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Breeding preference of *Aedes aegypti* and *Aedes albopictus* (Diptera: Culicidae) in Galle District, Sri Lanka

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Aedes aegypti and *Aedes albopictus* are main vectors of Dengue (DF) and Dengue Haemorrhagic (DHF) Fever in Sri Lanka. Both species are known to breed in microhabitats including water-filled containers, yet whether there is any breeding preference linked to features of containers/ microhabitats has not been addressed. Present study was conducted to find out breeding preference of the two *Aedes* species by estimating relative larval abundance in selected artificial and natural microhabitats. Nine larval surveys were conducted from January to October in 2017, and 1069 containers/ microhabitats were randomly sampled from three localities representing urban (n = 346), suburban (n = 367), and rural areas (n= 356) of Galle District. A total of 552 (51.63%) containers/ microhabitats were positive for both *Ae. aegypti* and *Ae. albopictus* larvae. Both species preferred artificial containers (90.57%) (including rubber tyres: 17.82%, plastic cups: 17.09%, and metal cups: 9.82%) than natural containers (9.43%) (including plant axils, coconut shells and wood caves). Analysis of percentage abundance of larvae revealed that both species had similar preference for black-coloured containers (47.98% for *Ae. aegypti* and 37.32 % for *Ae. albopictus*). Both species were abundant in containers having water level height less than 10 cm (*Ae. aegypti* 77.57% and *Ae. albopictus*70.11%) and containers with 50-100 ml of water (*Ae. aegypti* 29.28% and *Ae. albopictus* 41.79%). Their abundance increased with the presence of leaf litter in the containers (*Ae. aegypti* 80.69% and *Ae. albopictus* 73.77%). For both species, preferred water temperature was 31 ± 0.3^{o}C (*Ae. aegypti* 58.23% and *Ae. albopictus* 61.21%*)* while preferred mean water pH was 7.44 ± 0.04 (*Ae. aegypti* 56.84% and *Ae. albopictus* 52.46%). Characteristic features such as the presence of leaf litter, pH and temperature of the logged water within the containers/ microhabitat may play an important role on the abundance of these two *Aedes* vector mosquito species.

Keywords: *Aedes aegypti*, *Aedes albopictus*, breeding containers, larval surveys

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