

ABSTRACT

The Biology of Goldsilk Sea Bream (Family: Sparidae) from the Inshore Waters of North Coast Kenya

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The biology of the sparid, *Acanthopagrus berda* (goldsilk sea bream) was investigated using catch samples obtained from artisanal fishers at selected fish landing sites in the Marereni and Ngomeni fishing areas on the north coast of Kenya. This species has not previously been studied in Kenya although it forms significant proportions of artisanal fish landings and is also a promising aquaculture species. In order to contribute to knowledge of this species, the length-weight relationship, condition factor and feeding preference for prey items were studied in a total of 751 specimens sampled from July 2013 to July 2014. Length-weight relationships for male and female individuals from both fishing areas were strongly correlated (Males: Marereni - $R^2 = 0.920$, Ngomeni - $R^2 = 0.983$; Females: Marereni - $R^2 = 0.966$, Ngomeni - $R^2 = 0.941$). The condition factor of mixed sexes was not significantly different between the two fishing areas (Marereni 2.15 ± 0.08 ; Ngomeni 2.05 ± 0.02) at $p > 0.05$. Gut content analysis recorded a total of 5 taxa in the diet (gastropods, molluscs, detritus, crustaceans and fish). The overall sample was dominated by female individuals with an overall sex ratio of females (405 individuals) to males (338 individuals) of 1:0.8 being significantly different at $p < 0.05$. The species exhibited isometric and positive allometric growth patterns, indicative of the physiological well-being of this species on the north coast of Kenya. Gonadal maturation occurred throughout the year with peaks in July, August and September. However, more work is needed on the biology, distribution, spawning grounds, behavior, and migration patterns along the Kenyan coast.

Keywords: goldsilk sea bream, biology, north coast of Kenya