

SOME FISH TREMATODES FROM THE MEDITERRANEAN SEA

BY

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(Received: 9. 7 . 1990)

INTRODUCTION

The work done on the helminth parasites of marine fish is so little in Egypt. This is evidenced by the fact that, the species described here represent new generic types differing considerably from those occurring in previous work done by Nagaty (1954) in Ghardaga, Fischthal and Kuntz (1963), Abdel-Hady(1981) and Raef (1990).

But, Linton (1910) in U.S.A. described *Schikhobalotrema acutum* from the intestine of marine fish and found that, the body was small and the worms characterized by the presence of single caecum and single testis. Odhner (1911) in Inland Sea--- reported *Xenopera maculatus* from the intestine of *Epinephelus akaara*. In North Queensland, Nicoll (1915) found *Xenopera insolita* from the rectum of *Sparus australis* and stated that, the body elongated, subcylindrical form and with pedunculated ventral sucker. Thapar (1930) and Mehra (1941) recorded that, *Opisthorchis gontii* in the intestine of siluroid fish. they found that, the body was small and covered with minute spines.

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MATERIAL AND METHODS

65 marine fishes (39 *Mullus barbatus* and 26 *Mugil cephalus*), were collected from Port Said fish market. In the laboratory, the fishes were examined for helminth parasites. The collected trematodes were washed in warm water, then stored in formalin 5% over night. After that they were stained with acetic acid alum carmine, decolourised in acid alcohol. Dehydration in ascending grades of alcohol, then cleared in clove oil and xylol and mounted in canada balsam and drawn with comera lucida according to the technique described by Carleton and Drury (1957).

RESULTS

Three digenetic trematodes were collected, one from *Mullus barbatus* and two genera from *Mugil cephalus*.

Morphological description of the detected trewatodes:

1. *Opisthorchis gontii* (Thapar, 1930).

Syn. *Comtia piscicola* (Fig.1).

Host: *Mugil cephalus*

Location: Intestine.

Description: The body was small and covered with minutes spines, it measured 1.031 mm in length and 0.841 mm in width at the middle of the body. The oral sucker was subterminal and measured 0.051 mm X 0.041mm followed by long prepharynx, measured 0.026mm in length. The oesophagus measured 0.036mm in length. The intestinal caeca terminating short from the posterior extremity without surpassing the hind testis. The acetabulum was small, situated at the end of the first quarter of the body length, and measured 0.056mm X 0.061mm. The testes exactly tandem in position, at the posterior extremity and the anterior one measured 0.77mm X 0.097mm, but the posterior one measured 0.087mm X 0.091mm. Seminal vesical winding posterior to the

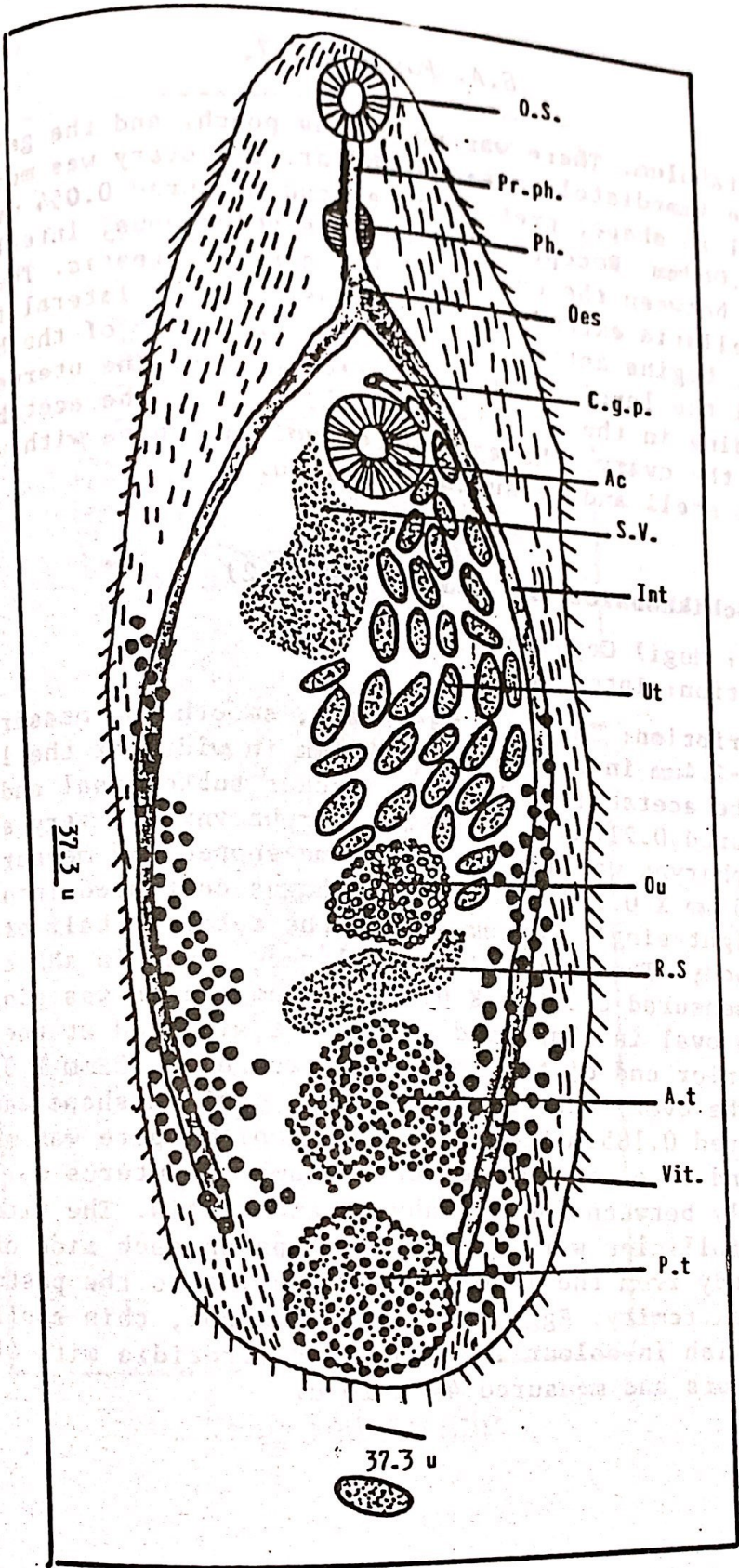


Fig. [1]: Opisthorchis gontii

acetabulum. There was no cirrus pouch, and the genital pore immediately pre-acetabular. The ovary was median, oval in shape, pretesticular and measured 0.054 mm X 0.063mm. Receptaculum seminis voluminous, interlocated between the ovary and the anterior testis. The vitellaria extending continuously in the lateral fields, begins anteriorly from the two fifth of the body till the level of the posterior testis. The uterus winding in the intercecal field between the acetabulum and the ovary. The eggs were ovoid in shape with very thin shell and measured 31 X 19 u.

2. *Schikhobalotrema acutum*: (Fig. 2).

Host: Mugil Cephalus

Location: Intestine

Description: The body was small, smooth and measured 2.36-2.4mm in length and 0.946mm in width at the level of the acetabulum. The oral sucker subterminal and measured 0.217mm X 0.290 mm, perpharynx was very short. The pharynx was large, weak dome-shaped and measured 0.145 mm X 0.188 mm. The oesophagus continued into straight single caecum end in the anterior half of the body. The acetabulum was large, round in shape and measured 0.399mm X 0.427mm. The testis was single, alrge oval in shape and smooth. It situated at the posterior end of the body and measured 0.332mm X 0.220 mm. The ovary was pre-testicular, oval in shape and measured 0.185mm X 0.138mm. The genital pore was median and anterior to the acetabulum. The uterus coiled chiefly between the acetabulum and testis. The vitelline follicles were large extending on each side of the body from the level of the pharynx to the posterior extremity. Eggs were oval in shape, thin shell, yellowish in colour and contained miracidia with clear eye spots and measured 44 X 20 u.

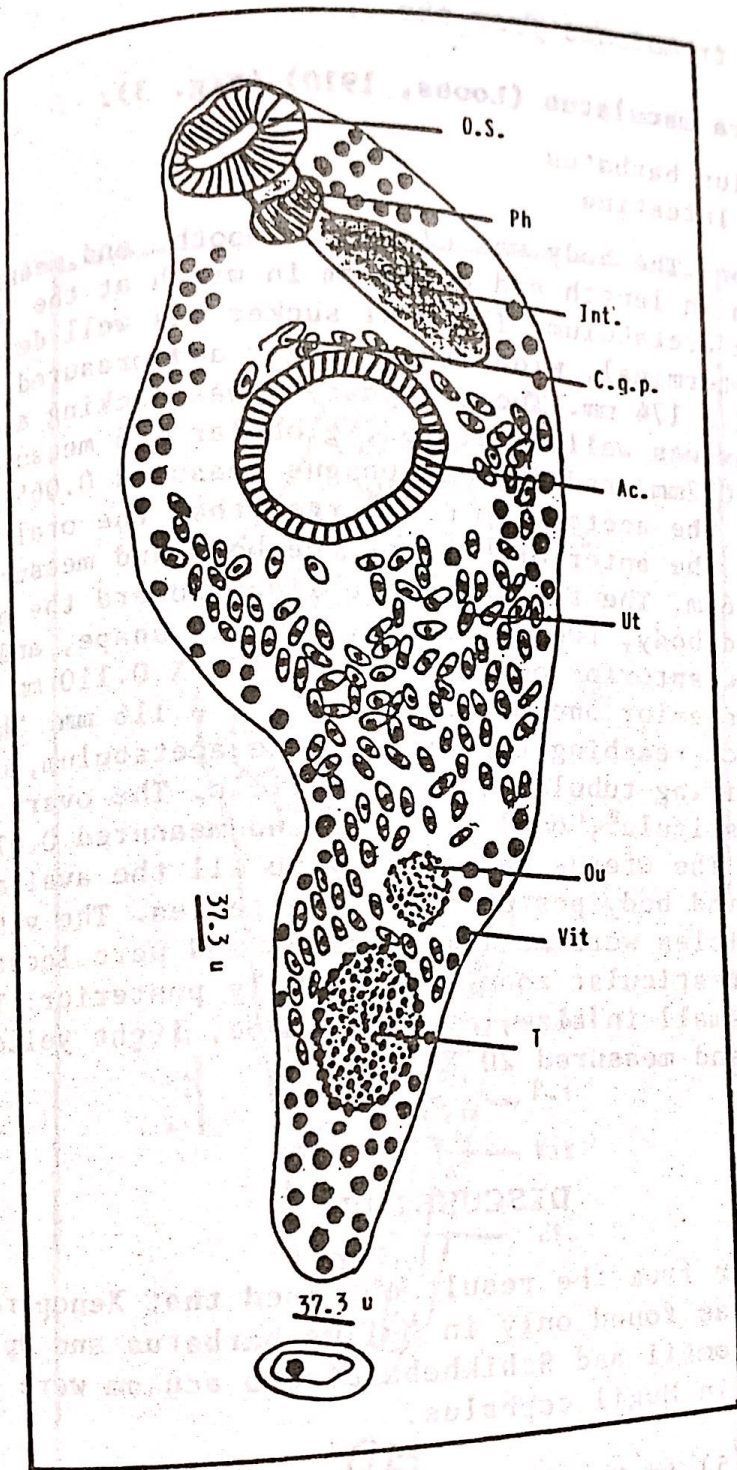


Fig. [2]: Schikhobalotrema acutum

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3. *Xenopera maculatus* (Looss, 1910) (Fig. 3).

Host: *Mullus barbatus*

Location: Intestine

Description: The body was elongated smooth and measured 1.37mm in length and 0.435 mm in width at the level of the acetabulum. The oral sucker was well developed, subterminal, wider than longer and measured 0.116 mm X 0.174 mm. The pre-pharynx was lacking and the pharynx was well developed, globular and measured 0.082 X 0.072mm, and the oesophagus measured 0.065 mm in length. The acetabulum was larger than the oral sucker, in the anterior half of the body and measured 0.29 X 0.26mm. The testes were oblique toward the middle of hind body, two in number, oval in shape, and smooth. The anterior one measured 0.128 X 0.110 mm and the posterior one measured 0.141 X 0.116 mm. The cirrus pouch reaching the back of the acetabulum, containing widening tubular seminal vesicle. The ovary was pre-testicular, oval in shape and measured 0.077mm X 0.069mm. The uterus was filling up all the available space of hind body posterior to the testes. The vitelline follicles were medium in size, and were located in ovario-testicular zone and slightly posterior. The eggs were small in size, oval in shape, light yellow in colour and measured 20 X 11u.

DISCUSSION

It was clear from the result obtained that *Xenopera maculatus* was found only in *Mullus barbatus* and *Opisthorchis gontii* and *Schikhobalotrema acutum* were found only in *Mugil cephalus*.

Nicoll (1915) in North Queensland reported *Xenopera insolita* from the rectum of *Sparus australis* and found that, body was elongated with pedunculated ventral sucker raised on a short pedicle and situated about 0.7mm from the anterior end. Along tube like

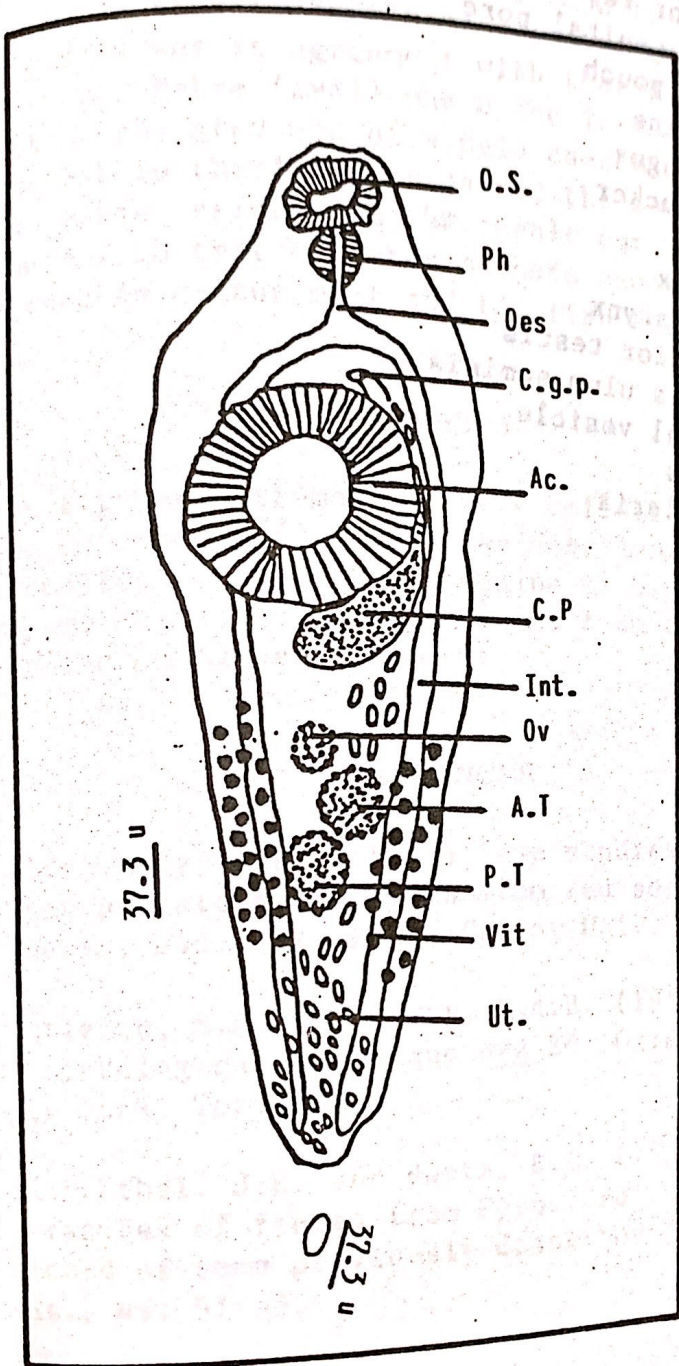


Fig. [3]: Xenopera maculatus

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Abbreviation of trematodes:

Ac	: Acetabulum
A.T.	: Anterior testis
C.g.p	: Common genital pore
C.p	: Cirrus pouch
Int	: Intestine
Oes	: Oesophagus
O.S.	: Oral sucker
Ov	: Ovary
Ph	: Pharynx
Pr.ph	: Pre-pharynx
P.t	: Posterior testis
R.s	: Recepta ulum seminis
S.V	: Seminal vesicle
Ut	: Uterus
Vit.	: Vitellaria

genital sinus extend behind the ventral sucker. The ovary lies a little to the left side of the middle line. The morphology of this parasite differs from our result, the morphology of *Xenopera maculatus* was in agreement with that obtained by Odhner (1911). The morphology of *Schikhobalotrema acutum* and *Opisthorchis gontii* was in agreement with that given by Linton (1910) and Mehra (1941) where the former is characterized by the presence of single caecum and single testis, but in the later parasite, the body is covered with minute spines. So the result our work is in agreement with that of other authors except in minor difference in measurement and the fish host.

SUMMARY

Three digenetic trematodes were collected from marine fish. *Opisthorchis gontii* and *Schikhobalotrema acutum* were collected from the intestine of *Mugil cephalus* *Xenopera maculatus* was collected from the intestine of *Mullus barbatus*.

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