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HELMINTH PARASITE OF GREY MULLET *Liza subviridis* (VAL., 1836) FROM KHOR ABDULAH, ARABIAN GULF

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ABSTRACT

Three species of trematodes were detected from *Liza subviridis* captured from Khor Abdulah since June to October 2001. These parasites *Haliotrema mugilinus*, *Metamicrocotyla mugilis*, (monogenea), and *Haplosplanchus mugilis* (digenea). The later two parasites were found a newly recorded in Iraqi Marine Water's. So a brief description were given in the present article.

INTRODUCTION

There is a tremendous numbers of monogentic and digenatic trematodes parasitizing fishes of the World. (Rhode,1982).

Dactylogyridae are highly host –specific parasites, and the host range of each species is restricted to one or several species of fish of the same genus. These parasites are small in size (0.3 to 1.5 mm in length) and attached to the host gills through posteriorly situated anchors, exceptionally to the skin (Roberts & Janovy, 1996).

Paperna (1980) mentioned that the Infection levels by dactylogyridae in the different fish seem to be determined by the interaction between the parasites and their specific hosts, while environmental parameters and other extrinsic factors are apparently of secondary importance.

About the pathological view of dactylogyrids on their host fishes, Mhaisen (1983) mentioned that the presence of parasite on the gills, even in small numbers, induce extensive hyperplasia of the gill epithelium.

According to Dawes (1946) the most dangerous flukes are cyst formation which cause extensive lesions in fish gills.

In addition, toxins which produced by some digeneans are absorbed by the host and leucocytosis and other deleterious effects such blidness may result (Baudet, 1929).

Helminth parasites of the Arabian Gulf fishes are poorly known, and the paucity of information indicated this point.

Only five published account of monogenetic and digenetic trematodes

infecting the mullets in particular since 1976 to 2004 have been carried out in the Arabian Gulf region viz., (Al-Yamani and Nahhas,1981; Al-Daraji,1995,1998 and 1999 and Bannai, 2002). Thus,it expected that there are undescribed helminth parasites await discovery.

MATERIALS AND METHODS

Fourty fish specimens of *Liza subviridus* (Val., 1836) were captured at Khor Abdullah north-west the Arabian Gulf during June to October 2001. Fishes were examined externally and internally searching for the parasites.

Gills and the gut were removed individually and examined carefully under dissecting microscope, The detected parasites pressed between two slides as recommended by Dawes (1946) and fixied in 70% alcohol or A.F.A., then washed in 50% alcohol, stained with acetocarmine, destained with 0.5% acid alcohol ,rinesd in Xylol and mounted in D.P.X..

Measurements are given in millimeters.Yamaguti (1963, 1968, 1970 and 1971) was followed for terminology and parasites identification.

RESULTS AND DISCUSSION

As a result of dissecting of 40 specimens of *Liza subviridis* three species of parasites were recorded and descriped as follows:

I- *Haliotrema mugilinus* (Fig. 1)

Location :Gill filaments

Prevalence: 62.5%

Mean Intensity: 0.5

Deserription: See Yamaguti (1963) and Al-Daraji (1995).

Hargis (1955) described *Pseudohaliottroema mugilinus* from *Mugil cephalus* from Florida. This parasite was transformed later to *H. mugilinus* by Yamaguti (1963), who listed 15 *Haliotrema* spp. in his systema helminthum Yamaguti (1968) described 35 new *Haliotrema* spp from Hawaiian fishes, whereas Tripathi (1959) deserihed *Ancylodiscoides mugilids* from *Mugil subviridis* from India. Al-Daraji (1995) described *Haliotrema mugilis and Haliotrema mugilinus.* from *Liza subviridis* captured from Khor Al-Zubiar. Bannai (2002) redescribed *Haliotrema mugilis* in Khor -Abdulah.The present specimens is similar to *Haliotrema mugilinus* which described by Yamaguti (1963) and Al-Daraji (1995). The present finiding of this parsite represents its a new locality recorded in the Khor - Abdulah.

II-*Metamicrocotyla mugilis* (Fig. 2)

Location: Gill fillament

Prevalence:19%

Mean Intensity:4.5

Deserription: Metamicrocotyladae: Body elongate, 7-10(8.5) mm long, and widest at acetabulum level and measure 0.5-0.8 (0.65) mm. Oral suckers septate, esophagus narrow 0.35-0.7 (0.55)mm long, intestinal limps with numerous side branches. 76-86 testes rounded to oval, smaller posteriorly and arranged in a double row,extending behind the ovary to the posterior third of the body, Measuring 0.5-0.7 x 0.25-0.45 mm. Vitellaria co-extensive with intestinal limbs Prehaptoral region enlarged and frilled laterally. Opisthohaptor, flat 1-1.5 x 0.5-0.6mm,with symmetrical longitudinal rows of 19 clamps each clamp, consisting of two pairs of slender unjointed lateral arm, median spring with apical spine and pair of short basal pieces.

According to the Yamaguti (1953) there is one species belonging to the genus *Metamicrotyla*.i.e. *M. bora* from *Mugil cephalus*. Yamaguti (1968) described *M. mugilis* as a new species belonging to this gunus from Hawaiian fishes. The present specimen showing a fill agreement with Yamgutis (1968) specimen. So, the present finiding consider as the first record of this parasites in the Arabian Gulf region.

III-*Haplosplanchus mugilis* (Fig. 3)

Location: intestine

Prevalence:55%

Mean Intensity:0.4

Description :Haplosplanchadae:The body is smooth, elongated and cylindrical, and measurs 1.22-1.26 (1.245). The subterminal, spherical oral sucker is submounted by apreoral lobe. It measures 0.12-0.0.14 (0.125) in diameter. Pharynx subrounded and measures 0.1-0.12 (0.11) in diameter. The intestinal bifurcation starts immediately at short distance in front of the acetabulum. Caeca pass laterally and extend up to the posterior extremity of the body. The spherical acetabulum is located at the middle thired of the body, it measures 0.189-0.192 (0.190) in diameter.

A single ovary is located in front of the testis. It measures 0.078-0.082 (0.080) in diameter. The single testis is spherical and situated at the posterior thired of the body and measures 0.11-0.13 (0.12). The vitellaria located lateraly at the right side of the body just front of the testis.

The validity of the genus *Haplosplanchus* has been questioned by various authors ,including Yamaguti (1971). The present species is similar to *Haplosplanchus mugilis* which described by Yamaguti (1971) and its diagnosis in *Liza subviridis* in Khor Abdulah represents it's a new record in the Arabian Gulf.

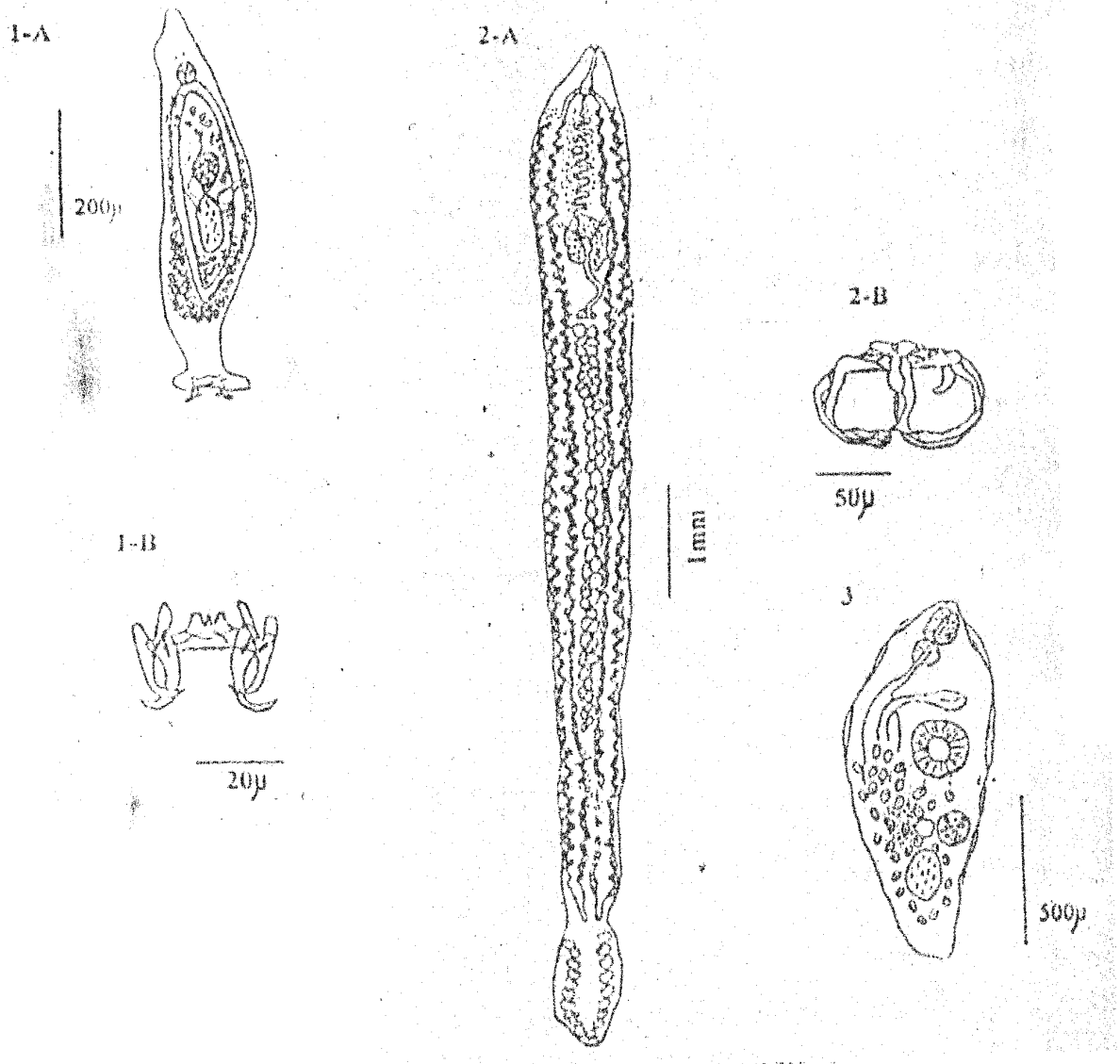

Fig:1-A *Halimurnia mugilinus* (Ventral view) B:Anchor.
Fig:2-A *Haplosplanchus mugilis* (Ventral view) B:Clamps.
Fig:3 *Metamicrocotyla mugilis* (Ventral view).

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الديدان المتطفله على اسماك البياح الاخضر *Liza subviridis* في خور عبد الله، الخليج العربي

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الخلاصة

تم في الدراسة الحالية تشخيص نوعين من الديدان المتطفلة وحيدة المنشأ monogenea هما *Haliotrema mugilinus* و *Metamicrocotyla mugilis* نوع من الديدان ثنائية المنشأ digenea هو *Haplosplanchus* في سمكة البياح الاخضر *Liza subviridius* في خور عبد الله، شمال غرب الخليج العربي خلال الفترة من شهر مايس إلى شهر أيلول 2001 وقد عد تسجيل النوعين الاخيرين هو التسجيل الأول في الخليج العربي والمياه البحرية العراقية.