



## Accouterments of organic pollution on autotomy and regeneration of *Sesarma boulengeri* (Calman, 1920) in Shatt al-Arab, Basrah, Iraq

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### Abstract

*Sesarma boulengeri* (Calman 1920), a type of freshwater invertebrate, was collected between January and December 2022 from three stations at the Shatt AL-Arab River, Basrah/ Iraq in order to conduct the research. The goal of the study was to determine the effect of organic pollution on autotomy in this species of crab. The organisms were subjected to varying levels of organic contamination in the river that came from sewage, farming activities, boat traffic, and transportation of products and oil derivatives using the organic pollution index (OPI). The left fifth leg's object was the reason for the autotomy. According to the characteristics of the water quality impacted by the oscillation, the cut creatures have varied indicators in response to the aquatic species. As a result, an extended period of growth for the regenerated portions is caused by the rise in organic contaminants in the water. Thus, the present findings indicate that *S. boulengeri* exposed to high amounts of organic pollution has a slower rate of replacing the cut component than control animals, that the growing bud is more vulnerable to distortion, and that the period of compensating for the cut part is longer. According to the OPI result shows that the first station has significant difference ( $P<0.05$ ) as compared to the second and third stations which did not differ.

**Key words** Autotomy, *Sesarma boulengeri*, R- Value, OPI, Regeneration, Shatt AL-Arab

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