



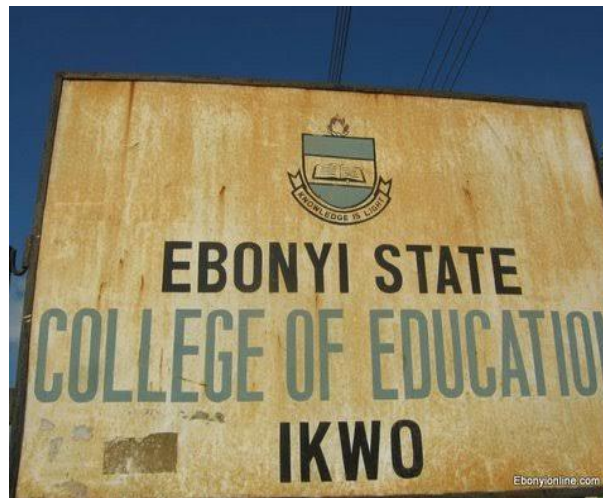
Histological Assessment of the Impact of Climate Change on Ovarian Recrudescence in African Catfish (*Clarias Gariepinus*)

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Abstract:

Climate change standard forecasts have heightened occurrence of severe weather actions like global warming and flooding. This in effect increases periodic volume of water level fluctuation in lentic water bodies thereby altering their natural composition. Too much water level variation is projected to have more serious effect on the morphology, role and biodiversity of marshy localities than effects due to increase in temperature owing to change in climate pattern. So, this study was undertaken, to unravel specific areas and extent of water level effects on fish fecundity. It specifically targeted assessment of the effect of water levels variations on *Clarias gariepinus* broodstock. This study was carried out to assess the impact of climate change on ovarian recrudescence in African catfish (*Clarias gariepinus*) female broodstock fed housefly maggot meal based diets. A total of 24 *Clarias gariepinus* female broodstock were randomly distributed into 12 concrete tanks for a 49 day growth trial. Two (2) female broodstock fish was stocked per experimental concrete tank and were fed in triplicates at 2% body weight in two portions per day. The effect of water level variation on the fish ovarian recrudescence was investigated histologically. The results suggested that gonads of *Clarias gariepinus* reared in higher water volumes developed to phase V and V1 (spawning and depletion stage) within 7 weeks. Hence there was a significant difference ($P > 0.05$) in gonadal development in fishes reared at varying water levels. Results therefore suggest that water level variation has significant effect on gonadal maturation in *Clarias gariepinus* female broodstock. These results highlight the vulnerability of fish, especially *Clarias gariepinus* in the face of climate change. The results will be useful for aquaculture as adaptation strategies are needed to contain the effect of water level fluctuation in the wild.



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Biography:

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