

UDC 576.89:595.122:597.536(262.5)

THE FIRST RECORD OF *APHALLUS TUBARIUM* (TREMATODA, CRYPTOAGONIMIDAE) IN THE BLACK SEA

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Accepted 18 February 2003

The First Record of *Aphallus tubarium* (Trematoda, Cryptogonimidae) from the Black Sea. Korniyuchuk Yu. M., Gaevskaya A. V. — The trematode *Aphallus tubarium* (Rudolphi, 1819) Poche, 1926 is found in the new host, the pipefish, *Syngnathus typhle* Linnaeus (Pisces, Syngnathidae) caught near coast of the Black Sea. Morphological description and figure of trematode are given. The genus *Aphallus* is recorded from the Black Sea for the first time.

Key words: trematodes, fishes, Black Sea, fauna, *Aphallus tubarium*, new records.

Первая находка *Aphallus tubarium* (Trematoda, Cryptogonimidae) в Черном море. Корнейчук Ю. М., Гаевская А. В. — Трёматода *Aphallus tubarium* (Rudolphi, 1819) Поше, 1926 зарегистрирована у нового хозяина — иглы-трубкорога (высокорылой) *Syngnathus typhle* Linnaeus (Pisces, Syngnathidae), выловленной у берегов Крыма. Приведено описание и оригинальный рисунок мариты. Род *Aphallus* впервые отмечен в Черном море.

Ключевые слова: трёматоды, рыбы, Черное море, фауна, *Aphallus tubarium*, новые находки.

Introduction

Long-termed parasitological investigations of the Black Sea fishes have revealed a reach trematode fauna of these hosts (Gaevskaya et al., 1975). Nevertheless, we continue the research of the Black Sea fishes trematode fauna and to obtain the new results.

In 1996 we dissected one specimen of the Black Sea pipefish, *Syngnathus typhle* Linnaeus (total length 310 mm, male), and found four gravid trematodes in its middle intestine. The detailed study of these specimens revealed that they belong to *Aphallus tubarium* (Rudolphi, 1819) Poche, 1926. The representatives of genus *Aphallus* are unknown in the Black Sea, therefore, our finding is the first record of this genus from this sea. Below we describe the morphology of *A. tubarium* from the Black Sea.

Aphallus tubarium (Rudolphi, 1819) Poche, 1926 (fig. 1)

Material studied: slides N 22.1/1055.1 and 22.1/1055.2, the Black Sea, Sevastopol (Streletskaia Bay), December 18, 1996 (Korniyuchuk), host — pipefish, *Syngnathus typhle* L. Slides are held in the collection of the Institute of Biology of the southern Seas, NAS of Ukraine (Sevastopol).

Description. Large trematodes; body elongated, slightly enlarged at level of ventral sucker. Tegument spined. Two groups of pigment granules at level of anterior margin of pharynx. Oral sucker rounded, terminal, aperture subterminal. Ventral sucker slightly smaller than oral one. Forebody is about 20% of body length. Prepharynx short, pharynx rounded, oesophagus moderately long. Intestinal bifurcation in the middle of forebody. Caeca broad, extends to posterior extremity, terminate blindly. Testes two, rounded or oviform; tandem or slightly diagonal; may be contiguous; in posterior half of hindbody. Posterior testis is larger than the anterior one. Vesicula seminalis tubular, very long, coiled. Genital pore median; at level of anterior margin of acetabulum. Ovary three-lobed; median or submedian; pretesticular. Loops of uterus in hindbody are laterally to testes and also in post-testicular region (testes may also be separated by uterine loops) and pre-ovarian region. Uterus forms the cross loops above level of ovary, these loops dorsal to seminal vesicle.

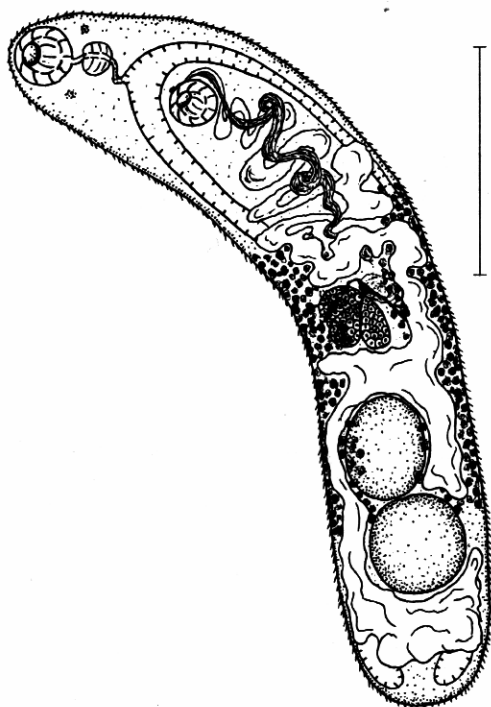


Fig. 1. *Aphallus tubarium* from the gut of the Black Sea pipefish *Syngnathus typhle* — general morphology (ventral view). Scale bar 1 mm.

Рис. 1. *Aphallus tubarium* от черноморской иглы-трубкорова, вид с вентральной стороны. Масштабная линейка 1 мм.

Eggs fine; extremely numerous. Vitellarium follicular; in lateral fields, dorsal to caeca; from level of middle of seminal vesicle to anterior boundary of posterior testis.

Measurements (mm). Body length 2.553–3.243; body width 0.552; oral sucker 0.152–0.179 × 0.193–0.221; ventral sucker (diameter) 0.152–0.166; pharynx (diameter) 0.097–0.110; anterior testis 0.317–0.386 × 0.290–0.317; posterior testis 0.345–0.400 × 0.290–0.386; ovary 0.207–0.276 × 0.207–0.386; eggs ($n = 12$) 0.19–0.022 × 0.008–0.011; body length: body width ratio 4.63–5.88; oral sucker length: ventral sucker length ratio 1.0–1.2:1; oral sucker width: ventral sucker width ratio 1.16–1.33:1; forebody (% of the body-length) 17–19; post-testicular space (% of body-length) 10–13.

Discussion. The morphology of Black Sea specimens is very similar to that of the Mediterranean *A. tubarium* described by Bartoli, Bray (1987) and Dollfus (1952); it also corresponds to the description of Adriatic forms of this species given by Janiszewska (1953). The main difference is the position of the posterior boundary of vitellarium fields (they are less extensive in the Black Sea worms). Worth noting also what a small space approximately at the

level of the ovary separating two groups of vitellaria on the two sides of the body presents in description of Janiszewska (1953) and Dollfus (1952) but is barely visible on our specimens. Nevertheless, it is difficult to evaluate the taxonomic significance of these features because we have only four individuals from the Black Sea. These specimens have relatively bigger gonads than those described by Janiszewska (1953) and Bartoli, Bray (1987).

The Mediterranean fishes of Sciaenidae, Scombridae, Sparidae Carangidae, Serranidae and Lophiidae families are known as definitive hosts of *A. tubarium* (Bartoli, Bray, 1987). The grass goby, *Gobius (Zosterisessor) ophiocephalus* is known as an intermediate host for *A. tubarium* (Dollfus, 1952). This goby is the common food for mentioned fishes. Because the pipefish, *Syngnathus typhle*, is also able to catch small gobies, for example, *Aphyia* sp. (Andriyashev, Arnoldi, 1945), it is possible to suppose that small juvenile grass gobies infected with *A. tubarium* metacercariae could be an infection source for pipefish.

We would like to thank Dr. R. Bray (the Natural History Museum, London) for help with literature. Thanks are also due to Mr. A. Chernyshov for sampling of fish.

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