



Government of **Western Australia**  
Department of **Health**

# Medical Entomology Quarterly Report

## Pilbara Health Region: Apr – Jun 2021



# Ross River virus disease case data summary

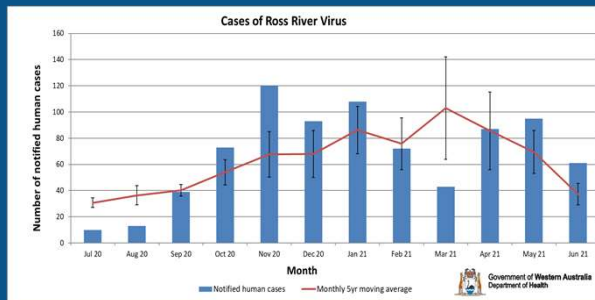
## Western Australia: 2020/21

Data reflected in this summary of mosquito-borne disease is taken from the Western Australia Notifiable Infectious Disease Database (WANIDD) and includes enhanced surveillance data collected by Population Health Units and local governments (only locations with notified cases of disease are shown in tables and figures).

### Ross River virus (RRV) Western Australia

A total of 243 cases of RRV have been reported between 1 April 2021 and 30 June 2021 in Western Australia. Of these 195 cases were notified by Doctor and follow-up data is available for 83 cases.

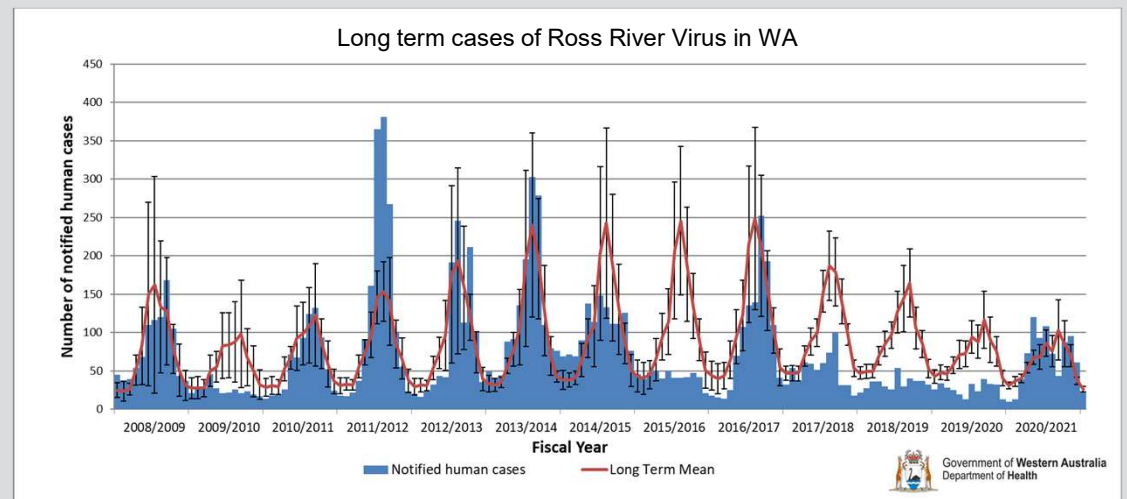
The number of cases was **significantly above** the 5-year moving average for May and June and average for April.



**Serologically confirmed doctor-notified and laboratory reported cases of Ross River virus disease each month in WA, July 2020 - June 2021 #**

*\*Compiled by the Medical Entomology, WA Department of Health*

REGION	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total	Crude Rate	Age Std Rate
KIMBERLEY	0	0	2	0	0	0	2	0	2	1	5	1	13	36.2	34.8
PILBARA	0	0	0	0	0	1	1	1	1	1	2	2	9	14.5	14.1
GASCOYNE	0	0	2	1	1	0	0	0	0	5	7	13	29	312.6	304.5
MIDWEST	0	6	11	13	5	2	2	1	0	10	8	3	61	101.7	100.1
WHEATBELT	0	0	2	1	3	3	1	2	1	4	18	5	40	58.7	59.5
METRO	4	1	5	6	6	15	18	33	16	30	32	22	188	10.4	10.1
	3	3	8	12	20	11	12	10	4	6	10	5	104	37.5	37.2
	1	0	4	6	18	8	10	4	3	9	5	1	69	93.2	92.0
	1	2	5	29	54	34	10	2	4	4	2	2	149	257.9	247.6
	0	0	0	2	4	6	12	3	3	9	4	2	45	93.9	92.9
SOUTH WEST	5	5	17	49	96	59	44	19	14	28	21	10	367	80.3	
GREAT SOUTHERN	1	1	0	2	5	6	26	12	7	6	3	2	71	116.4	116.4
GOLDFIELDS-ESPERANCE	0	0	0	1	4	7	14	3	3	2	0	2	36	66.2	63.0
WA UNDETERMINED	0	0	0	0	0	0	0	0	0	0	0	0	0		
INTERSTATE	0	0	0	0	1	0	1	2	0	1	1	2	8		
<b>WA TOTAL (does not include interstate)</b>	<b>10</b>	<b>13</b>	<b>39</b>	<b>73</b>	<b>120</b>	<b>93</b>	<b>108</b>	<b>71</b>	<b>44</b>	<b>87</b>	<b>96</b>	<b>60</b>	<b>814</b>		



# Ross River virus disease case data summary

## Pilbara Health Region: Apr – Jun 2021



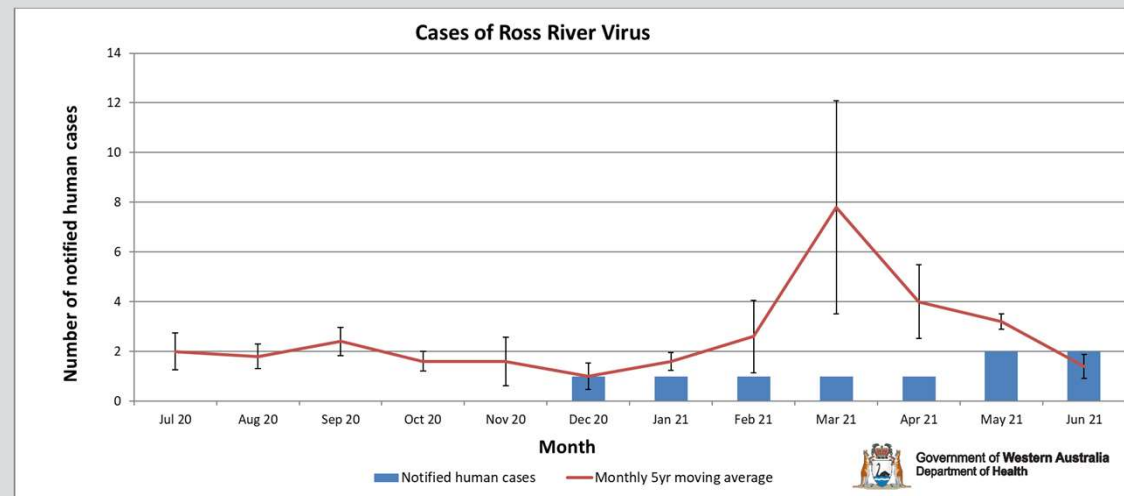
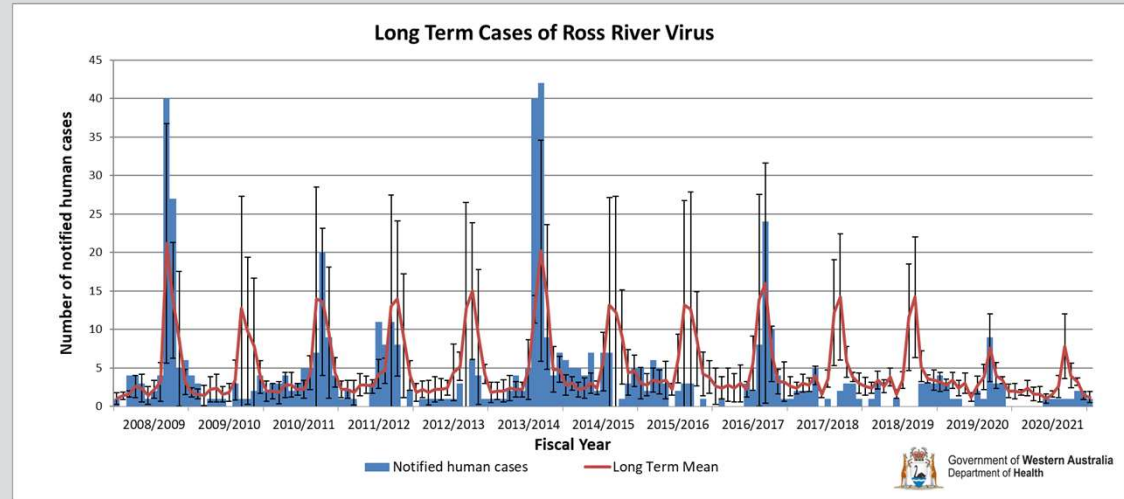
Data reflected in this summary of mosquito-borne disease is taken from the Western Australia Notifiable Infectious Disease Database (WANIDD) and includes enhanced surveillance data collected by Population Health Units and local governments (only locations with notified cases of disease are shown in tables and figures).

### Ross River virus (RRV) Pilbara Health Region

5 RRV cases for the Pilbara Health Region with all 5 cases notified by Doctor. Follow-up data is available for 1 case.

The number of cases was **significantly below** the 5-year moving average in April and May and **significantly above** average in June.

RRV 2021	Apr	May	Jun	Total
<b>Pilbara</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>5</b>
Ashburton (S)	1	2	1	4
ONSLow	1	2		3
TOM PRICE			1	1
<b>Karratha (C)</b>			<b>1</b>	<b>1</b>
POINT				
SAMSON			1	1
<b>Total</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>5</b>



# Barmah Forest virus disease case data summary

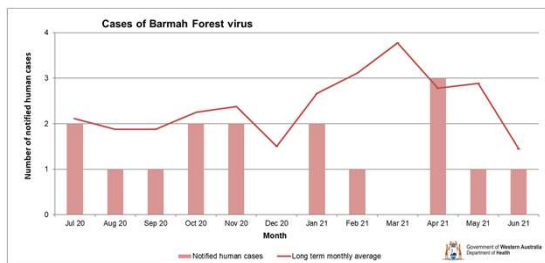
## Pilbara Health Region and State summary: Apr - Jun 2021

Data reflected in this summary of mosquito-borne disease is taken from the Western Australia Notifiable Infectious Disease Database (WANIDD) and includes enhanced surveillance data collected by Population Health Units and local governments (only locations with notified cases of disease are shown in tables and figures).

### Barmah Forest virus (BFV) Western Australia

A total of 5 cases of BFV have been reported between 1 April 2021 and 30 June 2021 in Western Australia. 4 were notified by Doctor and follow-up data is available for 2 of these cases.

The number of cases was below the 5-year moving average for May and June.

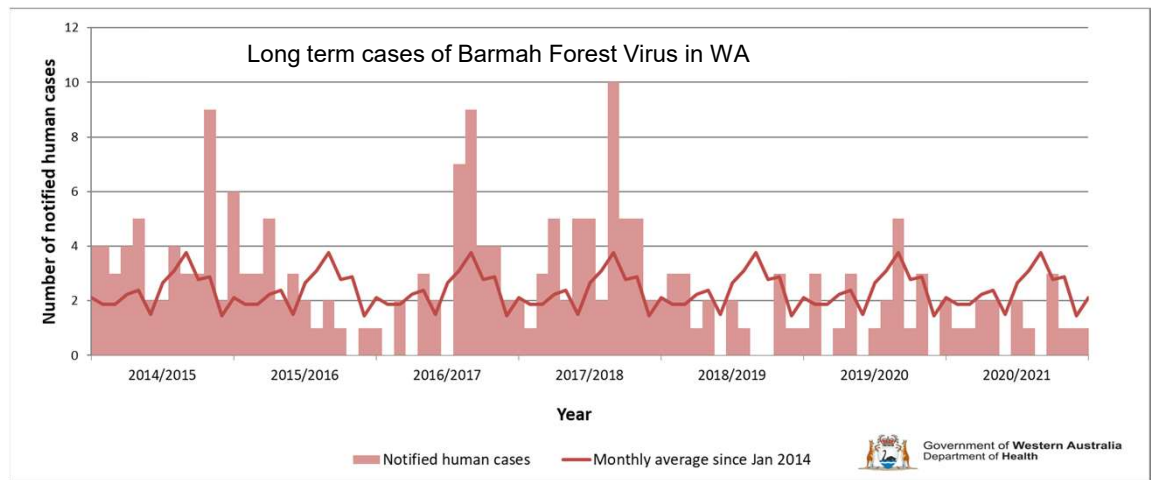


### Barmah Forest virus (BFV) Pilbara Health Region

No BFV cases in the Pilbara Health Region between April - June 2021.

The 5-year moving average is less than one case per month for this region.

Serologically confirmed doctor-notified and laboratory reported cases of Barmah Forest virus disease each month in WA, July 2020 - June 2021 #																
*Compiled by the Medical Entomology, WA Department of Health																
REGION	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total	Crude Rate	Age Std Rate	
KIMBERLEY	2	0	1	1	0	0	2	1	0	2	0	0	9	25.1	23.1	
PILBARA	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	
GASCOYNE	0	0	0	0	1	0	0	0	0	0	1	0	2	21.6	24.2	
MIDWEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	
WHEATBELT	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	
METRO	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	
PEEL	0	0	0	0	0	0	0	0	0	0	0	1	1	0.4	0.3	
LESCHENAULT	0	0	0	0	1	0	0	0	0	0	0	0	1	1.4	1.7	
GEOGRAPHE	0	0	0	1	0	0	0	0	0	1	0	0	2	3.5	3.4	
ELSEWHERE SW	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	
SOUTH WEST	0	0	0	1	1	0	0	0	0	1	0	1	4	0.9		
GREAT SOUTHERN	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	
GOLDFIELDS-ESPERANCE	0	1	0	0	0	0	0	0	0	0	0	0	1	1.8	1.6	
WA UNDETERMINED	0	0	0	0	0	0	0	0	0	0	0	0	0			
INTERSTATE	0	0	0	0	0	0	0	0	0	0	0	0	0			
<b>WA TOTAL (does not include interstate)</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>16</b>			



# Climate outlook for Western Australia Sep-Nov 2021

## Predicted impact of climatic conditions on mosquito breeding

The El Niño–Southern Oscillation (ENSO) remains neutral. Climate model outlooks indicate this neutral phase will last at least until October. The IOD is currently negative and predicted to last throughout spring. Despite this BOM are predicting lower than average rainfall across much of the state for the next few months.

**Impact on mosquito breeding:** In the north of state, warmer days and nights are conducive to mosquito breeding and possible mosquito-borne virus activity. Both MVE and Kunjin virus activity has been detected in some Kimberley and Pilbara sentinel chicken flocks from April through to August 2021.

### El Niño–Southern Oscillation (ENSO)

A weather forecast based on interaction between the atmosphere and tropical Pacific Ocean. Conditions can be El Niño, La Niña or neutral:

**El Niño:** Associated with drier conditions, decreased rainfall and tidal activity. Warmer days in south. Late start to northern wet season with less cyclones and less flooding.

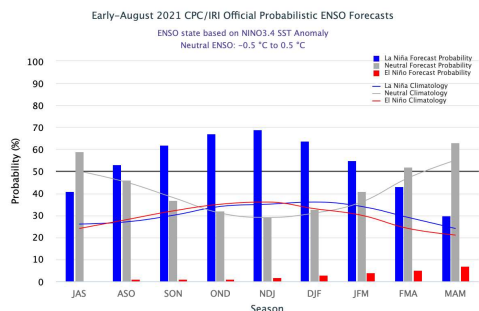
**La Niña:** Associated with wetter, cooler days and warmer nights (due to increased cloud cover). Earlier start to the northern wet season with more tropical cyclones. More conducive to mosquito breeding and possible mosquito-borne virus activity.

### Indian Ocean Dipole (IOD)

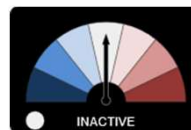
**Positive IOD:** Brings below average winter-spring rainfall, warmer days in the west, warmer nights in the south west, and cooler nights in the north.

**Negative IOD:** Brings above average winter-spring rainfall, cooler days in the south, and warmer nights in the north with increased chances of flooding.

## International Research Institute for Climate and Society (IRI ENSO) Forecast Issued 12 August 2021

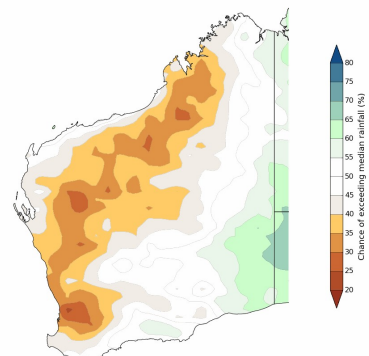


**ENSO Alert Status:** El Niño–Southern Oscillation likely to remain neutral to October



## Australian BOM Rainfall Outlook Issued 12 August 2021

Chance of exceeding the median rainfall for September to November 2021

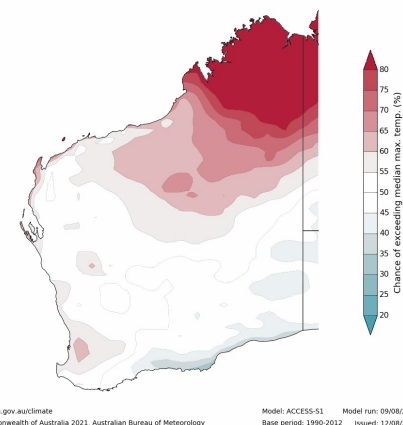


www.bom.gov.au/climate © Commonwealth of Australia 2021, Australian Bureau of Meteorology Model: ACCESS-S1 Base period: 1990-2012 Model run: 09/08/2021 Issued: 12/08/2021

**Despite the negative IOD, Rainfall is likely to be at or below average for most of the state.**

## Australian BOM Temperature Outlook Issued 12 August 2021

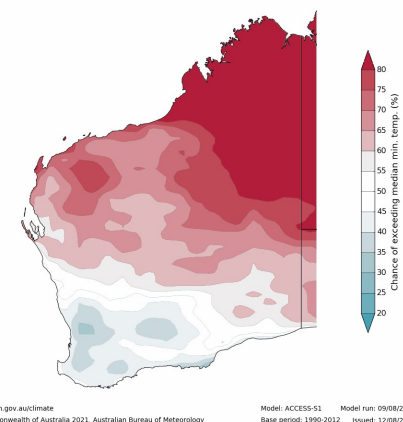
Chance of exceeding the median maximum temperature for September to November 2021



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**Daytime temperatures** are likely to be average for the state with the exception of the far north which is predicted to be above average.

Chance of exceeding the median minimum temperature for September to November 2021



www.bom.gov.au/climate © Commonwealth of Australia 2021, Australian Bureau of Meteorology Model: ACCESS-S1 Base period: 1990-2012 Model run: 09/08/2021 Issued: 12/08/2021

**Night-time temperatures** are very likely to be warmer than average across the north and cooler than average in the south.