



## BORDER HEALTH NEWSLETTER - AUGUST 2011

### WELCOME!

Spring is here and although we had a few quite cool spells in winter with a few sprinkles of snow here and there overall the winter has been quite mild and with the trend continuing into this month things are looking good for a warm spring.

Mosquito activity has not dropped off completely this year, although health programmes have not turned up large numbers other programmes have found some decent populations of larvae and adults have been trapped through the winter months. All this suggests we may be in for large populations developing into summer and the nuisance biting and public complaints that are associated with that. Might be worth planning ahead for things to come.

And finally from me, as everyone is jumping onto the Rugby World cup roller coaster it is only fitting that we show our support, so I am sure you will join with me in wishing all the best to the Scottish team.

### INCURSIONS/INTERCEPTIONS

There was a single interception event in August:

On the 4<sup>th</sup> of August, two insect specimens were discovered while a container from Mexico was being devanned in Christchurch. MAF believed the specimens could be of exotic origin. On receipt at the lab they were identified as one male *Culex pervigilans* and one non-mosquito specimen.

### MOSQUITO SURVEILLANCE WORKSHOP

The annual Mosquito Surveillance workshop is being held from the 2<sup>nd</sup> to the 4<sup>th</sup> of November.

The workshop is designed for those of you who are looking for more hands on practical mosquito and invertebrate vector surveillance training and is a step up from the National Border Health Training course for those who wish for advanced training after attending the Border Health Course. The workshop consists of some class based background presentations followed up with hands on training in a range sampling and trapping methodologies, specimen handling, screening and processing and survey techniques, including a practical field exercise, and demonstrations of a range of treatment equipment.

The workshop shall be run at the Salty Dog Inn in Snells Beach and at various field sites. Anyone who is interested in attending should enrol soon. A course brochure with registration details can be found here [Mosquito Surveillance Workshop](#) (Click for link)

### SAMPLES

During August, 339 samples were collected by staff from 12 District Health Boards, with 43 positive. Sampling numbers were down on last month and on this time last year, however the number of positive samples was increased on both. The specimens received were:

Species	Adults	Larvae
<b>NZ Mozzies</b>		
<i>Aedes australis</i>	0	17
<i>Ae. notoscriptus</i>	4	790
<i>Culex pervigilans</i>	4	137
<i>Opifex fuscus</i>	0	3
<b>Exotics</b>	0	0
<b>TOTAL MOSQUITOES</b>	<b>8</b>	<b>947</b>



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**WEBSITE**

We agree! It has been a reasonably mild winter. The website has had a steady rate of enquiries from members of the public regarding mosquitoes and other flying insects and more frequently crawling insects. Codling moth and fruit flies are high on the nuisance scale!

In response we have added some new products particularly traps and lure based products which attract, catch and kill our ambivalent pest invertebrates. Make sure you take the time to familiarise yourself with what's on offer from time to time.

As always sampling equipment and consumables are available on purchase order to PHS clients.

We hope you are finding this on-line service useful and as always are interested to hear about other products you may wish us to include. Please feel free to contact us through the website, or email us directly at [taxonomy@nzbiosecure.net.nz](mailto:taxonomy@nzbiosecure.net.nz) or [enquiries@smsl.co.nz](mailto:enquiries@smsl.co.nz)

**MOSQUITO-BORNE DISEASES**

**Aedes notoscriptus – A Vector for Yellow Fever**

The abstract for this work can be viewed or the article purchased here: <http://www.ajtmh.org/content/85/3/446.abstract>

YELLOW FEVER - AUSTRALIA: VECTOR  
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A ProMED-mail post  
<<http://www.promedmail.org>>

Date: Tue 2 Aug 2011  
Source: ABC Radio Australia [edited]  
<<http://www.radioaustralia.net.au/connectasia/stories/201108/s3283651.htm>>

New research shows that Australia's most commonly found mosquito has the potential to transmit yellow fever. For many decades the deadly disease has been restricted to South America and Africa where it is spread by the so-called yellow fever mosquito -- *Aedes aegypti*. In Australia, *Aedes aegypti* exists in northern Queensland where it is responsible for dengue outbreaks. But scientists have found that a native mosquito found throughout Australia is able to transmit yellow fever [virus] and other nasty exotic viruses.

[speaker: Dr Andrew Van Den Hurk, research entomologist with Queensland Health]

[Mod.DHA contacted Dr Van Den Hurk, who indicated that the mosquito mentioned above is *Aedes notoscriptus* states, "This species is arguably the major domestic pest species in south eastern Australia; it has been incriminated as an important vector of dog heartworm, has been shown to be able to carry Murray Valley encephalitis, and transmit Ross River and Barmah Forest viruses in laboratory studies.

Any role as a vector of arboviruses remains unknown. Adults readily attack humans by day in shaded areas but also feed during evening, night, and early morning. It is found in New South Wales, Victoria, South Australia, Tasmania, (also Queensland, Northern Territory, and Western Australia); domestic and also sylvan in forested areas with tree-holes and/or rockpools."

Now, yellow fever virus can be added to the list of viruses that this mosquito can transmit experimentally. One hopes that yellow fever virus (YFV) will never arrive in Australia in a viremic human coming from a YFV endemic area in South America or Africa, but it is not beyond the realm of possibility, however remote the probability.



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## **Murray Valley Encephalitis**

Source: Govt. of W. Australia  
Media Statement 8<sup>th</sup> August

### **Mosquito-borne disease risk continues in the Kimberley and Pilbara regions**

The Department of Health is reminding people living and travelling in the Kimberley and Pilbara regions of WA to continue to take care against mosquito bites following further detections of Murray Valley encephalitis (MVE) virus.

Department of Health Medical Entomologist Sue Harrington said that the Department's surveillance program (undertaken by The University of Western Australia) had detected continued activity of the rare, but potentially fatal, MVE in the Kimberley and Pilbara.

"It is unusual to detect MVE virus so far into the dry season and it indicates ongoing and persistent activity of the virus," Ms Harrington said.

Nine Western Australians have been diagnosed with MVE contracted in northern and central WA this season. One person has died and another possible case of MVE infection is being investigated.

"Murray Valley encephalitis virus is carried by mosquitoes, and while the risk of being infected and becoming unwell is low, the illnesses can be severe and people should take sensible precautions to avoid mosquito bites," Ms Harrington said.

"Mosquito numbers are likely to be quite low, but our monitoring results show that it is still important to take measures to avoid mosquito bites," she said.

"Initial symptoms of MVE include fever, drowsiness, headache, stiff neck, nausea and dizziness and people experiencing these symptoms should seek medical advice quickly. In severe cases, people may experience fits, lapse into a coma, and may be left with permanent brain damage or die.

"In young children, fever might be the only early sign, so parents should see their doctor if concerned, particularly if their child experiences drowsiness, floppiness, irritability, poor feeding, or general distress.

Ms Harrington said that anyone experiencing these symptoms should seek medical advice quickly.

"There are no specific cures or vaccines for Murray Valley encephalitis virus, so it is very important that people take care to prevent being bitten by mosquitoes."

Ms Harrington said controlling mosquitoes in most rural regions of WA was generally not possible because of the large size and inaccessibility of natural mosquito breeding habitat.

People do not need to alter their plans to visit locations in the Kimberley or Pilbara regions, but it is important to avoid mosquito bites by taking a few simple steps, such as:

- avoiding outdoor exposure from dusk and at night;
- wearing protective (long, loose-fitting) clothing when outdoors;
- applying a personal repellent containing diethyl toluamide (DEET) or picaridin to exposed skin or clothing. The most effective and long-lasting formulations are lotions or gels. Most natural or organic repellents are not as effective as DEET or picaridin or need to be reapplied more frequently;
- ensuring insect screens are installed and completely mosquito-proof: use of mosquito nets and mosquito-proof tents is recommended; and



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- ensuring infants and children are adequately protected against mosquito bites, preferably with suitable clothing, bed nets or other forms of insect screening.

ENDS

**Media contact: +61 8 9222 4333**

## Photo of the Month

*Aedes notoscriptus*



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