

A preliminary study on the release of *Toxorhynchites splendens* to control *Aedes* populations in the semi-urban area of Gangodawila, Nugegoda

Investigations on the possibility of controlling *Aedes* mosquito populations by releasing laboratory bred, mated *Toxorhynchites splendens* females, were carried out in the Gangodawila, Nugegoda area of the Colombo District during 22nd January to 11th July 2001. The experimental locality covered an approximate area of 5 km² and included twenty randomly selected houses, five building sites and two commercial sites, which were examined for indoor and outdoor larval breeding habitats. Ovitrap were also placed in various locations for *Aedes* breeding. Data on larval surveys showed the presence of *Aedes aegypti* and *Aedes albopictus*, the latter species breeding in higher densities. A Breteau Index of 20% was recorded for *Ae. aegypti* in respect of container habitats while for *Ae. albopictus* House and Breteau indices of 60% and 80% were recorded respectively. An ovitrap index greater than 13% was obtained from five locations for *Ae. aegypti* while for *Ae. albopictus* the ovitrap index recorded was greater than 50%. A total of 100 mated *Tx. splendens* females were released at the center of the experimental area, which was approximately 500 m².

Ovitrap surveys were carried out within four weeks before and after release of *Tx. splendens* females. Each ovitrap was examined for two days per week. Ovitrap placed in locations with vegetation cover and flowering plants were positive for *Toxorhynchites* larvae. The mean number of *Aedes* larvae per such positive trap, when compared with the mean number of *Aedes* larvae before release was highly significant statistically ($p < 0.05$). Ovitrap placed in other locations with low vegetation cover recorded very low numbers of *Toxorhynchites* larvae ($p > 0.05$). The results were suggestive of the possibility of using

Tx. splendens to control specially *Ae. albopictus* that breed more in natural container habitats in semi-urban areas. *Tx. splendens* adult females being nectar feeders would be able to survive better in habitats with vegetation and flowering plants.