Arbovirus Surveillance Summary 2022-2023

February 2023

Summary

- No cases of **Ross River virus** or **Barmah Forest virus** infection in SESLHD residents were reported in February 2023
- Four confirmed and two probable cases of **dengue virus** infection in SESLHD residents were reported in February 2023, along with one confirmed case of malaria. All infections were acquired overseas.
- Mosquito numbers were extremely low in February 2023

1. Surveillance of Ross River and Barmah Forest Virus infections

In South Eastern Sydney Local Health District (SESLHD), place of acquisition continues to be investigated for all confirmed cases, as well as for probable cases who reside in areas along the Georges River where there is potentially increased risk of local transmission of the Ross River and Barmah Forest viruses (postcodes 2210 and 2234).

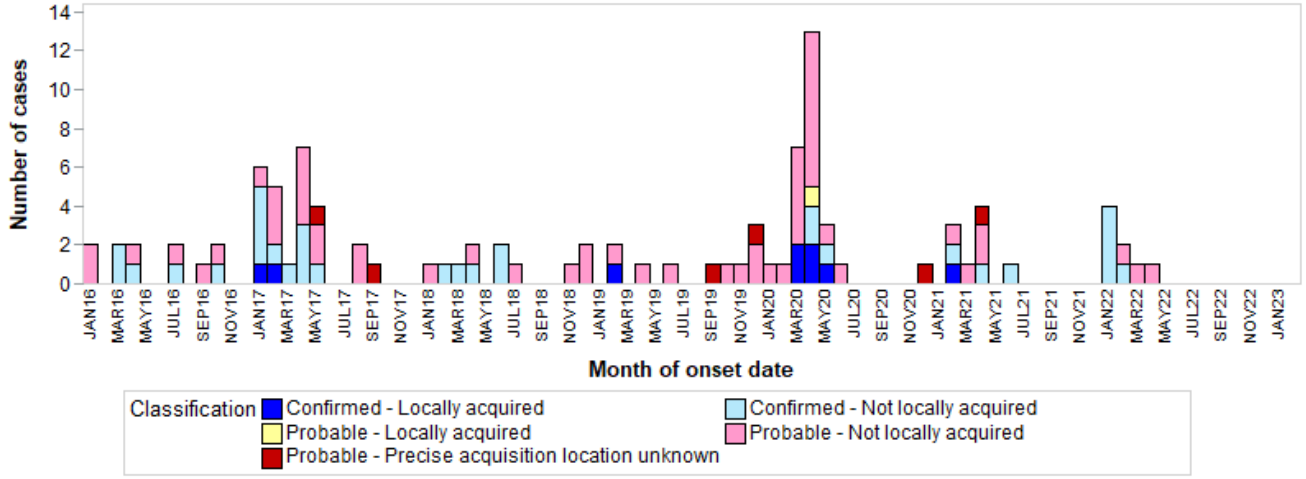
a. February 2023

- No cases of **Ross River virus** infection in SESLHD residents have been notified.
- No cases of **Barmah Forest virus** infection in SESLHD residents have been notified.

b. This season (1 October 2022 to 30 April 2023)

- No cases of **Ross River virus** infection in SESLHD residents have been notified.
- No cases of **Barmah Forest virus** infection in SESLHD residents have been notified.

Confirmed and probable Ross River virus infections in South Eastern Sydney LHD residents, by location of acquisition, 2016 to date



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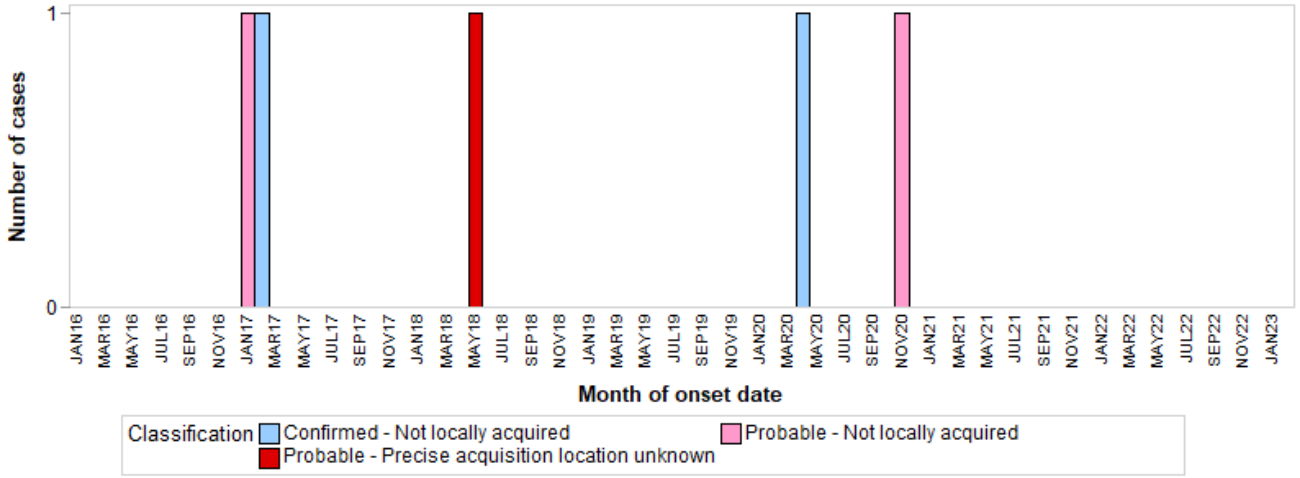
Confirmed and probable Barmah Forest virus infections in South Eastern Sydney LHD residents, by location of acquisition, 2016 to date



2. Summary of other mosquito-borne diseases not known to be locally transmitted

Four confirmed cases and two probable cases of **dengue virus** infection have been notified in SESLHD residents this month. All infections were acquired overseas in either Indonesia, Vietnam or Papa New Guinea. One confirmed case of **malaria** in a SESLHD resident was reported this month, acquired in Papa New Guinea.

On February 28 2022, NSW Health issued an alert following the detection of **Japanese encephalitis virus** in several pig farms in the west of the state. Subsequently 13 cases in humans, including two deaths, were identified. One case has been notified in NSW this season. Information about the outbreak is available here. While local transmission of Japanese encephalitis is unlikely in SESLHD, the favoured mosquito vector for the virus, *Culex annulirostris* is common in the region.

In 2023, Murray Valley encephalitis (MVE) virus has been detected through routine surveillance across much of the western districts of NSW, with one confirmed case in a resident of Leeton. Kunjin (KUN) virus has also been detected in several sites in Western NSW and Murrumbidgee LHDs, but less frequently than MVE. *Culex annulirostris* is also the favoured vector for MVE and KUN.

Confirmed and probable cases among South Eastern Sydney LHD residents, since 1 October 2022

	Acquired in SESLHD	Not known to be acquired in SESLHD		
		Acquired elsewhere in Australia	Acquired overseas	Precise acquisition location unknown
Dengue				
Confirmed	0	0	20	0
Probable	0	0	5	0
Malaria				
Confirmed	0	0	1	0
Probable	0	0	0	0
Japanese encephalitis				
Confirmed	0	0	0	0
Probable	0	0	0	0
Total	**0**	**0**	**26**	**0**

3. Mosquito surveillance in South Eastern Sydney LHD

Mosquito surveillance along the Georges River is undertaken from late November to April each year, and this year surveillance will also occur in Matraville, near Port Botany. The detection of increased mosquito numbers may signal an increased risk of arboviral infection. The predominant species of mosquito in the coastal area of the Georges River which may pose a risk to human health is *Ochlerotatus (Aedes) vigilax,* a known carrier of Ross River and Barmah Forest viruses. Three sites along the Georges River close to SESLHD residents used for mosquito surveillance include Illawong, Alfords Point and Picnic Point (in SWSLHD).

a. Georges River

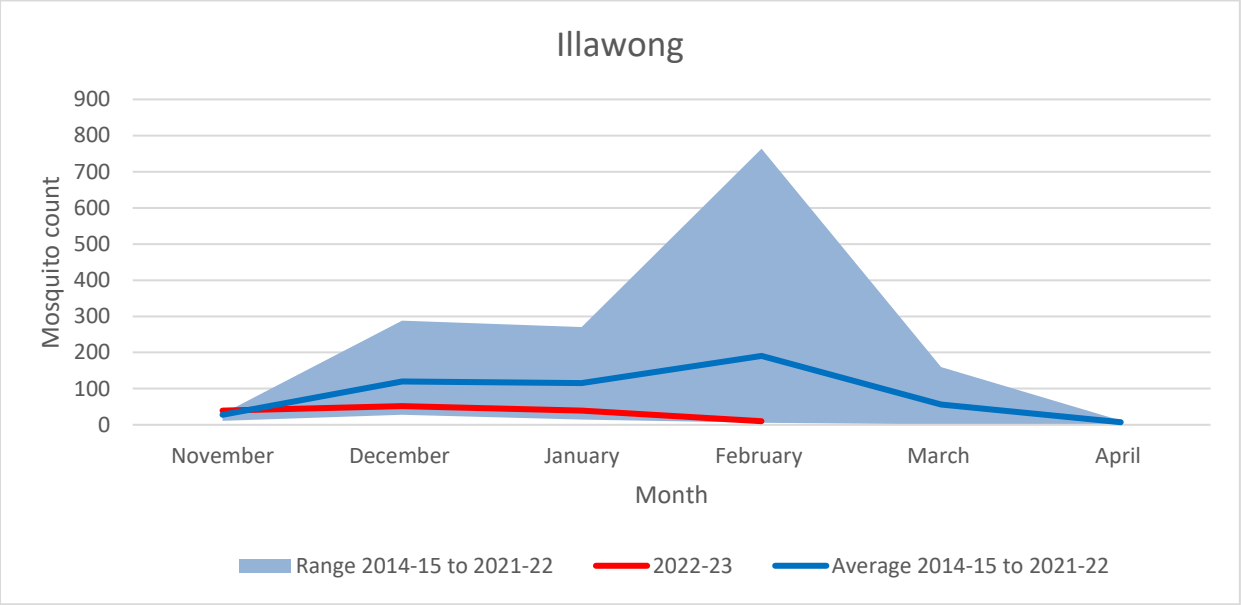
- Average mosquito numbers in February 2023 were extremely low at Illawong, Alfords Point and Picnic Point when compared to average February numbers from the previous seasons at these locations.
- There were no very high individual mosquito counts in February 2023.

Mosquito surveillance sites on the Georges River near SESLHD residents (blue overlay highlights SESLHD region)

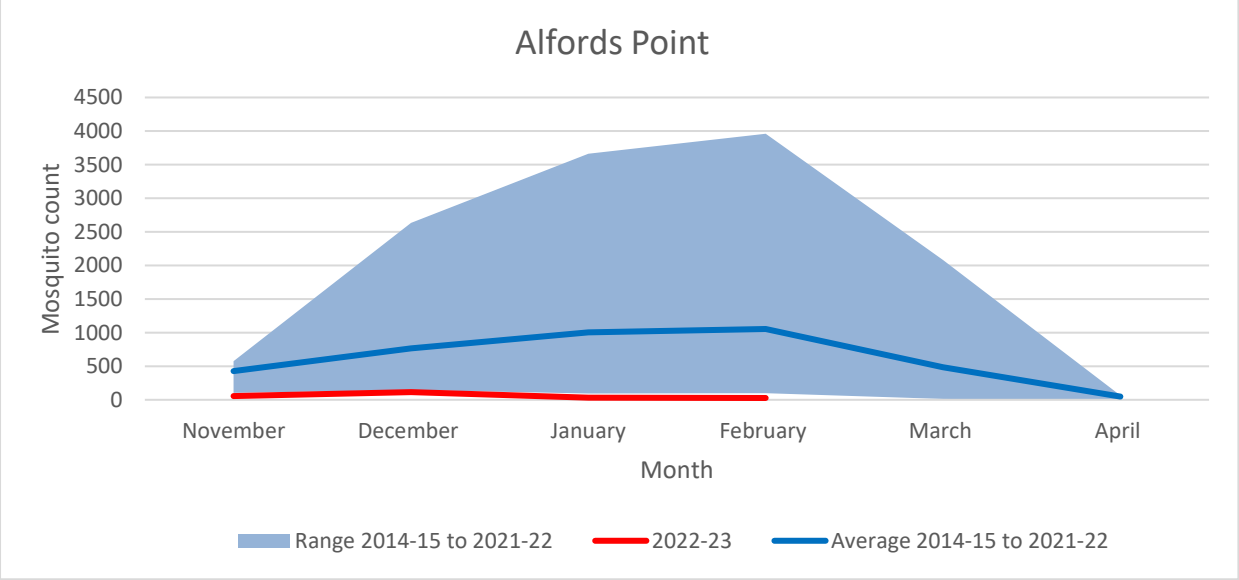
Mosquito numbers as a daily average per month, by current season and 2014 to 2022 seasons

		Average mosquito count					
Site	Season	November	December	January	February	March	April
Illawong	This season	39	52	40	10		
	All previous seasons*	(18 – 37)	(11 – 272)	(28 – 283)	(15 – 772)	(6 – 165)	(1 – 13)
Alfords Point	This season	57	115	33	27		
	All previous seasons*	(192 – 664)	(105 – 2589)	(147 – 3718)	(93 – 3954)	(99 – 2165)	(14 – 78)
Picnic Point (SWSLHD)	This season	20	11	9	6		
	All previous seasons*	(5 – 1157)	(24 – 3006)	(26 – 5639)	(108 – 6672)	(60 – 2624)	(7 – 139)

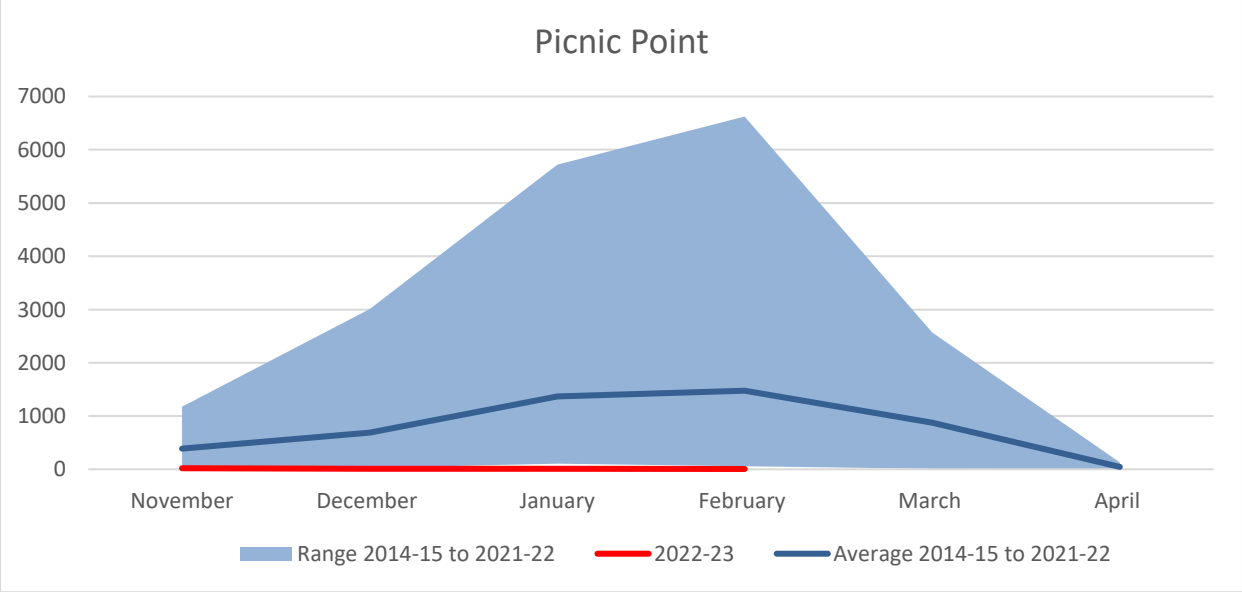
*2014-15 to 2021-22 range



Illawong – average monthly mosquito count, seasons 2014-15 to 2021-22 and 2022-23



Alfords Point – average monthly mosquito count, seasons 2014-15 to 2021-22 and 2022-23



Picnic Point – average monthly mosquito count, seasons 2014-15 to 2021-22 and 2022-23

b. Matraville

This season a new trapping site in Matraville near Port Botany has been established. Its purpose is to determine a baseline for the types and abundance of mosquitoes in this part of the District.

Mosquito surveillance site in Matraville

Mosquito numbers as a daily average per month at Matraville

Average mosquito count					
November	December	January	February	March	April
82	46	18	75		