



## BORDER HEALTH NEWSLETTER – FEBRUARY 2014

### WELCOME!

Welcome everybody! We hope you are enjoying the year so far- it seems to be disappearing rather quickly- February has flown by & the mornings are getting a lot darker.

February 2014 was characterised by anomalously high pressure to the south of New Zealand and anomalously lower pressures to the northeast of the country. This set up resulted in a predominantly southeast wind flow over the country for the month. Consequently, this contributed to the abnormally dry conditions in western and central areas of the North Island. In contrast, this supported higher than normal rainfall for eastern coastal sections of the North Island. Temperatures for much of New Zealand were near average (within 0.5°C of February average). Exceptions to this were localised areas of above average temperatures such as Auckland, Hamilton, and central North Island (0.5-1.2°C above February average). Above average temperatures were recorded in Reefton and Arthurs Pass as well as parts of south Canterbury, Central Otago and Fiordland. Pockets of below average temperatures (0.5-1.2°C below February average) were experienced for Wellington, northern portions of Hawke’s Bay and far northern parts of the South Island.

**If you would like to see NIWAs full outlook for your area you will find it here:**

<http://www.niwa.co.nz/node/110036>

### INCURSIONS/INTERCEPTIONS

There was only one interception event during February. It involved a *Culex quinquefasciatus*, likely of local origin.

### SAMPLES

During February, 1026 samples were collected by staff from 12 District Health Boards, with 303 positive. Samples collected were slightly lower than last month but more than this time last year. Of the positive samples found, larval numbers were the slightly lower than last month, and last year. Adults were significantly higher than last month but lower than this time last year. The specimens received were as follows:

Species	Adults	Larvae
<b>NZ Mozzies</b>		
<i>Ae antipodeus</i>	2	0
<i>Ae. notoscriptus</i>	345	1462
<i>Culex pervigilans</i>	18	1687
<i>Cx. quinquefasciatus</i>	1068	1258
<i>Cq iracunda</i>	8	0
<i>Cq tenuipalpis</i>	5	0
<i>Opifex fuscus</i>	0	84
<i>Ae australis</i>	0	19
<b>TOTAL MOSQUITOES</b>	<b>1446</b>	<b>4510</b>

### INSECT-BORNE DISEASES

#### Invasive Mosquito - Australia: (Northern Territory)

A rare dengue fever-spreading mosquito- thought to have been eradicated from the [Northern] Territory [NT] in 1969- has reappeared in Darwin Harbour.

Between April and December [2013], 5 different invasions were detected between Toll Marine Logistics at Frances Bay and East Arm Wharf.

Yellow fever mosquitoes, or *Aedes aegypti*, were discovered in an insect trap at the Toll Marine Logistics dock on Frances Bay Drive in April, according to a recent bulletin from the Centre for Disease Control (CDC).

And Asian tiger mosquitoes [*Aedes albopictus*] were also found in traps at East Arm Wharf in August, December, and at Toll in August.

*Aedes aegypti* are normally only found in northern coastal Queensland.

The 1st batch of mosquitoes were thought to



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have arrived on the international cargo ship Kathryn Bay on 22 Apr [2013].

Mosquito eggs were also discovered in traps the following month but no other specimens were found. The larvae and pupae were thought to have come from a female mosquito from the cargo ship Starbird, which had previously stopped in Gove and Cairns before arriving in Darwin on 9 May [2013].

Traps were set and surveys completed of both boats when the ships were in port.

The port area, including adjoining properties Frances Bay Marine and Paspaley, were sprayed and "fogged" to eradicate mozzies.

Exotic mosquitoes have shown up in the port in the last 12 years, but only once before have as many as 5 incursions been detected. "Increased numbers of incursions are concerning and action should be taken," CDC medical entomologists Nina Kurucz and William Pettit said in the report. The report recommends targeting high-risk cargo with barrier spray. It also called for immediate inspections of risk cargo by the Agriculture Department and inspections on ships coming from Queensland to the Territory.

"(This) once again demonstrated the vulnerability of the Darwin port area as an entry point for exotic mosquito vectors in the NT and the importance of routine vector surveillance and control operations in such areas to keep the NT free of exotic vectors and disease," the report said.

"\_Aedes aegypti\_ ... pose a real threat to the NT, with the Darwin and other NT port areas particularly vulnerable to the importation of such vectors."

The report also recommended "to minimise the potential for future exotic vector incursions in the NT, a revision of current procedures should be considered."

[\_Aedes aegypti\_ and \_Ae. albopictus\_ are

efficient vectors of dengue and chikungunya viruses, hence the concern about them becoming established in the Northern Territory (NT). There have been sporadic dengue outbreaks in northern Queensland state. Since these mosquitoes were detected in Darwin from April to December 2013, and no further mention was made for their presence at a later date, we presume that they were eliminated by the vector control measures that were implemented. This above situation has 2 important lessons: 1) Ongoing surveillance is essential to early detection and rapid response is required for elimination. And 2) these 2 \_Aedes\_ species are notorious for being disseminated to other localities through human activity, and can easily become established. The above report is correct; these mosquitoes pose a real threat to the NT.

A HealthMap/ProMED-mail map showing the location of Darwin in the Northern Territory can be accessed at <http://healthmap.org/r/27QR>.

Date: Sat 22 Feb 2014 Source: Herald Sun

### **"Deadly Fever" fears for NZ**

An outbreak of dengue fever that has killed three people and swamped hospitals in Fiji may be headed for New Zealand, experts warn.

For the first time all four known serotypes of the virus are active in the region, threatening the severe and potentially deadly dengue haemorrhagic fever.

In New Zealand the latest figures (December 2013) show a 41 per cent jump in the monthly reported cases of dengue, most of them in Auckland.

Reports from around the Pacific show a dengue epidemic has potential to hit New Zealand, having already swept through northern Queensland, New Caledonia, French Polynesia and the Solomon Islands.

In Fiji, where there have been 2589 confirmed cases, the military regime claims there is "little chance" that the fever will hit its lucrative tourist belt.

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Dr Mary McIntyre, of the University of Otago's Ecology and Health Laboratory in Wellington, does not rule out mosquitoes capable of spreading dengue from getting established here.

"We are creating situations that make things easier for those pests and pathogens that already cause us woe," she says.

Travel was spreading the virus and trade could bring in the mosquitoes, such a dengue's main vector *Aedes aegypti*.

Land use is also changing in New Zealand making it favourable for mosquitoes.

"A warmer climate means that foreign mosquitoes can move into areas that were previously too cool, where they usually replace native ones," she said, noting this had recently happened in Palmerston North.

McIntyre says if Asian tiger mosquitoes escaped biosecurity measures and became established, it could act together with the resident striped mosquito to spread dengue infection.

McIntyre says New Zealanders who get dengue abroad recover back home but are "at risk of a more serious haemorrhagic condition [if] reinfected in the future with a different strain of dengue virus".

Fiji's Ministry of Information says most of the dengue cases there have hit Suva. The main resort island of Denarau had recorded no cases.

Australian Broadcasting Corporation Fiji reporter Samisoni Pareti visited Lautoka Hospital last month where large numbers are overwhelming medical staff.

"What I saw that night was a very pitiful sight, the out-station emergency area was being taken up by patients seeking medical treatment," he said.

Widespread insecticide spraying was launched last week in Fiji's central district.

As many as 400 million people are infected by dengue annually, with 20,000 deaths in 125 countries. It has emerged as a global problem

only since the 1950s and urbanisation. There are no vaccines and no drugs to control it.

'THERE IS NO MEDICINE FOR DENGUE' Dengue fever might sneak up on you gently at first - a bit of a sore throat, maybe a few mild dizzy spells.

A few days later you may experience the worst muscle pain of your life, you might feel your body cramping and your joints swelling. You might have hot flushes, an irritating rash or stabbing eye pain under certain types of light.

They call dengue "break-bone" fever because of the intense joint pain, but it doesn't start contorting your body until about day four. At least, that's how it happened for me.

At first I put my sore throat and intense headaches down to being in a new country, a new climate, maybe some not so sanitary mee goreng.

It was the rainy season of 2010. Jakarta was crowded, impossibly humid and in the midst of one of its worst-ever dengue epidemics.

Our guest-house cleaners sprayed mysterious chemicals around the walls to guard against mosquitoes and warned about staying clear of stagnant water.

It didn't seem to help.

I knew something was seriously wrong when my legs seized up in the street and I fainted.

I came to on my back on the busy footpath with a dozen or so locals peering down at me, muttering excitedly and fanning my face.

Embarrassed, I dragged myself to a taxi and asked for the nearest medical centre. I was told I needed immediate hospitalisation.

For seven nights I lay in a hospital bed, hooked up to a hydrating drip. A nurse had to help me shower in case I passed out.

There is no medicine for dengue, only rest and hydration. I was given papaya juice as it was believed to help.



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Every night at around the same time I would jerk awake, body twisted in pain, bathed in a pool of sweat.

My bones felt like they were being wrung dry, my mind was constantly racing from the most vivid nightmares.

Every morning the doctors would come in with and give me that day's news, my platelet count was dropping again and there was nothing they could do.

A healthy person's platelet count will be somewhere above 150,000, at the worst stages of the fever my levels fell to 25,000.

Every afternoon my travel insurance company would call me to "check in" and see when I thought I might be out of hospital.

I was physically exhausted just by moving around in bed. My mind would blank and my eyes would hurt if I tried to read a book.

I watched bad television and ate hospital food, the quality of which didn't matter because I was always ravenous. I still lost about 6kg that week.

Finally, just as my platelet levels were nearing life-threatening levels and the doctors were discussing blood transfusions and medivacs to Singapore, I bounced back.

Unlike malaria, which can stay with a person for a long time, dengue is often quick and sharp. It beats you up then leaves you alone. The fever eased, the joint pain subsided and my blood tests returned to near normal levels over the next week.

Over the next month, my energy levels slowly recovered.

I now have immunity against that particular strain of dengue, unfortunately there are three other types which my body won't recognise, meaning complications if I were to be exposed to a new strain of the virus.

With reported dengue outbreaks closer to home, New Zealand has to ensure it guards against this virus. It's not an experience I would want

anyone else to suffer and I certainly never want to go through it again.

-Shabnam Dastgheib is a Fairfax NZ journalist. SOURCE: stuff.co.nz

## Chikungunya – Caribbean

In this update:

- [1] Merida, Mexico: suspected
- [2] PAHO update
- [3] ECDC summary
- [4] French Antilles

[1] Merida, Mexico: suspected

Date: Fri 28 Feb 2014

Source: Examiner [summarized and edited]

Dr. Scott Weaver, Director of the Institute for Human Infection and Immunity at the University of Texas Medical Branch in Galveston, TX, confirmed to the Houston Chronicle on 26 Feb [2014] that there are suspected cases of chikungunya in the area of Merida, Mexico.

During a telephone interview on 24 Feb [2014] with this reporter, he mentioned that a colleague was investigating those reports. The difficulty in confirming the appearance of chikungunya on the Yucatan Peninsula, he said, was the inability to test for the illness locally. Specimens may have to be brought to Galveston for testing.

This report is of significant concern, possibly as the 1st reported instance of chikungunya cases in North America in an area of active dengue virus (DENV) transmission. If these are, indeed, cases of CHIKV infection, there are no barriers to its spread southward into Central America and beyond.

ProMED will be very interested in the results of the laboratory tests confirming or discarding the etiology of these cases as due to CHIKV infection.

[2] PAHO update

Date: Fri 28 Feb 2014

Source: PAHO/WHO [edited]

Country / Week / No. Cases / Deaths



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#### Latin Caribbean

French Guiana / 9 / 17 (7 imported) / 0  
Guadeloupe / 9 / 476 (3 imported) / 0  
Martinique / 9 / 1058 / 1 (co-morbidity)  
St. Barthelemy / 9 / 127 / 0  
St. Martin / 9 / 765 / 2 (indirectly related to CHIKV infection)

#### Non-Latin Caribbean

Anguila / 8 / 11 (1 imported) / 0  
Aruba / 6 / 1 (imported) / 0  
Dominica / 9 / 56 (1 imported) / 0  
St. Kitts & Nevis / 8 / 1 / 0  
St. Maarten / 6 / 65 / 0  
UK Virgin Islands 5 / 5 / 0

Total cases: 2582; Deaths 3 [not directly related to CHIKV infection. Mod.JW]

[The above are confirmed or probable cases and do not include numbers of suspected cases, which are much higher (see ECDC report below).

Roland Hubner wonders what will happen when spring break students return to their home countries after their holidays in chikungunya affected islands. Ongoing transmission following their return will depend on the availability of mosquito vectors.

This moderator wonders what happens when infected individuals from the affected islands travel to dengue-endemic countries, such as Brazil, where carnival, which has just begun, attracts tourists from all over the world.

Maps showing the location of the localities where CHIKV is occurring can be accessed at <<http://www.worldatlas.com/webimage/countrys/namerica/caribb/ai.htm>>, at <<http://healthmap.org/r/9NLv>>, and at <<http://healthmap.org/r/4cwR>>. - Mod.TY]

#### [3] ECDC summary

Date: 23 Feb-1 Mar 2014  
Source: ECDC communicable Disease Threats Report; Week 9 [edited]

#### Epidemiological summary:

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Cases reported as of 28 Feb 2014: Virgin Islands (UK), 6 confirmed cases; Saint Martin (FR), 2030 suspected and 765 confirmed or probable cases; St. Maarten (NL), 115 confirmed autochthonous cases; Martinique, 3940 suspected and 1058 confirmed or probable cases; Saint Barthelemy, 380 suspected and 127 confirmed or probable cases; Guadeloupe, 1460 suspected and 476 confirmed or probable cases; Dominica, 45 confirmed cases (1 imported) and 44 autochthonous cases; French Guiana, 17 confirmed cases, 10 of which are autochthonous cases; Anguilla, 11 confirmed cases on the island with one case probably originating from Saint Martin; Aruba, one imported case originating from St. Maarten; St. Kitts and Nevis, one confirmed case.

#### ECDC assessment:

Epidemiological data indicate that the outbreak, which started in St. Martin (FR), is expanding. An increasing number of cases have been observed from most of the affected areas. The vector is endemic in the region, where it also transmits dengue virus. Vigilance is recommended for the occurrence of imported cases of chikungunya in tourists returning to the EU from the Caribbean, including awareness among clinicians, travel clinics, and blood safety authorities. The autochthonous cases in French Guyana are the 1st autochthonous chikungunya cases in mainland South America.  
Communicated by: ProMED-mail

[The above report includes the numbers of suspected cases, which continue to climb slowly in most localities. - Mod.TY]

#### [4] French Antilles

Date: 17-23 Feb 2014  
Source: Pointe Epidemiologique No. 8. French Caribbean Antilles [in French, trans. Mod.TY, summarized, edited]

Cases since November 2013:



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St. Martin (susp.) 2030 cases (probable and conf.) 765, 2 deaths St. Barthelemy (susp.) 380 cases, (probable and conf.) 127 cases Martinique (susp.) 3940 cases, (probable and conf.) 1058 cases; 1 death Guadeloupe (susp.) 1460 cases, (probable and conf.) 476 cases

[Weekly graphs and maps for these case locations are provided in the above URL.Mod.TY]

Other Caribbean localities: French Guiana 10 non-travelers [locally acquired], 7 imported cases.

British Virgin Islands 6 locally acquired cases.

St. Maarten 115 locally acquired cases

Anguilla 11 cases

Dominica 45 cases

Aruba 1 imported case

St Kitts and Nevis 1 case

## Photo of the Month



T2: Fabulous but mosquito bites leave passengers complaining

Mumbai's brand new terminal takes the cake. Mosquitoes are making life hell for passengers catching night flights at Chhatrapati Shivaji International Airport's T2, diluting their admiration for the state-of-the-art terminal built at a cost of over Rs5,500 crore