

## NT Medical Entomologist Ipswich Flood Relief Trip 20-26 January 2011

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On 18 January 2011 Queensland (Qld) Health requested 2 entomologists from the Northern Territory Department of Health (DoH) Medical Entomology (ME) section to provide support for vector control for the Brisbane flood relief operations between 20-26 January 2011. The area of operations for the ME staff was to be in the Ipswich area.

### **Thursday 20 January**

The ME Advice and Vector Control Officer Allan Warchot and the Operations Manager Nina Kurucz attended a meeting in Darwin to organise the logistics of the trip with 2 DoH Environmental Health Officers (EHO), who were also part of the support operation requested by Qld Health. The 4 officers travelled to Brisbane on 20 January.

### **Friday 21 January**

On Friday morning, the ME officers travelled to Ipswich, where they attended a meeting with the vector control organiser, Matthew Ryan, from the Ipswich City Council. There were 4 vector control officers from the Gold Coast City Council and 2 officers from the Redland Shire Council present.

The ME officers were informed that aerial surveys of Ipswich were carried out after the flood water receded, and that areas still containing flood water were tentatively identified, and needed to be surveyed for mosquito breeding. In addition, each of the 4 vector control groups were assigned to designated areas for vector surveillance and control. ME officers were assigned to the worst flood affected areas for assessment.

### **Vector survey and control operations 21 - 24 January 2011**

Between 21- 24 January ME officers carried out mosquito survey and control operations in the following areas of Ipswich:

- Moores Pocket
- Tivoli
- Goodna
- Amberley
- Redbank
- Bundamba

- Moggill
- Yamanto
- Purga and
- Riverview.

During the survey and control operations, it was observed that the flood water had already largely receded, and that only small areas in local public parks and sport ovals required mosquito control. Mosquito species found were *Culex annulirostris* and *Culex quinquefasciatus* including 1<sup>st</sup> to 4<sup>th</sup> larval instars and pupae and control was carried out using methoprene pellets and briquettes. A constructed wetland with stagnant water in Goodna was one of the largest and most productive mosquito breeding sites located during the surveys.

On 22 January, ME officers inspected the sewage treatment plants in Tivoli, Bundamba and Goodna. No sewage overflow or mosquito breeding was found at the plants in Tivoli or Bundamba. In Tivoli, due to a sewage pump failure, sewage was overflowing into a creek line. Areas were treated for mosquito breeding in this area near the sports oval and the temporary dump. The Tivoli sewage overflow pond was found to be in a condition requiring attention, and was breeding low numbers of mosquitoes. The findings were reported to the Ipswich Council.

**Figure 1. Tivoli. Grassy ponding at dog training facility off Tantivy Rd. High *Cx. annulirostris* and *Cx. quinquefasciatus* breeding. Site treated with methoprene 150 day briquettes.**



On 23 and 24 January, the ME officers inspected areas that were identified as potential mosquito breeding areas during an aerial survey. During the ground survey, however, the only areas found to hold water were quarries, dams and cut off pools along the Brisbane River, which contained biological control agents, such as fish. No mosquito control was required in those areas.

ME officers were advised that the military would survey the floodplain areas around the Amberley base located to the west of Ipswich town. ME officers inspected areas close to the military base along the Cunningham Highway. The topography was sufficient to prevent major residual water pooling, which was the general observation in the Ipswich locality.

#### ***Tuesday 25 January***

On Tuesday morning, ME Officers advised the Ipswich Council vector control coordinator, that mosquito breeding was minimal, and that all major areas were attended to. ME officers also met with the part-time local Ipswich vector control officer to discuss the setting of routine CO2 baited EVS surveillance traps, to determine the number of mosquitoes present following the flood, and to get baseline information on seasonal mosquito numbers in the Ipswich area. The need for mosquito traps to be set in response to mosquito complaints was also discussed, in addition to the findings from the mosquito survey and control operations carried out by ME between 21 and 24 January. As a result of the

floods, the Ipswich Council received a new position for vector control, while previously there was no dedicated position.

ME and EH Officers travelled back to Brisbane on Tuesday afternoon, and were invited to a meeting with the Qld Health Officer, who requested the NT support to provide relevant feedback in regards to the operations carried out in Ipswich. ME provided the following feedback:

- Overall operations were well organised and adequate support was provided by Qld Health and the Ipswich Council.
- Mosquito survey and control operations should have been carried out earlier (2 to 4 days after the flood peak) to prevent adult mosquitoes from emerging.
- For aerial surveillance for potential mosquito breeding sites, a vector control officer should have been present to determine the likelihood of mosquito breeding in the flooded areas.
- More methoprene pellets were required to carry out the control.

For the NT ME officers, it was beneficial to provide vector control support to the Ipswich Council by meeting the Qld vector control counterparts and discussing local vector control operations. In addition, it was a valuable experience to carry out vector survey and control in a post flood situation.

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