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VECTOR MOSQUITO DIVERSITY AND HABITAT VARIATION IN A SEMI URBANIZED AREA OF KELANIYA IN SRI LANKA

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ABSTRACT

Mosquito larval sampling was performed at 30 locations, maintaining a distance of at least 200 m radius between two locations in a semi-urban area of the city of Kelaniya in Sri Lanka. The analysis of similarity test identified the abandoned rice field mud flats as the habitat type revealing the highest diversity of *Culex* mosquito species, showing the presence *C. quinquefasciatus*, *C. bitaeniorhynchus*, *C. gelidus* and *C. whitmorei* and one *Armigeres* species. *Culex gelidus* and *C. whitmorei* were restricted to such habitats occupied with live vegetation with high water conductivity and turbidity. Blocked drains were associated with a significantly higher occurrence of *C. quinquefasciatus* when compared with *C. bitaeniorhynchus* or *Armigeres* spp. This study revealed that water quality requirements of the habitat of the culicine mosquito larvae varied among the species. The larval habitats of *C. quinquefasciatus* were characterized by low dissolved oxygen and high biological oxygen demand compared with those of the other culicine mosquitoes. Such habitats were associated with tubificid worms (Annelida) and chironomid larvae (Diptera). *C. quinquefasciatus* larval survival rapidly declined at pH level of 9.4.

Keywords: *Culex*; container breeders; marshy lands; rice field habitats; turbidity.
