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OBSERVATIONS ON TWO LARVAL CESTODES FROM RED SEA FISHES AT JEDDAH , SAUDI ARABIA

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SUMMARY

Examination of red sea fished at Jeddah revealed the presence of larval cestodes belonging to the trypanorhynchid cestode genera: **Grillotia Guiart, 1927, and Otobethrium Linton, 1890.** Cestodes of the former genus were found in the intestine of Roving Grouper (**Plectropomus maculatus, Bloch 1790,** locally known as El-Nagil) fishes, and those of the latter genus in cysts attached to the mesentry of Mahsena Emperor (**Lethrinus mahsena, Forsakal 1775,** locally known as El-Shuour fishes. The incidence and morphology of these two larval stages are discussed.

INTRODUCTION

The earliest studies on parasites of the Red Sea fishes were reported by Jagerskiold and Odhner (1901) and Wilson (1928) who collected crustacean parasites during the Swedish Zoological Expedition to the White Nile and Red Sea. Tronquist (1931) described a nematode, Procamalanus spharcronconchus, from both Sermus and Tuthis spp. fishes from the Red Sea.Later on Nagaty (1937; 1948; 1956a; 1956b) and Nagaty and Abdel Aal (1969; 1972) recorded trematodes, while Abdel Hady et al., (1981) described trematodes and nematodes from Red Sea fishes. Banaja and coworkers (Banaja and Roshdy, 1979; Banaja et al., 1979) also observed larval stages of Trypanorynch cestoda from Plectropomus maculatus and studied the ulterastructure of the scolex of a Trypanorynchid plerocercus from that fish. Saoud and Hassan (1983) carried out a general survey on helminthic parasites of some elasmobranchs from Egyptian coastal waters of both the Mediterranean and Red seas.

The objective of this preliminary study was to identify parasites of Red Sea fishes caught from Saudi Arabian waters. This study was dictated by the importance and development of Red Sea fisheries and because fish are anticipated to play a major part as a source of animal protein for the growing population of Saudi Arabia.

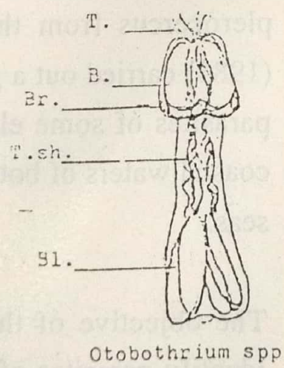
MATERIALS AND METHODS

A total number of 85 fishes were examined for parasites. The fish spp. were identified using the key of **Kluzinger (1984)**. Forty five fish, Plectropomus maculatus (known locally as El-Nagil; family Serranidae, **Randall, 1983**), and 40 fish :Lethrinus mahsena (known locally as El-Shuour, family Lethrinidae), were purchased from fishermen and fish markets in Jeddah. In the laboratory, the fish were parasitologically examined as soon as possible. Cysts attached to the guts of fish were collected and placed in normal saline. The gut of each fish was cut opened in a Petri dish filled with saline and examined for helminths. The detected parasites were thoroughly washed. Some of the collected parasites were flattened by gentle pressure then fixed in 10% formalin. Some of these flattened specimens were stained with acetic acid c
and the remainder were preserved for
investigation.

RESULTS

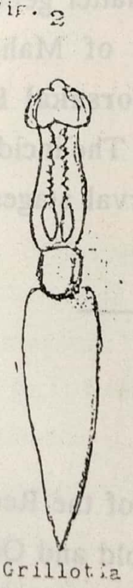
Out of the 45 fish of Plectropomus ma
(El-Nagil) examined, 15 harboured pleroc
of trypanorynchial worms, correspondin
infection rate of 33.3%. The rec
plerocercoids were identified as Grillo
(Guiart, 1927) according to Wardle and M
(1952) and Yamaguti (1959). The fol
description is based on 10 whole mounts
measure 12-26 mm. x 1-1.25 mm. H
4.1-4.3 mm. long and has 4 bothridia
posterior marginal notch, each one mea
0.45 mm. long. Pars vaginalis region of
2.5-2.8 mm. long, and has long, sinuous t

Fig.1



Otobothrium spp.
plerocercoid

Fig. 2

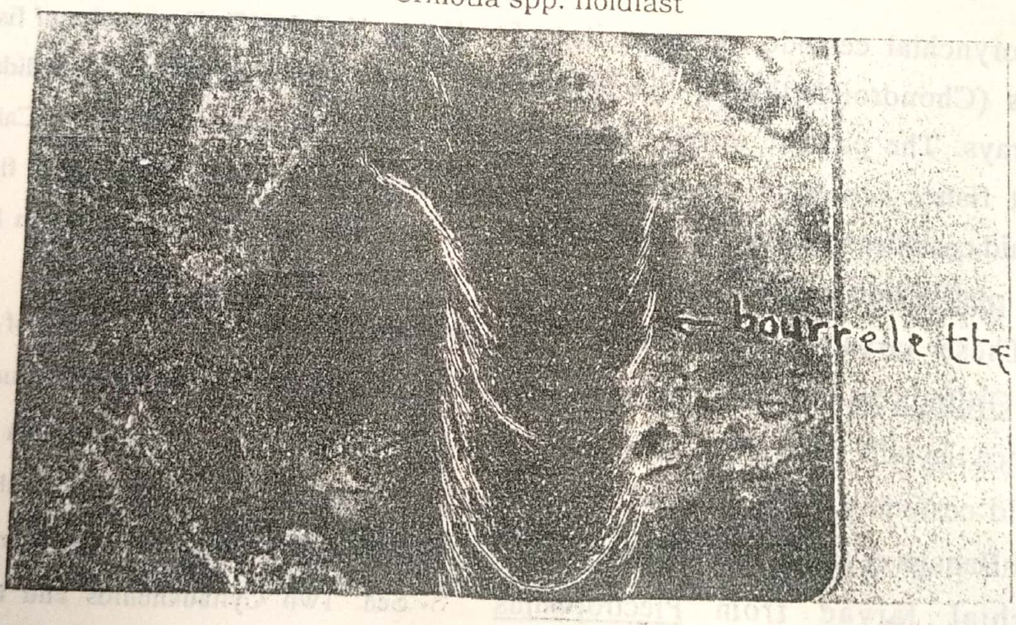


Grillotia spp.
plerocercoid

After Wardle & McLeod (1952)

B., = bothrium
T., = tentacle
B1., = bulbs
T. Sh., = tentacle sheata
Br., = bourrelette

Crillotia spp. holdfast



Otobothrium holdfast invaginated inside the cyst

sheaths. The tentacles are heteroacanthous, armed with obliquely half turns of principal hooks 4-6 in each half turn, increasing gradually in size from internal to external surface (Fig. 1).

Out of the 40 fishes of Lethrinus sp. (El-Shuour) examined, 10 harboured encysted plerocercoids, corresponding to an infection rate of 30%. The cysts were identified as Otoborthrium sp. (Wardle and McLeod, 1952; Yamaguti, 1959). Each cyst is oval or bean shaped, with short appendix. The cysts measure 6-13 mm. by 5-7 mm. Microscopical examination of whole mounts revealed the existence of invaginated holdfasts each provided with two filliform bothridia. On the external and free margin of each bothridium there is a bourrelette. Tentacles are invaginated and armed with hooks. Tentacles are shorter than their sheaths (Fig. 2).

DISCUSSION

Adult trpanorynchial cestodes are parasites of Elasobridilis (Chondroichythysis) like sharks, skates and rays. The present worms recovered from teleost fishes represent larval stages of trypanorynchid cestodes and illustrate the part that these teleost play a role in the food chain in the Red Sea. These larval stages, which were identified as Grillotia sp. and Otobothium sp., are of interest since the only other recoreds of a larval trypanrynchild cestode parasite in red sea fishes were those of Banaga et al., (1979) who recovered trypanorynchial larvae from Plectropomus maculatus from Red Sea in Saudi Arabia and Abdel Hady et al., (1981) who recorded Nybelinia spp. from Epinephalus fasciatus from the [...] in Egypt.

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