Newsletter - May 2010

Greetings everyone. Welcome to our first winter newsletter for the year. I hope you've all survived the recent deluges intact and are starting to dry out a bit. Our house was an island for a couple of days and thankfully the rain stopped just a couple of inches short of coming inside – we were not looking forward to that! The mosquitoes have already started reappearing and I'm sure this will be the case further north also. Keep a close eye out and catch them if you can.

Rachel

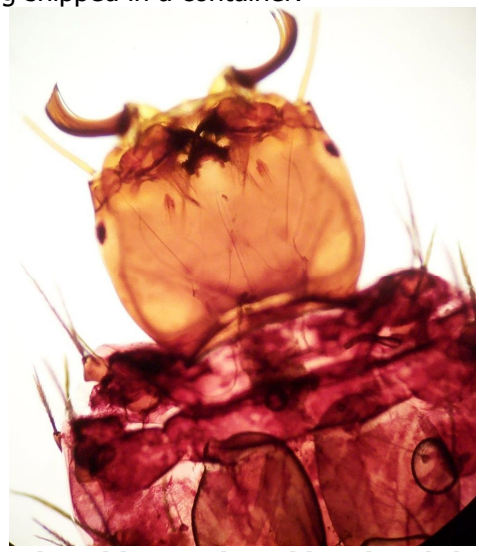
SAMPLES

During May, a total of 514 samples were collected by staff from 12 public health services, with 54 positive. Sampling numbers were down on last month and slightly down on last year. The specimens received were as follows:

Species	Adults	Larvae
Aedes notoscriptus	12	356
Culex pervigilans	0	159
Cx. quinquefasciatus	20	473
Opifex fuscus	0	8
Exotics		
Toxorhynchites sp.	0	4
TOTAL	**32**	**996**

INCURSIONS/INTERCEPTIONS

During May, there was only one interception callout, but it did involve an exotic species. Larvae of *Toxorhynchites sp*. were discovered at Wellington Port in tyres imported from New South Wales as part of some personal effects being shipped in a container.



***Toxorhynchites sp*. larval head and thorax**

Toxorhynchites mosquitoes are interesting because the larvae are predacious, feeding on larvae of other species as well as their own. They have modified mouthparts for grabbing their prey rather than the brushlike filter-feeding structures most mosquito larvae possess. The species tend to be larger than most other mosquitoes as both larvae and adults.

If you are interested in watching a video of this species feeding on another mosquito larva, you can view one from this website link, http://www.arbovirus.health.nsw.gov.au/areas/arbovirus/mosquit/toxorhynchitesspeciosus.htm.

The adults have a characteristic hooked proboscis (bent down and backwards) and do not bite, therefore have no role in vectoring diseases. They feed on plant juices and nectars.

***Toxorhynchites speciosus* adult female**

DATABASE MAINTENANCE
Can each Health Admin for the online database please check their list of persons with access to the database. Any previous employees need to have their profile suspended and new employees have their own profiles created. If you are unsure who your local Health Admin is, please email the taxonomy address and we will forward you the information.

MOSQUITO-BORNE DISEASES

MALARIA - ETHIOPIA: GEOGRAPHIC EXPANSION

Source: Afrik.com 1 May 2010, reported on ProMED Mail 2 May 2010.

Ethiopia sounds alarm over new malaria prone areas

The Ethiopian Ministry of Health (MoH) has sounded concerns over outbreaks of malaria in areas where the disease was previously not found.

A replacement program for insecticide-treated mosquito nets has had to be altered to incorporate the new areas. The ministry had bought a 2nd round of insecticide-treated bed nets to replace the previously distributed 20 million nets that have a life span of 3 to 5 years, according to government sources.

However, the presence of malaria in previously inactive places has forced the ministry to change its plan to replace the 20 million nets and commenced distribution to people living in newly-identified places, the source said.

Climate fluctuation has been identified by MoH officials as one of the principal reasons for the latest possible outbreak.

The mosquito net measure, taken since 2005 by the ministry in collaboration with the Roll Back Malaria Initiative, in which UNICEF and WHO are partners, has brought about significant change.

But, despite Ethiopia's extensive malaria-fighting measures, the mosquito parasite induced sickness remains the most fatal disease in Ethiopia. According to UNICEF "large scale epidemics occur every 5 to 8 years in certain areas aggravated by climatic fluctuations and drought-related emergencies that weaken people's immune system."

In 2003 a major epidemic was registered, during which an estimated 6 million cases and more than 40 000 deaths were recorded.

The Ethiopian Ministry of Health, in the course of the programme, stretched its health services as it dispatched more than 30 000 health extension workers and distributed about 20 million bed nets to malaria prone areas.

This effort contributed to a dramatic fall in deaths from a disease that kills one in 4 people. The program halved malaria morbidity and mortality within 3 years.

Map ex http://www.usaid.gov/locations/sub-saharan_africa/countries/ethiopia/

There are 2 transmission seasons in Ethiopia: the 1st begins in April following the belg rains and the 2nd in October, which also follows the country's main regular rainy season, according to information obtained from WHO Ethiopia.

Tedros Adhanom, Ethiopian Health Minister, has expressed his concerns over the new outbreak. As chairman of the international Roll Back Malaria initiative, Tedros Adhanom has

been using his country's malaria-fighting model to inspire other African countries.

[Highlands are more prone to changes in malaria transmission than low land areas because a few degrees changes can dramatically change transmission (Zhou G. *et al*. 2004. Association between climate variability and malaria epidemics in the East African highlands. *Proc. Natl. Acad. Sci. USA*. 101:2375-80. Erratum in: *Proc. Natl. Acad. Sci. USA*. 2004,14;101:13694).]

DENGUE – KATHMANDU, NEPAL

Source: The Himalayian 17 May 2010 reported on ProMED Mail 19 May 2010 (excerpts)

For the 1st time, 2 cases of dengue fever have been found in Kathmandu. Dengue is caused by dengue virus (DENV), a mosquito-borne flavivirus. It is transmitted by *Aedes* mosquitoes. "This is the 1st discovery of dengue fever in the Kathmandu Valley even though the disease was detected in the Tarai and inner-Tarai districts some 5 years ago," according Sukraraj Tropical and Infectious Disease Hospital, Teku.

Aedes mosquitoes also breed in water collections in artificial containers such as plastic cups, used tires, broken bottles, flower pots, etc. Dr Pandey advised people to keep their houses clean and treat water to remain safe from the disease.

Map ex
www.nepalvista.com/features/history/index.php

Dengue fever is an acute febrile disease which normally occurs in the tropics. It is also known as break-bone fever and can be life-threatening. There is no tested and approved vaccine for the dengue flavivirus. Prevention of dengue mainly is in mosquito control. Dengue may also be transmitted via infected blood products including blood transfusions, plasma, and platelets.

TICK-BORNE DISEASES

TICK-BORNE AND LYME DISEASE - RUSSIA

Source: GZT.RU [in Russian, trans. Corr.ATS, edited] 24 May 2010 reported on ProMED Mail 31 May 2010

The incidence of Lyme disease [borreliosis] has increased in Russia.

The most affected area is Moscow city. However, the specialists consider that most cases of tick bites in Muscovites occur outside the city's border and there is no need for tick control chemicals in the Moscow city parks.

Rospotrebnadzor [Federal Service for Consumer Affairs and Human Welfare] reports that the numbers of tick-borne encephalitis and borreliosis cases are significantly higher this year [2010]. The incidence of both diseases was up in 2009 by 32.4 percent and 26 percent, [respectively] compared with 2008 data. This underlines the continuous worsening of the situation over the recent years. The area of borreliosis spread is larger than that of tick-borne encephalitis.

Out of 732 tick-borne borreliosis cases in 2009 only 10 [1.4 percent] were acquired within the Moscow city territory; 56 percent of cases were acquired from Moscow oblast region, 40 percent of cases were acquired from other regions of Russia, and 2.7 percent of cases came from foreign countries.