The Study of Seasonal Variation of Predatory Mosquito Larva Genus Lutzia with Climatic Factors around Eastern University Premises

P. Jeyanthini* and M. Vinobaba

Department ofZoology, Faculty ofScience, Eastern University, Sri Lanka.
Corresponding Author: pjeyanthini@hotmail.com

Mosquitoes are obligate vectors of many vertebrate pathogens including human. The larvae belonging to the genus Lutzia have been known as predators of other mosquito larvae for a long time. The biological characters of Lutzia were studied with the aim of employing this mosquito as a biological control agent of other mosquito larvae and dipterans. The seasonal variation of the larvae of genus Lutzia was studied around the Eastern University premises from February 2009 to March 2010. Artificial ovitraps were placed in different localities under shade and the water level in the ovitraps maintained constant. The occurrence of the immature stages of Lutzia was checked at two weeks interval together with the occurrence of prey population. If Lutzia was observed, the stage of life cycle of Lutzia, abundance number of each stage and the occurrence of other prey mosquito larva were recorded. These seasonal variations in the abundance of Lutzia were correlated with the three main climatic factors such as temperature, rainfall and relative humidity.

The larval population of genus Lutzia fluctuated seasonally to some extent and depending on prey population, breeding sites and larval stages. The total number of the immature stages of Lutzia was considered as population index. The peak population index was observed in July and a second peak was observed in January and February. The three climatic factors such as rain fall, temperature and relative humidity showed negative correlation r = -0.123, r = -0.178 (max temp), -0.389 (min temp) and r = -O. 146 respectively on the population index of Lutzia.

Key words: Biological control, Climatic factors, Lutzia, Predatory mosquito, Seasonal fluctuation