

FIRST RECORD OF *BRANCHIOMYCES DEMIGRANS* FROM BIZZ FISHES, *BARBUS ESOCINUS* CAUGHT FROM MOSUL DAME LAKE

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ABSTRACT

After examining 79 bizz fishes, *Barbus esocinus*, caught from Mosul dam lake, a fungus was revealed with incidence 5% and depending to its characters especially its branched sporophores it is very close to a fungus, *Branchiomyces demigrans*. As such this is considered the first record from Iraqi fishes.

KEY WORDS: *Barbus esocinus*, *Branchiomyces demigrans*, fishes, fungus.

INTRODUCTION

Fungus infection known to invade most species of fishes among them the freshwater fishes (Davis, 1953; Duijn, 1973) but mostly these fungi are secondarily infected fishes after mechanical damage or comes after viral or bacterial infections, or after parasitic infection causing injury to the fish organs. Fungus infection comes after viral or bacterial infections which may cause gill rot or branchiomyiasis or infection by *Saprolegnia*, which causes saprolegniasis (Hickling, 1971; Huet, 1972).

In Iraq Herzog(1969) for the first time recovered *Saprolegnia* fungus from *Mugil abu*. Later on same fungus isolated from *B. luteus*, golden fish and carp (Khalifa *et al.*, 1978). The fungus, *Ichthyophorus hoferi* found in the liver *B. esocinus*, *B. grypus*, *B. luteus* and in the heart and ovary of *B. luteus* (Herzog, 1969). Mhaisen (1993) in his review reported seven species of fungi infecting pond and culture fishes.

Abd Al-Rahman and Abd El-Galil (2007) found saprolegniasis disease in fish culture, *O. niloticus* in earthen ponds fish farm in Beni suef, Egypt. The observed lesions were white colored cotton like growth on fish back, body sides, and peduncle, in addition to dorsal, caudal and anal fins. The isolated strain was identified as *Saprolegnia diclina*.

El-Ashram *et al.*(2007) gave clinical observation on the infected fish of *O. niloticus*, they found that often developed greyish-white cotton-like growths with sever skin lesions because lethargic and inappetant. Gills appear in pale color with profuse mucous and covered by tuft of fungi. They were able to isolate bacteria from fish suffered from saprolegniasis, identified as gram-negative bacilli, *Aeromonas* species, *Pseudomonas* species and *Citbacter freundii*. Sloughing of epidermis was also observed. They used formalin at a concentration of 25 ppm which gave a good result in the treatment fish in the aquaria.

Rafaat and El-Feki (2007) considered *Saprolegnia parasitica* as one of the most destructive fungi in freshwater habitats causing ulcerative dermal necrosis disease for fish. Once entering the fish body, these organisms become engulfed by various circulating and tissue fixed phagocytic cells, which migrate to the melanomacrophage centers. The present paper designed to record a fungus on a bizz fish, *B. esocinus*, caught from Mosul Dam Lake, which was not recorded before.

MATERIALS AND METHODS

A total of 79 Bizz fishes, *Barbus esocinus*, (Figure1: attached photographed by Mr Samir Billal) were caught from Mosul Dam lake brought to the laboratory of college of Agriculture and Forestry the period between 1992-1993, after removal of gills and damaged skin. Fungus isolated from gills and some of the skin regions put in Petri dishes containing Streptomycine as average 0.04 to prevent bacterial contamination then incubated at room temperature for several hours as reported by Noga (2010) to get definitive diagnosis, examined under microscope, the fungus isolated was identified according to Ainsworth (1973).

RESULTS AND DISCUSSION

Incidence of this fungus was 5% as damage areas on gills are gray in color, regions containing many skin moults also scales were dropped off near mouth region near gill opening. Fungus with necrotic areas and formation of false membrane which turn the gills pale gray or white in appearance. This fungus characterized by the presence of sporophores which are branched at hyphae line. Spores were swollen, oval in shape sessile on small tail from its narrow end, they are single measured between 10-27 X 21-45microns (Ainsworth, 1973). This record considered the first

record in bizz fishes as symptoms are similar to those observed in other fishes (Hickling, 1971; Huet, 1972). High infection was seen in summer which may be because of availability of phytoplanktons and organic materials as these materials were usually abundant in summer as found by Bauer *et al.*, (1969) and Huet (1972). It is well known that this fungus, *B. demigrans*, infect Pike fishes which has characteristic tree branching sporophores usually preferring gills (Mhaisen, 1983).



Figure: Photograph of freshwater fish, *Barbus esocinus*.

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