Study on Ecological of macroscopic Red Algae in the Coast of Bushehr Province

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Abstract

Red algae with about 4,000 species are ecologically important and economically used. The goal of this study was to evaluate biodiversity and density of Red algae of the Persian Gulf coast in Bushehr province during two sampling periods (warm and cold season) in 2011 at three stations: Genaveh, Bushehr University and Atomic power plant station.Linear transect sampling method with three replication was used for ecological calculation of red algae. After identifying the species, the number of each species in the Quadrat were recorded as abundance to be used in statistical analysis and calculation of indicators. Red algae identified in this study were belonged to 23 species of 8 families.The highest density of red algae was observed at Atomic power plant station (8.6 ± 1.9 N/m^2) in the Infra littoral Zone(9.6 ± 2.7 N/m^2)and in spring(8.7±1.9 N/m^2).The reason for this can be attributed to the rocks of Atomic power plant station in order to have an adequate support for the connection and growth of algae, the greater depth of water in the Infra littoral Zone and the appropriateness of the air in the early spring. *Laurencia snyderia* was observed at high density(18/2 ± 6/8 N/m^2) and *Gracilaria corticata* was revealed most biomass(52/59 ± 26/60 W/m^2) in between of red alga in whole studied stations. The highest amount of Shanon index (2.4) and Evinness index (0.898) were related to Atomic power plant station.The reason for this can be related to the high desirability of this habitat due to the low slope and expanse of the tidal zone. Most of Margalef index(2/56) was displayed in University station.The highest diversity (2.21) and the best species richness (2.6) were related to the Mid Mid Litoral which indicates the condition of the region in terms of light and moisture for the growth of red algae.

Keywords: Persian Gulf, Tidal zone, Red algae, Biodiversity.