



BORDER HEALTH NEWSLETTER - JANUARY 2013

WELCOME!

Hi again everyone. It's that time again, we're already half way through February! Where is the time going? The mozzie numbers are on the increase with the recent spells of wet weather providing habitat and the lovely warm temperatures in between encouraging the fast development of each life stage.

We've also seen an increase in the number of interception callouts with some Auckland devanning sites becoming frequented by local mozzies and causing a bit of a stir when imported containers are opened.

INCURSIONS/INTERCEPTIONS

There were three interception callouts during January. The first occurred on January 1st with a female *Culex quinquefasciatus* found in the arrivals hall at Auckland International Airport. The second was a female *Cx. pervigilans* found in logs ex the Solomon Islands at a devanning site on the 18th January and the third was three female and 1 male *Cx. quinquefasciatus* found at second devanning site on the 21st January.

Photo of the Month

Interestingly, when you run a search for 'mozzie' on Google - Images one of the first results is...

Mozzie

Mozzie, aka Moz or Dentist of Detroit, is Neal's close friend and most trusted confidante. He is another con man and little is known about him thus far. He grew up in foster homes and has a photographic memory. Though he is lacking in Neal's people skills, he appears to be a jack of all trades and a fountain of knowledge.

The witty little guy is a conspiracy theorist who harbors a deep distrust for the FBI - referring to Peter as 'The Suit'. Though after over-coming some of his dislike for Peter and the rest of the White Collar team, Mozzie has proven himself invaluable time after time.



Willie Garson, one of the stars of a crime/mystery television series called White Collar which airs in the United States!

SAMPLES

During January, 755 samples were collected by staff from 11 District Health Boards, with 145 positive. Sampling numbers were up on last month and on this time last year however the number of positive samples increased from last month and decreased from last year. The specimens received were:

Species	Adults	Larvae
NZ Mozzies		
<i>Aedes antipodeus</i>	2	1
<i>Ae. australis</i>	0	8
<i>Ae. notoscriptus</i>	6	2658
<i>Ae. subalbirostris</i>	0	6
<i>Culex pervigilans</i>	68	1400
<i>Cx. quinquefasciatus</i>	38	821
<i>Maorigoeldia argyropus</i>	0	1
<i>Opifex fuscus</i>	0	9
Exotics	0	0
TOTAL MOSQUITOES	114	4904

WEBSITE

The SMS NZB website is the easiest option for sourcing mosquito species information and any new sampling or specimen resources that you may require.



We have a Facebook page where articles and mosquito related news items are posted for easy access. Have a look at the page:

<https://www.facebook.com/SMSL.MosquitoControl>, there's lots to



The newsletters are readily available in the documents section of the website (<http://www.smsl.co.nz/Documents++Links/Newsletters/NZBEL+2012.html>). If there is any information you would like to see in the newsletters, that is not currently included, or if you have any queries about any of the information, please feel free to contact us through the website, or email us directly at enquiries@smsl.co.nz or taxonomy@nzbiosecure.net.nz.



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MOSQUITO-BORNE DISEASES

YELLOW FEVER - AFRICA: SUDAN (DARFUR)

Source: All Africa [edited] 10 January 2013
<http://allafrica.com/stories/201301110027.html>
reported on ProMED Mail 12 January 2013

A "Situation Report" on the yellow fever outbreak in Darfur jointly released by the Sudanese federal Ministry of Health and by the World Health Organisation (WHO) asserted that 171 people have died of the disease in the region as of 9 Jan [2013]. The report also indicated that 849 suspected cases of yellow fever have been reported in Darfur since 2 Sep 2012. Additionally, the case fatality rate (CFR) of the disease is suspected to be 20.1 per cent.

Information suggests that 35 out of the 64 localities of Darfur have been affected by the disease. Central Darfur is reportedly still the most affected state with 51.5 per cent of the registered cases. It is followed by North Darfur (21 per cent), West Darfur (17.4 per cent) and South Darfur (9.5 per cent).

East Darfur is not mentioned in this calculation, being allegedly the least affected state with 0.6 per cent of the diagnosed cases based on the percentage provided above.

So far, 1.1 million people have been vaccinated against yellow fever in Darfur.

The 2nd phase of the campaign covered 95 per cent of South Darfur's targeted population, 87 per cent of West Darfur, and 86 per cent of Central Darfur, the joint statement announced.

For the campaign's 3rd phase, the WHO recommends the inclusion of 2 million people residing in the following areas: Kabkabiya, Edd Elfursan (including Kabum locality), Elwihda, Shaeriya (including Yassin locality), El-Daen, Rokiro and Umm Dukhun.

"The 1st vaccine shipment of 670 400 doses is scheduled to arrive in Sudan on 14 Jan [2013],

while the 2nd shipment of 702 000 doses and 3rd shipment of 827 600 doses will be delivered shortly afterwards."

A total of 1754 blood samples were collected from different zones of Sudan and sent to a virologist from Institute Pasteur in Dakar, Senegal to analyze the material. He is reportedly working at the National Public Health Laboratory in Khartoum.

TICK-BORNE DISEASES

SYMPTOMS OF LYME DISEASE, "THE GREAT IMITATOR"

Source: <http://www.envita.com/lyme-disease/symptoms-of-lyme-disease-great-imitator/>

The symptomology of Lyme disease is varied and diverse, resulting in significant difficulty in diagnosis. Known as "the great imitator," Lyme disease can mimic the symptoms of Fibromyalgia, Chronic Fatigue Syndrome, MS, ALS, Parkinson's and Alzheimer's, as well as more than some 350 other diseases. When patients do present with a number of infections and co-infections, including other tick-Born infections, it is this complicated presentation that we call Lyme Disease Complex.

What Happened to Lyme's Classic "Bull's Eye" Rash?

An initial bite from a tick can cause a rash that will appear in three months to a year. While the characteristic "bull's eye" rash (erythema migrans) is associated with Lyme disease, the rash only appears in an estimated 50% of infected individuals, or it may appear in a different form. If this rash does appear, it will generally wane over a two to a four-week period. 70 percent of all patients who do present with Lyme disease complex never recall such a rash.

A Review of Lyme Disease Complex Symptoms

In the first month to six weeks following a bite from an infected tick, the initial symptoms that appear may include flu-like symptoms such as malaise, chills, fever, sore throat, achiness, and



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swollen lymph nodes. After these symptoms pass, infected persons will generally develop muscle and joint pain, which can be severe, temporary, and manifest in different areas. Shooting, burning, and prickling sensations, as well as numbness, may also be experienced. Neurological problems, such as facial paralysis may also occur, in addition to encephalitis and cognitive dysfunction, such as short-term memory loss. Panic, anxiety, or depression can also be caused by the infection.

Important to Remember

Importantly, Lyme disease does not follow the same course in all individuals. It is also worthy to note from our experienced LLMD (Lyme Literate Doctors) that clinically the patient may have multi- autoimmune disease diagnosis in addition to memory problems, word, name and other memory recall issues along with neurological and digestive symptoms as well. Other symptoms indicative of Lyme can include:

1. Cough, shortness of breath
2. Unexplained fevers, chills, sweats
3. Cystitis
4. Fatigue
5. Chest plain/heart palpitations
6. Cardiac irregularity
7. Double/blurry vision, pain or floaters
8. Photophobia
9. Hair loss
10. Fever
11. Tick bite(s)
12. Rash at bite site or other areas
13. Difficulty swallowing
14. Swollen glands
15. Sore throat
16. Swelling around the eyes
17. Unexplained weight loss/gain
18. Buzzing, ringing or ear pain
19. Difficulty eating
20. Nausea or vomiting
21. Diarrhea or constipation
22. Tremors
23. Eyelid/facial twitching or Bells Palsy
24. Joint pain and swelling
25. Abdominal cramping/pain

26. Irritable bladder or bladder dysfunction
27. Testicular/pelvis pain
28. Neck creaks, cracks or stiffness
29. Joint or back stiffness
30. Muscle pain or cramps
31. Insomnia
32. TMJ (jaw pain)
33. Headaches
34. Tingling or numbness
35. Poor balance
36. Difficulty walking
37. Seizure activity
38. Stabbing sensations
39. Dizziness
40. Personality changes
41. Mood swings
42. Irritability
43. Depression
44. Confusion
45. Anxiety
46. Difficulty concentrating or reading
47. Gastritis
48. Menstrual irregularity
49. Loss of libido
50. Trouble speaking
51. Disorientation

BAT-BORNE DISEASES

NIPAH ENCEPHALITIS – BANGLADESH

Source: BDNews 24 [edited] 23 January 2013
<http://bdnews24.com/health/2013/01/23/nipah-virus-strikes-back> reported on ProMED Mail 25 January 2013

The virus that killed nearly 80 per cent of its total infections in Bangladesh has struck back killing an 8-year-old boy in Dhaka and leaving his father critically ill, the government's disease monitoring agency, IEDCR [Institute of Epidemiology, Disease Control & Research] confirms.

According to its director, the family drank raw date sap brought from Bhaluka on 11 Jan [2013] and fell ill 6 days later. "The boy succumbed on Tuesday [22 Jan 2013] at a Dhaka clinic and his father is in an intensive



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care unit," Prof Mahmudur Rahman told bdnews24.com.

He said [the presence of the Nipah virus was confirmed] in their laboratory at around 5.45 pm on Wednesday [23 Jan 2013].

The bat-borne Nipah virus that infects a person only after drinking raw date sap and later can pass it on to other persons through contact is a cause of public health concern in Bangladesh as it breaks out every year during January-April.

Since 2001, when it first broke out as an unknown disease, the virus has killed 136 of its 176 victims in 21 districts across Bangladesh.

"It is 100 percent preventable if we can prevent people from drinking raw date sap," the director said, "But once infected, we don't have a cure. It usually takes 7-8 days on average between exposure and signs of symptoms -- fever, altered mental status, and seizure," Prof Rahman said. He said they would watch the family where 8 members took the drink, up to 21 days.

They were also following the families who received the date sap from the same source. "We have discovered that one person from Bhaluka supplied 100 bottles of sap to families in Dhaka," he said. He could not rule out further outbreaks. "We are watchful."

Nipah virus was first detected in Malaysia in 1998 but at present Bangladesh, a hotspot for infectious diseases, is the only country in the world that reports the disease. Though public health analysts believe that border districts of India have the virus, reports are not available from the Indian government to confirm it [see comment and reference below].

An anthropological study says drinking raw date or palm sap in the morning is an old practice in Bangladesh, especially in rural areas, where there is a general lack of hygiene.

An ICDDR,B study using infrared cameras found that fruit bats perch on the jars, put up on trees to collect the sap, and try to drink the juice. They also urinate into the pot. The *Pteropus* bat saliva and urine carry the virus. But it gets destroyed if the sap is boiled.

"The virus is killed in 70 deg C [158 deg F] temperature," Prof Rahman said.

Bangladesh first confirmed the virus in 2004 after testing samples from the US following the deaths of a number of people from an 'unknown' ailment since 2001.

Meherpur, Naogaon, Rajbarhi, Tangail, Faridpur, Manikganj, Rangpur, Kushtia, and Thakurgaon districts of the central and northwestern regions are highly vulnerable to Nipah [virus infections], according to IEDCR. When it breaks out in a place, panic runs so high that people even desert their homes en masse. The presence of the virus at Bhaluka in Mymensingh is new.

It is not clear why the virus is widespread in some districts, and why it strikes new places, but the date tree is very common in those areas.

"We did not find it in Jessore despite many date trees being there. It was because bats in that region do not carry the virus," Prof Rahman said.

Tracking the history of Nipah [virus] in Bangladesh, bdnews24.com found that it is highly communicable and can be passed on with minimal human contact. Many victims were infected and they died after not taking precautions in taking care of patients. "But you can prevent the infection by washing hands with soap and not sharing the same food," he said, suggesting caregivers should wear masks. "But above all, the campaign should be not to drink raw date sap."