Length Composition, Growth, Mortality and Exploitation Rate of King Fish (*Scomberomorus commerson*) in the Coastal Waters of Boushehr Province

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Abstract

Length composition, growth, mortality and exploitation rate of King fish, *Scomberomorus commerson*, was studied in the coastal waters of Boushehr Province, Persian Gulf 2008 and 2009. In total, 5801 *S. commerson* were sampled at random from tree major landings in the study area. This study covered all the length classes over a one year period. Fork length ranged from 13 to 131 cm. The FiSAT software was used to estimate the growth parameters of the von Bertalanffy growth equation. The von Bertalanffy growth equation could be written as $L=137.34[1-\exp(-0.35(t+0.31))]$. Growth performance index was 3.82. Mortality rates were $Z=1.81$ year^{-1}, $M=0.448$ year^{-1} and $F=1.36$ year^{-1} for total, natural and fishing mortality, respectively. The exploitation rate, E was estimated to be 0.75. The annual instantaneous rate of fishing mortality ($F = 1.36$ year^{-1}) was considerably greater than the target ($F_{opt}=0.22$ year^{-1}) and limit ($F_{limit} = 0.29$ year^{-1}) biological reference points, indicating that the stock is overexploited.

Keywords*: Growth, Mortality, Scomberomorus commerson, Exploitation, Boushehr, Persian Gulf*