



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

# Medical Entomology Quarterly Report

## North Metropolitan Health Region: Jan – Mar 2021



# Ross River virus disease case data summary

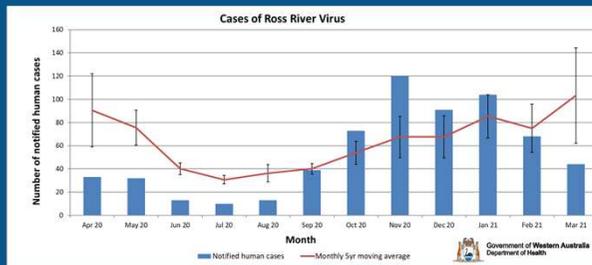
## Western Australia: 2020/21

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 213 cases of RRV have been reported between 1 January 2021 and 30 March 2021 in Western Australia. Of these 184 cases were notified by Doctor and follow-up data is available for 95 cases.

The number of cases was **above** the 5-year moving average for January and below average for February and March.

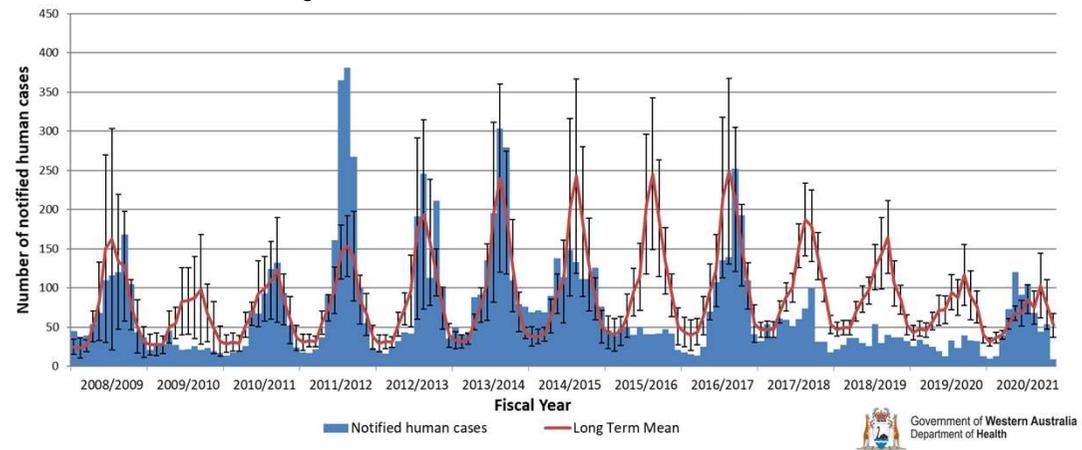


Serologically confirmed doctor-notified and laboratory reported cases of Ross River virus disease each month in WA, July 2020 - June 2021 #

\* 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	1	0	8	22.3	21.7
PILBARA	0	0	0	0	0	1	1	1	2	0	0	0	5	8.1	8.0
GASCOYNE	0	0	2	1	1	0	0	0	0	3	0	0	7	75.5	69.3
MIDWEST	0	6	11	13	5	2	2	1	0	5	0	0	45	75.0	73.1
WHEATBELT	0	0	2	1	3	3	1	2	0	0	0	0	12	17.6	17.4
METRO	4	1	5	6	6	14	16	31	20	22	5	0	130	7.2	6.9
PEEL	3	3	8	12	20	11	11	8	5	5	1	0	87	31.4	30.9
LESCHENAULT	1	0	4	6	18	8	10	4	3	6	2	0	62	83.7	81.4
GEOGRAPHE	1	2	5	29	54	33	10	2	2	2	0	0	140	242.3	234.6
ELSEWHERE SW	0	0	0	2	4	6	11	3	0	3	0	0	29	60.5	59.9
SOUTH WEST	5	5	17	49	96	58	42	17	10	16	3	0	318	69.6	
GREAT SOUTHERN	1	1	0	2	5	6	26	11	6	6	0	0	64	104.9	103.6
GOLDFIELDS-ESPERANCE	0	0	0	1	4	7	14	3	3	1	0	0	33	60.7	57.7
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	0	0	5		
<b>WA TOTAL (does not include interstate)</b>	<b>10</b>	<b>13</b>	<b>39</b>	<b>73</b>	<b>120</b>	<b>91</b>	<b>104</b>	<b>66</b>	<b>43</b>	<b>54</b>	<b>9</b>	<b>0</b>	<b>622</b>		

Long term cases of Ross River Virus in WA



# Ross River virus disease case data summary

## North Metropolitan Health Region: Jan – Mar 2021

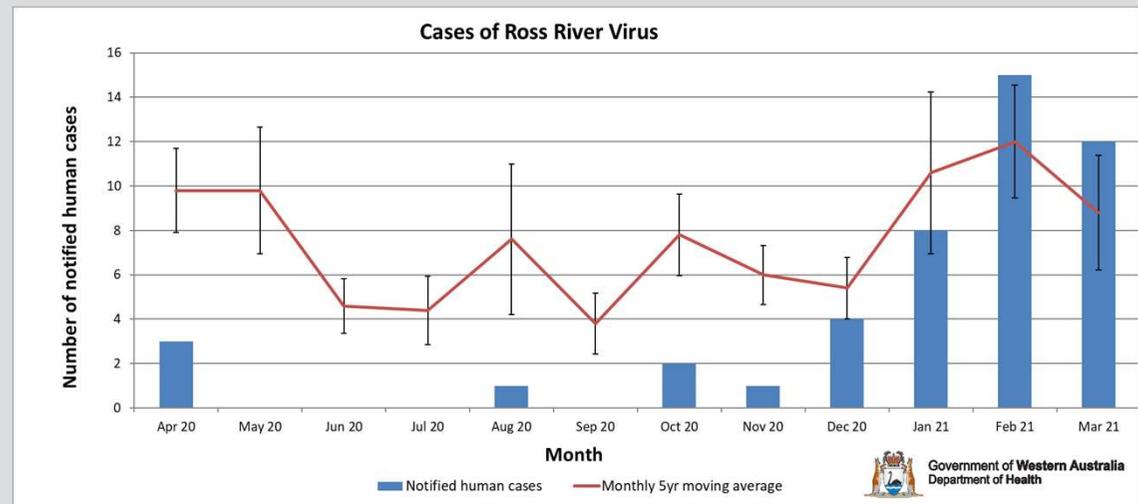
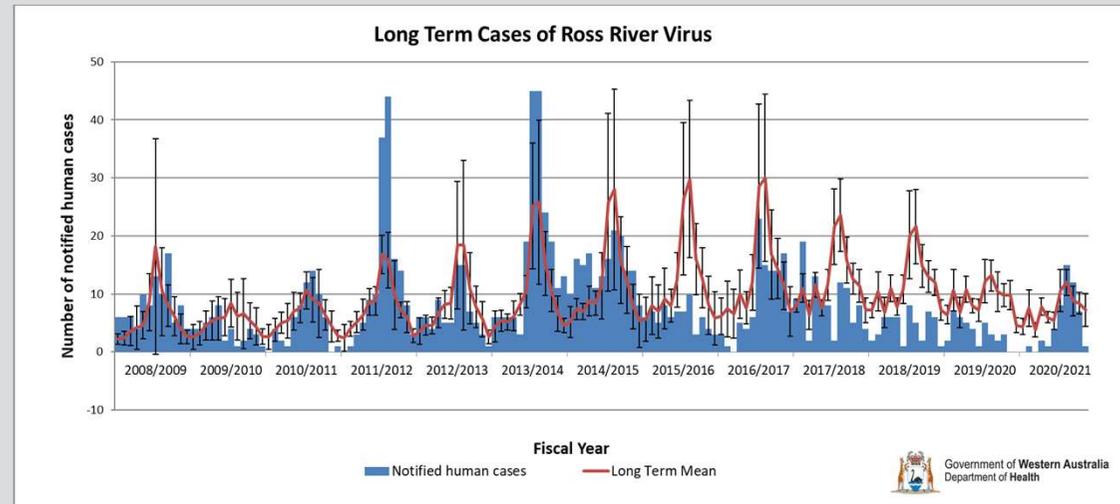


Data reflected in this summary of mosquito-borne disease is taken from the Western Australia Notifiable Infectious Disease Database (WANIDD) and includes enhanced surveillance data collected by Population Health Units and local governments (only locations with notified cases of disease are shown in tables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

### Ross River virus (RRV) North Metropolitan Health Region

35 RRV cases for the North Metropolitan Health Region with 29 cases notified by Doctor. Follow-up data is available for 10 cases. The number of cases was significantly above the 5-year moving average for February and March.

RRV 2021	Jan	Feb	Mar	Total
<b>Metro</b>	<b>8</b>	<b>15</b>	<b>12</b>	<b>35</b>
<b>Claremont (T)</b>		<b>1</b>		<b>1</b>
SWANBOURNE		1		1
<b>Cottesloe (T)</b>			<b>1</b>	<b>1</b>
COTTESLOE			1	1
<b>Joondalup (C)</b>	<b>2</b>	<b>5</b>	<b>4</b>	<b>11</b>
CRAIGIE		1		1
DUNCRAIG		1	1	2
ILUKA	1			1
JOONDALUP	1	2	1	4
KINGSLEY			1	1
SORRENTO			1	1
WOODVALE		1		1
<b>Nedlands (C)</b>		<b>1</b>		<b>1</b>
MOUNT CLAREMONT		1		1
<b>Stirling (C)</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>6</b>
CHURCHLANDS		1		1
DIANELLA	1			1
MIRRABOOKA			1	1
SCARBOROUGH		1		1
TUART HILL	1		1	2
<b>Swan (C)</b>		<b>1</b>	<b>2</b>	<b>3</b>
BALLAJURA		1	2	3
<b>Wanneroo (C)</b>	<b>4</b>	<b>5</b>	<b>3</b>	<b>12</b>
CARRAMAR	3			3
CLARKSON			1	1
HOCKING		1		1
MINDARIE		1		1
TAPPING			1	1
WANNEROO	1		1	2
YANCHEP		2		2
NOWERGUP		1		1
<b>Total</b>	<b>8</b>	<b>15</b>	<b>12</b>	<b>35</b>



# Barmah Forest virus disease case data summary

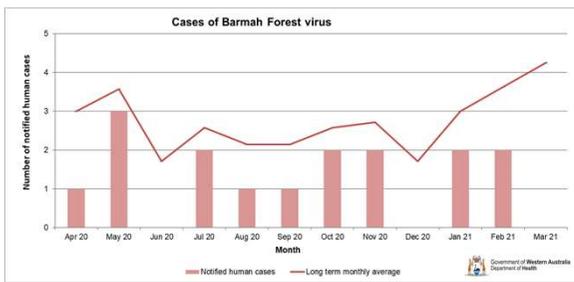
## North Metropolitan Health Region and State summary: Jan - Mar 2021

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 4 cases of BFV have been reported between 1 January 2020 and 31 March 2021 in Western Australia. 2 were notified by Doctor however follow-up data is unavailable for these cases.

The number of cases was below the 5-year moving average.



### Barmah Forest virus (BFV) North Metropolitan Health Region

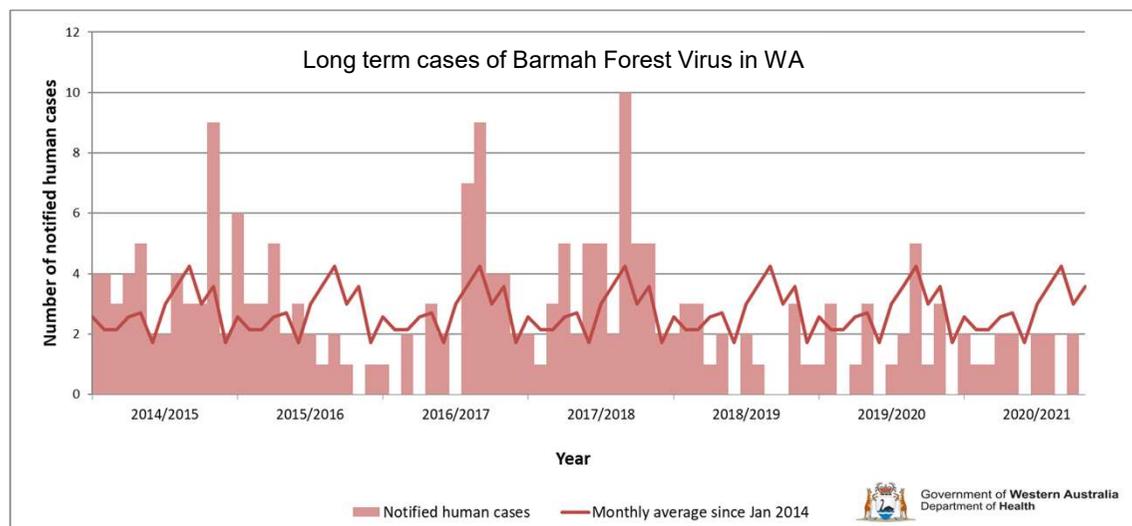
No BFV cases in the North Metropolitan Health Region between January - March 2021.

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	0	0	1	10.8	13.0
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	1	0	0	0	0	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	0	0	0	1	1.7	2.0
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	1	0	0	0	0	3	0.7	0.0
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>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>14</b>		



# Climate outlook for Western Australia

## Jun-Aug 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 September. The IOD is currently neutral, having less influence on WA's climate and most models suggest it will remain neutral at least through early winter.

**Impact on mosquito breeding:** In the north of state, above average rainfall conditions and warmer 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 during April and May 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.

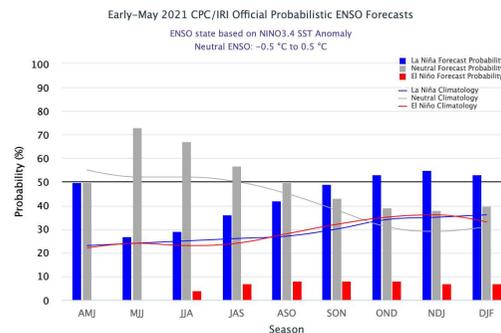
#### Indian Ocean Dipole (IOD)

**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.

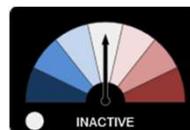
**Negative IOD:** Brings above average winter-spring rainfall, cooler days in the south, and warmer nights in the north with increased chances of flooding.

### International Research Institute for Climate and Society (IRI ENSO) Forecast

Issued 13 May 2021



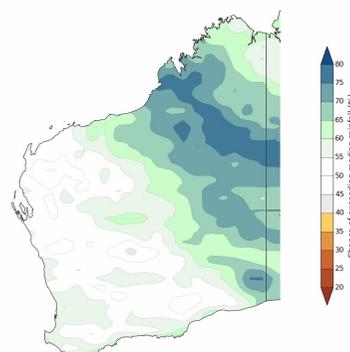
**ENSO Alert Status:** El Niño–Southern Oscillation likely to remain neutral for southern hemisphere winter



### Australian BOM Rainfall Outlook

Issued 06 May 2021

Chance of exceeding the median rainfall for June to August 2021



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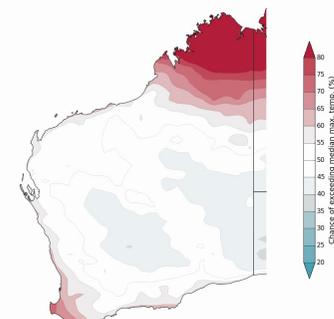
Model: ACCESS-G1 Model run: 03/05/2021  
Base period: 1990-2012 Issued: 06/05/2021

**Rainfall** is likely to be above average for northern and eastern WA. Average rainfall predicted for western WA.

### Australian BOM Temperature Outlook

Issued 06 May 2021

Chance of exceeding the median maximum temperature for June to August 2021

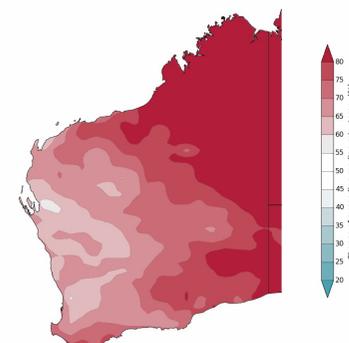


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Model: ACCESS-G1 Model run: 03/05/2021  
Base period: 1990-2012 Issued: 06/05/2021

**Daytime temperatures** are likely to be at or below average for the state with the exception of the far north.

Chance of exceeding the median minimum temperature for June to August 2021



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Model: ACCESS-G1 Model run: 03/05/2021  
Base period: 1990-2012 Issued: 06/05/2021

**Night-time temperatures** are very likely to be warmer than average across most of the state.