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

Newsletter - April 2010

Hi everyone. Welcome to the second of our autumn newsletters for 2010. Hasn't the weather been stunning despite the changing of the clocks. I hope you've all been keeping up with your gardens, there's always so much to do at this time of year. I took a week off to tackle it and hardly made a dent! No surprises what I'll be doing for the next few weekends. The mozzies seem to have been easing off as we head closer to winter, however we must still be alert as the recent interceptions have shown they are still around. Have a great month.

Rachel

SAMPLES

During April, a total of 737 samples were collected by staff from 12 public health services, with 159 positive. Sampling numbers were down on last month which is expected at this time of year, and about the same as this time last year. The specimens received were as follows:

Species	Adults	Larvae
Ae. notoscriptus	273	866
Culex pervigilans	7	361
Cx. quinquefasciatus	444	1479
Opifex fuscus	0	4
Exotics		
Aedes aegypti	1	0
Aedes vexans	1	0
TOTAL	**724**	**2710**

INCURSIONS/INTERCEPTIONS

There were three interception callouts during April; a chironomid midge was found in container of Grapefruit ex Panama, an adult female *Aedes vexans* was found dead in a container of Taro from Fiji and a male *Ae. aegypti* along with some *Culex quinquefasciatus* adults (males and females) were found dead in a container out of Vietnam at an Auckland devanning site.

NSP UPDATE

Mild and dry weather continued throughout April and we are only just starting to see some rain arrive. As a result of the very dry conditions, most of the rain has been rapidly soaked up and sampling conditions remain average in many areas. Larvae and adult numbers are low.

However we have had some large tides and several sites are starting to present good habitat sampling quality. As the climate cools and rain increases, water should start to pool. Mosquito populations may remain low given the lack of ideal saltmarsh habitat and temperatures being on the decline.

Surveillance priority continues throughout May and early June. The following few months are generally much quieter as the weather cools, mosquito breeding reduces and landowners restrict access due to wet weather and stock issues.

If you have any queries please lets us know at the control centre.

Monica Singe
Technical Manager

WEBSITE UPDATES

A profile for the New Zealand cattle tick *Haemaphysalis longicornis* has been uploaded to the tick page. This species is most commonly encountered in New Zealand associated with cattle and deer, but sometimes also dogs and children. See the profile for more information on this species which is widespread throughout the upper half of the North Island and more patchy elsewhere. The profile can be viewed online or downloaded as a pdf.

MOSQUITO-BORNE DISEASES

KUNJIN/BARMAH FOREST/ROSS RIVER VIRUSES - AUSTRALIA (WESTERN AUSTRALIA)

Source: Geoff Vivian's Kimberley Page, 8 Apr 2010, reported on ProMED Mail, 15 Apr 2010 [edited]
http://www.kimberleypage.com.au/2010/04/mosquito-bourn-virus-detected/

A mosquito-borne virus is present in the Kimberley this season, says the health department. Mosquito expert Mike Lindsay warned newcomers to take precautions against Kunjin virus, which has symptoms similar to Ross River virus.

You can read the department's 8 Apr 2010 media release here:

Mosquito-borne disease risk in the north of WA

The Department of Health today [8 Apr 2010] urged people living and holidaying in the north of Western Australia to take extra care against mosquito bites, following detection of the mosquito-borne Kunjin virus for the 1st time this wet season. The Environmental Health Hazards Managing Scientist, Dr Michael Lindsay, said that the Department's surveillance program (undertaken by The University of Western Australia) had detected activity of Kunjin virus in the Kimberley.

"Infection with Kunjin virus can cause symptoms that are similar to Ross River virus disease, such as swollen and aching joints, fever and rash. However, in rare case, it can cause more severe symptoms, including headache, neck stiffness, fever, delirium and coma. In young children, fever might be the only early sign, so parents should see their doctor if concerned, and particularly if their child experiences drowsiness, floppiness, irritability, poor feeding, or general distress."

People most likely to be affected by Kunjin virus are newcomers to affected regions, such as babies, young children, tourists or new employees, but anyone experiencing these symptoms should seek medical advice quickly.

"Despite below average rainfall and relatively low numbers of mosquitoes in most areas of the Kimberley for this time of year, the surveillance results show that mosquitoes are still carrying mosquito-borne diseases, so it is important that people living or travelling in the north take particular care to avoid mosquito bites for the next few weeks," Dr Lindsay said.

"Transmission of other mosquito-borne viruses is also continuing in the north, with 13 cases of Ross River virus disease and Barmah Forest virus disease reported from the Kimberley in the past 3 months," he said. "There are no specific cures or vaccines for Kunjin, Murray Valley encephalitis, Ross River or Barmah Forest viruses, so it is very important that people take care to prevent being bitten by mosquitoes." This warning is particularly important for people living, visiting or camping near swamp and river systems during the evening and night through the Kimberley, Pilbara and Gascoyne regions. However, the viruses may be active elsewhere in the north of the state, especially where mosquitoes are abundant.

Dr Lindsay said controlling mosquitoes in most rural regions of WA was generally not possible because of the large size and inaccessibility of natural mosquito breeding habitats. "It is also important that communities prevent mosquitoes breeding in man-made sites around the home or workplace because these types of mosquitoes can also be disease carriers," he said. People do not need to alter their plans to visit the northern half of WA, but it is important to avoid mosquito bites by taking a few simple steps, such as:
- avoiding outdoor exposure from dusk and at night
- wearing protective (long, loose-fitting) clothing when outdoors

- using a personal repellent containing diethyl toluamide (DEET) or picaridin. The most effective and long-lasting formulations are lotions or gels. Most natural or organic repellents are not as effective as DEET or picaridin
- ensuring insect screens are installed and completely
mosquito-proof: use mosquito nets and mosquito-proof tents
    - ensuring infants and children are adequately protected against mosquito bites, preferably with suitable clothing, bed nets or other forms of insect screening.

DENGUE/DHF UPDATE - AUSTRALIA (NORTH QUEENSLAND)

Source: The Sydney Morning Herald, 16 Apr 2010 reported on ProMED Mail, 20 Apr 2010 [edited]

A new outbreak of dengue fever has hit Townsville. Queensland Health on Friday [16 Apr 2010] confirmed that 2 women, from the suburbs of North Ward and Deeragun, have been diagnosed with type 2 of the dengue virusk, the 1st locally-acquired cases in the city since December [2009].

Queensland Health's Dr Steven Donohue said given the 10 km [6 mi] distance between the 2 cases, it was likely more cases would come to light. "There certainly will be other cases; we are trying to find out what could be the link," he said. Dr Donohue said one of the women had recovered, and the other was still being treated. "They presented with very typical symptoms, sudden fever, severe headaches, muscle pains, nausea," he said.

Three Queensland Health teams and council officers are visiting properties to check for mosquitoes and breeding sites, such as car tyres, saucers and pot plant stands.

The city experienced 2 small outbreaks last year [2009] which affected 13 residents. Those outbreaks were declared over early last month [March 2010].

TICK-BORNE DISEASES

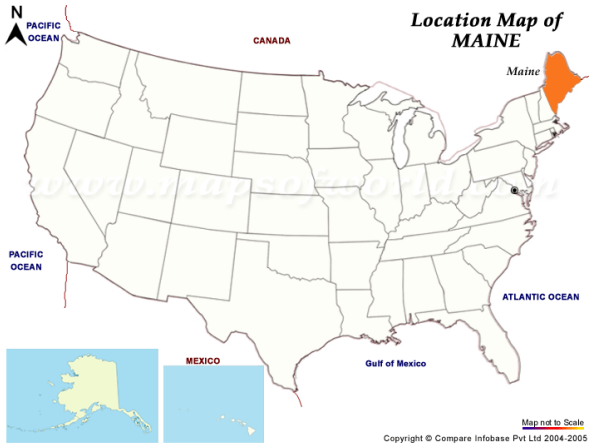
LYME DISEASE - USA: (MAINE) INCREASED INCIDENCE

Source: WBZTV / Portland Herald, 5 Apr 2010, reported on ProMED Mail, 7 Apr 2010 [edited]

Dr. Dora Anne Mills of the Maine Center of Disease Control says 50 cases of Lyme disease were reported in the state in January and February 2010. That's up from a 5-year average of 15 for those 2 months.

Officials told the Portland Press Herald that the warm temperatures in recent months are likely to blame, setting the stage for a possible increase in ticks for the coming summer.

Maine Medical Center biologist Chuck Lubelczyk said ticks normally come out in the middle of April, when the snow is gone and the ground thaws. But with the warm winter, ticks have been active most of the past several months.



Map ex
http://www.mapsofworld.com/usa/states/maine/maps/maine-location-map.gif

[*Borrelia burgdorferi*, the spirochaete that causes Lyme Disease, is transmitted to humans by the bite of an infected tick (*Ixodes scapularis* in Maine), which begins to feed on a blood meal in spring, soon after the thaw. The thaw in Maine has apparently occurred earlier than usual this year.

Lyme disease surveillance in Maine began in 1989 and the number of Lyme disease cases has increased steadily since 2000.

Borrelia burgdorferi (the cause of Lyme disease), *Anaplasma phagocytophilum* (the cause of human granulocytic anaplasmosis), and *Babesia microti* (the cause of babesiosis) share a common vector, the deer tick which along with the white-footed mouse maintain the organisms in nature, and as a result, the diseases they produce have a common geographic distribution in the northeastern and upper Midwest USA, where this tick is commonly found. Patients with any one of the diseases transmitted by *Ixodes scapularis* may also be concurrently infected with the other diseases transmitted by this vector.]

Ixodes scapularis photo ex http://www.francelyme.fr/Images/Ixodes_scapularis.jpg

White-footed mouse Photo ex http://i.pbase.com/u39/tmurray74/upload/25349963.DSC00119.jpg

Mozzie Photo of the Month

Adult female *Aedes vexans*

Photo ex http://assets.geospecies.org/spec_concept_uuid/0fcb5b7e-bcfc-4b56-b565-e1e38768badd/Aedes_vexans.jpg

The specimen of this species which was the subject of one of the interception callouts, was in a delicate condition and didn't pose well for photos before losing her head. Unfortunately this is a common occurrence with mosquito specimens which have been dead a while before they are found, as they become brittle and difficult to handle.