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شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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STUDIES ON THE CONTROL OF PREVAILING PARASITIC DISEASES AMONG ORNAMENTAL FISHES

THESIS
Presented by

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(B.V.Sc. 1996, Faculty of Vet. Medicine, Suez Canal University)

For the degree of
M.V.Sc.
(Fish diseases and management)

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Submitted to
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2001

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Approval sheet

This is to approve that the Master thesis presented by **Heba Ibrahim Abdel-Moula** to the Faculty of Vet. Medicine, Suez Canal University entitled **(Studies on the control of prevailing parasitic diseases among ornamental fishes)**. For the degree of M.V.Sc. has been approved by the examining committee on May, 2001.

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بسم الله الرحمن الرحيم

سبحانك لا علم لنا الا ما علمتنا انك أنت العليم الحكيم

صدق الله العظيم

ACKNOWLEDGEMENT

First of all, all prayerful thanks are due to the almighty God who gave me every thing I have.

This work would not have been possible without the expert supervision of Professor Dr. Ismail Abdel-Moneium head of fish diseases and management department, Faculty of Vet. Medicine, Suez Canal University for his stimulating supervision, continuous interest and kind encouragement.

I am deeply grateful to Professor Dr. Ahmad Fekry Professor of fish diseases and management, Faculty of Vet. Med., Suez Canal University for his keen supervision, interest encouragement and sincere advises throughout the work.

I am indebted to Professor Dr. Nashaat Abdel-Motaal Prof. of fish diseases, Animal Health Research Institute, El-Dokki for his encouragement and support.

I am grateful to Dr. Salah El-den Meselhy Ass. Prof. of Pathology, Faculty of Vet. Med., Suez Canal University for his great help.

I am also indebted to Dr. Ahmad Anwar Abdel-Al Ass. Prof. of Parasitology, Faculty of Vet. Med., Suez Canal University.

Finally, my appreciation is extended to all who offered their help and assistance.

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INTRODUCTION

INTRODUCTION

Ornamental fishes are beautiful creatures and many people like to have them. Aquarium fishes play an important role in the amusement of many people and create wonderful corners in houses and offices all over the world. As a matter of fact, pet fish are the most popular pets in the United States. Production of fish for sale in pet stores is an important aquaculture industry **(Francis-Floyd, 1998)**.

On the other hand, they are considered as a source of income through selling them. Accordingly, it is very important to set an ideal standard for getting a healthy aquarium fishes. Nevertheless, the environment has a major influence on virtually every important disease affecting cultured fish **(Kabata, 1985)**. The parasites of aquarium fishes are not as well known as most of us like think **(Goldstein, 1971)**. The number of species of fish parasites is measured in thousands and many more remain to be discovered very few are seriously harmful to fish **(Roberts, 1978)**.

The most common parasites that infested the aquarium fish in Russa were *Ichthyophthirius multifiliis*, *Costia necatrix*, *Hexamita truttoe*, *Trichodina pediculus*, *Oodinium pillularis* and Gyrodactylus spp **(Popov et al. 1993)**. Meanwhile, monogenetic trematodes (Dactylogyrus and

Gyrodactylus spp.) and flagellates (*Costia necatrix*, Hexamita, Octomitus, Spironucleus and Cryptobia) were the commonest parasites that infested aquarium fish in Northern Germany, while nematodes and cestodes were less common **(Muller *et al.* 1989)**. Ectoparasitic protozoa are among the most important parasites of fish in Egypt, especially in aquaculture and aquaria. When fish kept in good ecological condition, ectoparasitic ciliates may occur in low undetectable numbers **(Zaki, 1999)**.

In fact, many of protozoan parasites of fishes are serious pathogens and several are known as true pests in freshwater and in the breeding of ornamental fishes **(Lom and Dykova, 1992)**. When fish are heavily infested, clinical manifestations and a high morbidity rate can be observed while in cases low to moderate parasitic infestations are present, clinical signs may not be apparent **(El-Gwady *et al.* 1992)**. The latter situations, still constitutes an important problem since the parasite may act as a stress factor inducing a decrease in the body weight, lowering the resistance, and rendering the fish more susceptible to other diseases **(Hoffman et al. 1990)**. Generally speaking, the main clinical signs of infested fish with parasites are sluggish movement and loss of appetite. The infested fish swim near the water surface, gasping air, showing an increase in the breathing frequency while the gill covering is stretched and opened. The color of the infested fish become pale, slimy skin than normal and fish rubbed their bodies against fixed objects. Moreover, dropping and detachment of scales from the body were observed with small blood spots on the skin and at the base of the fins. Accordingly, the infested fish became anemic exhibited signs of anoxia

(**Omaima, 1993**). Nevertheless, water may act as one of the most important sources of infection and contamination of fish with many microbes. However, fish can also acquire pathogenic or potentially pathogenic organisms from other sources including food, utensils and equipment (**Ahmed *et al.* 1990**).

Eventually, the aim of the current study could be summarized in the following points:

1. Determination of the most prevailing external and internal parasitic diseases infesting the examined ornamental fishes.
2. The prevalence of infestation in both viviparous and oviparous aquarium fishes.
3. Clarifying the serious chemotherapeutic trials for treatment and control of the most common parasites by using the different feasible methods.
4. Detection of the possible histopathological lesions produced by those parasites.

REVIEW OF LITERATURE