



BORDER HEALTH NEWSLETTER - MAY 2013

WELCOME!

Hi everyone. Time again for your monthly instalment of mozzie related news! I've not seen any around here lately with the nasty southerly weather we've had, but I'm sure they're not far away and will turn up when the weather improves a bit. They're obviously still present in some areas, given the sizeable number of specimens collected this month.

INCURSIONS/INTERCEPTIONS

There were three interception callouts during May. The first two both occurred on the 2nd, one was a non mozzie and the other a female *Culex quinquefasciatus* found at a transitional facility in Christchurch. The last involved a live third instar *Aedes albopictus* larvae found in water on a used boat on a ship ex the USA at Ports of Auckland on 26 May.

MOZZIE PUZZLE TIME

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | S | I | A | N | T | I | G | E | R | B | I | T | E | M |
| K | P | V | B | E | N | F | E | D | Y | I | N | D | Z | N |
| N | L | U | Z | V | A | D | T | I | Z | R | Z | Z | L | S |
| B | H | M | P | K | L | U | A | C | X | D | U | T | E | A |
| X | D | C | C | V | L | F | W | I | F | B | H | R | G | F |
| D | G | U | T | T | E | R | S | T | T | A | Y | D | Z | A |
| L | I | W | G | I | P | N | S | S | F | T | D | U | S | S |
| P | X | S | G | M | E | C | O | E | U | H | B | Q | B | S |
| F | J | E | E | L | R | V | C | P | G | P | N | T | H | W |
| P | R | K | W | A | T | E | R | T | O | T | U | W | P | V |
| Z | N | Q | T | R | S | R | W | K | X | G | W | M | H | P |
| U | Q | C | O | V | I | E | M | R | Y | Y | D | G | P | L |
| G | H | X | G | A | K | C | H | F | C | S | P | N | O | A |

ASIAN TIGER
BIRD BATH
BITE
BUZZ
DISEASE
EGG
GUTTERS
ITCH

LARVA
PESTICIDE
PUPA
REPELLANT
SCRATCH
SWAT
TYRES
WATER

SAMPLES

During May, 817 samples were collected by staff from 11 District Health Boards, with 85 positive. Sampling numbers were up on last month and well up on this time last year. The number of positive samples was up from last year but down on last month. The specimens received were:

| Species | Adults | Larvae |
|-----------------------------|------------|-------------|
| NZ Mozzies | | |
| <i>Aedes antipodeus</i> | 4 | 0 |
| <i>Ae. notoscriptus</i> | 106 | 851 |
| <i>Culex pervigilans</i> | 3 | 107 |
| <i>Cx. quinquefasciatus</i> | 23 | 388 |
| <i>Opifex fuscus</i> | 0 | 3 |
| Exotics | | |
| <i>Aedes albopictus</i> | 0 | 1 |
| TOTAL MOSQUITOES | 136 | 1350 |

WEBSITE

Things have certainly quietened down over the last month with the onset of cooler temperatures.

Over the next few months is a great time to look for those areas holding water and either clear out to ensure water flows or fill in with sand and soil to prevent pooling. The facebook page has some links to news releases which you might find interesting.

<https://www.facebook.com/SMSL.MosquitoControl>

We are always happy to address any enquiries or matters you may wish to discuss. Please feel free to contact us through the website, or email us directly at enquiries@smsl.co.nz or taxonomy@nzbiosecure.net.nz.



NEW ZEALAND BIOSECURE

Entomology Laboratory



MOSQUITO-BORNE DISEASES

WEST NILE VIRUS - USA

Source: The Global Dispatch [edited] 14 May 2013 reported on ProMED Mail 16 May 2013

<http://www.theglobaldispatch.com/final-2012-west-nile-numbers-released-by-cdc-israeli-researchers-suggest-global-warming-contributes-to-the-outbreak-of-mosquito-borne-disease-11677/>

As promised, the US Centers for Disease Control and Prevention (CDC) have released the final data for West Nile Virus in the US for 2012. According to the federal health agency numbers, "In 2012, all 48 contiguous states, the District of Columbia, and Puerto Rico reported West Nile virus infections in people, birds, or mosquitoes. A total of 5674 cases of West Nile virus disease in people, including 286 deaths, were reported to CDC. Of these, 2873 (51 per cent) were classified as neuroinvasive disease (such as meningitis or encephalitis) and 2801 (49 per cent) were classified as non-neuroinvasive disease. The numbers of neuroinvasive, non-neuroinvasive, and total West Nile virus disease cases reported in 2012 are the highest since 2003." The number of deaths is the highest since cases of WNV disease were 1st detected in the United States in 1999.

In 2012, 62 per cent of all reported West Nile virus cases were concentrated in California, Louisiana, Michigan, Mississippi, Oklahoma, South Dakota, and Texas. Texas reported 33 per cent (1877) of all reported West Nile virus cases in 2012. Dallas County, Texas alone accounted for 405 human cases of WNV.

The CDC says, "Last summer's [2012] outbreak likely resulted from many factors, including higher-than-normal temperatures that influenced mosquito and bird abundance, the replication of the virus in its host mosquitoes, and interactions of birds and mosquitoes in hard-hit areas. Because the factors that lead to West Nile virus disease outbreaks are complex, CDC cannot predict where and when they will occur."

New research from the University of Haifa in Israel piggybacks on the CDC's "higher-than-normal temperatures" statement. In the study commissioned by the European Centre for Disease Prevention and Control (ECDC) in Stockholm, researchers found that rising temperatures have a more considerable contribution than humidity, to the spread of the disease, while the effect of rain was inconclusive.

"These results are an additional testament that global warming contributes to the outbreak of mosquito-borne and other temperature-sensitive vector-borne diseases. The indications to this are piling up in different parts around the globe", says Dr Shlomit Paz, who led this research. These findings were recently published in the online scientific journal, PLoS One.

[Reference

Paz S, Malkinson D, Green MS, et al: Permissive summer temperatures of the 2010 European West Nile fever upsurge. PLoS One. 2013;8(2):e56398.

doi: 10.1371/journal.pone.0056398; available at

<http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0056398>]

YELLOW FEVER: AFRICA (ETHIOPIA)

Source: WHO Global Alert and Response (GAR), Disease Outbreak News [edited] 31 May 2013 reported on ProMED Mail 2 Jun 2013

http://www.who.int/csr/don/2013_05_31/en/

The Ministry of Health of Ethiopia is launching an emergency mass vaccination campaign against yellow fever from 10 Jun 2013. This is in response to laboratory confirmation of 6 cases in the country on 7 May 2013.

The campaign aims to cover more than 527 000 people in the 6 districts of South Ari, North



NEW ZEALAND BIOSECURE



Entomology Laboratory

Ari, Benatsemay, Selamago, Hammer, and Gngatom and one administrative town (Jinka) in South Omo Zone of the Southern Nations, Nationalities and Peoples' region (SNNPR) of Ethiopia.

The laboratory confirmation was done by Institute Pasteur in Dakar, Senegal, a WHO regional reference laboratory for yellow fever.

The International Coordinating Group on Yellow Fever Vaccine Provision (YF-ICG11) will provide over 585 800 doses of yellow fever vaccine for the mass vaccination campaign run by the Ministry of Health in Ethiopia, with support from the GAVI Alliance [Global Alliance for Vaccines and Immunization] and other partners. WHO is closely supporting the outbreak investigation, capacity building for case management, resource mobilization for outbreak management, and monitoring preventive and control activities in the field.

Photo of the Month



The 6 laboratory confirmed cases are from South Omo, in the Southern Nations, Nationalities and Peoples' region. The cases were identified through the national surveillance programme for yellow fever. The index case was a 39 year old man who presented with fever and jaundice and haemorrhagic signs in January 2013. He was laboratory confirmed by IgM (antibody test). Differential diagnosis for other flaviviruses was negative.

This is a photograph of the third instar *Aedes albopictus* larval specimen collected as part of the last interception callout for May. This is an example of how uncleared, unmounted larval specimens usually appear ready for identification.