

RESEARCH ARTICLE

Assessment of the species composition and abundance of Rotifers in Two tropical ponds at Nsukka, Nigeria

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Article History: Received – November 11, 2016; Accepted – September 22, 2017

ABSTRACT

An ecological survey was carried out in the zoological garden ponds of the University of Nigeria, Nsukka (UNN) to determine the various rotifer species, abundance, percentage composition and physico-chemical characteristics of the pond. The rotifers were collected using plankton net on a weekly basis for two months in two ponds (fisheries - A and hippopotamus - B). The turbidity of the pond water, temperature, pH, Alkalinity, free carbon dioxide and water hardness were determined *ex situ*. Dissolved oxygen level was determined using the Winkler's method. Samples of rotifers were collected using plankton net. Identification of the rotifers was made by microscopic observation of the water samples collected using the 100X magnification. The percentage composition, species richness, evenness and the abundance of the rotifer fauna recorded in each station were calculated. The average temperature of pond A and B was 22.3 °C and 22.5 °C respectively. Pond A had a higher pH value than pond B. Free carbon dioxide was higher in pond B than in pond A. The value for water hardness was 0.31mg/l for pond A and 0.24mg/l for B. Pond B recorded zero alkalinity while for A it was 0.15mg/l.13. Pond B had a higher turbidity when compared to pond A. Rotifer species represented in 7 families was recorded. Pond A recorded higher species richness, abundance and evenness than B. *Philodina* sp had the highest percentage composition and abundance in both ponds. The results obtained showed that pH and other physico-chemical parameters could be responsible for the distribution and abundance of the rotifer fauna of the ponds.

Key Words: Water quality, Biotic indices, Environmental pollution