

Life history baseline of unexploited populations: The case of *Beryx splendens* from the Sierra Leone Rise

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Abstract

This study examines for the first time the biology of alfonsino (*Beryx splendens*) from three small seamounts of the Sierra Leone Rise (SLR), an unexploited and fragile ecosystem in the Atlantic, using data from an experimental survey carried out in 2001 by Spanish longliners. In general, the lack of rigorous baseline data limits the implementation of efficient management and conservation plans in fisheries strategies. Therefore, the main aim of present study was to provide baseline information on basic biological parameters of the alfonsino population associated with an unexploited ecosystem. A total of 17296 individuals of alfonsino were sampled from SLR. Alfonsino is gonochoric and presented an unbalanced sex ratio, there were significantly more females than males. Taking into account the results in stage of maturity of alfonsino and the gonadosomatic index values during studied period, we can conclude that at least one reproductive period in these seamounts was in the late spring and early summer. The spawning stage was attained at a minimum fork length of 23 and 25 cm for males and females, respectively. The size at which 50% of the population attains sexual maturity was approximately 28 and 27 cm for males and females, respectively. The stock structure of alfonsino showed a segregation of the size with the depth, as they increase in size they move into the deeper water. © 2021 Elsevier B.V.

Author keywords

Alfonsino; Biological parameters; Eastern Central Atlantic; Seamount; Sensitive ecosystem