



Tropentag, October 9-11, 2007, Witzenhausen

“Utilisation of diversity in land use systems:  
Sustainable and organic approaches to meet human needs”

## Proximate and Mineral Composition of *Parachanna obscura* Juveniles Exposed to *Derris elliptica* Root Powder

MOSUN OLUFAYO

*Federal University of Technology, Akure, Nigeria, Department of Fisheries and Wildlife, Nigeria*

### Abstract

Many plants contain chemicals which have traditionally been used to harvest fish in almost all parts of Nigeria. The use of toxicants is essential for controlling fish predators. For example, *Derris elliptica* root extracts act as toxicant when used in water bodies and fish culture enclosures in Nigeria. It is one of indigenous sources of fish toxicant in Nigeria. It is known that fish farmers have persistently and indiscriminately abuse *D. elliptica* by using far more than required concentration and thereby causing mass mortality of target, non-target and affecting histological properties of the fish. *Parachanna obscura* juveniles were assessed for proximate composition with a view to establish the nutritive value of *D. elliptica* on fish species. Muscle samples were taken from fish and body composition (% protein, % fat, % moisture and % ash ) was determined. Analysis of the muscle revealed that the mean of all the proximate and mineral composition of *P. obscura* juveniles exposed to *D. elliptica* root extracts were 0.70 % moisture, 9.23 % protein, 0.78 % lipid, 32.44 % ash and, 45.63 % NFE while the mean values of Zn, Ca, Mg and Cu composition of the test fish were 987.97, 1789.33, 1583.63 and 30.62 respectively. The technological implications of this analysis on the test fish are discussed. The sizes and sex of the fish species did not significantly affect the proximate composition of their flesh.

If adequately used the toxicant would result into increased food production since it constitutes a significant aide to local fish farmers although its effect on the health of the consumers is yet to be fully investigated.

**Keywords:** *Derris elliptica*, *Parachanna obscura*, proximate composition