

Reproductive aspects of common freshwater fishes in the cross river, Nigeria

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Abstract

Sexual maturity, fecundity, and breeding seasons of 46 freshwater fish species belonging to 28 genera and 16 families comprising 1060 individuals from Cross River were analyzed between January 2004 and December 2006. Mean fecundity vary with species from 215 plus minus 193 eggs (*Oreochromis niloticus*) to 110,000 plus minus 12,000 eggs (*Labeo coubie*). Few eggs (215) were produced by mouth brooders (*O. niloticus*) more eggs (1,268) by guarders (*Sarotherodon*) while the substrate spawners (*Clarias gariepinis* and *Labeo coubie*) without parental care produced highest number of eggs 71,963 plus minus 9084 and 10,000 plus minus 12000 respectively). Positive relationship was observed between fecundity of individual fish of a species and body size. The correlation coefficient (r) was highest in Cyprinids (0.98) and lowest among Clupeids (0.28). Size at sexual maturity, vary with species from 1.8cm standard length (*Petrocephalus ansorgii*) to 31.4cm (*Calamoichthys calabaricus*). Seasonal variation in fecundity of 25 species (56%) revealed an increase in the gonadal ripe stage from January and peaked at months of July-August; 6 species (13%) had peak fecundity at September-October and only 1 species (*Hepsetus odoe*) peaked at March - April. Eggs were scarce in 14 species (30.4%). Significantly higher number of fish species in Cross River inland wetlands breed during early rains (July-August) and the large number of eggs recorded in some species is evidence that the fish population can provide excellent broostock.