

Study the Feeding Efficacy of the Predatory Larvae of Genus *Lutzia* (Diptera: Culicidae) during its Larval Life

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Abstract: Mosquitoes are nuisance and play a major role as vectors of many pathogens. Larvae are mostly filter feeders but the larvae of genus *Lutzia* is known as predators of mosquito larvae for a long time. The maximum prey consumption is the basic elements in the evaluation of a predator as a possible biological control agent. To obtain some understanding of the predatory potential of *Lutzia* this quantitative study was undertaken around the Eastern University premises from February 2009 to March 2010. Field collected egg rafts of *Lutzia* were reared in the laboratory conditions (Room temperature 29°C and Relative humidity 75%) and the freshly emerged larvae were separated individually by using plastic dropper into the larval rearing cups filled with filtered tap water which covered by mosquito net to prevent other ovipositions and other predatory interactions. In this experiment, fifteen replicates of larval rearing cups were arranged to four repeated trials. Thirty 1st instar larvae of *Culex* were provided as a prey and the consumed prey was counted every twenty four hours intervals and the consumed prey larvae were replaced each time until all the predatory larvae pupated. The prey larvae were maintained approximately same size as the predator. There is a statistical significance ($p=0.0001$) between hours of interval and consumption. In this experiment one predator larvae of *Lutzia* consumed average of 76.25% of same size of the prey *Culex* larvae in its larval life.

Keywords: Consumption, Feeding efficacy, Instar, *Lutzia*, Predatory larva