GUPPIES AS PREDATORS OF COMMON MOSQUITO LARVAE IN MALAYSIA

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Abstract. Observation on predation activities of guppies (Poecilia reticulata) on the larvae of three species of mosquito, namely Aedes albopictus, Aedes aegypti, and Culex quinquefasciatus was carried out under laboratory conditions. Male and female guppies were used as predators for predation experiments on the 4th instars of mosquito larvae. The daily feeding rates comparing male and female guppies on mosquito larvae were different; the female guppies consumed more mosquito larvae than male guppies did. The daily feeding rates of female guppies were 121.3 for Ae. aegypti, 105.6 for Ae. albopictus, and 72.3 for Cx. quinquefasciatus. The daily feeding rates of male guppies were 98.6 for Ae. aegypti, 73.6 for Ae. albopictus, and 47.6 for Cx. quinquefasciatus. In terms of prey preference, there was greater preference towards mosquito larvae of Ae. aegypti, followed by Ae. albopictus, and the least preferred was Cx. quinquefasciatus. Male and female guppies consumed more mosquito larvae during lights on (day time) compared with lights off (night time). The water volume, prey species, number of fish predators available, prey densities, and prey’s sex also influenced the predation activities.

Keywords: Ae. aegypti, Ae. albopictus, Culex quinquefasciatus, guppy, predation activities, Malaysia