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"STUDIES ON THE PROFUNDAL BENTHIC MACROINVERTEBRATE
PRODUCTIVITY IN LAKE NAIVASHA, KENYA."

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ABSTRACT

STUDIES ON THE PROFUNDAL BENTHIC MACROINVERTEBRATE
PRODUCTIVITY IN LAKE NAIVASHA, KENYA.

The study aimed at establishing the distribution, abundance, biomass of benthic macroinvertebrates, and the population structure and production of the most abundant species.

The profundal benthos was found to be dominated by tubificid oligochaetes Limnodrilus hoffmeisteri Claparede, Branchiura sowerbyi Beddard, Potamothrix heuscheri Bretscher and a naid Dero sp. Others include microtubellarian worm and chironomid larvae dominated by Chironomus formosipennis Kieffer. The macroinvertebrates are clumped in their distribution and widespread throughout the lake. Their distribution is influenced by substrate type of the sediment and interspecific association. L. hoffmeisteri is the most abundant species. Variations in abundance and life cycle of macrobenthos was strongly influenced by rainfall in the Naivasha basin. L. hoffmeisteri and B. sowerbyi reproduce continuously throughout the year with a peak in October and March respectively while emergence of Chironomid adults peaks twice a year in February and July. B. sowerbyi contributes 58% of a total benthic biomass of 4.07 g dry weight/ m².

The annual secondary productivity of L.

hoffmeisteri and B. sowerbyi in the profundal region of Lake Naivasha are 0.65 and 7.43 g dry weight/ m² / year respectively. Introduction of a commercially important benthic feeding fish, especially, those belonging to the genus Mormyrus is recommended to exploit the profundal benthic production.