

FEED THE FISH TO FEED THE PEOPLE: THE EXPERIENCE OF A ZOOLOGIST

ABSTRACT

My areas of specialization are Fisheries and Aquaculture, particularly reference to fish food and nutrition. Food and feeding are critical aspects of life and Nigerians depend on fishes as a major source of animal protein due to its comparative cheap cost. However the demand for fish is ever increasing and it is currently about double the domestic production, hence the need to produce more fish to feed the people. My studies on the biology and nutrition of several cultural fish species including tilapias and catfish in their natural water bodies not only revealed their status, but also provide relevant findings useful for their adequate sustenance and culture. Aquaculture is the fisheries sector that can produce enough fish to feed the people because Nigeria is richly blessed with vast natural resources (currently grossly unexploited) that can be used for fish production. To solve the problem of inadequate feeds, a major hindrance to aquaculture development in Nigeria, my team carried out several studies on the production and use of Non-Conventional Feed Resources (NCFRs) of animal (e.g insect such as maggots, palm grub and termites, earthworms, garden snails, adult toads and tadpoles) and plant origins (e.g weeds). These NCFRs of animal origin are suitable feed ingredients that can be easily produced from organic wastes and used to replace fish meal (which is expensive) in catfish and tilapia feeds, thereby significantly reducing the cost of feeding fish during culture and enhance production. A PhD these from one of such studies with NCFRs won Award of Best Doctoral Thesis in Biological Sciences in the Nigerian University System by the National Universities Commission, and I won Award of Supervisor of Best Doctoral Thesis in Biological Sciences in the Nigerian University System, 2007. My interest in environmental pollution led to several studies on the water quality, plankton, macroinvertebrates and fish faunae of many water bodies in Nigeria. The studies revealed that many of our natural water bodies are under pollution stress (from anthropogenic activities), adversely affecting resident organisms and posing threats to humans that consume resources from them. My studies on biodiversity of fishes and herpetofauna using molecular techniques like DNA barcoding, revealed cryptic lineages in fishes and reptiles which could not be revealed by traditional morphomological and morphometric methods. New species of frogs, *Xenopus fischbergi*, and *Kassina cassinoides* and lizard, *Agama*

parafricana were recorded for the first time in Nigeria. These biodiversities are threatened by environmental degradation. Our book, *Food and feeding ecology of fishes in Nigeria* is useful to students of fisheries in tertiary institutions, researchers in fisheries and aquaculture and fish farmers I recommend enhancement of aquaculture through adequate empowerment by government and non-governmental organisations to increase domestic fish production to meet demand. Regulatory/Monitoring agencies should be adequately empowered to protect our water bodies from pollution. Laboratories in tertiary institutions and research institutes should be adequately equipped to meet trends in current research toward increase in food production and to solve the many problems damaging the environment.