



Newsletter - July 2010

Hello everyone. Welcome to our mid-winter newsletter. I hope you're all staying afloat with this latest deluge and had a chance to enjoy some of the sunshine which made brief appearances during July. The mosquitoes are still out and about, particularly in the far north, with Culex asteliae one of our rarer endemic species making a showing in a sample taken as part of a survey of palm trees leaf axils.

SAMPLES

During July, a total of 518 samples were collected by staff from 12 public health services, with 37 positive. Sampling numbers were very similar to last month and up quite a lot on this time last year. The specimens received were as follows:

Table with 3 columns: Species, Adults, Larvae. Rows include Aedes notoscriptus, Culex asteliae, Cx. pervigilans, Exotics, and a TOTAL row.

INCURSIONS/INTERCEPTIONS

During July there were three suspected interceptions with non mosquitoes found in freight on a ship ex Panama, Culex pervigilans was found at Auckland International Airport (AIA), and larvae of Culex sp. and Aedes albopictus were found on a ship at Ports of Auckland ex Baltimore, U.S.A.

Dead Culex gelidus and Cx. tritaeniorhynchus (Mozzie Photo of the Month) adults were also recovered from an overhead baggage locker on a Thai Airways plane at AIA. This wasn't recorded as an interception as the mosquitoes were dead when found.

PUBLIC COMPLAINTS - SALTMARSH MOSQUITOES

Please direct all public complaints regarding saltmarsh mosquitoes to the MAFBNZ Exotic Pests and Disease hotline (0800 80 99 66). They will forward details to the appropriate incursion investigation team.

All non-saltmarsh mosquito complaints should be forwarded to the Ministry of Health's 0800 MOZZIE hotline (0800 66 99 43) as per usual.

MOSQUITO-BORNE DISEASES

DENGUE/DHF UPDATE - USA (FLORIDA)

Source: Reuters [edited] 13 Jul 2010 reported on ProMED mail 16 Jul 2010

Of the population of Key West, Florida, 5 percent -- more than 1000 people -- have been infected at some point with the dengue virus, government researchers reported on Tuesday [13 Jul 2010]. Most probably, they did not even know it, but the findings show the sometimes deadly infection is making its way north into the United States, the researchers said.

"We're concerned that if dengue gains a foothold in Key West, it will travel to other southern cities where the mosquito that transmits dengue is present, like Miami," said Harold Margolis, chief of the dengue branch at the U.S. Centers for Disease Control and Prevention.

"These cases represent the re-emergence of dengue fever in Florida and elsewhere in the United States after 75 years," Margolis said in a statement. "These people had not travelled outside of Florida, so we need to determine if these cases are an isolated occurrence or if dengue has once again become endemic in the continental United States."

Dengue is the most common virus transmitted by mosquitoes, infecting 50 million to 100 million people every year and killing 25 000 of them. It can cause classic flu-like symptoms but can also take on a haemorrhagic form that causes internal and external bleeding and sudden death. Companies are working on a vaccine, but there is not any effective drug to treat it.

Dengue was eradicated in the United States in the 1940s, but a few locally acquired U.S. cases



NEW ZEALAND BIOSECURE

Entomology Laboratory



have been confirmed along the Texas-Mexico border since the 1980s. More cases have been reported recently in Mexico and the Caribbean.

After 27 cases of dengue were reported in Florida in 2009, scientists from the CDC and the Florida Department of Health took blood samples from 240 randomly chosen Key West residents. Of these, 5 percent had active dengue infections or antibodies to the virus, showing they had been infected, the researchers told the International Conference on Emerging Infectious Diseases being held in Atlanta.

DENGUE EPIDEMIC THREATENS CARIBBEAN, KILLS DOZENS

Source: San Juan, Puerto Rico July 17; Associated Press, reported on Royal Society of NZ website and daily email circular - Science in the News 18 July 2010

Warm weather and an unusually early rainy season blamed for increasing mosquito numbers.

Mosquito-borne dengue fever is reaching epidemic stages across the Caribbean, with dozens of deaths reported and health authorities concerned it could get much worse as the rainy season advances. The increase in cases is being blamed on warm weather and an unusually early rainy season, which has produced an explosion of mosquitoes. Health officials say the flood of cases is straining the region's hospitals.

In the Dominican Republic, where at least 27 deaths have been reported, hundreds of health workers and soldiers went door-to-door Saturday to warn about the virus and destroy mosquito breeding areas.

Hospitals in Trinidad are running out of beds, and Puerto Rico is facing what officials say could be its worst dengue outbreak in more than a decade.

"We are having a really large epidemic," said Kay Tomashek, epidemiology section chief of the Centres for Disease Control and

Prevention's dengue branch in Puerto Rico. At least five people have died in the US Caribbean territory, and another 6300 suspected cases have been reported as of mid-July, she told The Associated Press.

Only 100 more cases were reported during the same period in 1998, which marked the island's worst dengue outbreak. By the end of that year, the virus had sickened 17,000 and killed 19 people.

In Trinidad, officials added 15 beds to the San Fernando General Hospital on Friday. They also opened a dengue clinic to follow up on patients who are being discharged quickly to free up more beds. At least one death has been reported.

Dr. Anton Cumberbatch, chief medical officer of the island's health ministry, said he is worried that the number of deaths and cases of the more severe haemorrhagic dengue will increase this year.

The more people are repeatedly infected, the greater the chance they will develop the haemorrhagic form, which can be fatal, he told a recent news conference. And since Trinidad had a severe dengue bout just two years ago, that means it is likely people who had the virus will get it again, he added.

"The risk and the severity of the dengue situation is apparently rearing its head at a really rapid rate," Cumberbatch said. The Dominican Republic is grappling with the same problem.

Nurses at a children's hospital in Santiago, which has one of the highest dengue incidences this year, demanded more resources and personnel. Four children died this week in Santiago, located northwest of the capital of Santo Domingo.

Health Minister Bautista Rojas says more than 5000 people have been diagnosed with dengue,



NEW ZEALAND BIOSECURE

Entomology Laboratory



but Senen Caba, president of the Dominican Medical Association, disputed those numbers and said doctors have reported more than 7000 cases.

"Hospitals are flooded with fever cases," Caba said. "Emergency rooms are overflowing." Caba said the last time the country experienced a similar dengue epidemic was a decade ago. "There has been a kind of explosion when it comes to mosquitoes," he said of this year.

French Guiana, Guadeloupe and St. Martin also have registered a high number of dengue cases, and more than 16,700 total cases had been reported across the Caribbean through early June, according to the latest statistics available from the Pan American Health Organisation.

There are four types of dengue, and all cause fever, headaches and extreme joint and muscle pain. Most victims recover within a week, and while they become immune to the specific type of dengue they caught, they are still vulnerable to other types, Tomashek said. Health officials fear the virus, which had once disappeared from the United States, also could gain a foothold there.

While test results for a suspected dengue case in the Miami area came back negative this week, a recent study found five percent of Key West residents show evidence they have been exposed to the virus.

MALARIA IN MUMBAI, INDIA - 1

Source: DNA [edited] 17 Jul 2010 reported on ProMED mail 18 Jul 2010

The state government on Thursday [15 Jul 2010] admitted that Mumbai had become the malaria capital of the state. Out of the total cases registered in the state, 47 percent were from the city. Public health minister Suresh Shetty said that though the state percentage had declined by 12 percent, the number of cases in Mumbai, Thane and Nashi went up by 7, 10 and 1 percent respectively.

Of the 22 159 people reported to be suffering from malaria till 10 June 2010, 12 393 were in the city. In 2008-09, the death toll in the state was 166, including 104 in Mumbai, the minister said. Shetty said only 2 percent of the construction work contractors were following the norms laid down by the civic body to contain malaria.

"There are 2500 ongoing constructions in the city. Even though the civic body made compliance of the anti-larvae treatment compulsory for developers to get the intention of disqualification for the construction, none of the builders follow it. Now, the BMC has decided to recover the expenses from the developers," the minister said.



Location map of Mumbai (formerly Bombay) ex <http://www.solarnavigator.net/geography/mumbai.htm>

An official from the public health department alleged that BMC officials were protecting the developers. "Criminal cases should have been registered against developers who weren't following the norms," he said. The official also claimed that five wards in the city had the maximum number of victims. "Lack of sanitation, filth and contaminated water are the major reasons of the epidemic in the wards in eastern and western suburbs," he said.

The minister said 700 paramedical workers and 396 fogging workers had been appointed by the BMC to contain malaria.



NEW ZEALAND BIOSECURE

Entomology Laboratory



MALARIA IN MUMBAI, INDIA - 2

Source: NDTV [edited] 22 Jul 2010 reported on ProMED mail 23 Jul 2010

In the last fortnight, nearly 9000 cases have been reported in Mumbai, the highest in 4 years.

Compared to other metros, Mumbai is clearly on the edge. While 8642 cases have been registered in Mumbai, Delhi has seen just 5 cases, and Bangalore zero in the last 2 weeks.

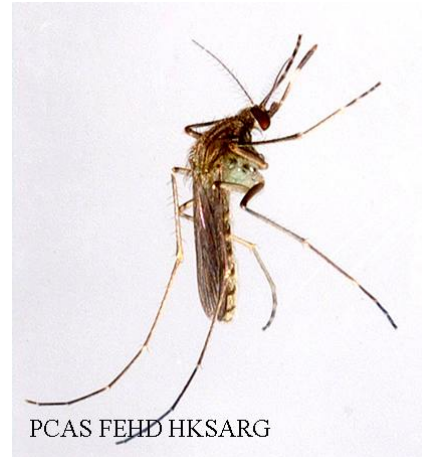
Most cases have been reported from Central Mumbai, where over a 100 big construction projects are underway. A building in Lower Parel which is surrounded by 3 projects has reported nearly 200 cases this monsoon [2010].

"In this building, in every home, there are 4-5 people who have malaria. Civic workers come for checks, but what do you expect when there are 3 buildings being constructed around us," said a Lower Parel resident.

Much of the blame, the health authorities say, is on the builders for not following civic norms, which make it compulsory for them to carry out anti-larvae treatment at construction sites.

"Since we do not want to put the lives of Mumbaikars at risk, we have started carrying out these activities ourselves, and we will recover the expenses from them," said Dr Girish Ambe, Executive Health Officer, Brihanmumbai Municipal Corporation.

Mozzie Photo of the Month



Adult female *Culex tritaeniorhynchus* photo ex <http://www.fehd.gov.hk/english/safefood/risk-pest-mosquito.html>

- Breeds in pools, fishponds, water-logged grass fields, slow running streams and ditches
- Adults are active at night with peak of activities one hour after dark
- Exophilic (tends to occur outdoors) but can be indoors before and after blood feeding
- Mainly zoophagous (feeds on animals) but also feeds on man
- Vector of Japanese encephalitis and filariasis