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## Species composition and habitat characterization of mosquito (Diptera: Culicidae) larvae in Dhaka, Bangladesh

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An entomological surveillance was carried out to study the mosquito species composition and larval habitats characterization in Dhaka, Bangladesh. A total of 6,088 mosquito larvae belonging to 12 species (*Ae. aegypti*, *Ae. albopictus*, *An. barbirostris*, *An. peditaeniatus*, *An. vagus*, *Cx. gelidus*, *Cx. hutchinsoni*, *Cx. quinquefasciatus*, *Cx. tritaeniorhynchus*, *Mn. annulifera*, *Mn. uniformis* and *Tx. splendens*) were collected from 14 types of habitats during the study period. *Culexquinquefasciatus* was found as dominant (21.7/500ml) species followed by *Cx. tritaeniorhynchus* (10.53/500ml). Dissolve oxygen and chlorophyll were the preeminent predictor for the abundance of all collected mosquito larvae except *Ae. aegypti*. Water temperature was positively associated with *An. vagus* ( $r = 0.421$ ,  $p = <0.001$ ), *An. barbirostris* ( $r = 0.489$ ,  $p = <0.001$ ) and *An. peditaeniatus* ( $r = 0.375$ ,  $p = <0.001$ ) breeding. Water depth, distance from nearest house, emergent plant coverage and alkalinity were found as the basis of larval abundance. Every *Culex* species and *Tx. splendens* ( $r = 0.359$ ,  $p = 0.001$ ) were found positively associated with chemical oxygen demand while *Mn. annulifera* showed negative association ( $r = -0.115$ ,  $p = 0.0297$ ). *Culex* larvae were found to share their habitats with *Aedes* (8.86%) and *Anopheles* (32.81%) but *Anopheles* was not found to coexist with *Aedes*. Marked differences between the physicochemical characteristics of different types of larval habitats were observed. This study highlighted that various physicochemical factors affect the presence and abundance of mosquito larvae.

### Biography

Md. Sayfur Rahman has completed his B. Sc. in Zoology from Jahangirnagar University in 2010 and M. Sc. in Entomology from Dept. of Zoology of Jahangirnagar University in the year of 2011. He worked under the direct supervision of Professor Abdul Jabber Howlader and Dr. Kabirul Basar, Associate professor of Jahangirnagar University. An abstract on his research report was published on the souvenir of Zoological Society of Bangladesh. Currently he is writing scientific Paper from his Thesis work for publication.

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