

Population dynamics of the freshwater clam



Population parameters such as asymptotic (L_{∞}), growth coefficient (K), mortality rates (Z, F and M), exploitation level (E) and recruitment pattern of the freshwater clam *Galatea paradoxa* were estimated using length-frequency data from the Volta River estuary, Ghana. The L_{∞} for *G. paradoxa* at the Volta estuary was 105.7 mm, the growth coefficient (K) and the growth performance index (ϕ') ranged between 0.14–0.18 year⁻¹ and 3.108–3.192, respectively. Total mortality (Z) was 0.65–0.82 year⁻¹, while natural mortality (M) and fishing mortality (F) were 0.35–0.44 year⁻¹ and 0.21–0.47 year⁻¹, respectively, with an exploitation level of 0.32–0.57. The recruitment pattern suggested that *G. paradoxa* has year-round recruitment with a single pulse over an extended period (October–March) in the Volta River. The Volta River stock of *G. paradoxa* is overfished and requires immediate action to conserve it. This can be achieved by implementing a minimum landing size restriction and intensifying the culture of smaller clams which is a traditional activity at the estuary.

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