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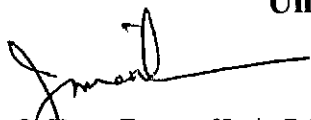
STUDIES ON SAPROLEGNIOSIS IN CULTURED TILAPIA

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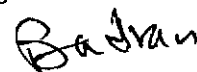
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CONTENTS

	Page
1. INTRODUCTION	1
2. LITERATURE	3
3. MATERIAL AND METHODS	30
4. RESULTS	37
5. DISCUSSION	83
6. SUMMARY	92
7. REFERENCES	95
ARABIC SUMMARY	

LIST OF FIGURES

Figure	Page
1 Prevalence and seasonal variations of saprolegniosis	47
2 <i>O. niloticus</i> naturally infected with <i>Saprolegnia</i> sp showing cotton wool like growth on coual fin	48
3 <i>O. niloticus</i> naturally infected with <i>Saprolegnia</i> sp showing cotton like growth on coual fin magnified	49
4 Eye opacity and skin ulceration	50
5 <i>O. niloticus</i> suffering from development of white cotton wool like lesion on the body surface	51
6 Fungal hyphae of <i>Saprolegnia</i> sp on head, fins	52
7 Hyphae of <i>Saprolegnia</i> sp are previously branched non sepetated	53
8 Culture <i>Saprolegnia</i> sp on Sabaraud's dextrose agar medium showing whitish cotton like growth filled entire dish	54
9 Hyphae of <i>Saprolegnia</i> sp stained with lactophenol cotton blue. stain	55
10 Wet mount preperation showing zoosporangia of <i>Saprolegnia parasitica</i> (low power)	56
11 Wet mount preperation showing zoosporangia of <i>S.</i> <i>Parasitica</i> (high power)	57
12 Sporangia renewed both in <i>Aclyla</i> sp and <i>Saprolegnia</i> sp.	58
13 Saprolegnoid manner discharge ofzoospore of <i>S. Parasitica</i> (two arrows). Young oogonia of <i>S. parasitica</i> (one arrow) ...	59
14 Oogonia of <i>S. Parasitica</i> stained with lactophenol cotton blue	60

Figure	Page
15 Subcentric oospore of <i>S. parasitica</i>	61
16 Bird nest investmen	62
17 Wet mount preparation showing zoosporangia of <i>S.diclina</i> ..	63
18 Sporangia of <i>S.diclina</i> (high power)	64
19 Various forms of sporangia of <i>S.diclina</i> (high power)	65
20 Oogonia of <i>S. diclina</i> with antheridial attatchment	66
21 Oogonia of <i>S. diclina</i> with centric and sub centric oospores .	67
22 Gemmae of <i>S. diclina</i>	68
23 Sporangina of <i>S. aniospora</i> containing large spores	69
24 Different forms of sporangia of <i>S. anisospora</i>	70
25 Sporangia of <i>S. anisopra</i> releasing zoospores	71
26 Oogonia of <i>S. anisospora</i> attacked by a parasite	72
27 Oogonia of <i>Aclyla carolininana</i> containing ripe eggs	73
Sporangia of <i>A. carolininana</i>	
28 Oogonia merly rough or warted of <i>Olipidiopsis saprolegae</i> .	74
29 Oogonia with spines of <i>Olipidiopsis saprolegnae</i>	75
30 O.niloticus experimentally infected with <i>Saprolegnia</i> <i>parasitica</i> showing cotton like growth at the base of caudal peduncle	76
31 Skin from infected fish with <i>S.Parasitica</i> H with and E stain	77
32 Skin from infected fish with <i>S. parasitica</i> with PAS stain	78
33 Skin from experimentally infected fish with <i>S.parasitica</i>	79
34 Muscle from infected fish with <i>S.parasitica</i> (H and E stain)	80
35 Muscle from infected fish with <i>S. parasitica</i> with PAS stain	81
36 Gill from infected fish with <i>S.Parasitica</i>	82

LIST OF TABLES

Table		Page
1	Prevalence and seasonal variation in <i>Saprolegnia</i> fungal infection	44
2	Isolation and identification of <i>Saprolegnia</i> sp.	45
3	Pathogenesity of <i>Saprolegnia parasitica</i> infection to <i>O. niloticus</i> using different routes	46



INTRODUCTION

Fish is one of the man's oldest and most important food source due to its high protein content. The protein of fish origin is of high biological value for human being, so it is very essential for growth and maintenance of vital function. Moreover, certain localities of the world depend mainly on the fish as a source of animal protein, so it would be wise economically to cultivate this important source of protein to meet the dietary need of the expanding population.

The fish culturing, especially the intensive farms, acts as predisposing for appearance and spreading of many fish diseases. Diseases of fish can be identified as a departure from typical normal state of health of a fish. Likewise, disease is any phenomenon which causes a population to be abnormal or disadvantaged.

Disease is not a simple result of contact between host and pathogens, it is a complex interaction between host, pathogen and environment (*Snieszko, 1974*). Environment is the most important and unstable of these factors and its importance is intensified by the presence of potential pathogens that commonly exist in the water.

Mycotic infections may contribute to heavy mortalities among fish up to 100% (*Scott and O'Bier, 1962; Richard and Pickering, 1979*).

Primary saprolegniosis has been reported in several fish species including cultured eels (*Hoshina et al., 1960*), brown trout (*Neish, 1977*) and the Mexican platy fish (*Vishniac and Nigrelli, 1957*). Such infections are common in freshwater fishes under both hatchery and natural conditions either with or without a recognizable stress factor. The most common and important mycotic infection is *saprolegniosis* which caused by the oomycetes in association with the predisposing factor such as low water temperature, overcrowding, water pollution, injury of fish and failure to remove dead fishes (*Roth, 1972*). *Saprolegnia* fungi can act as lethal primary pathogen (*Neish and Hugbes, 1980*) or secondary to primary bacterial infection or parasitic infestation (*Willoughby and Robert, 1992*).

Saprolegniosis possesses potential threat to fish production leading to economical losses therefore, the present work was planned to study the following:

- The prevalence of *saprolegniosis* with regard to seasonal variation.
- The clinical signs and postmortem findings of naturally infected fish.
- Isolation and identification of the causative organism(s).
- Histopathological alterations in the affected organs.
- Experimental infection with *Saprolegnia spp.* among healthy fish to identify the pathogenicity and the condition that promote the outbreak of the disease.