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Investigation of asymmetry in the Sagitta of the bartail flathead *Platycephalus indicus* (Linnaeus, 1758) in the marine waters of Iraq

by

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Abstract

In this study, 76 specimens of *Platycephalus indicus* collected from the coasts of Iraq were examined, assessing the asymmetric square coefficient of variation (CV^2_a) among three features: the length, width, and weight of the otolith from both sides of the fish head. In the statistical analysis, the squared coefficient of fluctuating asymmetry (FA) deviation (CV^2_a) for the three sagitta features based on Valentine et al. (1973) formula was used to assess the values of FA in the three otolith features examined. The feasible source of the FA in the sagitta features considered has been resolved relative to the discrepancy in growing driven by environmental influence accompanying with the incongruence in water temperature, salinity, depth and impurities occurring in the coasts of Iraq. The application of bilateral irregularities in otolith parameters of *P. indicus* was discussed. Future studies will incorporate the collection of otoliths FA data from additional species in the marine waters of Iraq eventually improving the consistency and exactness of niches stress estimations in this marine waters.

Key words: Actinopterygii, Platycephalidae, ecological factors, otolith, bartail flathead, contaminations, Arabian Gulf