

Observation of the Algal Flora (Phytoplankton) of the Coral Reef in Iraqi Territorial Waters

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ABSTRACT

Coral reefs in Iraqi territorial waters are important and recent discoveries in the northwest of the Arabian Gulf. Fourteen samples were collected from five sites of these reefs from different levels of water column during the day and night. Exactly (46) taxa documented of phytoplankton suspended in the water column under (32) genus, of which (44) species belong to the Bacillariophyta, and only two species belong to the Dinoflagellate. The most common genera were *Rhizosolenia* and *Cheataceros* four species to both and *Nitzschia* three species. It was found that the species of higher frequency were *Cheatacerosdidymus*, *Coscinodiscus radiates* and *Thalassiothrixnitzschodis*, while species *Achnanthes*, *Amphora*, *Rhopalodia* and *Epithemia* were of fewer frequency.

Key word: *Algal Flora, Phytoplankton, Coral Reef, Iraqi Territorial Waters.*

Introduction

A coral reef is an underwater ecosystem characterized by reef building corals. Reef is formed of colonies of coral polyps held together by calcium carbonate. They are most commonly found at shallow depth in tropical or sub-tropical water, but deep water and cold water they are exist on smaller scales (Lee, 2008). Coral reefs are one of the richest environment in biodiversity (Goreau *et al.*, 1979). The productivity and biodiversity of these complex marine ecosystems can be compared to tropical rain forests in terrestrial environments (Maragos *et al.* 1996). Among these organisms, diatoms were found to be rather divers. Phytoplankton are often used as food supply in the aquaculture industry for grown (Harrison *et al.*, 1990).

Coral reefs are found in the Arabian Gulf in the United Arab Emirates, Saudi Arabia, Bahrain, Qatar, Oman, Kuwait, and Iran, whose coasts are rocky

sandy nature. Soon, no reefs were registered in Iraqi territorial waters because of the muddy nature of their coastlines. But in September 2012, coral reefs were discovered in this area. It is characterized by its environmental conditions such as turbidity and its soft fragile deposits and high currents that are not related to coral reefs in most parts of the world (Pohl *et al.*, 2014).

Taxonomic studies on benthic diatoms algae from coral reef are well dominant for instant Al-Handal, *et al.*, (2016,2018). The first one detailed list of benthic diatoms investigation was made in tropical water and coral reefs of Reunion & Rodriguez Island in Indian Ocean. The list includes 141 taxa. The last work also on benthic diatoms was made in Arabian Gulf which document (96) taxa belonging to 33 genera.

Few publications were available on the phytoplankton of the coral reef, most of which were about benthic diatoms.