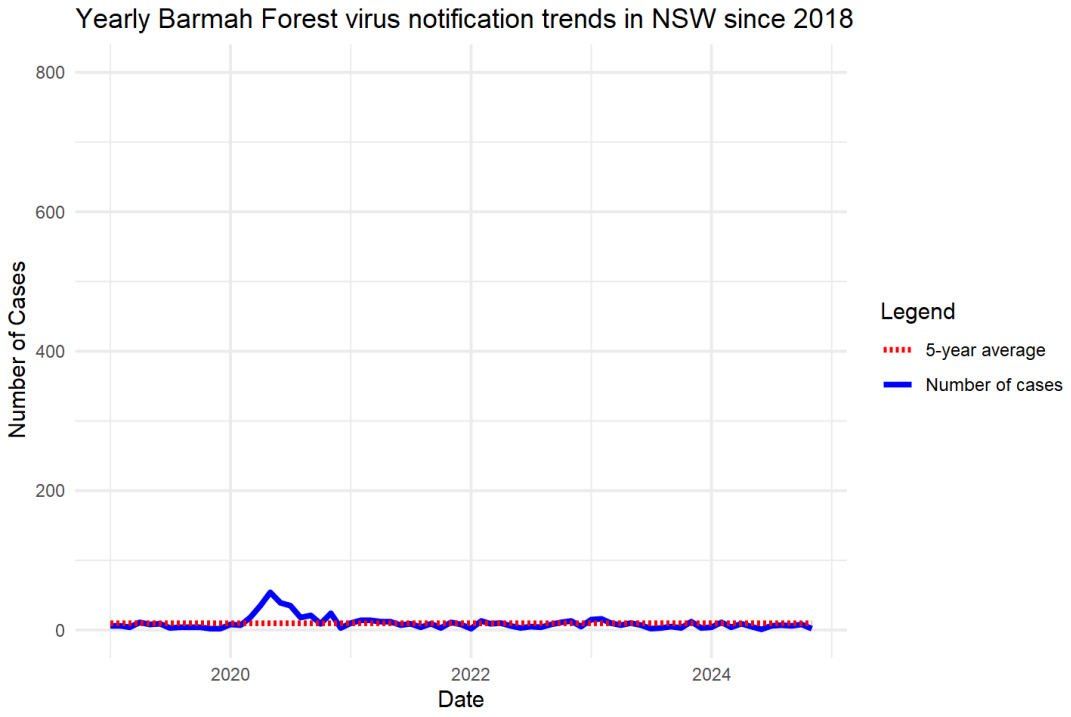
Ross River virus





Barmah Forest virus





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