

Comparison of Diversity and Distribution of Polychaetes in the Western and Eastern Jask Protected Areas in Jask Port (Gulf of Oman)

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Abstract

This research was carried out to compare diversity and distribution of polychaetes in western and eastern Jask creeks protected areas in Jask Port (Gulf of Oman), located in the East of Hormozgan province. Sampling of sediments was done seasonally from fall 2009 to summer 2010 by 0.04m² Van Veen Grab, in three stations including mouth, middle and end of each creek. A total of 72 sediment samples were taken from the stations. In this study, 20 species belonging to 16 families in the eastern Jask area with a frequency of 9075 per m² and 17 species belonging to 13 families in the western Jask area with a frequency of 4800 per m² were identified. Polychaetes families were mainly consist of Nereididae, Owenidae, Capitellidae and Pilargidae. Ecological indices including Shannon - Wiener, Margalef and Simpson also were calculated. The average of Shannon index in different seasons and stations of eastern Jask (1.02±0.47) were higher than the western Jask (0.898±0.74). Correlation analysis between environmental factors and polychaetes showed that the abundance of polychaetes has a significant positive correlation with the temperature, oxygen, salinity and EC (P<0.05). Results of ANOVA revealed no significant differences between indices in different seasons (P>0.05). The results of Kruskal-Wallis test showed significant differences between the abundance of polychaetes in the eastern and western Jask (P<0.05). In addition, the results of this test indicated a significant difference in the abundance of polychaetes, between summer and fall and also between summer and winter, in both of Eastern and Western Jask (P<0.05).

Keywords: *Diversity, Distribution, Polychaetes, Jask, Gulf of Oman.*
