NEW ZEALAND BIOSECURE
Entomology Laboratory
A DIVISION OF SMS SOUTHERN MONITORING SERVICES LIMITED

BORDER HEALTH NEWSLETTER - NOVEMBER 2012

WELCOME!

Hi everyone. The silly season is upon us already. I hope you've managed to get all your shopping sorted so you won't be caught in the last minute panic during the last week!

HO HO HO HEE HEE HEE!!

The changeable weather this month has produced sufficient rainfall to provide habitats for the next generation of mozzies, possibly even by Christmas in some parts. Be ready with your repellents as well as your sunscreen this year! ☺

INCURSIONS/INTERCEPTIONS

There was one interception callout during November; an adult female *Culex quinquefasciatus* was retrieved from the "All Passports" risk assessment area of the Arrivals Hall at Auckland Airport on the 18th.

SAMPLES

During November, 628 samples were collected by staff from 11 District Health Boards, with 73 positive. Sampling numbers were up on last month and on this time last year; however the number of positive samples was about the same for all. The specimens received were:

Species	Adults	Larvae
NZ Mozzies		
Aedes antipodeus	2	0
Ae. notoscriptus	2	1000
Culex pervigilans	0	799
Cx. quinquefasciatus	2	68
Opifex fuscus	0	5
Exotics	0	0
TOTAL MOSQUITOES	**6**	**1872**

WEBSITE

Aquatain, Mozzie Stop Dunks and Granules and the tangle foot sticky trap items remain the most popular, a sure sign flying insects are annoying.

The website shop will be closed over the Christmas and New year period, if you need supplies please place your order before the 19th December to ensure it is processed on time.

Please feel free to contact us through the website, or email us directly at enquiries@smsl.co.nz or taxonomy@nzbiosecure.net.nz.

We wish you all a very safe and Happy Christmas!

MOSQUITO-BORNE DISEASES

YELLOW FEVER - AFRICA: SUDAN (DARFUR)

Source: MiNews 26 [edited] 31 Oct 2012 reported on ProMED Mail 1 Nov 2012
http://www.minews26.com/content/?p=20693

A previously unknown disease which has claimed more than 30 lives in Sudan's troubled Darfur region this month [October 2012] has been identified as yellow fever, the World Health Organization (WHO) said on Tuesday [30 Oct 2012]. Preparations for a mass vaccination campaign are now underway.

The outbreak was 1st detected early this month [October 2012] when a number of people in the central and southern regions of Darfur became ill and eventually died. Sudanese media said the victims suffered from a number of symptoms, including diarrhea, vomiting, and bleeding from both the mouth and nose.

Tarik Jasarevic, a spokesman for the World Health Organization (WHO), on Tuesday [30 Oct 2012] said it had been informed by Sudan's Federal Ministry of Health (FMoH) that the outbreak is being caused by yellow fever. Since the 1st week of October [2012], a total of 84 suspected cases, including 32 deaths, have been reported in the districts of Azoom, Kass, Mershing, Nertiti, Nyala, Wadi Salih and Zalingei.

"FMoH said that the immediate priority is to control the vector, reinforcing the disease surveillance system and raising public awareness on the prevention and control of this disease," Jasarevic said. "Preparations for a mass vaccination campaign are underway to vaccinate the at risk population in Darfur."

According to Darfur radio station Dabanga, however, at least 37 people are believed to have died as a result of the disease, while 125 others have been infected. The radio station quoted a resident as saying that local authorities were slow to react and did not immediately take necessary action to contain the outbreak.

"FMoH, WHO, as well as health partners are working on ground to ensure timely containment of the outbreak," Jasarevic added.

There is no cure for yellow fever, which is an acute viral haemorrhagic disease transmitted by infected mosquitoes. Treatment is aimed at reducing the symptoms for the comfort of patients, and measures often taken include supportive care to treat dehydration and fever and blood transfusion if needed.

"It is a preventable disease with symptoms and severity varying from case to case," Jasarevic explained. "Protective measures like the use of bed nets, insect repellent and long clothing are considered the best methods to contain an outbreak. Vaccination is the single most important measure for preventing yellow fever."

It is estimated some 200 000 people are infected by yellow fever each year, killing approximately 30 000 of them [worldwide estimates]. The virus is endemic in tropical areas of Africa and Latin America, which have a combined population of over 900 million people. Up to half of severely affected persons will die from the disease without treatment.

YELLOW FEVER - AFRICA: SUDAN (DARFUR) - UPDATE

Source: Reuters [edited] 3 Dec 2012 reported on ProMED Mail 5 Dec 2012
http://uk.reuters.com/article/2012/12/03/us-sudan-fever-darfur-idUKBRE8B20PD20121203

Yellow fever has killed 164 people over the last 3 months in Sudan's Darfur, the World Health Organization (WHO) said on Monday [3 Dec 2012], an arid region the size of Spain where fighting and banditry makes access particularly difficult.

MITE-BORNE DISEASES

Healthcare is provided almost entirely by aid agencies in parts of Darfur, where rebels took up arms in 2003 complaining of neglect by the central government hundreds of miles away in Khartoum.

The latest outbreak of mosquito-borne yellow fever [virus] has been concentrated in central Darfur, the WHO and Sudan's health ministry said in a joint statement. "Between 2 Sep-29 Nov [2012], the total number of suspected yellow fever cases has reached 677, including 164 deaths," the statement said.

Nearly half the yellow fever cases were in people between the ages of 15-30, it said, and about a quarter were children aged 5-15.

There is no effective treatment for the hemorrhagic fever, but there is a vaccine. The WHO said last month [November 2012] that some 3.6 million people would be vaccinated in affected areas of Darfur.

Monday's [3 Dec 2012] statement said more than half of the targeted population had been vaccinated by 30 Nov 2012.

[It has been difficult to obtain reliable current numbers of cases and deaths during this yellow fever outbreak. The above count is the latest report coming to ProMED and indicates that the number of deaths officially reported has risen from 110 reported earlier today (3 Dec 2012) to 164. Cases have been reported in 23 localities. With half of the targeted population reported vaccinated as of 30 Nov 2012, it would be of interest to know the current coverage, since vaccination at 4 sites will end tomorrow (4 Dec 2012), and the campaign is expected to end 10-12 days after its initiation, which would end vaccination on or about 5 Dec 2012. Can the remaining unvaccinated proportion of the population be vaccinated by that date, or will the campaign be extended if necessary?

SCRUB TYPHUS – India (Manipur)

Source: E-Pao, The Sangal Express report [edited] 16 Nov 20120 reported on ProMED Mail 18 Nov 2012
www.e-pao.net/GP.asp?src=16..171112.nov12

Recalling the unknown disease that broke out at Bishnupur district in 2008/2009 and which claimed a number of lives, a medical expert has sounded an alert that the disease is now stalking the populace of Ukhrul district.

Talking to The Sangai Express, the medical expert, a doctor who preferred to remain anonymous, said that the disease is known as scrub typhus and added that he has personally come across around 20 such cases from Ukhrul district. The patient can be cured easily, but the watchword is early detection, he said and added that the schoolgirl who recently passed away in Ukhrul is a case in point.

"Many patients undergo testing for malaria and typhoid, but seldom undergo the test to detect scrub typhus," said the doctor and added that since the tests for malaria and typhoid return negative, the patients are thought to be suffering from viral fever. The symptoms are similar to malaria, typhoid, and viral fever, he said but added that patients suffering from scrub typhus typically carry a scar. The scar is caused by the bite of an insect he said and added that it is important for the patient to inform the doctor of the presence of such a scar.

Domestic animals are the host carrier of these insects whose bite causes scrub typhus, he added. The test for scrub typhus is a simple procedure he said and added that suspected patients should undergo the rapid scrub antibody test. The result can be known in a matter of some minutes he said and added that once this is confirmed, the treatment can start with doxycycline drugs, which is fairly cheap and affordable. With the right treatment and at the right time, recovery rate is as high as 98

per cent, said the doctor and added that recovery process can start within 48 hours of the right medication.

Around 50 such cases were also reported from Senapati this year [2012], he said and added that a medical awareness camp held at the said district went a long way in effectively treating the patients.

Awareness programme on the disease may be held at Ukhrul district, he suggested.

[Scrub typhus is caused by *Orientia tsutsugamushi*, a rickettsia-like microorganism that is transmitted by chiggers, the larval stage of trombiculid mites, which feed on the skin cells of animals, including humans and rodents. After feeding on their hosts, chiggers drop to the ground and become nymphs, which then mature into adults that feed only on plant materials. The cutaneous reaction to chiggers leaves a characteristic black eschar that is useful for making the diagnosis.

Humans become infected when they accidentally encroach in an area where the infected chigger-rodent cycle is occurring, most often areas of low-lying scrub brush or transitional vegetation. Rodents may serve as reservoirs, although transovarial transmission in mites is the dominant mechanism for maintenance of *O. tsutsugamushi* (<http://www.cdc.gov/ncidod/EID/vol9no12/03-0212.htm>).]

Photo of the Month

Asian Tiger Mosquito image from "Mosquitoes are both fascinating and deadly insects" article on The Florida Tech Crimson website http://activities.fit.edu/crimsons/?p=2372