

## HELMINTHOLOGICAL INVESTIGATIONS OF FISH IN LAKE BALATON II. PARASITIC NEMATODES FROM FISH IN THE LAKE

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In 1967, our helminthological investigations, aiming at the complete survey of the helminthofauna of fish in Lake Balaton (MÉSZÁROS 1966), were further continued. The present paper discusses the parasitic nematodes of fish species collected in 1967.

### Material and methods

In the course of the year under discussion, 180 fish specimens have been studied on three occasions. The nematodes were cleared in lactophenol for identification.

### Results

Of the investigated 180 fish specimens, 164 (91.8 per cent) were infested by parasitic worms. Nematodes had been shown in 95 fish specimens (57.5 per cent).

*Table 1* shows the rate of infection by nematodes of the examined fish species.

The following nematode species have been identified:

*Anisakidae* spec.

Host: *Lucioperca lucioperca*

Localization: liver

Date of collecting: 23 May, 1967

Host: *Abramis brama*

Localization: liver

Date of collecting: 26 Sept., 1967

*Camallanus lacustris* (ZOEGLER, 1776)

Host: *Perca fluviatilis*

Localization: pyloric appendages, intestine

Date of collecting: 23 May, 23 Aug., 26 Sept., 1967

*Camallanus truncatus* (RUDOLPHI, 1814)

Host: *Lucioperca lucioperca*



Table 1 — 1. Táblázat

Rate of infection of the fish species examined  
A fertőzöttség mértéke a vizsgált halfajokon

Fish species Halfajok	Number of examined specimens Vizsgált halak száma	Number of parasitized specimens Fertőzött halak száma	Percentage of extensity Extenzitás %-a
<i>Esox lucius</i>	8	5	—
<i>Rutilus rutilus</i>	20	2	10
<i>Scardinius erythrophthalmus</i>	19	12	63.1
<i>Aspius aspius</i>	15	13	86.6
<i>Alburnus alburnus</i>	1	—	—
<i>Blicca bjoerkna</i>	3	1	—
<i>Abramis brama</i>	63	37	58.7
<i>Pelecus cultratus</i>	5	—	—
<i>Carassius carassius</i>	7	2	—
<i>Cyprinus carpio</i>	2	—	—
<i>Silurus glanis</i>	1	—	—
<i>Anguilla anguilla</i>	1	—	—
<i>Lucioperca lucioperca</i>	23	16	69.5
<i>Lucioperca volgenis</i>	2	2	—
<i>Perca fluviatilis</i>	8	5	—
<i>Acerina cernua</i>	2	—	—
altogether összesen	180	95	52.7

Localization: pyloric appendages, intestine

Date of collecting: 23 May, 14 Aug., 26 Sept., 1967

Host: *Lucioperca volgenis*

Localization: pyloric appendages, intestine

Date of collecting: 23 May, 1967

Host: *Perca fluviatilis*

Localization: pyloric appendages, intestine

Date of collecting: 23 May, 26 Sept., 1967

Host: *Aspius aspius*

Localization: intestine

Date of collecting: 23 May, 14 Aug., 1967

Host: *Esox lucius*

Localization: intestine

Date of collecting: 23 May, 14 Aug., 26 Sept., 1967

*Philometra ovata* (ZEDER, 1803)

Host: *Abramis brama*

Localization: air bladder, body cavity (in fish infected by *Ligula*)

Date of collecting: 23 May, 14 Aug., 26 Sept., 1967

Host: *Rutilus rutilus*

Localization: air bladder

Date of collecting: 20 April, 23 May, 1967

*Philometra rischta* SKRJABIN, 1917

Host: *Blicca bjoerkna*

Localization: gill surface



Date of collecting: 23 May, 1967

*Philometra sanguinea* (RUDOLPHI, 1819)

Host: *Carassius carassius*

Localization: air bladder, body cavity

Date of collecting: 14 Aug., 26 Sept., 1967

MOLNÁR has already shown this species (1966) from the Crucian carp in another locality in Hungary.

*Philometra* sp.

Host: *Aspius aspius*

Localization: air bladder, body cavity

Date of collecting: 23 May, 14 Aug., 1967

Of the 15 examined specimens, I found this *Philometra* species in 10 fish exemplars. Identification was not possible, since the females were not mature. The males stand near *Ph. rischta* SKRJABIN, but their spicules were twice bigger than those of this latter species (MOLNÁR, 1967, p. 300).

*Skrjabillanus erythrophthalmi* MOLNÁR, 1966

Host: *Scardinius erythrophthalmus*

Localization: air bladder, body cavity

Date of collecting: 23 May, 14 Aug., 1967

Host: *Aspius aspius*

Localization: air bladder, body cavity

Date of collecting: 14 Aug., 1967

The occurrence of this parasite from the balin has not yet been published.

Host: *Abramis brama*

Localization: air bladder, body cavity

Date of collecting: 26 Sept., 1967

I have collected four mature female specimens and a male exemplar. This nematode was heretofore unknown from the bream.

*Skrjabillanus scardinii* MOLNÁR, 1966

Host: *Scardinius erythrophthalmus*

Localization: air bladder, body cavity

Date of collecting: 23 May, 14 Aug., 1967

*Capillaria* sp.

Host: *Aspius aspius*

Localization: intestine

Date of collecting: 23 May, 1967

Host: *Abramis brama*

Localization: intestine

Date of collecting: 14 Aug., 1967

### Summary

Author established the occurrence of ten nematode species, on the basis of the examination of 180 fish exemplars comprising 17 fish species. The new hosts, recorded herein, of *Skrjabillanus erythrophthalmi* are *Aspius aspius* and *Abramis brama*.



## REFERENCES

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A BALATONI HALAK HELMINTHOLÓGIAI VIZSGÁLATA II  
PARAZITA NEMATODÁK A BALATONI HALAKBÓL

**Összefoglalás**

*Mészáros Ferenc*

A szerző 10 Nematoda — faj előfordulását állapította meg 17 fajhoz tartozó 180 balatoni hal vizsgálata alapján. A *Skrjabillanus erythrophthalmi* szerző által megállapított új gazdái az *Aspius aspius* és az *Abramis brama*.

ГЕЛЬМИНТОЛОГИЧЕСКОЕ ИССЛЕДОВАНИЕ БАЛАТОНСКИХ РЫБ. II.  
ПАРАЗИТИЧЕСКИЕ НЕМАТОДЫ РЫБ ОЗЕРА БАЛАТОН

*Ф. Месарош*

При обследовании 180 особей балатонских рыб, относящихся к 17 видам, обнаружено 10 видов нематод. Показано, что хозяином *Skrjabillanus erythrophthalmi* являются *Aspius aspius* и *Abramis brama*.