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**Transmission of dengue infection and density of *Ae. Aegypti* at a new focus in a rural tea estate in the central hills of Sri Lanka**

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Several dengue cases were detected in the latter part of January 2010 at Wevally tea estate in the Medical Officer of Health (MOH) area Lindula in the Nuwara-Eliya district. Investigation of the outbreak in February 2010 revealed that there were 09 suspected dengue/serologically positive (IgG and IgM positive) dengue haemorrhagic fever (DHF) cases with 01 death. Of the 9 DF/DHF cases, 3 were females and 6 were males. The age of the patients ranged from 4 - 40 years with a majority (67%) between 21-40 years. There were 2 patients below 5 years. Only one patient gave a history of moving outside the area while the rest did not give a history of moving to any dengue prevalent area within 3 months prior to onset of fever. Two entomological investigations were carried out in the area to determine the breeding sites and the density of *Ae. aegypti* and *Ae. albopictus*. The first larval survey was carried out in February 2010. During this survey 119 houses were examined for *Aedes* immatures (larvae and pupae) where 9 premises were positive for *Ae. aegypti*. In this survey, the larval density is high with container index of 8.7, house index of 7.5 and Breteau index of 9.2. Breeding sites of *Ae. aegypti* were water storage barrels (37 %), tyres (27 %) flower pots (9 %), polythene roofs (18 %) and roof gutters (9 %). Another entomological survey was carried out in March 2010 when 100 houses were examined where 01 barrel in 01 house was positive for *Ae. aegypti*. The container index, premises index and Breteau index were 1.5 %, 1 % and 1 respectively. This study shows that there was local transmission of DF/DHF at Wevally tea estate where there was no history of dengue transmission previously. The study also showed the occurrence of *Ae. aegypti* at higher elevations (1676 m) where *Ae. aegypti* has not been previously reported. This indicates that the major dengue vector, *Ae. aegypti*, is moving to higher elevations, surviving at micro environments and starting dengue transmission when environmental conditions are conducive. Thus, it is necessary to expand dengue control programmes to cover the central hills, including the rural estate sector, of Sri Lanka.