# ON THE HELMINTH PARASITES OF SOME FISHES FROM THE RED SEA

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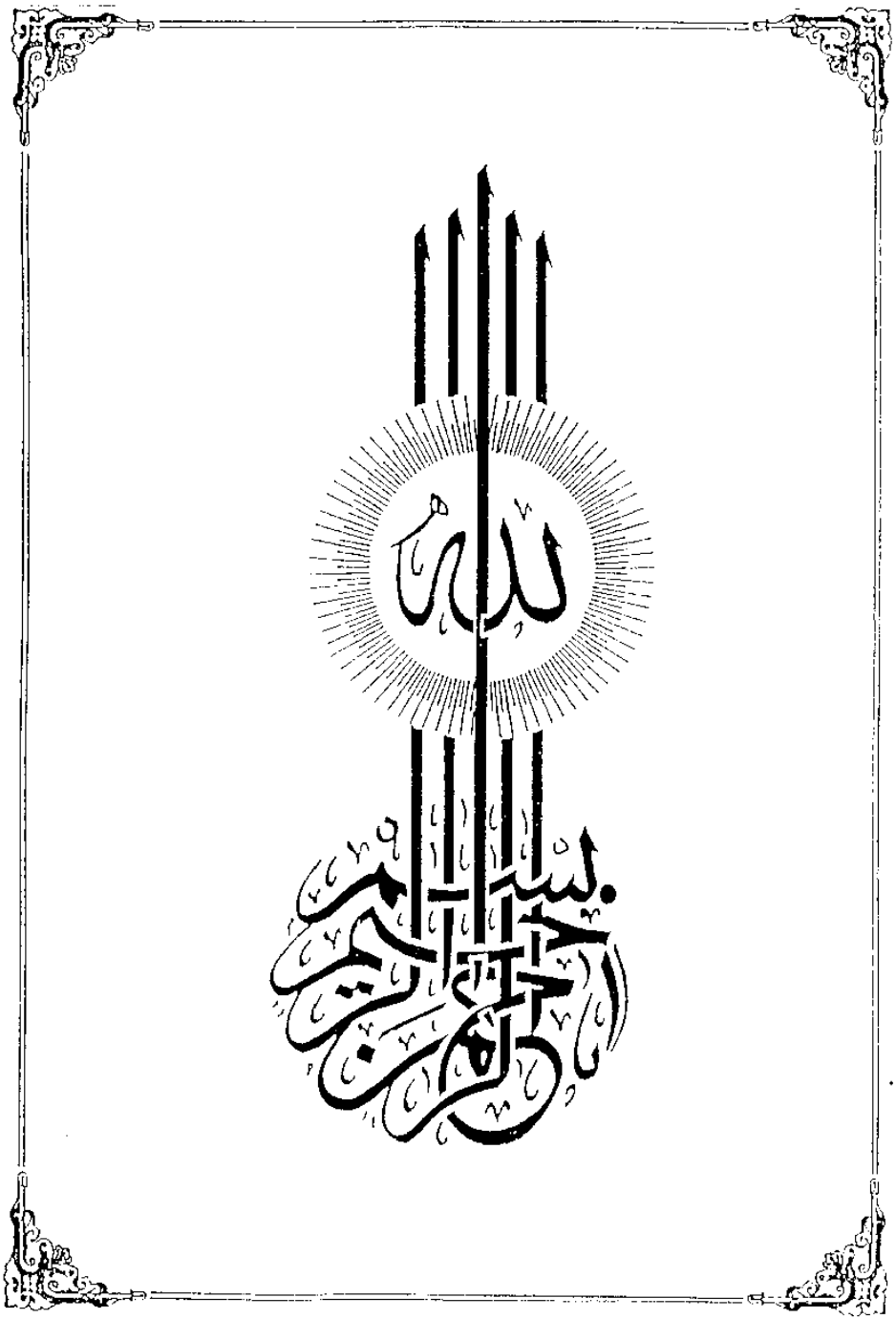

Post _ Graduate Courses :-

Zoology Courses : Advanced Parasitology.

Malacology.

Vertebrate Taxonomy.

Language : English M.SC. Course.

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# INTRODUCTION

The past few decades have witnessed unprecedented advances in various fields of applied biology . Research and management have made great strides in the science of Ichthyology and fishery management .

Fisheries are destined to play an increasingly important role in the feeding of the rapidly growing population of our globe , as fishes provide us with a considerable proportion of animal proteins .

Owing to the rapidly increasing human population in Egypt and consequently the increasing demand for protein sources , special attention is being paid by various authorities to fisheries and fish culture from all aspects.

Nowadays , it is well accepted that the development of fish resources could be enhanced by the proper study of different aspects of fish biology including fish parasitology ( Williams , 1967 ). For this and other reasons the study of fish parasites is now recognized as an important subject in many biological and parasitological institutes .

On the other hand , studies on fish parasites are of special significance , since fishes a source of different helminthic infections for man and his domestic animals .

Moreover , these parasites that occur in fishes devalue their aesthetic quality and palatability , and generally lower their economic profitability .

Therefore , the present work was aimed to give an insight about the helminth fauna that infest the most common local Red Sea fishes .

The full information about these parasites might help in the better understanding of the host parasite relationships , types of associations and degree of host specificity . Knowledge of the above aspects might eventually lead to further investigations about the epidemiology , geographical and seasonal distribution of the different species of marine helminth parasites and their effects on their host fishes .

## HISTORICAL REVIEW

Several investigators have always shown wide interest in the study of the parasites of fishes in Egypt .

Before the close of the nineteenth century there was the work of **Wedl** (1882) and **Looss** (1896 & 1899) and early in the twentieth century emerged the work of **Looss** (1900 & 1901) who described and illustrated several common digenetic trematodes from Egyptian fish fauna . More recently the studies of **Fischthal and Kuntz** ( 1963 a , b , c ) , confirmed the occurrence of some species previously described by **Looss** ( 1896 , 1899 & 1901 ) and added several others .

The study of parasites of the Red Sea fishes has attracted the attention of parasitologists a long time ago .

**Nagaty** published a series of papers from 1930 - 1957 on the trematodes of Red Sea fishes (**Nagaty** , 1930 , 1937 , 1941 , 1942 , 1948 , 1954 , 1956 , a and b and 1957 ).

This was followed few years later by further papers on the same subject (**Nagaty and Abdel - Aal**, 1962 a,b&c - 1969) and a full report on that work was published by **Nagaty** ( 1973 ).

**Saunders** ( 1960 ) published the results of a general survey of blood parasites in fishes of the Red Sea .

Saoud( 1963 ) recorded helminth parasites from marine elasmobranchs from Red Sea .

Parukin ( 1970 ) recorded several trematodesfrom the fishes of the Red Sea and Gulf of Aden .

Hassan ( 1976 ) made a thorough investigation of helminth parasites of some elasmobranchs from the Egyption Costal water of the Medditerranean and the Red Sea.

Ramadan ( 1979 & 1983 & 1984 & 1985 a & b & 1986 a & b ) made a comprehensive study of helminth parasites , mainly trematodes of marine fishes from Red Sea .

Corresponding studies about the collected helminthes can be reviewed as following :

A - Trematode genera :

1 - Genus Hexangium established by Goto and Ozaki (1929) as Monostomiid trematodes.Yamaguti (1958) established the subfamily Hexangiinae to include the genus Hexangium Goto and Ozaki. 1929 and also considered that the genus Arthurloosia Nagaty, 1954 to be a synonym to that genus. Ramadan (1979) reported trematodes in this genus in marine fishes from AL-Ghardaga Red Sea . AL-Yamani and Nahhas (1981) reported trematodes of the same genus from fishes from the Kuwaiti Coast of the Arabian Gulf .

2 - Genus Pseudoplagioporus established by Yamaguti, (1938) for the allocreadiid trematodes. Yamaguti (1942) described another species belonging to this genus in fishes from Naha, Ryukyu Island . Nagaty and Abdel - Aal (1962) recorded trematodes in this genus in marine fishes from AL-Ghardaga, Red Sea. Durio and Manter (1968) obtained worms of this genus from fishes from New Caledonia, Australia. Ramadan (1979) reported two species of this genus from marine fishes from Red Sea . Saoud and Ramadan (1984) reported trematodes from this genus in marine fishes from AL-Ghardaga Red Sea. Saoud et al (1987) added some species of this genus in Arabian Gulf fishes .

3 - Genus Hamacreadium established by Linton (1901) for Allocreadiid trematodes . Manter ( 1947 ) indicated a great similarity between the genera Hamacreadium and Plagioporus . Nagaty and Abdel-Aal (1962b) reported trematodes belonging to this genus in Red Sea fishes. Saoud et al. (1977) described some of its species in fishes from Red Sea in the Coast of the Sudan . Ramadan (1983) recorded trematodes of this genus in fishes from Red Sea . Saoud et al (1986) added trematodes of this genus in fishes from the Arabian Gulf .

4 - Genus Tublovesicula established by Yamaguti (1934) from all other genera of Hemiuridae by the nature of vesicula seminalis and the greatly developed pars prostatica . Nagaty (1956) reported

trematodes of this genus in Red Sea fishes . Siddiqui and Hafeezulla (1975) found this genus in fishes from Coast of Lagos . Aleshkina (1983) reported it in fishes from South East Atlantic. Ramadan (1984) obtained worms of that genus from Al-Ghardaga Red Sea .

5 - Genus Uterovesiculurus established by Skrjabin and Guschanskaja (1954) from the genus Erilepturus on the basis of the terminal swelling of uterus. Manter and Pritchard (1960a) regarded Erilepturus as distinct genus, and reduced Uterovesiculurus as its Synonym, rejecting the generic importance of the terminal dilation of uterus.

Yamaguti (1971) consideredUterovesiculurus distinct from Erilepturus on the basis of the terminal swelling of uterus. Ahmad (1980), Gupta and Gupta (1986) reported trematodes belonging to this genus in marine fishes from Bay of Bengal , India.

6 - Genus Sterrhurus differentiated by Looss (1900) from the genus Lecithochirium by its slender spindle-shaped body with pointed anterior end . Looss (1907) recorded genus Sterrhurus wich gives its name to the subfamily. Linton (1910) described this genus as possessing a definite preacetabular pit . Manter (1934) described this genus as possessing a very definite lip. Jones (1943) noted that this genus had an oblique muscle bundle directed backward over the acetabulum, and inse-