BORDER HEALTH NEWSLETTER - DECEMBER 2012

WELCOME!

Happy New Year! I hope everyone is well rested and feeling revived after all the Christmas and New Year celebrations. This mixed bag of weather has meant that mosquitoes have continued to breed in many areas around the country and this is reflected in the total number of specimens received in the samples over the last month.

INCURSIONS/INTERCEPTIONS

There were two interception callouts during December. *Aedes notoscriptus* larvae and pupae were found in forklift tyres on the wharf at Ports of Auckland on the 15th and a non-mosquito was identified from Auckland on the 23rd December.

TICK INCURSION

During late November, an exotic tick was collected off a patient in the Wellington region. This person had just returned from a trip to Australia and the tick was discovered once they were back in New Zealand. The specimen was an unfed female *Ixodes holocyclus* tick.

Photo of an adult female *Ixodes holocyclus* ex http://www.afpmb.org/sites/default/files/pubs/guides/field_guide.pdf

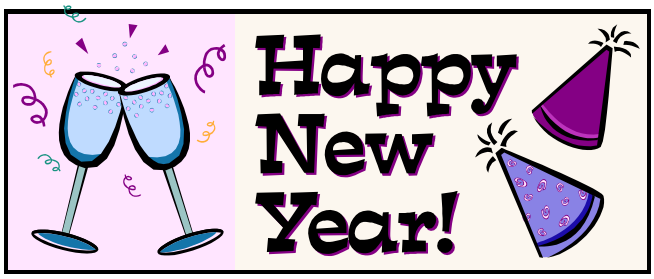
The paralysis tick, *Ixodes holocyclus* is Australia's most medically important tick. It has a distribution which is confined to coastal areas of eastern Australia, including highly populated parts of New South Wales. It occurs in a variety of habitats and is especially common in wet sclerophyll forests and temperate rainforests.

Although most cases of tick bite are uneventful, some can result in life threatening illnesses including paralysis, tick typhus and severe allergic reactions. These reactions can vary from a mild itching with localised swelling to widespread swelling with pain to a severe and life threatening anaphylactic condition.
[Info ex http://medent.usyd.edu.au/fact/ticks.htm]

SAMPLES

During December, 663 samples were collected by staff from 12 District Health Boards, with 85 positive. Sampling numbers were up slightly on last month and also on this time last year however the number of positive samples was less than this time last year. The specimens received were:

Species	Adults	Larvae
NZ Mozzies		
Aedes antipodeus	18	0
Ae. australis	0	18
Ae. notoscriptus	58	591
Coquillettidia iracunda	563	0
Coq. tenuipalpis	4	0
Culex pervigilans	31	656
Cx. quinquefasciatus	1	19
Opifex fuscus	0	38
Exotics	0	0
TOTAL MOSQUITOES	**675**	**1322**



MOSQUITO-BORNE DISEASES

Three articles on the Yellow Fever epidemic in Africa; this event is eclipsing all other events at present.

YELLOW FEVER - AFRICA: SUDAN (DARFUR)
Source: Voice of America [edited] 7 Dec 2012 reported on ProMED Mail 9 Dec 2012
http://www.voanews.com/content/sudan_begins_emergency_vaccinations_to_fight_yellow_fever_outbreak/1560840.html

Sudan's Federal Ministry of Health is organizing an emergency mass vaccination campaign against mosquito-borne yellow fever in the Darfur region. The latest figures from the World Health Organization put the number of suspected cases of yellow fever at 732, including 165 deaths.

This is the worst yellow fever epidemic to strike Africa in 2 decades. The last outbreak 20 years ago, also was in Sudan. At that time, 604 cases, with 156 deaths were reported in South Kordofan state, the epicenter of the disease. Given the number of cases and deaths reported in Darfur, the World Health Organization (WHO) notes the current epidemic already has surpassed the last one.

The WHO reports the emergency-response vaccination campaign will cover 5.5 million people. It is being conducted in 3 phases. The 1st phase of the campaign began 21 Nov [2012] to cover 2.2 million people in 12 districts with the highest number of cases.

The 2nd phase of the campaign aims to reach 1.2 million people and is to start next week. Vaccines are due to arrive in Sudan on Sunday [9 Dec 2012?] and will cover urban areas.

The WHO Representative in Sudan, Dr. Anshu Banerjee, said people in urban areas are more vulnerable to getting yellow fever than are people in rural areas. He explained this is because the disease is quickly transmitted from mosquitoes to humans in the cities, whereas in the rural areas, monkeys are the reservoir of the virus and the spread is slower.

Banerjee said an additional 2.2 million people will be vaccinated in a 3rd round in all other districts where positive cases are found.

"The challenges mainly are to reach the remote areas, partly because of transportation -- no roads, etcetera, and also because of insecurity, because of high risk of hijacking of cars, etcetera," said Banerjee. "So, transport modalities, which are being used now are like using donkeys to transport vaccines, which takes about 8 - 10 hours for people to transport vaccines to remote areas."

Banerjee said most of the cases of yellow fever are among nomads, which is why the epidemic is spreading so widely throughout Darfur.

He said Darfur, which was inundated with heavy rains, became a massive breeding ground for mosquitoes during the past year. He said the mosquitoes became infected from the monkeys in the forest and, in turn, have been affecting the human population. "There are also areas where we have mines and where there are migrant laborers coming from Chad, etcetera. So, one of the important issues also to cover this outbreak in Darfur is to make sure that it doesn't spread to other countries, like South Sudan and Chad, and also to make sure that it stays well within Darfur, within Sudan, because the vector is available throughout Sudan."

Yellow fever is a hemorrhagic disease. There is no cure. Bleeding can be managed by blood transfusions. Otherwise, the disease can be contained through the use of bed nets, insect repellent and the wearing of long clothes. The most effective preventive measure is vaccination.

YELLOW FEVER - AFRICA: REPUBLIC OF THE CONGO (CUVETTE OUEST)

Source: WHO Global Alert and Response [edited] 12 Dec 2012 reported on ProMED Mail 13 Dec 2012 http://www.who.int/csr/don/2012_12_12/en/index.html

The Ministry of Health of the Republic of Congo is launching an emergency mass-vaccination campaign against yellow fever in Ewo District in Cuvette-Ouest region beginning next week.

The emergency vaccination campaign aims to cover approximately 35 000 people in 3 health districts of Mbama, Ewo and Okoyo, all of which belong to the administrative district of Ewo.

The emergency vaccination campaign is being carried out after recent confirmation of a case with yellow fever virus infection that occurred in October 2012. The case was identified through the national surveillance programme for yellow fever.

Laboratory confirmation was done at Institut National de Recherche Biomedicale Kinshasa (INRB) and reconfirmed by a WHO regional reference laboratory for yellow fever, Institut Pasteur, Dakar, Senegal.

The vaccination campaign is being supported by the International Coordinating Group on Yellow Fever Vaccine Provision (YF-ICG), the GAVI Alliance, and the European Commission's Humanitarian Aid and Civil Protection Department (ECHO).

The YF-ICG is a partnership that manages the stockpile of yellow fever vaccines for emergency response on the basis of a rotation fund. It is represented by United Nations Children's Fund (UNICEF), Medecins Sans Frontieres (MSF), and the International Federation of Red Cross and Red Crescent Societies (IFRC), and WHO, which also serves as the Secretariat. The stockpile was created by GAVI Alliance.

YELLOW FEVER - AFRICA: SUDAN (DARFUR) UPDATE

Source: Digital Journal [edited] 29 Dec 2012 reported on ProMED Mail 31 Dec 2012 http://www.digitaljournal.com/article/340094

Experts claim that the outbreak of yellow fever currently affecting Sudan is the worst the world has experienced in the past 20 years.

The disease has already claimed the lives of 168 people, while 800 suspected cases of the mosquito-spread disease have been reported across Darfur, since the outbreak began in October [2012]. Many more cases are likely not being reported to health authorities. The official death toll has currently surpassed that of a 2005 yellow fever outbreak in Sudan's South Kordofan region, which led to 163 deaths from 604 cases over a period of 5 months.

Yellow fever is caused by a mosquito-borne virus endemic in tropical regions of Africa and South America. In its extreme form, it causes jaundice with liver and kidney failure as well as systemic bleeding.

Yellow fever often reaches epidemic proportions and results in high death rates.

The current outbreak in Sudan could be linked to heavy rains and flooding in the region, which facilitated mosquito breeding this year [2012]. Moreover, prior to the recent outbreak, Darfur's routine vaccination programs had never included vaccinations against the yellow fever virus, [lack of which] which could have facilitated its rapid and extensive spread.

The disease's occurrence has followed nomadic migration routes across Darfur and has affected mainly rural areas, although there is a risk of it spreading to urban areas as well as the camps for internally displaced people, which house over 2 million people forced to flee their homes due to the conflict in Darfur. While a vaccine can prevent infection, there is no specific drug treatment for infected individuals.

Darfur launched a national immunization campaign in November 2012 to cover 2.2 million people, which ended on 7 Dec [2012]. The 2nd phase this month was launched on 15 Dec [2012] and it aims to reach an additional 1.2 million people at risk.

In organizing its national vaccination campaign, the Sudanese government has received the support of the international community, mainly through the World Health Organization (WHO). 1.3 million doses of yellow fever vaccine for the 2nd phase of the campaign were mobilized through the support of the Government of Sweden. On 18 Dec [2012], the UK announced that it would provide [USD] 2.9 million to support the vaccination of 2 million in Darfur.

The yellow fever outbreak has affected 34 localities in Central, North, South, East and West Darfur.

In reporting the updated regional situation and the vaccination campaign's results thus far, West Darfur's health minister claims that yellow fever has ended in his state.

In turn, Central Darfur's health officials explained that new cases had been registered, but that the patients all came from a gold mining area in Northern Darfur and that Central Darfur had not recorded any new locally-generated cases in over 2 weeks.

The health minister of South Darfur announced the initiation of a 3rd phase of the vaccination campaign in the state, after the 2nd phase ended on 27 Dec [2012] and covered over 70 percent of the population.

RECENT PUBLICATION

SPILLOVER Animal Infections and the next Pandemic
By David Quammen
Pub Norton 2012
It predicts the next pandemic will be a zoonotic infection. The book relates previous zoonotic events such as Hendra virus, Ebola, Malaria, SARS, Psiticossis, Viruses hantavirus, HIV, corona virus, marburg, rabies, yellow fever and so on.

Vectors are a key in transmission and quite good descriptions of various events.

Photo of the Month

Photo of adult female *Aedes aegypti* feeding ex http://www.historyofvaccines.org/sites/default/files/uploaded-timeline-overview-images/000425_265.jpg