

Influence of mangrove deforestation on nutrition ecology and genetic diversity of *Uca annulipes* along the Tanzania mainland and Zanzibar coast

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Fiddler crabs (Ocypodidae) are well known to influence mangrove ecosystem function through their biological potential of accelerating organic matter decomposition. The anthropogenic impacts of mangrove deforestation on the fiddler crab *Uca annulipes* will be evaluated by analyzing (1) $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ stable isotopes composition and (2) mitochondrial COI DNA sequences. Analysis of $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ stable isotopes in tissues and sediments will help to understand whether there is shift in feeding or foraging ecology of *U. annulipes* while analysis of COI sequences will help to document whether there is shift in genetic diversity due to mangrove deforestation for salt pan development. The study will compare mangrove areas disturbed for salt pan development and relatively undisturbed mangroves. It is expected that the results from this study will be useful for decision makers in planning the management strategies and conservation of both marine flora and fauna in the area and along the Western Indian Ocean.

Keywords

Mangal forest; salt production; intrinsic markers; benthic macroinvertebrates.