

Oligochaetes of Two Tropical Rainforest Lakes in Benin City, Nigeria

Odigie Osarogie Joyce¹ and Osimen Ekikhalo Catherine²

¹Department of Animal and Environmental Biology, Faculty of Life Sciences, University of Benin, Benin City, Nigeria. ²Department of Zoology, Faculty of life Sciences, Ambrose Alli University, Ekpoma, Edo State, Nigeria.

Abstract

Oligochaetes are relatively sessile and lack the ability to escape environmental stress which makes them useful bioindicators in the aquatic ecosystem. Low oligochaete diversity occurs in unpolluted and undisturbed environments. This research investigated the abundance, diversity and community structure of Oligochaetes in two tropical rainforest lakes (Obazuwa and Ozomu Lakes) in Benin City, Nigeria for over a period of one year (July 2014 to June 2015). By means of a modified Ekman grab, composite sediment samples were collected from 4 stations (two in each lake) fortnightly and analyzed in the laboratory. The sodium chloride floatation method and 1millimeter sieve were used to separate the organisms from the sediment and preserved in 10% formalin. Identification of the organisms and statistical analysis were carried out to ascertain the community structure. Three families (Naididae, Tubificidae and Aeolosomatidae) comprising of 24 taxa were represented in the two lakes. Naididae was the most diverse (twelve taxa) and the most abundant (63%). Aeolosomatidae was the least (4%), represented by two species. Species composition of the Oligochaetes did not change significantly ($P>0.05$), during the 12-month study though higher abundance was recorded in April and May 2015. This study has provided a baseline information on the diversity, abundance and community structure of the Oligochaetes of two tropical rainforest lakes located in two rural communities in Benin City, Nigeria.

Keywords: Benthic Invertebrates, Diversity, Obazuwa Lake, Oligochaeta, Ozomu Lake.

Email: joyce.odigie@lifesci.uniben.edu

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