

ON MYORHYNCHUS PRITCHARDAE AND PODOCOTYLOIDES CHLOROSCOMBRI (DIGENEA TREMATODA) DESCRIBED FROM NEW HOSTS FROM THE MEDITERRANEAN SEA IN LIBYA

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SUMMARY

In the present work, two trematode genera: *Myorhynchus* Durio and Manter, 1968 and *Podocotyloides* Yamaguti, 1934 were briefly reviewed. *Myorhynchus pritchardae* (Nahhas and Cable, 1964) n. comb., syn. *Bucephalus* sp. Nahhas and Cable, 1964 and *Podocotyloides chloroscombri* Fischthal and Thomas, 1970 were redescribed from *Labrus bergylata* and *Mullus surmuletus* respectively from Libya. The two hosts represent new host record and new locality for their respective parasites. A comparison between the original descriptions (single specimen) and the present description (twenty specimens) is given and discussed.

Howse, 1977). In polluted Sea water, oxygen depletion, stress-induced mucus and lamellar lesions which support parasitic infestation on fishes, compounding an already stressful stat (Overstreet and Howse, 1977).

The genus *Myorhynchus* was established by Durio and Manter, 1968 with *M. pritchardae* from a seranid fish in Caledonia as the type species. The genus *Podocotyloides* was established by Yamaguti, 1934 with *P. petalophallus* from *Plectrohynchus pictus* in Japan. The aim of the present work is to extend our knowledge on the morphological, morphometrical analysis, prevalence and distribution of the above two species in marine fishes from the middle southern part of the Mediterranean Sea in Libya.

INTRODUCTION

The Mediterranean is a semi-enclosed Sea and polluted with several pollutants (Overstreet and

MATERIAL AND METHODS

Ten adult fishes of *Labrus bergylata* and *Mullus surmuletus* locally called "khodaer" and "Trelya"

were respectively caught from the Libian Coastal waters near Misurata in Libya. They were examined for helminth parasites inhabiting the intestine as soon as possible. Trematode parasites 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- *Myorhynchus pritchardae* (Nahhas and Cable, 1964) n. comb. (Fig.1).

synonym: *Bucephalus sp.* Nahhas and Cable, 1964.

Host: *Larus bergylata*.

Site: intestine.

The following description is based on twenty specimens:

Body elongate, tapering posteriorly, truncate anteriorly 1.45- 1.85 long and 0.35-0.49 wide. Ectricuticle spinose, each spine 8-11 m in length. Rhynchus sucker like 0.29-0.35 long and 0.20-0.22 wide. Pharynx about equatorial in position 0.049-0.057 long and 0.055-0.068 wide. Oesophagus absent. Caecum elongate to oval, median in position and has its blind end directed anteriorly 0.23-0.28 long and 0.10-0.11 wide. Testes diagonal, situated equatorial, right testis 0.11-0.13 long and 0.10-0.11 wide, left testis 0.13-0.14 long and

0.11-0.12 wide. Cirrus sac lies in the posterior third of the body 0.56-0.62 long and 0.090-0.096 wide, containing ovoid seminal vesicle and long pars prostatica surrounded by prostate cells. Genital atrium wide, spherical 0.050-0.055 in diameter.

Vitellaria 12-14 follicles on each side, occupying the middle third of the body. Ovary oval-shaped, 0.12-0.13 long and 0.075-0.085 wide, situated at about level of pharynx. Uterus extending between pharynx and pesterior end of cirrus sac. Eggs numerous 36-38 m long and 15-17 m wide. Excretory vesicle tubular, extending anteriorly about to ovary and opens posteriorly by excretory pore.

In (1964) Nahhas and Cable described single mature specimen of *Bucephalus sp.* from *Centropo-*

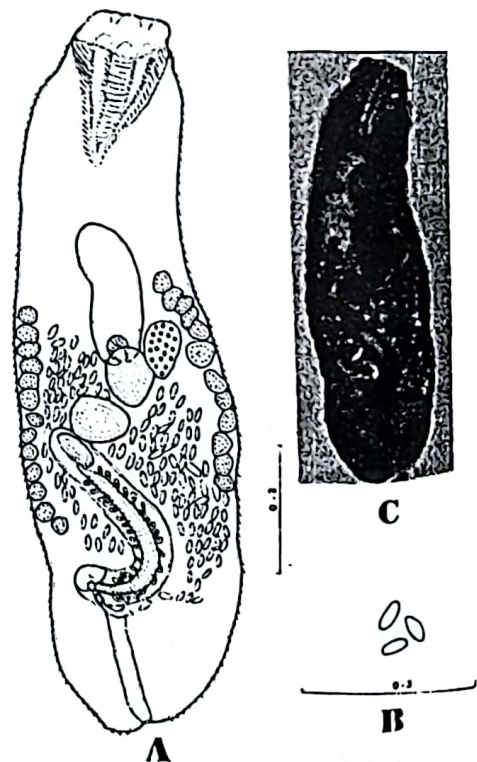


Fig. (1):
A) Ventral view
B) The Egg.
C) Photo to show the ventral view.

mus undecimalis in Jamaica. They did not show the main diagnostic features of their specimen such as the tentacles of the rhynchus which is considered by several authors the main character of the genus *Bucephalus* Baer, 1826. In (1968) Durio and Manter established the genus *Myorhynchus* for those Bucephaliid trematodes having rhynchus conical, flattened anteriorly, with ventral fold or lobe, without tentacles, etc.. *Myorhynchus pritchardae* Durie and Manter, 1968 from a serranid fish from Caledonia was designated as the type species of the genus. Thus I believed that the specimen described by Nahhas and Cable, 1964 belonging to the genus *Myorhynchus* with *M. pritchardae* as a new combination. Yamaguti (1971) considered *Myorhynchus* Durio and Manter, 1968 as a valid genus and listed no other species belonging to the genus. The present work revealed that no other species could be added to the genus *Myorhynchus*. The present material is similar to the single specimen described by Nahhas and Cable, 1964, but the present description (20 specimens) provides more detailed about the body length, rhynchus, vitellaria, testes and ovary (Table. 1).

Moreover, the present species is recorded for the first time from the Mediterranean Sea in Libyan coast and from the host *Labrus bergylata* as well.

2-Podocotyloides chloroscombri Fischthal and Thomas, 1970 (Fig.2)

Host: *Mullus surmuletus*

Site: intestine

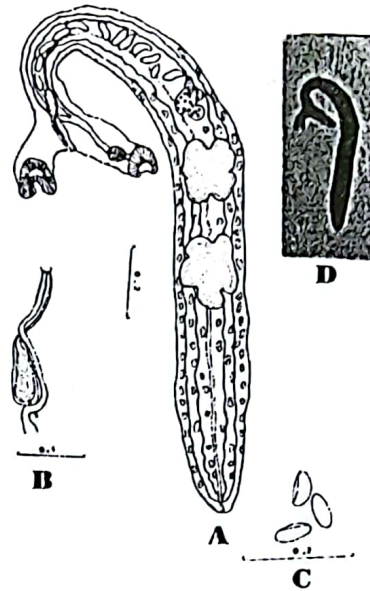


Fig. (2):
 A) Ventral view.
 B) The cirrus pouch.
 C) The Eggs.
 D) Photo to show the ventral view

The following description is based on twenty specimens:

The body is elongate, slender, anterior extremity round, tapering to blunt point posteriorly, unspined, with acetabular stalk 2.35-3.85 long and 0.19-0.25 wide. Oral sucker nearly terminal 0.071-0.078 long and 0.082-0.089 wide. Acetabulum 0.12-0.13 long and 0.11-0.12 wide, usually retracted into stalk, latter 0.19 - 0.21 in length. Suckers ratio 0.6-0.8:1. Prepharynx, short 0.015-0.016 in length. Pharynx relatively large, 0.049-0.052 long and 0.044-0.049 wide. Oesophagus long, 0.12-0.14 in length. Caecae bifurcate at level with acetabular stalk, narrow, terminating blindly at posterior extremity.

Table 1: A comparison between the present description of *myorhynchus pritchardae* and that of nahhas and cable, 1964:

Characters	(Nahhas and Cable, 1964)	The present specimens
Body shape	Elongate, spinose 1.03 x 0.20	Elongate, spinose, 1.45-1.85 x 0.35-0.49
Rhynchus	Sucker-like, 0.173 x 0.20	Sucker like, without tentacles 0.19-0.35 x 0.20-0.22
Pharynx	Equatorial in position, 0.053 x 0.060	Equatorial in position, 0.049-0.057 x 0.055-0.068
Oesophagus	Not evident	Absent
Caecum	Subtriangular	Elongate oval, 0.23-0.28 x 0.10-0.11
Testes	Tandem postequatorial, 0.090-0.117 x 0.083	Diagonal, equatorial 0.12-0.14 x 0.10-0.12
Cirrus sac	0.347 x 0.058	0.56-0.62 x 0.090-0.096
Seminal vesicle	Ovoid	Ovoid
Vitellaria	Anterior to pharynx (12-14)	In the middle third of body (12-14)
Uterus	Extend anterior to Vitellaria	Never extend anteriorly to vitellaria
Ovary	Anterior to testes, 0.060 x 0.10	Anterior to testes, 0.12-0.13 x 0.075-0.085
Eggs	(15-17) 10-12 μ long	Numerous 36-38 x 15-17 m
Excretory vesicle	Tubular, anterior extent not determined	Tubular, extending to ovary
Hosts	<i>Centropomus undecimalis</i>	<i>Labrus bergylata</i>
Site	intestine	Intestine
Locality	Jamaica	Libya

Testes lobed, intercecal, situated at the middle of the body. Anterior testis 0.19-0.19 long and 0.14-0.16 wide. Posterior testis 0.20-0.22 long and 0.15-0.17 wide. Cirrus sac commencing 0.19-0.21 posterior to acetabular stalk, bipartite, proximal part saccular 0.10-0.11 long and 0.060-0.070 wide, distal part narrowing to longer tubular. Seminal vesicle filling cirrus sac 0.080-0.090 in length. Genital pore situated between oral sucker and ventral sucker.

Ovary deeply lobed, lying pretesticular, 0.088-0.96 long and 0.082-0.086 wide. Seminal recepta-

cle small lying immediately anterior to ovary 0.070-0.072 long and 0.050-0.054 wide. Uterus containing 12-20 eggs in single file, coiled between ovary and cirrus sac. Metraterm long, thick walled, without muscular sphincter. Vitelline follicles large, round to oval in shape, extending from seminal receptacle to posterior extremity. Eggs yellow-brown, operculated each measuring 7-75 m long and 27-29 m wide. Excretory bladder unbranched, tubular, extending anteriorly to about the level of ovary. It appears only in live specimens and opens by terminal excretory pore.

Table 2: A comparison between the original and present descriptions of *podocotyloides chloroscombri* fischthal and thomas, 1970.

Characters	Original description (single specimen)	Present description (Twenty specimens)
Body shape	Elongate, unspined 2.575 x 0.190	Elongate, unspined, 2.35-3.85 x 0.19 - 0.25
Oral sucker	Terminal 0.111 x 0.104	Terminal 0.071-0.078 x 0.082-0.089
Ventral sucker	Retracted into stalk 0.105x0.085	0.12-0.13x0.11-0.12
Acetabular stalk	0.225x0.150	0.19-0.21 in length
Suckers ratio	0.95 : 1	0.6-0.8 : 1
Prepharynx	0.15 in length	0.15 - 0.016 in length
Pharynx	0.085 x 0.065	0.049-0.052 x 0.044-0.049
Oesophagus	0.090 in length	0.12-0.14 in length
Caecae	Narrow, terminating near posterior extremity	Narrow, ending at posterior extremity
Testes	Slightly lobed, anterior testis 0.190 x 0.143 and posterior testis 0.222x0.167	Lobed, anterior testis 0.17-0.19 x 0.14 - 0.16, posterior testis, 0.20-0.22 x 0.15-0.17
Cirrus sac	Bipartite, proximal part, 0.222 x 0.094, distal part longer tubular	Bipartite, proximal part 0.10 - 0.11, distal part longer
Genital pore	At sinistral part of pharynx	Between two suckers
Ovary	Elongate, 0.150x0.087	Lobed, 0.088-0.096 x 0.082-0.086
Vitellaria	Extend from circus sac to posterior extremity	Extend from seminal receptacle to posterior extremity
Eggs	Operculated (61) 48-56x29-36 m	Operculated (12-20) 71-75 x 27-29 m
Hosts	<i>Chloroscombrus chrysurus</i>	<i>Mullus surmuletus</i>
Locality	Ghana	Libya

Pritchard (1966a) emended the genus *Podocotyloides* Yamaguti, 1934 and recognized five species therein from Indo-Pacific fishes. Pritchard (1966b) described a sixth species from Hawaii (Fischthal and Thomas, 1970).

Podocotyloides chloroscombri originally described by Fischthal and Thomas, 1970 from the small intestine of *Chloroscombrus chrysurus* in Ghana. Yamaguti (1971) considered *Podocotyloides* as a valid genus.

The present material is similar to the specimen (single specimen) described by Fischthal and Thomas, 1970, but the present description (twenty specimens) added more details about the body length, testes, ovary and eggs (Table 2).

It is worth to mention that *P. chloroscombri* is reported for the first time in Libya. The species is also recorded from new host viz *Mullus surmuletus*.

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