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An Investigation on Morphometric and Meristic Characteristics of Gambusia (*Gambusia holbrooki*) in Summer and Autumn in the Dinor River, Kermanshah

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Abstract

Morphometric and meristic characteristics of Gambusia, *G.holbrooki* in the Dinor River of Kermanshah were investigated during summer and autumn 2011. We caught 130 specimens using beach seine with a mesh size of 5 mm, 28 morphometric and 8 meristic characteristic. Morphometric characteristics were standardized before analysis to alleviate the errors caused by algometric growth. According to morphometric characteristics, in males, there five factors and in female two factors accounted for about 81.931% and 88.810% of characteristic diversity, and in the case of meristic characters, in males four factors and in female also four, accounted for 70.065% and 70.730 % of characteristic diversity within character, were separated. A meaningful difference in seventeen morphometric characters in male ($p \leq 0.05$) and in female a meaningful difference in Twenty-eight morphometric character ($p \leq 0.05$) was observed. No meaningful difference in meristic characteristics in male ($p > 0.05$) was observed, however in females meaningful difference in two meristic characters was seen ($p \leq 0.05$). According to the result of Principal Component Analysis, in morphometric characteristics, distinctions between males were not seen in summer and autumn, while in females were observed. In meristic characteristics, distinctions between sexes were not observed and the distribution of male and females had high overlap. Therefore, it seems that impressionability of morphometric characteristics measured in fish in relation to the changing seasons is more than of meristic characteristics.

Keywords: *Gambusia, Morphometric characteristics, Meristic characteristics, Dinor River*