

SOUTH AUSTRALIAN MOSQUITO INTELLIGENCE REPORT

No. 33

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Mosquito virus testing: The Mosquitoes & Public Health Research group has used an arbovirus surveillance system to detect arboviruses in the mosquitoes captured in the trap runs throughout Jan/Feb and March 2014 which exploits the process whereby mosquitoes excrete virus in their saliva during feeding on honey soaked FTA (nucleic acid preservation cards) cards that are placed within the traps (see Fig. 1).

The cards were then analyzed for excreted virus by the ICPMR, Westmead Hospital in NSW. The advantage of using this method lies in the detection of viral RNA directly from the cards, rather than the mosquitoes and therefore being able to avoid costly and time-consuming analysis of mosquitoes. In previous field trials this method of viral detection has detected the presence of Ross River and Barmah Forest viruses.

After the 5 isolations were detected from the first batch (from January 2014), a further 16 detections of arboviruses (Ross River, Barmah Forest and Stratford) from February and March field collections have been reported. It is important to note that there have been virus detections from some of the same locations as reported from the trap collections in January.



(Fig. 1.)

Mosquito abundance: An increase in mosquito numbers has been reported in the last couple of weeks due to heavy rainfall events prior to the last trap run (3-4th of March) as potential larvae sites have been inundated. Mosquito numbers along the River are overall similar or lower for the March trap run than last year, GDP and St Kilda trap collections recorded an increase in numbers. Extensive treatment and control efforts have been implemented to reduce numbers.

Arbovirus risk prediction: RR Forecaster is currently predicting NO elevated risk of RRv transmission along the River Murray.

Detections were as follows:

Regional sites:

Goolwa – Stratford virus, Barmah Forest, Ross River
Goolwa North – Barmah Forest virus
Mypolonga – Stratford virus
Adelaide Hills (Mylor-Hahndorf area) – Stratford virus
Renmark – Ross River virus
Renmark – Ross River and Barmah Forest
(from motor less 'passive' trap)
Murray Bridge – Ross River virus

Metropolitan sites:

Globe Derby Park – Ross River virus (2 detections)
Port Adelaide – Ross River virus (2 detections)
Warriparinga – Ross River virus
Enfield – Barmah Forest virus

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Mosquito trap collection summary March 2013-14

