

An Invasive Lessepsian Species, Golden-Banded Goatfish, *Upeneus Moluccensis* Population from Iskenderun Bay, the Eastern Mediterranean Sea, Türkiye, With Some Biological Notes: The Effects of Climate Differences and Opening of Suez Canal

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Abstract : This study presented the investigation of the population structure of *Upeneus moluccensis* in order to provide further knowledge and to compare the data with the studies before and thus help in the management of the population in the Iskenderun Bay. For this purpose, a total of 370 golden-banded goatfish were caught by a commercial vessel monthly at a depth of 50-60 m. from Iskenderun Bay in the years 2016-2018. Von Bertalanffy growth equation, length-weight relationships, sex ratio, age, condition, and gonado and hepato-somatic index values of *U.peneus moluccensis* specimens were determined. For this, the lengths and weights were measured using a dial caliper of 0.05 mm and a sensitive balance. Total lengths were 7.2-17.5 cm in females and 7.0-17.9 cm in males, while total weight ranges for females and males were 3.91-64.26 g and 3.69-60.95 g., respectively. Length-weight relationship for all individuals was calculated as $W=0.004*L^{3.38}$, $R^2=0.85$. Growth parameter was determined as $L_{\infty}=20.75$ cm, $k=0.33$, $t_0=-0.56$. The age readings were done by using the Bhattacharya method. The population was composed of 3 ages (1-3). The sex ratio was found as 1:1.42, corresponding to 41.4% males and 58.6% females, in favor of females ($p<0.05$). Values of the average condition and hepatosomatic index were found to be shown a similar pattern for males (1.088, 1.104) and females (1.124, 1.177), respectively. According to GSI values, the spawning period started in March and increased to April, May, and September. It was estimated that total (Z) mortality, natural (M) mortality, and fishing (F) mortality rates were estimated as $Z=0.94$ year⁻¹, $M=0.033$ year⁻¹, and $F=0.63$ year⁻¹, respectively. As the exploitation rate was estimated to be $E=0.67$, it can be shown that the golden-banded goatfish stock was influenced by overfishing. The findings of this study are very important to point out the population of *U. moluccensis*, which penetrated into the eastern Mediterranean Sea of Türkiye due to global heating and the construction of the Suez Canal and to be basic data for the next fisheries investigations.

Keywords : biology, *U. moluccensis*, invasive, lessepsian, Iskenderun Bay

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