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PARASITIC HELMINTHS OCCURRING IN ADRIATIC FISHES

Part II (Flukes and Tapeworms)

PARASITSKI HELMINTI U JADRANSKIM RIBAMA-II dio

OTTO SEY

SPLIT 1970

PARASITIC HELMINTHS OCCURRING IN ADRIATIC FISHES

Part II (Flukes and Tapeworms)

PARASITSKI HELMINTI U JADRANSKIM RIBAMA — II DIO

By

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In the course of the spring months of 1966 I had possibilities to study internal parasitic worms occurring in fishes caught in the proximity of Split, Yugoslavia. The list of the fishes examined and a certain group of flukes can be found in the first part of this series (Sey, 1968).

The present paper contains the rest of the recovered flukes and tapeworms. Thirty three fluke and sixh tapeworm species are listed in the paper.

RECOVERED FLUKE SPECIES

*Bucephalidae Poche, 1907**Bucephalopsis gricilescens* (Rud., 1819)

It was found in the intestine of *Auxis thazard* and *Anguilla anguilla*. So far it has only been known from the same organ of *Lophius piscatorius* in the Adriatic. Thus the fishes mentioned above proved to be new hosts. (Table I and II)

Prosrhynchus aculeatus Odhner, 1905

It came only up from the intestine of *Anguilla anguilla*. This fluke has been known only in the *Ariosoma* species in Europe and only in the Adriatic, too.

*Felodistomatidae Nicoll, 1913**Bacciger bacciger* (Rud., 1819)

It occurred in a great number in the stomach of *Boops boops*. It was mentioned for the first time in the Mediterranean area by Stossich (1889) from the food canal of *Atherina hepsetus*. *Boops boops* has never been mentioned as its host.

Steringotrema divergens (Rud., 1809)

Some specimens were found only in the intestine of *Blennius ocellaris*. This was the first occasion that it occurred in the Adriatic Sea.

Haplocladus typicus Odhner, 1911

Several specimens were found in the intestine of *Trachurus trachurus* and only one in the same organ of *Cepola rubescens*. All the worms found in both hosts belonged to the species *Haplocladus typicus*. So far this fluke has not been known as a parasite of *Cepola rubescens*. Another fluke, *Haplo-*

cadus filiforme (Rud., 1819) is known as a parasite of *Cepola rubescens*. *Haplo-cadus typicus* is widely distributed in the European seas.

Lomasoma wardi (Manter, 1934)

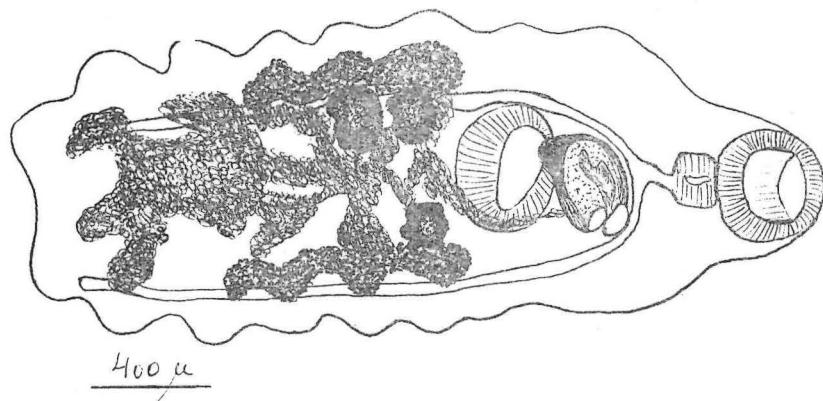
This fluke was described in 1934 by Manter from the food canal of *Coelorhynchus carminatus* and *Urophycis regius* in the United States (Florida). During my investigation I collected it several times and in a relatively greater number from the intestine of *Solea variegata*. According to the literature so far this genus has not been known in the European seas and the Adriatic fauna. At the same time *Solea variegata* represents a new host for *Lomasoma wardi*. In spite of the long distance and the new host I could not observe any important differences comparing its measures and morphological features to Manter's description.

Lomasoma wardi (Manter, 1934)

Acanthocolpidae Lühe, 1909

Stephanostomum cesticillum (Molin, 1858)

Only one specimen occurred in the intestine of *Lophius piscatorius*. This parasite was mentioned for the first time from the same host by Stossich (1883) in the Adriatic.



Lomasoma wardi (Manter, 1934)

Mesometridae Poche, 1925

Centroderma spinosissima (Stossich, 1883)

Some specimens were found in the intestine of *Boops boops*. The specimens in my collection belong to this species although there is another fluke, *Centroderma stossichi* (Monticelli, 1892) which also parasitizes in *Boops boops*.

Opecoelidae Ozaki, 1925

Helicometra fasciata (Rud., 1819)

It seemed to be the most common parasite, found in sixteen species of different fishes. Some of them are new hosts for this fluke. (Table I)

Helicometra pulchella (Rud., 1819)

This helminth was found in the intestine of the following four fish species: *Anguilla anguilla*, *Crenilabrus mediterraneus*, *Labrus bergylta*, *L. bimaculatus*. The latter three fishes are new hosts for this worm.

Podocotyle fractum (Rud., 1819)

This fluke was found several times in the food canal of *Boops boops*. It was mentioned for the first time from the Adriatic and Mediterranean areas by Stossich (1888) and Timon-David (1937).

Plagioporus varicus (Nicoll, 1910)

This fluke occurred in three species of fishes (*Oblata melanura*, *Diplodus annularis*, *Blennius ocellaris*). They are new hosts for this helminth.

Plagioporus idoneus (Nicoll, 1909)

It was found in six different fish species. So far it has not been known in them. It occurred for the first time in the Adriatic.

Plagioporus alacris (Looss, 1901)

It was recovered in a small number in the food canal of *Crenilabrus cinereus*, *C. mediterraneus*. So far this fluke has not been known in the Adriatic.

Podocotyle atomon (Rud., 1802)

It is a widely distributed fluke. It can be found in the Atlantic, the Pacific and the Mediterranean. More than a hundred fish species (in Skrjabin, 1958) are known as its host. During my investigation I found it in five fish species.

Lepocreadidae Nicoll, 1935*Lepocreadium album* (Stossich, 1890)

Only one specimen was recovered from the intestine of *Spondyliosoma cantharus*. This fluke from the Adriatic was described by Stossich.

Lepocreadium retrusum Linton, 1940

It was found in five of the examined fishes. It is known in several other countries, too, from the mentioned hosts (Table I). This was the first finding of that fluke for the Adriatic.

Lepidopeden elongatum (Lebour, 1908)

Some specimens occurred in the food canal of *Maena chrysocoma*, *M. smaris* and *Solea variegata*. So far it has not been known from these hosts.

Monorchidae Odhner, 1942*Achoerodus pauli* Wlasenko, 1931

Only one specimen was found in the intestine of *Sciaena umbra*. It was described for the first time from the same host by Wlasenko in the Black Sea. So far it has not been known in the Mediterranean area.

Zoogonidae Odhner, 1911*Zoogonus rubellus* (Olsson, 1868)

Some specimens occurred in the intestine of *Crenilabrus tinca*, and *Citharus linguatula*. This fluke parasitizes in some other Adriatic fishes, too. The mentioned fishes are new hosts for this parasite.

Zoogonoides viviparus (Olsson, 1868)

I found some flukes in the intestine of *Blennius gattorugine*. So far it has not been known in this host and in the Adriatic.

Diphtherostomum brusinae (Stossich, 1889)

This fluke was described by Stossich from the intestine of *Oblata melanura* and *Lethrinus halmatopterus* in the Adriatic. During my investigation only one specimen was recovered from *Diplodus annularis*. Wlasenko (1931)

described another species named *Diphtherostomum sargus annularis* from this host, caught in the Black Sea, which is a synonym of *Diphtherostomum brusinue* according to Dolguh and Naydenova (1966).

Steganoderma tidae Dollfus, 1952

Steganoderma retroflexum (Molin, 1858)

Only once a few worms were found in the intestine of *Belone belone*.

Acanthostomatidae Poche, 1925

Anisocladium gracile (Looss, 1901)

In the literature there are different opinions about the distinction of this species. Morozov (in Skrjabin, 1955, p. 290) identifies it as *Anisocladium fallax*. Wlasenko (1931), Janiszewska (1951-53) repute it as a real species. I agree with the opinions of the latter authors because *Anisocladium gracile* differs from *Anosocladium fallax* chiefly in its body dimensions, shape of the front part, arrangement of vitelline glands and the occurrence in the host's digestive tract. *Anisocladium fallax* was always found in the anterior part, and at the same time *Anisocladium gracile* in the posterior one of the host's alimentary canal.

Hemiridae Lühe, 1901

Aphanurus stossichi (Monticelli, 1819)

Some specimens were recovered from the intestine of *Boops boops*. Besides this host it parasitizes in numerous other fishes, too, in the Adriatic.

Lecithasteridae Skrjabin et Guschanskaja, 1954

Lecithaster gibbosus (Rud., 1802)

This fluke was found only in three fish species although it is a common parasite not only in the Adriatic, but also in the other seas (the Atlantic, the Pacific and so on).

Lecithociriidae Skrjabin et Guschanskaja, 1954

Lecithochirium ruforiride (Rud., 1819)

I found it in eight of different fish species, some of them represent new hosts for this parasite.

Lecithocirium fusiforme Lühe, 1901

It occurred only in the *Ariosoma* species. Besides the Mediterranean it can be found in the Atlantic, the Pacific, too. So far it has not been known in the Adriatic.

Lecithocirium grandiporum (Rud., 1819)

Three specimens were found in the stomach of *Muraena helena*. This was the first recovery of the fluke in the parasitic fauna of the Adriatic.

Brachyphallus crenatus (Rud., 1802)

It was found in the digestive canal of *Merluccius merluccius*. It is a widely distributed parasite; apart from Europe it is known in Japan, Canada and the United States. This is the first record of its occurrence in the Adriatic.

Brachyphallus musculus (Looss, 1907)

This parasite was found in five fish species, of which *Scomber scombrus* and *Citharus linguatula* are new hosts for this fluke.

Haploporidae Nicoll, 1914

Haploporus benedeni (Stossich, 1887)

It was found in the intestine of *Mugil labeo* and *M. capito* in a small

number. Stossich himself had described it for the Mediterranean. So far it has not been known in the Adriatic.

Saccocoelium obesum Looss, 1902

It was collected from the intestine of the examined *Mugil* species in a small number.

RECOVERED TAPEWORM SPECIES

Phyllobothriidae Braun, 1900

Echeneibothrium variabile Beneden, 1850

Only two specimens were recovered from the intestine of *Raja miraletus*.

Onchobothriidae Braun, 1900

Acanthobothrium dujardini v. Beneden, 1849

In general, it is a common parasite of *Raja* species. During my investigation it occurred in the food canal of *Torpedo marmorata*.

Ptychobothriidae Lühe, 1902

Clestobothrium crassiceps (Rud., 1819)

Only some specimens were recovered from the intestine of *Merluccius merluccius*.

Ptychobothrium belones (Dujardin, 1845)

Only one specimen was found in the intestine of *Belone belone*.

Bothriocephalidae Blachard, 1849

Bothriocephalus scorpii (Müller, 1819)

It is a widely distributed parasite among different fish families. Apart from the Mediterranean it can be found in the Atlantic, the Pacific, the White Sea and so on.

Bothriocephalus andresi Porta, 1911

It proved to be a very frequent tapeworm of *Citharus linguatula*. Percentage of its incidence was over 78.

SUMMARY

In the course of the spring months of the year 1966 I studied helminth parasites of fishes caught in the waters around Split, Yugoslavia. During the investigations 824 specimens of 82 different fish species were examined. As a result of the studies 48 fluke species, 2 subspecies and 6 tapeworms were recovered.

Generally speaking, most of the flatworms frequently occurred in the fishes of the European Seas or just in those of the Adriatic. Nevertheless the investigations resulted in several new records. So far *Lomasoma wardi* (Mantter, 1934) has not been known in the parasitic fauna of Europe. The parasitic fauna of the Adriatic has become richer with the knowledge of several new parasitic worms. In this paper further data concerning geographical distribution of the recovered flukes and the localization in their new hosts are given.

The incidence of tapeworms in the fishes was lower than that in the case of flukes. Only six tapeworms were recovered. Four of them constitute new data of the parasitic fauna for the Adriatic.

Table I.
LIST OF INFECTED FISHES AND THEIR FLUKES

<i>Sardina pilchardus sardina</i>	* <i>Lecithaster gibbosus</i> <i>Hemiurus rugosus</i>
<i>Alosa fallax nilotica</i>	* <i>Hemiurus lühei</i>
<i>Anguilla anguilla</i>	<i>Deropristis inflata</i> * <i>Prosorhynchus acuelatus</i> <i>Lecithochirium rufoviride</i>
	* <i>Bucephalopsis gracilis</i> <i>Helicometra fasciata</i> <i>Lecithochirium grandiporum</i> <i>Prosorhynchus crucibulus</i> <i>Podocotyle atomon</i>
<i>Muraena helena</i>	* <i>Brachyphallus musculus</i> <i>Lecithochirium rufoviride</i>
<i>Ariosoma balearicum</i>	<i>Lecithochirium fusiforme</i> * <i>Lecithochirium fusiforme</i> * <i>Podocotyle atomon</i> <i>Derogenes varicus</i> <i>Brachyphallus crenatus</i> <i>Derogenes varicus</i>
<i>Ariosoma mystax</i>	* <i>Lepocreadium retrusum</i> * <i>Lepocreadium retrusum</i> <i>Lecithaster gibbosus</i>
<i>Gadus minutus capelanus</i>	<i>Saccocoelium obesum</i> <i>Haploporus benedeni</i>
<i>Merluccius merluccius</i>	<i>Saccocoelium obesum</i> <i>Haploporus benedeni</i>
<i>Onos tricirratus</i>	* <i>Lecithaster gibbosus</i> <i>Helicometra fasciata</i>
<i>Zeus faber</i>	* <i>Plagioporos idoneus</i> * <i>Monorchis monorchis</i>
<i>Mugil capito</i>	* <i>Tergestia laticollis</i> * <i>Lecithochirium rufoviride</i>
<i>Mugil labeo</i>	* <i>Plagioporos idoneus</i> * <i>Plagioporos varicus</i> <i>Diphtherostomum brusinae</i>
<i>Serranus scriba</i>	* <i>Monorchis monorchis</i> * <i>Lecithochirium rufoviride</i>
<i>Serranus cabrilla</i>	* <i>Plagioporos idoneus</i>
<i>Pagellus erythrinus</i>	* <i>Monorchis monorchis</i>
<i>Diplodus annularis</i>	* <i>Tergestia laticollis</i> * <i>Lecithochirium rufoviride</i>
<i>Diplodus vulgaris</i>	* <i>Plagioporos idoneus</i> * <i>Plagioporos varicus</i> <i>Diphtherostomum brusinae</i>
<i>Diplodus sargus</i>	* <i>Monorchis monorchis</i> * <i>Lecithochirium rufoviride</i>
<i>Boops boops</i>	* <i>Plagioporos idoneus</i> <i>Podocotyle fractum</i> <i>Aphanurus stossichi</i> <i>Mesometra orbicularis</i> <i>M. orbicularis minutacuelata</i>
	* <i>Bacciger bacciger</i>

* indicates a new parasite for the host

<i>Boops salpa</i>	<i>Mesometra brachycoelia</i> <i>M. brachycoelia minispinus</i> <i>Podocotyle fractum</i> <i>Centroderma spinossissima</i>
<i>Oblata melanura</i>	* <i>Plagioporus varicus</i>
<i>Spondyliosoma cantharus</i>	* <i>Lepocreadium album</i>
<i>Maena cyselis</i>	* <i>Lepidopeden elongatum</i> <i>Lepocreadium retrusum</i>
<i>Maena smaris</i>	* <i>Lepidopeden elongatum</i> * <i>Plagioporus idoneus</i> <i>Lepocreadium retrusum</i> <i>Opecoeloides furcatus</i> <i>Derogenes varicus</i> <i>Achoerus pauli</i> <i>Lepocreadium retrusum</i> <i>Haplocadus typicus</i>
<i>Mullus barbatus</i>	* <i>Haplocadus typicus</i>
<i>Mullus surmuletus</i>	* <i>Helicometra pulchella</i>
<i>Sciaena umbra</i>	* <i>Plagioporus alacris</i>
<i>Trachurus trachurus</i>	* <i>Tergestia laticollis</i> * <i>Plagioporus alacris</i> * <i>Plagioporus idoneus</i> * <i>Lecithaster gibbosus</i> <i>Helicometra fasciata</i>
<i>Cepola rubescens</i>	* <i>Zoogonus rubellus</i> * <i>Plagioporus alacris</i> * <i>Tergestia laticollis</i>
<i>Crenilabrus mediterraneus</i>	<i>Helicometra fasciata</i> * <i>Helicometra pulchella</i>
<i>Crenilabrus cinereus</i>	* <i>Helicometra pulchella</i> * <i>Plagioporus idoneus</i> * <i>Lecithaster gibbosus</i> <i>Helicometra fasciata</i> * <i>Plagioporus alacris</i> * <i>Tergestia laticollis</i>
<i>Crenilabrus tinca</i>	<i>Helicometra fasciata</i> * <i>Plagioporus alacris</i> * <i>Tergestia laticollis</i>
<i>Crenilabrus quinquemaculatus</i>	<i>Helicometra fasciata</i>
<i>Labrus bimaculatus</i>	* <i>Helicometra pulchella</i>
<i>Labrus hergylla</i>	* <i>Helicometra pulchella</i>
<i>Labrus merula</i>	<i>Helicometra fasciata</i>
<i>Coris juris</i>	* <i>Helicometra fasciata</i>
<i>Trachinus draco</i>	<i>Helicometra fasciata</i>
<i>Uranoscopus scaber</i>	<i>Anisocladium gracile</i> <i>Anisocoelium capitellatum</i> <i>Anisocladium fallax</i>
<i>Scomber scombrus</i>	* <i>Brachyphallus musculus</i> <i>Opechona bacillaris</i> <i>Lecithocladium excisum</i>
<i>Scomber japonicus colias</i>	* <i>Helicometra fasciata</i> <i>Lecithocladium excisum</i>
<i>Auxis thazard</i>	* <i>Bucephalopsis gracilis</i> <i>Sterigotrema divergens</i>
<i>Blennius ocellaris</i>	* <i>Plagioporus varicus</i> <i>Monorchis monorchis</i>
<i>Blennius gattorugine</i>	* <i>Zoogonoides viviparus</i>
<i>Blennius tentacularis</i>	* <i>Lecithochirium rufoviride</i>
<i>Ophidion barbatum</i>	* <i>Brachyphallus musculus</i>

<i>Gobius geniporus</i>	* <i>Helicometra fasciata</i>
<i>Gobius cruentatus</i>	<i>Podocotyle atomon</i>
<i>Gobius exanthematicus</i>	* <i>Brachyphallus musculus</i>
<i>Scorpaena notata</i>	<i>Helicometra fasciata</i>
<i>Trigla lyra</i>	<i>Steganoderma retroflexum</i>
<i>Citharus linguatula</i>	<i>Helicometra fasciata</i>
<i>Bothus podas</i>	* <i>Brachyphallus musculus</i>
<i>Solea variegata</i>	* <i>Lecithochirium rufoviride</i>
<i>Monorchis hispidus</i>	* <i>Zoogonus rubellus</i>
<i>Lophius piscatorius</i>	<i>Derogenes varicus</i>
	* <i>Lepidopeden elongatum</i>
	* <i>Lomasoma wardi</i>
	<i>Helicometra fasciata</i>
	<i>Podocotyle atomon</i>
	<i>Helicometra fasciata</i>
	<i>Stephanostomum cesticillus</i>

LIST OF THE INFECTED FISHES AND THEIR TAPEWORMS

<i>Raja miraletus</i>	<i>Echeneibothrium variabile</i>
<i>Sardina pichardus sardina</i>	<i>Bothriocephalus scorpii</i>
<i>Bothus pados</i>	<i>Bothriocephalus scorpii</i>
<i>Solea variegata</i>	<i>Bothriocephalus scorpii</i>
<i>Citharus linguatula</i>	<i>Bothriocephalus andresi</i>
<i>Merluccius merluccius</i>	<i>Clestobothrium crassiceps</i>
<i>Belone belone</i>	* <i>Acanthobothrium dujardini</i>
<i>Torpedo marmorata</i>	<i>Ptychobothrium belones</i>

Table II.

LIST OF THE FLUKES OCCURRING IN THE EXAMINED FISHES

— <i>Helicometra frasciata</i>	<i>Serranus cabrilla</i>
	<i>Anguilla anguilla</i>
	<i>Trachinus draco</i>
	<i>Gobius exanthematicus</i>
	<i>Labrus merula</i>
	<i>Solea variegata</i>
	<i>Monorchirus hispidus</i>
	<i>Trigla lyra</i>
	<i>Ophidion barbatum</i>
	<i>Scomber scobrus</i>
	<i>Crenilabrus cinereus</i>
	<i>Crenilabrus quinque maculatus</i>
	<i>Scorpaena notata</i>
	<i>Gobius niger joso</i>

— <i>Helicometra pulchella</i>	<i>Serranus scriba</i> <i>Coris juris</i> <i>Anguilla anguilla</i> <i>Crenilabrus mediterraneus</i> <i>Labrus bergylta</i> <i>Labrus bimaculatus</i>
— <i>Podocotyle fractum</i>	<i>Boops boops</i>
— <i>Plagioporus varicus</i>	<i>Boops salpa</i> <i>Oblata melanura</i> <i>Diplodus annularis</i> <i>Blennius ocellaris</i>
— <i>Plagioporus idoneus</i>	<i>Maena smaris</i> <i>Pagellus erythrinus</i> <i>Diplodus annularis</i> <i>Crenilabrus cinereus</i> <i>Diplodus sargus</i>

— indicates a new helminth for the Adriatic

— <i>Plagioporus alacris</i>	<i>Crenilabrus tinca</i> <i>Crenilabrus cinereus</i>
— <i>Podocotyle atomon</i>	<i>Anguilla anguilla</i> <i>Crenilabrus mediterraneus</i> <i>Ariosoma balearicum</i> <i>Ariosoma mystax</i> <i>Solea variegata</i>
<i>Opecoeloides furcatus</i>	<i>Gobius geniporus</i>
<i>Lepocreadium album</i>	<i>Mullus barbatus</i>
— <i>Lepocreadium retrusum</i>	<i>Spondyliosoma cantharus</i> <i>Trachurus trachurus</i> <i>Onos tricirratus</i> <i>Zeus faber</i> <i>Maena crusellis</i> <i>Maena smaris</i> <i>Scomber scombrus</i>
<i>Opechona bacillaris</i>	<i>Maena cryscelis</i>
— <i>Lepidopeden elongatum</i>	<i>Solea cariegata</i> <i>Maena smaris</i> <i>Boops boops</i>
<i>Aphanurus stossichi</i>	<i>Alosa fallax nilotica</i>
— <i>Hemiuirus lühei</i>	<i>Clupea pichardus sardina</i>
<i>Hemiuirus rugosus</i>	<i>Scomber scombrus</i>
<i>Lecithocladium excisum</i>	<i>Scomber janponicus colias</i> <i>Zeus faber</i>
— <i>Lecithaster gibbosus</i>	<i>Serranus scriba</i> <i>Sardina pichardus sardina</i> <i>Crenilabrus cinereus</i> <i>Ariosoma balearicum</i>

— <i>Lecithochirium fusiforme</i>	<i>Ariosoma mystax</i>
<i>Lecithochirium rufoviride</i>	<i>Blennius tentacularis</i>
— <i>Lecithochirium grandiporum</i>	<i>Diplodus annularis</i>
<i>Brachyphallus musculus</i>	<i>Ophidion barbatum</i>
— <i>Brachyphallus crenatus</i>	<i>Ariosoma balearicum</i>
<i>Monorchis monorchis</i>	<i>Anguilla anguilla</i>
— <i>Achoerusr pauli</i>	<i>Citharus linguatula</i>
<i>Zoogonus rubellus</i>	<i>Diplodus vulgaris</i>
<i>Zoogonoides viviparus</i>	<i>Blennius sanguinolentus</i>
— <i>Diphterostomum brusinae</i>	<i>Muraena helena</i>
— <i>Steganoderma retroflexum</i>	<i>Scomber scombrus</i>
— <i>Deropristis inflata</i>	<i>Ariosoma balearicum</i>
— <i>Bacciger bacciger</i>	<i>Gobius cruentatus</i>
— <i>Steringotrema divergens</i>	<i>Citharus linguatula</i>
<i>Haplocladus typicus</i>	<i>Ophidion barbatum</i>
— <i>Lomasoma wardi</i>	<i>Merluccius merluccius</i>
<i>Mesometra orbicularis</i>	<i>Diplodus annularis</i>
— <i>Mesometra orbicularis minutacuelata</i>	<i>Blennius gattorugine</i>
<i>Mesometra brachycoelia</i>	<i>Diplodus vulgaris</i>
— <i>Mesometra brachycoelium minispinus</i>	<i>Sciaena umbra</i>
<i>Centroderma spinossissima</i>	<i>Crenilabrus tinca</i>
<i>Tergestia laticollis</i>	<i>Citharus linguatula</i>
<i>Derogenes ruber</i>	<i>Blennius gattorugine</i>
<i>Derogenes varicus</i>	<i>Diplodus annularis</i>
	<i>Belone acus</i>
	<i>Anguilla anguilla</i>
	<i>Boops boops</i>
	<i>Blennius ocellaris</i>
	<i>Trachurus trachurus</i>
	<i>Cepola rubescens</i>
	<i>Solea variegata</i>
	<i>Boops boops</i>
	<i>Boops boops</i>
	<i>Boops salpa</i>
	<i>Boops salpa</i>
	<i>Boops salpa</i>
	<i>Crenilabrus tinca</i>
	<i>Crenilabrus cinereus</i>
	<i>Diplodus annularis</i>
	<i>Trigla lyra</i>
	<i>Merluccius merluccius</i>
	<i>Gadus minutus capelanus</i>
	<i>Mullus surmuletus</i>
	<i>Bothus podas</i>
	<i>Mugil capito</i>

— <i>Haploporus benedeni</i>	<i>Mugil labeo</i>
— <i>Saccocoelium obesum</i>	<i>Mugil capito</i>
<i>Prosorhynchus crucibulus</i>	<i>Mugil labeo</i>
<i>Bucephalopsis gracilescens</i>	<i>Ariosoma balearicum</i>
— <i>Prosocephalus acuelatus</i>	<i>Anguilla anguilla</i>
<i>Anisocoelium capitellatum</i>	<i>Auxis thazard</i>
<i>Anisocladium fallax</i>	<i>Anguilla anguilla</i>
<i>Anisocladium gracile</i>	<i>Uranoscopus scaber</i>
<i>Stephanostomum cesticillus</i>	<i>Uranoscopus scaber</i>
	<i>Uranoscopus scaber</i>
	<i>Lophius piscatorius</i>
	<i>Raja miraletus</i>

LIST OF THE TAPEWORMS OCCURRING IN THE INFECTED FISHES

— <i>Echeneibothrium variabile</i>	<i>Torpedo marmorata</i>
— <i>Acanthobothrium dujardini</i>	<i>Merluccius merluccius</i>
— <i>Cleistobothrium crassiceps</i>	<i>Belone belone</i>
— <i>Ptychobothrium belones</i>	<i>Citharus linguatula</i>
<i>Bothriocephalus andresi</i>	<i>Solea variegata</i>
<i>Bothriocephalus scorpii</i>	<i>Sardina pilchardus sardina</i>
	<i>Bothus podas</i>
	<i>Raja miraletus</i>

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PARASITSKI HELMINTI U JADRANSKIM RIBAMA — II DIO

KRATAK SADRŽAJ

Za vrijeme proljetnih mjeseci 1966. autor je studirao parazite *Helminthes* u ribama uhvaćenim u vodama oko Splita, Jugoslavija. Za vrijeme istraživanja ispitivana su 824 primjerka iz 82 različite vrste riba. Kao rezultat proučavanja nađeno je 48 vrsta metilja, 2 podvrste i 6 trakavica.

Općenito govoreći, većina *Platihelmintha* pojavljuju se često u ribama evropskih mora ili baš u onim iz Jadrana. Ipak, kao rezultat ovih istraživanja zabilježeno je nekoliko novih vrsta. Do sada *Lomasoma wardi* (Manter, 1934) nije bio poznat u parazitskoj fauni Evrope. Parazitska fauna Jadrana postala je bogatija upoznavši nekoliko novih parazitskih crva. Ovaj rad donosi daljnje podatke koji se tiču geografske rasprostranjenosti nađenih metilja i njihove lokalizacije u novim domaćinima.

Učestalost trakavica u ribama bila je manja nego metilja. Nađeno je samo šest trakavica. Četiri od njih sačinjavaju nove podatke o parazitskoj fauni Jadrana.

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