

Investigation of phytoplankton around the fish Cage culture in the coastal waters of Qeshm Island (Hormozgan province)

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Abstract

Fish farming in cages, new aquaculture than other methods and requires further study, particularly in the field of applied management techniques to reduce damage to the environment is one of the industry and the quality of water. This research was conducted in 13 Qeshm region on one of the fish farms. Monthly sampling from bed depth to water level at 3 stations including 1- center of cage deployment 2- end of cage deployment range 3- 1000 m distance from cage (control). In this study 73 genus were identified in three phylum of Bacillariophyta, Pyrrophyta and Cyanophyta. The results of the study showed that the density of phytoplankton was higher in center of cage than in the other stations but the diversity was lower. A higher frequency of Dinophyta was observed at station 1. Blooms of *Noctiluca* contains a photosynthetic symbiont *Pedinomonas noctilucae* (a prasinophyte) was showed in station 1. These results indicate that fish cage culture has an effect on the density and structure of phytoplankton and has contribute to the blooms of the phytoplankton

Keywords: Phytoplankton, *Noctiluca*, fish cage culture, Qeshem, Hormozgan