**Abstract**

Dragonfly nymphs are voracious predators that feed on smaller aquatic organisms. In this study, the life cycle and prey capturing mechanism of dragon fly nymph, Brachythemis contaminata was investigated. It was found that prey capturing mechanism is a complex grasping mechanism with additional sensory organs that help in sensing the surroundings. The time taken for the contraction and retraction of labial organ during prey capture was 180±52 minutes. The study also proves that dragonfly nymph had highest predation efficacy against Anopheles stephensi when compared to Culex quinquefasciatus and Aedes aegypti. The laboratory studies on the predatory potential of dragonfly nymphs, B. contaminata against different mosquito species in laboratory suggests that these nymphs have good larvivorous potential