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TROPHIC ECOLOGY OF COMMERCIALLY IMPORTANT FISHES IN THE CROSS RIVER, NIGERIA

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ABSTRACT

Diet composition, Food Richness, Diet Breadth and Gut Repletion Index of 47 fish species belonging to 28 genera and 16 families consisting of 14,837 individuals in the inland wetlands of Cross River, Nigeria, were studied monthly between January 2006 and December 2007. There was variation in the composition of food objects in the different species despite the similarity in the rank-order (r_s = 0.996, p > 0.004). Major food item in the diet of the 46 species consist of detritus (79.9%), fish and fish fry (41.3%), insect and insect larva (41.3%), phytoplankton (26.1%), crustaceans (23.9%), mollusk (13%), macrophytes parts (13 %), seeds (10.9%), worms (0.04%), arachnids (0.02%) and amphibians (0.02%). Food Richness (N) varied between 5 and 20, Diet Breadth (D) from 0.22 to 0.88 and Gut Repletion Index (GRI) between 34% and 100%. This implies that most of the fish species in Cross River are detritivores with high feeding intensity and trophic flexibility, hence are capable of changing diet according to availability.

Key Words:

Diet composition, Food richness, Gut Repletion Index, Ichthyofauna, Diet breadth, Diet similarity.