

D-28: Abundance of potential vector species of Japanese Encephalitis in a dry zone village

K T Fonseka¹, F P Amerasinghe¹, F Konradsen², P H Amerasinghe¹
(¹Dept of Zoology, University of Peradeniya, ²International Irrigation Management Institute, Colombo)

Studies on the abundance of six potential vector species of Japanese Encephalitis (JE) in Sri Lanka (*Culex fuscocephala*, *Cx. gelidus*, *Cx. pseudovishnui*, *Cx. tritaeniorhynchus*, *Cx. whitmorei* & *Mansonia uniformis*) were carried out in Mahameegaswewa, a purana (=ancient) village in the Anuradhapura district, located in the JE endemic low country dry zone of Sri Lanka. The study was carried out from January 1995 to December 1996. Fortnightly catches of mosquitoes were done by means of cattle bait (CBC), cattle baited trap hut (CBTH), human bait (HBC) and indoor resting (IRC) catches.

Culex tritaeniorhynchus was the most abundant species (35.44%) of total catch of culicines, followed by *Cx. fuscocephala* (13.6%), *Cx. gelidus* (9.31%), *Cx. pseudovishnui* (3.23%), *Ma. uniformis* (1.06%) and *Cx. whitmorei* (1.03%). Further analysis of CBC, CBTH and HBC showed that all three major vector species (*Cx. fuscocephala*, *Cx. gelidus*, and *Cx. tritaeniorhynchus*) peaked in abundance during November to December in both years with some minor peaks in the first half of the year. Human biting rates were lower than 01 per man hour even during the highest peak abundance. This was much lower than the human biting rates of a previous study in a large irrigated rice eco-system in the low country dry zone of Sri Lanka. Endophilic behaviour also was occasional at Mahameegaswewa.

According to these results, we can conclude that the traditional tank-based rice eco-systems pose a lower risk of generating high vector densities than large irrigated rice eco-systems.

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