



## BORDER HEALTH NEWSLETTER - MARCH 2013

### WELCOME!

Hi everyone. Hard to believe the Easter Bunny has come and gone, daylight saving has ended and we're well on our way into April! At last there's been some rain around the country and even some snow on the Alps west of Christchurch this week, so most of you should be breathing a little easier about the water situation in your part of NZ. The mozzies should be feeling the colder temps and hopefully will start to reduce in numbers from here on out.

### INCURSIONS/INTERCEPTIONS

There were three interception callouts during March; the first was an adult male *Culex quinquefasciatus* found in a devanning site in Auckland which is considered to be of local origin. The second was a damaged specimen found in the MPI laboratory area of Auckland International Airport which wasn't forwarded for identification and the third involved two *Aedes vigilax* females which flew out of a tent while being inspected at the Declared Baggage area of Christchurch International Airport. The traveller had just flown in from Sydney, Australia.



*Hope you had a Happy Easter!*

### SAMPLES

During March, 918 samples were collected by staff from 11 District Health Boards, with 235 positive. Sampling numbers were up slightly on last month and on this time last year. The specimens received were:

| Species                      | Adults     | Larvae      |
|------------------------------|------------|-------------|
| <b>NZ Mozzies</b>            |            |             |
| <i>Aedes australis</i>       | 1          | 8           |
| <i>Ae. notoscriptus</i>      | 240        | 1589        |
| <i>Coquillettia iracunda</i> | 1          | 0           |
| <i>Culex pervigilans</i>     | 2          | 839         |
| <i>Cx. quinquefasciatus</i>  | 171        | 2393        |
| <i>Opifex fuscus</i>         | 0          | 5           |
| <b>Exotics</b>               |            |             |
| <i>Aedes vigilax</i>         | 2          | 0           |
| <b>TOTAL MOSQUITOES</b>      | <b>416</b> | <b>4834</b> |

### WEBSITE

We have been updating the "Pest" webpage with more information regarding public health nuisance pests, including two sub pages with commonly asked questions regarding mosquitoes and some more detail on dust mites which we commonly receive enquiries about. We have also added some information about S-methoprene and how it works (<http://www.smsl.co.nz/Pests.html>). If there is more specific information regarding any pests please let us know.

Don't forget newsletters and reports are able to be downloaded from the website and if you can't find something please let us know. Mosquito species profiles can be downloaded from

<http://www.smsl.co.nz/Services/New+Zealand+BioSecure/New+Zealand+Mosquitoes.html>.

We hope you are finding this on-line service useful and 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](mailto:enquiries@smsl.co.nz) or [taxonomy@nzbiosecure.net.nz](mailto:taxonomy@nzbiosecure.net.nz).



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## MOSQUITO-BORNE DISEASES

### EASTERN EQUINE ENCEPHALITIS - USA: (FLORIDA)

**Source:** WTSP [edited] 25 Mar 2013

<http://www.wtsp.com/news/health/article/306969/12/Health-Alert-1st-human-case-of-encephalitis-in-2013-reported>  
reported on ProMED Mail 27 Mar 2013

The Florida Department of Health, Hillsborough County, has confirmed the 1<sup>st</sup> human case of locally acquired Eastern equine encephalitis (EEE) [virus infection] for 2013.

Health officials say the individual was most likely infected earlier this month in the northwestern part of Hillsborough County.

The unidentified person is currently being treated for the virus and is "doing well," according to the county's FDH Director Dr. Douglas Holt. Holt says while seeing a case of EEE this early in the year is unusual, it's not surprising given the very mild winter we've had locally.

Eastern equine encephalitis is a rare disease that is caused by a virus spread by infected mosquitoes. The EEE virus is one of a group of mosquito-transmitted viruses that can cause inflammation of the brain (encephalitis).

In the United States, approximately 5-10 EEE cases are reported annually. EEE [virus] is only transmitted through the bite of an infected mosquito, and does not occur directly from person to person.

The Florida Department of Health, Hillsborough County is working closely with Hillsborough County Mosquito and Aquatic Weed Control to reduce the risk of mosquito-borne disease throughout the county.

[The occurrence of a human case this early in the season does not bode well for the remainder of the year. EEE virus is endemic in Florida.

The statement that the patient is doing well is good news. The USA CDC points out that "EEE is one of the most severe mosquito-transmitted diseases in the United States with approximately 33 per cent mortality and significant brain damage in most survivors." (<http://www.cdc.gov/EasternEquineEncephalitis/>).

EEE virus infection in equine animals is also serious, and owners should have their animals vaccinated routinely. Unfortunately, there is no commercially available vaccine for humans. The best way to prevent infection is to avoid mosquito bites. Many local health departments also have mosquito control programs.]

## SANDFLY-BORNE DISEASES

### LEISHMANIASIS – SYRIA

**Source:** Today's Zaman [edited] 28 Mar 2013

<http://www.todayszaman.com/news-310925-leishmaniasis-outbreak-rings-alarm-bells-at-turkish-syrian-border.html>  
reported on ProMED Mail 29 Mar 2013

Approximately 100 000 people have been infected with the leishmaniasis parasitic disease in the past 2 years after civil war broke out in Syria, compared with before the conflict when the number of cases in Syria had been reduced to 3000-4000 as a result of joint efforts by Turkish and Syrian authorities.

The increase in the number of patients suffering from the disease is alarming not only for Syria but for Turkey as well, since leishmaniasis has also reached Turkey.

Opposition forces who have been leading an uprising against Syrian President Bashar al-Assad's rule have asked Turkey to deliver 10 000 boxes of Glucantim [supposedly the meglumine antimoniate Glucantime], a medicine used to treat leishmaniasis, which amounts to one month's treatment of 20 000 people.



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However, there has been no positive response from the Turkish side yet. Fake Glucantim is being produced and sold for 50 percent less than the normal price for the medicine in Aleppo.



Syria Location Map ex

<http://www.dispatch.com/content/stories/national/world/2012/10/04/turkey-fires-on-syrian-targets.html>

Dr. Kerem Kinik, coordinator of the Association of Earth Doctors, told Today's Zaman that his organization has been working to help the Syrians fight the disease. "We'll provide assistance to fight the disease, starting with sending medicine. This step is also important to protect our country [Turkey] from the disease," he said.

The number of doctors in Syria has dropped dramatically from 30 000 to 5000, and 57 percent of the hospitals have been damaged in the conflict, according to Kinik.

Before the civil war in Syria, the number of leishmaniasis patients had been reduced to a great extent after studies carried out in 45 centers in 14 provinces across the nation. After a Syrian health official fled to Canada following the start of the conflict in the country, the battle against the disease was halted.

Experts argue that the nation also faces typhoid, cholera and tuberculosis epidemics.

Turkey imports leishmaniasis medicine via the Turkish Pharmacists' Association (TEB). TEB Secretary General Harun Kizilay told Today's Zaman that Turkey could bring the drugs to

combat the disease for Syrians should the Turkish Prime Ministry's Disaster and Emergency Management Directorate (AFAD) submit a request at the Health Ministry.

Professor Fatih Koksul, from Cukurova University's department of microbiology and clinical microbiology, said *Leishmania infantum*, a parasite that causes leishmaniasis, has been more common in Turkey in the recent years. "There was one case each in 2005 and 2010. But now, 30 out of every 100 cases are caused by this parasite. Measures need to be taken," he urged.

Koksul said he visited the buffer zone between the Cilvegozu and Bab al-Hawa border gates and observed poor conditions there that might lead to other epidemics. "The passage of people [from Syria] to Turkey has increased the frequency of diseases in Turkey."

The symptoms of leishmaniasis are skin sores, fever and anemia and may result in spleen and liver problems. The disease can be fatal if not treated. The disease is transmitted by certain species of sandfly and later passes on to humans from animals, including dogs.

[This is probably cutaneous leishmaniasis, which is the most common form of leishmaniasis in Syria.]



An adult sand fly such as can transmit leishmaniasis - not to be confused with NZ blackflies commonly referred to as "sandflies".



## Photo of the Month



### ***Culex quinquefasciatus* adult female**

*Culex quinquefasciatus* is one of the most widespread mosquitoes in the world. It is an introduced species in New Zealand and is now one of the most commonly occurring mosquitoes after *Culex pervigilans* and *Aedes notoscriptus*. Originally this species' range was restricted to areas around ports of entry through which it was introduced, but this range has expanded.

Since its likely arrival in the 1830's (Sandlant, 2002), *Culex quinquefasciatus* has been intercepted at the border on many occasions. It

has also been intercepted breeding in gully traps near Auckland international airport), containers at Ports of Auckland and the Devonport Naval Base.

It is a domesticated species which is often found living in close proximity to humans. Nocturnal biters, the females will readily bite man indoors and out, but will also bite birds, pigs, horses, cattle, sheep, dogs, rabbits and even amphibians.

It usually breeds in organically rich and polluted surface waters or artificial containers. It has been found breeding in shallow ponds within streams and artificial habitats such as drains and drain sumps, wells, oxidation ponds at sewage treatment plants, stock drinking troughs, septic tanks, rain water containers, tyres and various other small containers. It may also be found utilising the same container for breeding as other species.

The adults do not usually disperse greater than one kilometre from a release or hatching point and remain close to breeding habitat and host sources. Adult females are anautogenous and so must consume a blood meal before laying the first batch of eggs.

Please refer to the full mosquito profile for this species at:

<http://www.smsl.co.nz/site/southernmonitoring/files/NZB/Cx.%20quinquefasciatus%20new%20profile%20Feb%2008.pdf>