**Abstract**

Wetlands are considered the most biologically varied of all ecosystems that act as link between terrestrial and aquatic habitats. Wetland vegetation plays an important role on invertebrate communities, as many invertebrates are found on these vegetation and they are used as shelter from predators, and for obtaining their food. Invertebrate communities may also vary according to plant growth form or morphology. Hence the present investigation was carried out to study the nutritional composition of the water hyacinth, Eichornia crassipes and the study of insect and plant interaction between Eichornia crassipes and selected aquatic insects. The nutritional constituents revealed that Eichornia crassipes was found to be rich in high protein and total organic matter that makes it more attractive to aquatic insects which adhere to the plant for its survival. The inventory of insect species present in the water hyacinth was grouped into four orders namely; Orthoptera; Coleoptera; Hemiptera and Odonata. The larvae, nymphs and adult of the insect species feed preference was on the upper leaf surface, lower leaf surface and the petiole of water hyacinth. This clearly indicates that the density and size of water hyacinth mats appear to have played an important role in determining invertebrate density, diversity, and assemblage composition