BREEDING HABITATS OF AEDES AEGYPTI AND AEDES ALBOPICTUS IN SOME SELECTED DENGUE RISK AREAS OF MATALE DISTRICT

S. VAIKUNTHAN,[1] K. PERERA[2] AND A.M.G.M. YAPABANDARA[3]

[1]*Postgraduate Institute of Science, University of Peradeniya*
[2]*Department of Engineering Mathematics, Faculty of Engineering, University of Peradeniya* [3]*Regional Office, Anti Malaria Campaign, Matale*

Dengue/dengue haemorrhagic fever is becoming one of the major public health problems in Sri Lanka. *Aedes aegypti* and *Ae. albopictus* are regarded as the principal and secondary vectors in Sri Lanka. In 2004, 352 dengue cases were reported in the Matale district. Therefore a field study was carried out to determine the key premises and containers suitable for *Aedes aegypti* and Aedes *albopictus* breeding in the dengue risk areas of Matale District. Six dengue high-risk areas of Ukuwela, Rattota Secretariat division and Matale Municipal area in the Matale District were randomly selected for this study. One year entomological surveys were carried out in these selected areas from January to December 2004 by entomology teams attached to Anti Malaria Campaign, Matale. All water filled containers in 6 study localities covering 100 houses per locality were examined and larvae were collected using dipping and siphoning techniques. Larvae were identified into species.

The data collected by the Anti Malaria Campaign, Matale were statistically analyzed. There were two species of dengue vectors, *Aedes aegypti* and *Ae. albopictus* prevailing in Matale district. Six types of artificial and natural containers namely, indoor and out door ground level water storage tanks and barrels, discarded receptacles and tyres, leaf axils of some plants and ornamental containers served as breeding places of vectors.

Of all the types of water filled containers, a high proportion of out door ground level water storage cement tanks were infested by *Aedes aegypti* and *Ae. albopictus* larve ($H = 48.83$, $df = 7$, $P < 0.000$). The containers left outdoors showed a higher frequency of breeding vectors than those kept indoors (($W = 81$, $P = 0.001$, $n = 12$). Middle income houses were significantly more likely to have *Aedes* larvae-infested containers than high ($W = 213$, $n = 12$, $P = 0.003$) and low income premises ($W = 78$, $n = 12$, $P < 0.001$). These results suggest that *Ae. aegypti* and *Ae. albopictus* control programmes could be more cost effective and sustainable by concentrating efforts on key premises and key containers to control mosquito densities and dengue transmission while reducing manpower needs and insecticide use.