Evaluateation of water quality of Khurmusa (Khuzestan) based on macrobenthos indices

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Abstract

Khor Musa is located in the northwest of the Persian Gulf. The region has a special geographical location and the presence of various petrochemical facilities and industries, as well as sensitive and strategic ports, as well as the presence of high tides in this region has greatly increased the range of pollutants. This study aimed to evaluate the water quality of Khor Musa using biological indices. For this purpose, sediment sampes was cpllected from 10 stations in Khor Musa during the summer and winter of 2018 and benthic invertebrates of each sample were identified using a stereomicroscope and identification keys. The identified benthic invertebrates belong to 5 class and 40 orders. 17 orders in Gastropoda, 11 orders in the Bivalvia, 7 orders in the Polychaeta, 4 orders in the Crustacea, and one order in the Mollusca was identified. In both studied seasons, the highest abundance belongs to the Bivalvia and the order Dentaliidae was identified only in summer. In all 10 stations, the number of orders detected in summer is higher than in winter. In summer in stations 3 and 10 and in winter in stations 3 and 6 the highest number of orders was identified. The Shannon-Wiener index showed moderate pollution in summer and winter. Of all the stations studied, the Shannon-Wiener index is higher in summer than in winter. The findings of the present study showed moderate to severe contamination of the Khor Musa.

Keywords: Macrobentose, Biodiversity Indices, Khor Musa, water Quality.