

## Abstract

From the environment of Shat – Al – Arab ( represented by Qurna ,Garma , and Ashar ) and the aquariums in the Marine Sciences Center and College of Agriculture , some species of aquatic fungi were isolated during a period of August 2008 to July 2009 .

Some of the environmental factors of the water sample such as the salinity , temperature , and the pH have been measured . Five species have been isolated and diagnosed as belonging to two genera (*Saprolegnia parasitica*, *S. hypogena*, *S. ferax* , *Saprolegnia* sp., and *Achlya* sp. ).

The total number of the isolated species were sixty . The spatiotemporal appearance and frequency of the isolated fungal species have been calculated in each location of the study . The proportion have been different in the location of the study , i.e. some are high others are low .

Some species of fish ( which are *Cyprinus carpio* , *Ctenopharyngodon idella* , *Carrassius auratus auratus* ) have artificially infected by *Saprolegnia parasitica*. This infection has been done under certain laboratory circumstances represented by a change in temperature ( 10°C , 15°C , 20°C , 25°C, 30°C ) and a change in nutrients ( normal , decrease , and increase in nutrients ) under a constant pH. The statistical analysis of infection results showed that the influence of temperature on fungal infection is dominant . Thus , when temperature decreases infection increases and rise versa . Time and nutrients are less influential .

The infected fish have been treated by different remedial materials ( such as , Sodium chloride , Methylene blue , Potassium permanganate , Ketoconazole and Fluconazole ) .All these materials shwed positive results in the total treatment of the infected fish but the best was the Sodium chloride .

The enzymic activity of all the isolated fungal species has been examined . The test involves all species of enzymes (Protease , Lipase , Amylase , Phenol oxidase , Keratinase ). All the examined species have given positive results concerning discovering all enzymes .

Some of ornamental fish have been left in the infection aquariums without treatment till they died for the purpose of histological study . Some of the skin and muscle tissues sections have been prepared . The results showed clear tissue changes represented by erosion and necrosis of the skin epidermis and muscles.