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ACANTHOCOLPOIDES LIBYACUS N.SP. AND *STENOPERA EQUILATA* (DIGENEA TREMATODA) FROM *MULLUS SURMULETUS* AND *LABRUS BERGYLATA* FROM THE MEDITERRANEAN SEA IN LIBYA

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Key words: Trematoda, Parasites, Fishes, Mediterranean

ABSTRACT

In the present work, two trematode genera: *Acanthocolpoides* Travassos Freitas et Burnheim,1965 and *Stenopera* Manter ,1933 were briefly reviewed . *Acanthocolpoides libyacus* n. sp.was described from the intestine of *Mullus surmuletus* from Libya. It resembles in the body shape *A. pauloi,* but differs by having rostrum shaped anterior extremity, a longer oesophagus,a smaller sucker ratio and vitelline follicles extending anteriorly to the level of the posterior margin of the acetabulum. *Stenopera equilata* Manter,1933 was redescribed from the intestine of *Labrus bergylata* from Libya representing new host and new locality record.

INTRODUCTION

There is no reason to believe that marine parasites are less important than terrestrial and freshwater parasites, and in recent years it has become more and more evident that they are indeed of great economic and hygienic significance. Many species of parasites affect marine fish making them commercially less valuable and probably limit their populations ; others lead to mass mortalities, for example in oysters and other molluscs, and still others may be transmitted from marine fishes to man (Rohde,1993).

More than 4,000 species of trematodes have been described, and many of these are endoparasites of marine fishes (Rohde,1993). Trematodes may affect the reproductive system of marine fishes,for example *Gonocerca oshoro* infect ovaries of the fish *Coryphaenoides pectoralis* in large numbers , making the hard roe inedible, and probably affecting reproductive success (Rohde,1993).

Numerous species of digenetic trematodes have been found in man, that the infection is also associated with the marine environment is indicated by the occurrence of larval trematodes in ocean-caught fish . Constipation or diarrhoea,abdominal pain and severe discomfort are the symptoms in human infection(Rohde,1993).

The genus *Acanthocolpoides* was established by Travassos,Freitas et Burnheim,1965 with *A. pauloi* from *Scomber colias* as the type species in Brazil. The genus *Stenopera* was

established by Manter (1933) with *S . equilata* from *Holocentrus ascensionis* as the type species in Florida .The present work aims to extend our knowledge on the morphological, prevalence and distribution of the above two species in marine fishes from the middle southern part of the Mediterranean Sea in Libya.

MATERIAL AND METHODS

Parasites. Several adult fishes of *Mullus surmuletus* locally called "Trelya" and *Labrus bergylata* locally called "khodaer" were caught from the Libian Coastal waters near Misurata in Libya. They were freshly examined for helminth parasites inhabiting intestine as soon as possible. Trematodes were first relaxed, then fixed in hot 70% alcohol or 5% formalin . The parasites were then stained using aceto-alum carmine stain (Al- Bassel, 1990). Drawings were made to the scale using a Camera Lucida. Measurements are in millimeters, unless otherwise stated. The identification of fishes as well as methods followed in collection, fixation, staining, clearing and mounting were carried out by the usual way.

RESULTS AND DISCUSSION

1) *Acanthocolpoides libyacus* n. sp. (Fig. 1).

Host: *Mullus surmuletus.*

Site: intestine.

Locality : Mediterranean Sea , Misurata , Libya.

Prevalence: 20 specimens from 5 hosts out of 40 fish examined.

Deposition : Holotype and Paratype were deposited in the Department of Zoology, Faculty of Science at Fayuom, Branch of Cairo University.

The following description was based on twenty specimens:

Body is elongate, tapering anteriorly truncate posteriorly, 1.60-1.80 long and 0.34-0.40 wide. Entire body is covered with backwardly directed minute spines,each is 8-10μ in length..Eyespot pigment granules present.Oral sucker terminal, being 0.070-0.080 long and 0.072-0.088 wide.Prepharynx is 0.138-0.144 in length.Pharynx 0.065-0.072 long and 0.041-0.048 wide.Oesophagus is 0.039-0.042 in length.Caecal bifurcation between pharynx and genital pore, extends to near posterior extremity,each caecum is 1.29-1.35 in length.Ventral sucker is spherical and larger than oral sucker 0.11-0.13 long and 0.13-0.14 wide.Suckers ratio is 0.50-0.63:1.

Testes are two, equal, tandem, close together, intercaecal, in posterior third of the body, being 0.15-0.17 long and 0.20-0.21 wide.Posttesticular space is 0.30-0.32 in length. Hermaphroditic pouch saccular, anterolateral to the acetabulum, being 0.17-0.19 long and 0.056-0.060 wide,enclosing 0.12-0.14 long and 0.05-0,07 wide saccular internal seminal vesicle;0.030-0.032 long pars prostatica which is surrounded by prostate gland cells;0.025-0.027 long hermaphroditic duct and a muscular body which can be everted as a sucker. External seminal vesicle extends posteriorly up to level of uterus, bipartite,anterior part tubular 0.26-0.27in length,posterior part spherical, being 0.12-0.14 in diameter. Genital pore is ventral, just behind caecal bifurcation.

Ovary is lobed with three or four lobes, pretesticular,median,0.12-0,14 long and0.13-0.15 wide. Seminal receptacle saccular, lies between ovary

and anterior testis 0.04-0,046 long and 0.08-0.088 wide. Vitellaria follicular, follicles are irregular, in two lateral fields, extending from acetabulum to posterior extremity. Uterus is small, containing few eggs and occupying small area between the end of external seminal vesicle and ovary. Metraterm is present. Eggs are large, elongate ,operculate 48-50 µ long and 29-33µ wide. Excretory vesicle is Y-shaped with terminal excretory pore.

Travassos, Freitas et Burnheim (1965) established the genus *Acanthocolpoides* with *A .pauloi* from *Scomber colias* as the type species in Brazil. In the same year, they added *A . walteri* from *Oligoplites saurus* from the same locality. Bray and Gibson (1990) synonym *Acanthocolpoides* Travassos, Freitas et Buhrnheim (1965) with *Prodistomum* Linton, (1910). In agreement with Yamaguti, (1971) *Acanthocolpoies* as valid genus...

A . libyacus n . sp resembles in body shape *A . pauloi* but differs by having rostrum-shaped anterior extremity, vitellaria extending anteriorly to the level of the posterior margin of the acetabulum, a longer oesophagus ,a smaller sucker ratio and the forebody equals one third of body length .

2) *Stenopera equilata* Manter, 1933 (Fig .2)

Host:*Labrus bergylata.*

Site: intestine.

Locality: Meditteranean Sea Misurata, Libya .

Prevalence: 15 specimens from 8 hosts out of 44 fish examined.

The following description was based on 10 specimens:

Body is selender, aspinose, tapering posteriorly 2.10-2.22 long and 0.57-0.60 wide . Oral sucker is terminal ,0.22-0.27 long and 0.23-0.26 wide. Prepharynx absent . Pharynx is well developed, being 0.10-0.13 long and 0.09-0.11 wide .Oesophagus is short, being 0.05-0.07 in length. Venteral sucker is 0.26-0.29 long and 0.25-0.27 wide. Sucker ratio is 0.75-0.93:1. Caeca are long, ending at posterior extremity, each 1.7-1.9 long and 0.09-0.12 wide.

Testes are tandem and lobed . Anterior testis is 0.23-0.25 long and 0.18-0.20 wide .Posterior testis is 0.19-0.21 long and 0.20-0.21 wide. Cirrus pouch is preacetabular, containing saccular seminal vesicle 0.23-0.25 long and 0.07-0.09 wide ,pars prostatica and long muscular cirrus 0.20-0.22 long and 0.04-0.06 wide.

Ovary is deeply branched, pretesticular, 0.12-0.14 long and 0.17-0.20 wide .Receptaculum seminis is large at the left side of ovary,being 0.25-0.27 long and 0.10-0.12 wide .Laurer's canal open dorsally, being 0.10-0.12 in length .Uterus is occupying small area between acetabulum and ovary. Metraterm is half as long as cirrus .Genital pore is median, lying a short distance anterior to acetabulum. Vitelline follicles in two lateral fields, extend from genital pore to posterior extremity. Excretory vesicle is saccular. Excretory pore opens on a terminal papilla in posterior extremity. Eggs are few, each 50-60µ long and 25-29 µ wide.

Manter (1933) described *S. equilata* from *Holocentrus ascensionis* in Florida .Siddiqi and Cable (1960) tranferred *S . equlata* to the genus *Helicometra* .Yamaguti (1971) considered *S . equilata* as valid species .

Gupta (1956) added *S . pteroisi* from *Pterois russelli* in Gulf of Manaar in India . In agreement with the latter authors, *S . equilata is* valid species . Nagaty (1956) `added *S . boseli* from *Holocentrus spp.* from Egypt .

Although the present specimen is similar to *S .equilata*, the present work added more details about Laurer`s canal , excretory pore, sucker ratio and cirrus pouch . Thus *S . equilata* was redescribed from *Labrus bergylata* from Libya , representing new host and new locality record .

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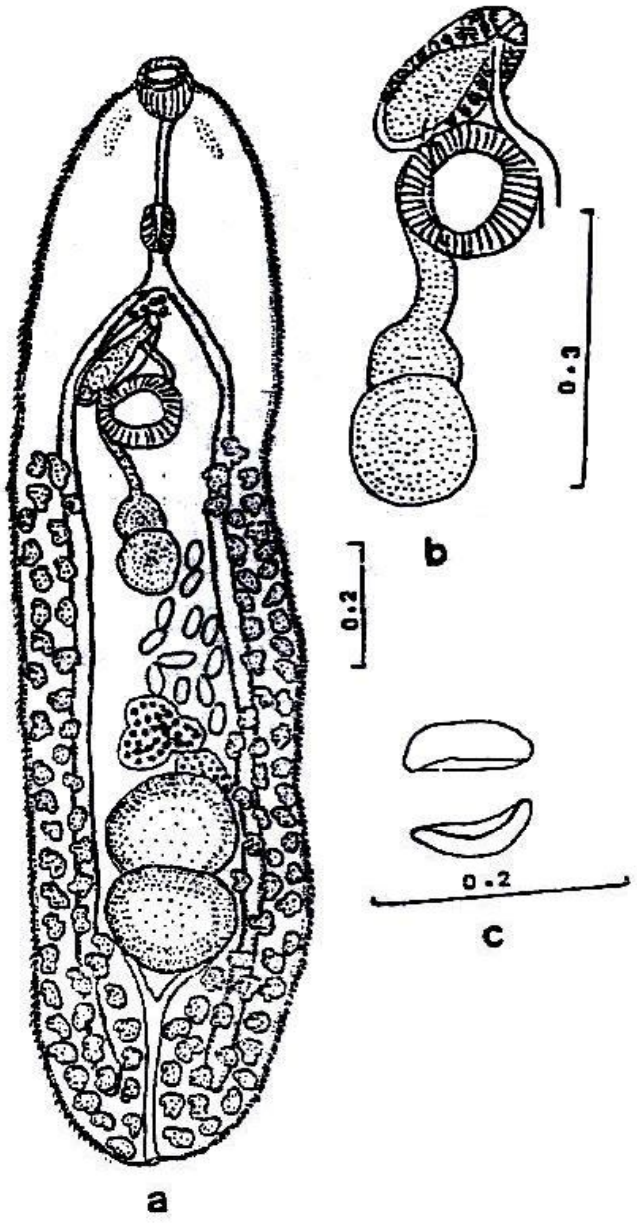


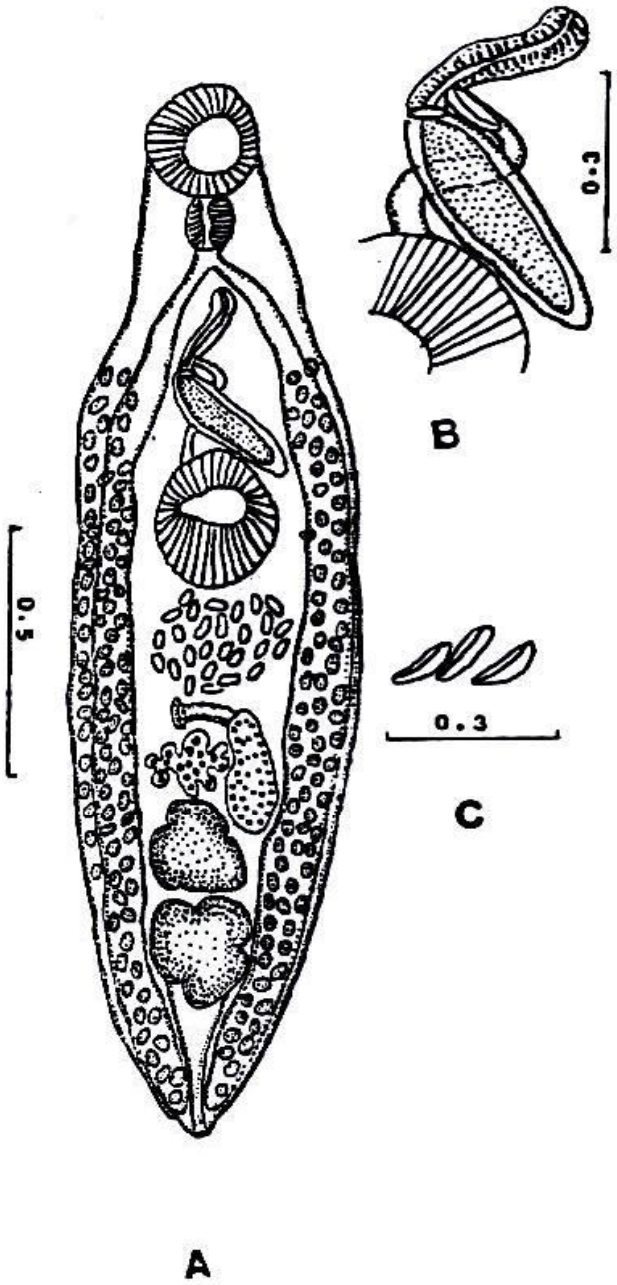
(Fig.1)

***Acanthocolpoides libyacus* n. sp.**

A) Ventral view.

B) Cirrus pouch.

C) Eggs.



(Fig.2)

***Stenopera equilata* Manter,1933**

A) Ventral view

B) Cirrus pouch

C) Eggs.

(Fig.1) A photomicrograph showing the ventral view of *Acanthocolpoides libyacus* n. sp.

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(Fig.2) A photomicrograph showing the ventral view of *Stenopera equilata* Manter, 1933.

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أكانثوكلبوديس ليبياكس (نوع جديد) *ستينوبيرا إكويلاتا* (تريماتودا ثنائية العائل) من نوعين من أسماك البحر المتوسط فى ليبيا

ديعوم عبد الحميد الباسل

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تم فى هذا البحث مراجعة مختصرة لجنسين من التريماتودا ثنائية العائل هما: *اكانثوكولبويدس* و *ستينوبيرا* .*كما تم وصف ا كانثوكولبودس ليبيا كس*(نوع جديد) من امعاء الأسماك البحرية من نوع التريلـيا فـى ليبيا ، وهذا النوع يشبه فى شكل الجسم نوع *اكانثوكولبويدس باولوى* ، ولكن يختلف عنه بشـموله على ما يشبه البوز فى مقدمة الجسم ، و زيادة طول المرئ مع انخفاض فى النسبة بين حجم الممصـين ، بالإضافة إلى إمتداد خدد المح أمامياً حتى مستوى النهاية الخلفية للممص البطنى ، كما تـم أيضاً إعادة وصف نوع *ستينوبيرا ايكويلاتا* لأول مرة من أمعاء أسماك الخضير .ولأول مرة من ليبيا .

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