

**ABUNDANCE AND SOME ASPECTS OF BREEDING BIOLOGY OF AFRICAN  
CATFISH(*Clariasgariiepinus*) IN KAFU RIVERINE WETLAND**

**BY**

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## ABSTRACT

Various studies on the ecology and biology of *Clarias gariepinus* have been carried out elsewhere by different scholars but not specific to Kafu Riverine wetland, because of its intraspecific ecological variations, fisheries resource management decisions that have been taken have not helped to address the environmental and human induced problems in the river catchment areas, therefore information generated from this study will help to address the above problems. This riverine wetland has two habitat types (open pools of water and closed wetland) this support a variety of fish species including *Clarias gariepinus* which account for 82% of the fishery of river Kafu.

In this study, fish samples were caught using various fishing gears such as basket traps gillnets and hooks. This was done once every fortnight and average catch per unit effort derived. The relations of fecundity to standard length (cm), total weight (g) and gonadal weight (g) were determined by regression Pearson's statistics. Results of this study revealed that, the abundance of *Clarias gariepinus* per day was significantly higher in the open than in the closed wetland type, the abundance was  $6.19 \pm 0.65$  and  $3.0 \pm 0.65$  fish in the open and closed wetlands respectively ( $P < 0.008$ ). Within seasons, a significant difference in abundance of this species per day was  $6.75 \pm 0.612$  and  $2.43 \pm 0.612$  in the wet and dry seasons, respectively ( $P < 0.042$ ). *Clarias gariepinus* exhibited a weak positive linear relationship with total length and somatic weight. However, a strong positive linear relationship was found between fecundity and gonadal weight:  $y = 366.3x + 7982$ , ( $r^2 = 0.721$ ,  $N = 157$ ,  $p < 0.01$ ). Therefore, gonadal weight was the best indicator of fecundity accounting for 72% of the variation in fecundity of *Clarias gariepinus* in Kafu riverine wetland. Gonadal somatic index (GSI) values of both females and males were at their highest during the months of October and November respectively and eventually started declining in mid-November which indicated the spawning activity. Therefore, November was presumed to represent the spawning period of *Clarias gariepinus* in Kafu riverine wetland. Males matured earlier ( $L_{50} = 33.7$ cm) than females ( $L_{50} = 33.7$ cm). Despite of *C. gariepinus* enormous contribution to the livelihood of the people especially in its catchment area, it is being threatened by human activities such as overfishing and environmental fluctuations which have caused changes in the abundance and reproduction of this specie Therefore information from this study will help to update managers especially in the affected districts on the key aspects of ecology and reproduction that needs attention for sustainable management of the fisheries resources.