



BORDER HEALTH NEWSLETTER - JULY 2012

WELCOME!

Hello again. Another wintry month has flown by; the spring bulbs will be out before we know it. We've had a mixed bag of weather, but in the midst of it all, I've regularly seen adult female *Culex pervigilans* inside my house so they may be reduced in number but they are still around!

INCURSIONS/INTERCEPTIONS

There were no interception callouts during July.

WEBSITE

Have you checked your sampling equipment lately? We have finally (apologies for the delay) got some Clarke sample dipper heads in from overseas and they are now available on the website.



Sample tubes, light trap stockings, pipettes and reconditioned adult traps are also available.

PHS and Government department's commercial clients are able to use the purchase order option for any supplies that are required and this is followed up with an invoice direct to you. Please ensure you include an order number for referencing in the invoice. If a product is listed as please enquire, there are generally restrictions on its sale.

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.

SAMPLES

During July, 343 samples were collected by staff from 11 District Health Boards, with 28 positive. Sampling numbers were about the same as last month and this time last year. The specimens received were:

Species	Adults	Larvae
NZ Mozzies		
<i>Aedes antipodeus</i>	1	0
<i>Ae. notoscriptus</i>	0	446
<i>Culex pervigilans</i>	59	128
<i>Cx. quinquefasciatus</i>	0	1
<i>Opifex fuscus</i>	0	5
Exotics	0	0
TOTAL MOSQUITOES	60	580

COURSE REPORT

"The Border Health and Ships Sanitation Course was held at the Blue Skies Conference Centre, Kaiapoi from 30 July to 3 August and although we did not have to contend with snow this year, rain kept us indoors for much of the time. While it was hoped all Public Health Services could be represented, the two persons from Public Health South who were scheduled to attend the course both had to withdraw due to ill health. The course was designed to be very much a developmental one with an emphasis on the Ships Sanitation Certification (SSC) program. The SSC inspection requires one to be familiar with a wide range of disease vectors associated public health impacts with that mode of transport not just rodents as was the case under the old "de-ratting" scheme.

The key teaching references were the International Health Regulations 2005 which came into effect in 2007 and it requires Public Health Services to provide a consistent method of application of the Regulations. The recent provision of the Handbook for Inspection of Ships and Issuance of Ships Sanitation Certificates to Public Health Services provides the objective basis for achieving that



NEW ZEALAND BIOSECURE

Entomology Laboratory



consistency and the course assisted in that by improving the operational skill of the Public Health staff carrying out the ships sanitation inspections. Other principal legislation and regulations referred to in the course included the Health Act 1956 and Quarantine Regulations.

The course highlighted the main disease vectors one is likely to encounter during a ships sanitation inspection and during ports surveillance. In addition to understanding the diseases vectors may carry, comprehensive profiles about their characteristics, habits and lifecycle were presented in addition to practical demonstration from Mark Disbury on trapping and surveillance and related equipment. Planning skills were taught and this was carried over into the main practice problem which was well received, whereby attendees practiced planning for and responding to a request for a SSC inspection which escalated into a significant disease event potentially of international significance.

Border Health Protection Course 2012



The course concluded with the 'world café' session where participants were asked to consider a number of issues and brainstorm responses to them. This was well received by all as the segment provides an opportunity to feedback in a constructive way the value and improvements to course content and design. SMS Training will summarise the feedback and forward it to the Ministry of Health. It was felt the course objectives were met including enabling participants to contribute their operational experience to the training and to be

in a position now to mentor their colleagues in their Public Health Units in various aspects of SSC delivery".

MOSQUITO-BORNE DISEASES

WEST NILE VIRUS - KIDNEY DISEASE

Source: Red Orbit [edited] 13 July 2012 reported on ProMED Mail 15 July 2012

<http://www.redorbit.com/news/health/1112656006/west-nile-virus-may-cause-chronic-kidney-disease/>

Patients who have a history of infection with West Nile virus (WNV) should be screened for chronic kidney disease (CKD), after US researchers have found varying degrees of the life-threatening disease in 40 percent of those patients who also contracted the mosquito-borne illness at an earlier time.

Researchers from 3 organizations -- Baylor College of Medicine, Texas Children's Hospital and The University of Texas Health Science Center -- studied 139 patients who had been infected with West Nile virus.

The teams used the Kidney Disease Outcomes Quality Initiative (KDOQI) criteria, based on the Modification of Diet in Renal Disease (MDRD) formula and urinary abnormalities, to assess risk factors and biomarkers of the disease.

Publishing the findings in the online edition of PLoS ONE, the team found that 2 in 5 of the West Nile patients also had a prevailing form of kidney disease.

"We are in the process of researching the relationship between West Nile virus infection and kidney disease, but this study now allows us to understand the prevalence and progression of kidney disease in those previously infected with West Nile virus," said study leader Dr. Kristy Murray, associate professor of pediatrics at BCM and Texas Children's.

At the time of the study, which involved mostly white (86 per cent) men (60 per cent) with an



average age of 57 years, about 83 per cent of the patients were 4 - 9 years post-infection. Based on the KDOQI initiative, 40 per cent of the participants showed evidence of CKD, with 10 per cent having Stage III or greater and 30 per cent with Stage I or II.

The researchers further found that 26 percent of patients had proteinuria and 23 percent had hematuria. Plasma NGAL levels were also elevated in 14 per cent of the patients.

WNV results from a bite from an infected mosquito. It causes fever, headache and body ache. In severe cases, it may cause high fever, neck stiffness, stupor, coma, tremors, convulsions, muscle weakness and paralysis. It can also lead to encephalitis or inflammation of the brain and sufferers of the most severe forms may likely need to be hospitalized.

While it has been known that the most severe forms of the disease have been known to contribute to long-term nerve and brain damage, long-term kidney problems have not been identified before, Murray noted.

"An estimated 2 million Americans have been infected with West Nile, and we advise physicians to screen them for potential kidney disease, because if you catch it early, then the person can be monitored and treated should the disease progress," said study co-author, Melissa Nolan, of the National School of Tropical Medicine at BCM.

CKD is divided into 5 stages. The first 2 stages are mild, and the 3rd stage is a moderate form. Stages 4 and 5 are the most severe forms and are usually irreversible, often resulting in dialysis or transplantation.

"Stage 3 is a tipping point where patients either recover or progress onto later stages," said Nolan, noting that because there are no

symptoms in the early stages of kidney disease, many people do not even know they have it.

Whereas traditional risk factors associated with kidney disease include diabetes and hypertension, the researchers found these risks were typically not associated with kidney disease found in the study participants, giving the disease a stronger connection to WNV [infection] in the study group.

The researchers will next look at the relationship between WNV infection and CKD.

"We believe we now have good evidence towards an association. There are many long-term and serious health effects related to infection with this virus, and we want to strongly encourage people of all ages to take precautions against mosquito bites," Murray said.

Photo of the Month



Photo ex <http://laughingsquid.com/giant-metal-mosquito-sculpture/>

This brilliant mosquito sculpture by Russian artist Valery Chaliy is made of scrap metal and vehicle parts. It is located at a facility owned by gas firm Gazprom in Noyabrsk, Russia.