



Age and Growth Parameters of African Catfish (*Clarias gariepinus* Burchell, 1822) From Asi River, Turkey

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ABSTRACT

This study aimed to determine the age and growth parameters of the African catfish *Clarias gariepinus* (Burchell, 1822) from the Asi River. A total of 185 fish samples have been collected from the Asi River, located in the Eastern Mediterranean region of Turkey, from December 2018 to March 2019. Samplings were carried out with fyke-nets. Lengths and weights of samples ranged from 20.47 to 62.46 cm and 74.4 to 1874.2 g, respectively. The sex ratio (1:1.06) was biased toward males ($p > 0.05$). In terms of length-weight relationship, b-values were calculated as 2.98, 2.83, and 2.94 for female, male, and whole samples, respectively. Isometric growth was determined. The Fulton condition factor (CF) value for all samples was calculated as 0.7591 ± 0.009 . The ages of fish samples ranged from I to IV, and the dominant age and total length (TL) groups of the population were the I and II age groups. The von Bertalanffy growth parameters were estimated as $L_{\infty} = 58.5$ cm, $K = 0.41$ year⁻¹, $t_0 = -0.7$, $\Phi' = 3.15$ for females; $L_{\infty} = 68.3$ cm, $K = 0.35$ year⁻¹, $t_0 = -0.6$, $\Phi' = 3.21$ for males and $L_{\infty} = 58.2$ cm, $K = 0.39$ year⁻¹, $t_0 = -0.4$, $\Phi' = 3.12$ for whole collected samples. As a result, climate change and its effects, especially the construction of dams in certain parts of the river for agricultural irrigation purposes and the resulting lack of management negatively affect the natural living stocks of the Asi River. Therefore, it can be said that the *C. gariepinus* stocks in these areas are overexploited. Legal arrangements should be made in this region to correct these conditions.

INTRODUCTION

Freshwater fishing provides the main food source and it is an important part of the ecosystem approach.

However, research and legal regulations in wetlands are limited as compared to general fishery worldwide (Zhang et al., 2020). The Asi River enriches the protein source alternatives of the people of the region, and

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