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# Effect of predatory fish chemical exudates on oviposition preference of two *Aedes* mosquito species; *Aedes aegypti* and *Aedes albopictus*

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Dengue virus is transmitted by the vector mosquitoes *Aedes aegypti* (Linnaeus) and *Aedes albopictus* (Skuse). The most important way to eliminate the dengue viral fever iscontrol the above two vector mosquitoes. Thorough knowledge on oviposition behavior of *Aedes* mosquitoes is a key factor for the implementation of new strategy to control these vectors. Therefore, the current study was carried out to study the effect of fish chemical exudates on oviposition preference by *Aedes* mosquitoes.

In this study the effects of chemical exudates of three larvivorous fish species *viz. Poecilia reticulata* ("Guppi"), *Rashora daniconius* ("RavulDandi") and *Applocheilus dayi* ("Nalahandaya") on the oviposition behavior of two species of *Aedes* mosquitoes *viz Ae. aegypti* and *Ae. albopictus* were tested separately under laboratory condition using ovitraps that are placed inside insects cages. Three ovitraps each were filled with conditioned water previously prepared by placing well fed female fish (n = 5) of each species in 5 L of aged tap water in separate glass tanks for 24 hrs. Aged tap water was used for the control ovitraps (n = 3). Blood fed gravid females (n= 20) and males (n =10) of both mosquito species were introduced separately into each experimental cage. After three days the number of mosquito eggs in ovitraps were counted separately. The effect of combination of fish chemical exudates on oviposition of the two mosquito species also examined separately by repeating the procedure with different combinations of fish exudates.

The results revealed that chemical exudates of fish have negative effect on oviposition preference of both *Ae. aegypti* and *Ae. albopictus*. Both mosquito species have the least preference of oviposition in water conditioned by *A. dayi* followed by *R. daniconius* and *P. reticulata*. Experiments carried out with combination of water conditioned by different fish species revealed that combination of fish had significant effect on oviposition preference of both species, while the oviposition was reduced when the conditioned water consisted of chemical exudates of *P. reticulata*. Both species of mosquitoes have least preference of oviposition in combination of *A. dayi* and *R. daniconius* followed by combination of *A. dayi*, *P. reticulata*, and *R. daniconius*, combination of *A. dayi* and *P. reticulata* and combination of *R. daniconius* and *P. reticulata*.

**Keywords:** *Aedes aegypti*, *Aedes albopictus*, *Aplocheilus dayi*, *Rashora daniconius*, *Poecilia reticulate*, oviposition