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RESEARCH REPORTS

Sustainable Aquaculture for a Secure Future

Title: **Bacteriological contamination of the freshwater clam (*Galatea paradoxa*) from the Volta estuary, Ghana**

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Abstract: This study was designed to generate information on the microbiological quality of the clam, *Galatea paradoxa* harvested from the Volta estuary in Ghana. Total Viable Counts (TVC) for heterotrophic bacteria, Total coliforms (TC) and Faecal Coliforms (FC) as indicators of faecal contamination, were evaluated in the rainy season (June - August) and in the dry season (January - February). *G. paradoxa* from the estuary were found to be highly contaminated with the above mentioned micro-flora. There was a significant seasonal variation ($p < 0.03$) in the levels of total heterotrophic bacteria (TVC), total coliforms (TC) and faecal coliforms (FC). Total viable counts of heterotrophic bacteria in clams in the rainy season (June - August) was significantly lower ($p < 0.03$); (June, 1.0×10^7 cfu/g) than for the dry season (February, 7.0×10^{10} cfu/g). Total coliforms (TC) and FC portrayed a similar trend, being significantly higher ($p < 0.01$) in the dry season (1.0×10^{11}) than the rainy season (2.4 x 104 and 1.3 x 104/g). Considering the importance of the clam fishery as an affordable protein source and a source of livelihood to the riparian communities along the Volta estuary, it is recommended that monitoring and regulatory controls of the fishery and growing waters be enforced whilst public education on the importance of depuration as a means of decontaminating the clams be pursued vigorously.

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