

BIOLOGICAL CONTROL OF *Aedes* MOSQUITO LARVAE (DIPTERA: CULICIDAE) USING THREE LARVIVOROUS FISH SPECIES IN LABORATORY CONDITION

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ABSTRACT

The mosquitoes *Aedes aegypti* and *Aedes albopictus* are the main vectors of Dengue virus in Sri Lanka. The larvivorous fish used as biological control agents to diminishing mosquito larval populations. This study was carried out to investigate the larvivorous potential of *Aplochelius parvus*, *Gambusia affinis*, and *Poecilia reticulata*, against *Aedes* mosquito larvae in laboratory condition. Solitary female, solitary male and female and male companion of all three fish species were fed by each three hundred larvae mixture of 3rd and 4th instar of *Aedes aegypti* and *Aedes albopictus* mosquito species under laboratory conditions. The mean number of larvae consumed in every 10 min, 20 min, 30 min, 1 hour, 2 hours, 5 hours, 8 hours and 24 hours were counted for every five replications. The mean larval consumption patterns showed statistical significance at $p < 0.05$ level with different time intervals. Solitary female, solitary male and female and male companion of *Aplochelius parvus* had higher feeding potential than *Gambusia affinis* and *Poecilia reticulata*. Therefore these fish species can be utilized as environmental friendly potential biological control agents for dengue mosquitoes.

KEYWORDS: *Aplochelius parvus*, Biocontrol, Larvivorous Fish, Larva & Vector