

Population dynamics of sharp nose mullet *Chelon saliens* (Risso, 1810) in Gorgan bay-southeast Caspian Sea

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Abstract

This study was conducted to determine growth parameters and mortality of sharp nose mullet (*Chelon saliens*). A total of 442 specimens collected using small beach seine in Gorgan bay from June to October two successive years of 2016 and 2017. The samples included 210 males and 232 females. Growth parameters calculated using Gulland and Holt method, and the length frequency analysis done using ELEFAN and Shepherd methods in FISAT software. Observed length-weight relationship was $W=0.0084L^{3.018}$ for males and $W=0.010L^{2.954}$ for females. After fitting the regression using least squares method, the non-linear relationships were $W=0.009L^{2.977}$ and $W=0.013L^{2.855}$ for males and females, respectively. The results showed that there are two cohorts (with mean values of TL 7.34 and 17.06 cm) in males and three cohorts (with mean value of TL 6.84, 15.28, 20.76 cm) for females. Fitted K and L_{∞} of VBGF were 0.270 year^{-1} and 32 cm for males, and 0.235 year^{-1} and 34 cm for females. Total mortality rate which calculated using linear catch equation, was 1.39 and 1.07 year^{-1} for males and females respectively. In general, this species inhabiting the Gorgan Bay has population dynamics characteristics similar to those of the r-selection strategy.

Keywords: *Chelon saliens*, Age, Mortality, Gorgan bay, Caspian Sea.