



BORDER HEALTH NEWSLETTER – JANUARY 2014

WELCOME!

Welcome everybody! We hope you are enjoying some sunny days- it is hard to believe January is already over. Looks like today is going to be a fantastic day for the Sevens here in Wellington, let's hope it holds for the weekend.

NIWA recorded a cool January for most of New Zealand, dry for North Island except Taranaki to Wellington. Temperatures were well-below average for most of the South Island and much of the Waikato and Manawatu-Wanganui regions (more than 1.2°C below January average). Below average temperatures were experienced for the remainder of the North Island (0.5-1.2°C below January average), except for Hawke's Bay, Gisborne, and eastern Northland and Auckland, where near average temperatures were observed (within 0.5°C of January average). Well below normal rainfall (less than 50 percent of January normal) for Northland, parts of Waikato, Hawke's Bay, and around Christchurch. Below normal rainfall (50-79 percent of January normal) in the remainder of those regions as well as Bay of Plenty. In contrast, well above normal rainfall (more than 149 percent of January normal rainfall) for Wellington region, parts of Marlborough, Central Otago, and Fiordland. Above normal rainfall (120-149 percent of January normal) in parts of north Canterbury and Taranaki, and near normal rainfall elsewhere (within 20 percent of January normal).

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 were five interception events during January. One involved an exotic *Aedes albopictus* larvae, found live in a container load of tyres. Only one specimen was collected. All other interceptions involved *Culex* adults, mainly *Culex quinquefasciatus* and *Cx pervigilans*.

SAMPLES

During January, 1088 samples were collected by staff from 11 District Health Boards, with 296 positive. Samples collected were slightly higher than last month and also than this time last year. Of the positive samples found, larval numbers were the slightly higher than last month, and last year. Adults were significantly higher than last month and this time last year. The specimens received were as follows:

Species	Adults	Larvae
NZ Mozzies		
<i>Ae antipodeus</i>	5	0
<i>Ae. notoscriptus</i>	141	1441
<i>Culex pervigilans</i>	12	2125
<i>Cx. quinquefasciatus</i>	1018	1189
<i>Cq iracunda</i>	32	0
<i>Cq tenuipalpis</i>	1	0
<i>Opifex fuscus</i>	0	72
<i>Ae australis</i>	0	20
Exotics		
<i>Ae. albopictus</i>	0	1
TOTAL MOSQUITOES	1209	4848



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WEBSITE

We have been working on other species profiles recently and the first "The Cat Flea" is now up on the website. <http://www.smsl.co.nz/Services/New+Zealand+BioSecure/Fleas.html> Fleas are as abundant as mosquitoes at the this time of the year and there are about 2100 species of flea worldwide, all living on a variety of warm-blooded hosts such as dogs, cats, rodents, birds and humans. We would love to hear your feedback regarding the profile, and if there are any invertebrates of public health interest that you would like to see profiled please let us know.

Don't forget newsletters and reports are all able to be downloaded from the website and if you can't find something please let us know. 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 or taxonomy@nzbiosecure.net.nz.

INSECT-BORNE DISEASES

Zika Virus- French Polynesia

In light of a large outbreak of the mosquito-borne viral disease, Zika fever, in the islands of French Polynesia, including Tahiti, the [US] Centers for Disease Control and Prevention (CDC) issued a travel notice on 22 Jan [2014].

According to the latest data from the French Polynesia Department of Health, there have been 361 laboratory-confirmed cases and 7156 suspected cases reported throughout the 15 islands as of 13 Jan [2014].

Zika virus (ZIKV) is a flavivirus related to yellow fever, dengue, West Nile, and Japanese encephalitis viruses; however, ZIKV produces a comparatively mild disease in humans. It was 1st isolated from an infected [sentinel] rhesus monkey in the Zika Forest of Uganda in 1947.

It is relatively rare to see ZIKV outside of Africa and Asia.

The virus is transmitted to humans via mosquitoes of the genus *Aedes*.

Information regarding pathogenesis of ZIKV is scarce but mosquito-borne flaviviruses are thought to replicate initially in dendritic cells near the site of inoculation, then spread to lymph nodes and the bloodstream.

Symptoms may include headache and a maculopapular rash covering the face, neck, trunk, and upper arms, which may spread to the palms and soles. Transient fever, malaise, and back pain may also develop.

ZIKV can be diagnosed by PCR tests, which detect viral RNA, and an ELISA has been developed at the Arboviral Diagnostic and Reference Laboratory of the Centers for Disease Control and Prevention (Ft. Collins, Colorado, USA) to detect immunoglobulin (Ig) M to ZIKV.

The federal health agency says there is currently no vaccine or medicine to prevent Zika fever. Travelers can protect themselves by preventing mosquito bites.

This includes covering exposed skin, using insect repellent that contains DEET, staying and sleeping in screened or air-conditioned rooms and using a bed net if the area where you are sleeping is exposed to the outdoors.

The mosquito that carries Zika virus can bite during the day and night, both indoors and outdoors, and often lives around buildings in urban areas.

Zika virus transmission continues on the French Polynesian islands. The total number of Zika virus infection cases in French Polynesia has increased from 333 confirmed cases and 6630 suspected cases on 9 Jan 2014 (see ProMED-mail archive no. 20140110.2165365) to 361 confirmed and 7156 suspected cases 4 days

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later, as of 13 Jan 2014, as reported above. As noted above, there is no vaccine available for this virus, and the only available preventive measures are mosquito vector control and avoidance of mosquito bites.

Source: ProMED

Yellow Fever Vaccine shortage- North America

Many people in Saskatchewan have been consumed with the recent influenza vaccine shortage, but there's another type of vaccine shortage affecting international travellers in Saskatoon. There's been a temporary production delay in the yellow fever vaccine since December [2013], causing a shortage across North America. In order to conserve the vaccine, only people going to countries with a high-risk of the mosquito-carrying disease are guaranteed to receive the shot.

"For example, in Ethiopia, there is currently an outbreak of yellow fever in the Horn of Africa," said Dr. Michael Schwandt, deputy medical health officer with the Saskatoon Health Region.

He speaks for the health region's International Travel Centre, the only designated yellow fever centre in Saskatoon, where travellers must book appointments to find out whether they qualify for the vaccine.

Schwandt said the criteria for what constitutes a country as "high-risk" is determined by the U.S. Centers for Disease Control. Yellow fever exists in tropical regions of Central and South America as well as parts of Africa and Asia, but the risk levels differ from country to country [There is no YF in Central America but there is an identified risk in southeastern Panama's Darien area along the border with Colombia, but nowhere else. Mod. TY]. "And if a traveller is unable to receive the vaccine and still travels to that location, that's a decision they're making," Schwandt said. He adds that it's still important for people to consult the International Travel

Centre to see whether they require any other vaccines or anti-malarial medication.

If travellers require a yellow fever vaccination certificate in order to enter a specific country, the health region will provide a medical waiver free of charge. "And that is to say that the risk related to the vaccine is higher than the benefit, and this is only for those places where there is a low risk of yellow fever, but our clients still require evidence of vaccination in order to enter those countries," Schwandt said.

The health region expects the vaccine supply to be replenished by the end of the month [January 2014]. In the meantime, it's asking people with travel dates further into the future to reschedule their appointment, which would free up vaccines for those travelling in the interim.

Schwandt said this type of vaccine shortage is pretty unusual. "Because the Public Health Agency of Canada, with respect to yellow fever, is only involved in certifying clinics that are able to give the vaccine, and Health Canada is involved with regulating the quality of the vaccine, there's nothing really that our national bodies are able to do in terms of prompting this. So this is really in the hands of the manufacturer," he said.

The vaccine is manufactured in France by Sanofi Pasteur. The company could not be reached in time for publication to explain the reason for the production delay.

When there isn't a vaccine shortage, Schwandt said anyone travelling to a country where yellow fever is present can purchase the vaccine for USD 180.

This vaccine shortage will be relevant for travelers going to Brazil for the FIFA World Cup 12 Jun-13 Jul 2014 or for other reasons if vaccine shortage continues. Travelers should remember that they should receive the vaccine at least 11 days before traveling, and it will be prudent to receive it as soon as the vaccine



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becomes available. The WHO indicates that booster vaccinations are no longer required, since the vaccine provides life-long protection.

In a 3 Nov 2008 statement the WHO indicated that: "Brazil now recommends vaccination for travellers to the following areas with risk of yellow fever [YF] transmission: a) total territory of federal states of Acre, Amapa, Amazonas, Goias, Maranhao, Mato Grosso, Mato Grosso do Sul, Para, Rondonia, Roraima, Tocantins, Minas Gerais, and Distrito Federal; b) specific areas of the states of Piaui, Bahia, Sao Paulo, Parana, Santa Catarina, and Rio Grande do Sul.

Brazil also considers that there is no risk of yellow fever transmission in the coastal areas of the states of Piaui, Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, Sergipe, Bahia, Espirito Santo, Rio de Janeiro, Sao Paulo, Parana, Santa Catarina, and Rio Grande do Sul.

A map showing areas with risk of yellow fever transmission is available at http://portal.saude.gov.br/portal/arquivos/pdf/nota_fa.pdf

Those planning to attend one or more of the World Cup venues should determine whether they are in the YF risk areas.

Source: ProMED

Leishmaniasis – Iran

The chancellor of Tehran University of Medical Sciences announced on Monday [13 Jan 2014] that every year 20 000 cases of leishmaniasis are diagnosed as other types of skin disease. Ali Akbar Sari alluded to the fact that there may be more people than the reported number affected by the disease, the IRNA news agency reported.

For treatment of the skin disease, proper steps should be taken within limited time to reduce patients' complications, he added. He encouraged physicians to keep themselves constantly updated on all skin diseases,

otherwise they may misdiagnose rare or outdated diseases.

Leishmaniasis is a disease caused by protozoan parasites and transmitted by the bite of an infected female sand fly. Symptoms of the disease appear in weeks to months after the bite of the sand fly. Less commonly, symptoms arise only years later when a person's immune system becomes suppressed. The 5 classic symptoms of more severe disease are: weight loss, which may be severe; low blood counts; enlargement of the liver and spleen; fever, which is usually intermittent; high levels of immune globulin in the blood. The skin may turn dark. Some people who recover will have a persistent rash or pigment changes in the skin. The kidney is also affected, which may lead to renal failure. Other organs, including the bowel and the lung, may be affected. The infected person should seek proper medical care immediately.

The epidemiology of leishmaniasis has recently been reviewed (Alvar J, et al. Leishmaniasis worldwide and global estimates of its incidence).

The country specific profiles can be found here: <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0035671#pone.0035671.s036>.

Cutaneous leishmaniasis (CL) is an increasing public health problem with several new foci identified in recent years.

Anthroponotic CL caused by *Leishmania tropica* is found in Tehran as well as in some other large or medium-sized cities and their outskirts. Outbreaks are related to population increase, unplanned urban development and an increase in sandfly population. In the city of Bam, there was an 8-fold increase in the number of cases over the 5 years after the 2003 earthquake. Recent outbreaks in Bam caused 2884 cases in 2007, 3442 in 2008 and 1372 in 2009, with a high rate of recidivant leishmaniasis.

CL caused by *L. major* is endemic and very common in many rural areas, especially in the



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plains of the north east, near the Russian border, and in the north of the Esfahan province, in the centre of the country, but has recently spread to its southern parts and to Fars province, in southwest Iran. About 70 per cent of CL in Iran is caused by *L. major*.

The endemicity is so high that almost 80 per cent of the rural population contracts the disease before the age of 10 and non-immune newcomers practically all become infected. This area may be the most important focus. However, a recent epidemiological survey in 3 villages in Shiraz province, where underreporting was suspected, found a prevalence of scars of 16.2 per cent and of infection (identified by PCR) of 23 per cent.

Visceral leishmaniasis (VL) is caused by *L. infantum* and is less common. The main endemic areas are the province of Fars, in the south, and the districts of Meshkin-Shahr in the north west. It is thought to be underreported. HIV-leishmania co-infection has been reported recently.

A HealthMap/ProMED-mail map can be accessed at: <http://healthmap.org/r/1Cfu>. Source : ProMED

Photo of the Month



August 2013, Chamapasak, Lao PDR: Dengue patients being treated at the Chamapasak hospital in southern Lao PDR. The country is struggling with its worst dengue outbreak in history. In August, public health facilities were stretched to their capacity. Credit: WHO/Dr. Luo
Aedes albopictus, the mosquito found live in Auckland this January, is capable of transmitting dengue & chikungunya amongst other diseases. It has been one of the fastest spreading animal species over the past two decades (Benedict et al 2007) & has been known to spread to new countries on tyres (Global Invasive Species Database).