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First Ukrainian record of the frog lung fluke *Skrjabinoeces breviansa* Sudarikov, 1950 (Trematoda: Plagiorchidae)

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Since 2004 till 2006 in the Kharkiv Region (Eastern Ukraine) an uncommon species of lung flukes, *Skrjabinoeces breviansa*, was found in three ponds in lungs of the green frogs *Rana ridibunda* and *Rana esculenta*. Previously it has been known by finds in Russia and Azerbaijan. This species differs from other species of the genus by the absence of spines on its tegument.

Key words: *Plagiorchidae, lung flukes, amphibians, Skrjabinoeces breviansa, tegument.*

Introduction

Digenean trematods of the subfamily Pneumonoecinae are common parasites of amphibian lungs. The main diagnostic feature of the subfamily is the presence of lateral extracaecal loops of the uterus (Skrjabin, 1948). In 1950 Sudarikov justified the new genus *Skrjabinoeces* including the species *S. similis*, *S. volgensis* and *S. breviansa*. The latter two species were obtained by the author from lungs of green frogs in the middle current of the Volga (Shevchenko, 1965). Subsequently in 1965 Shevchenko described other two species of the genus from the valley of the Siverskiy Donets: *Skrjabinoeces donicus* Shevchenko, 1965 and *Skrjabinoeces minimus* Shevchenko, 1965. The diagnostic feature, which the author used to establish the new genus, is the presence of vitelline glands only in the anterior part of the body.

According to previous studies (Ryzhikov et al., 1980), six species of the subfamily were recorded in Ukraine: *Pneumonoeces variegatus* (Rud., 1819), *Pneumonoeces asper* (Looss, 1899), *Skrjabinoeces similis* (Looss, 1899), *Skrjabinoeces volgensis* Sudarikov, 1950, *Skrjabinoeces donicus* Shevchenko, 1965, *Skrjabinoeces minimus* Shevchenko, 1965. The species *Skrjabinoeces breviansa* Sudarikov, 1950 has been found in Azerbaijan and the Volga-Kama Reserve (Russia). It is rare species and known only by very few records.

This study deals with trematodes found in lungs of *Rana ridibunda* and *Rana esculenta* in Eastern Ukraine (Korshunov et al., 2004) and identified as *Skrjabinoeces breviansa* Sudarikov, 1950.

Material and methods

We examined 30 adult green frogs *Rana ridibunda* Pallas, 1771 and *Rana esculenta* Linnaeus, 1758 since 2004 till 2006 in three points of the Kharkiv Region. The survey was based on the method of complete parasitological dissection, i. e. we inspected all organs and tissues of the animals (Odening, 1955). Living flukes were extracted from the lungs and preserved under cover glasses with 70% ethanol. If it is impossible to dissect newly preserved frogs, the specimens of helminths from older material are crumpled and it is difficult to straighten them. Therefore many of their organs were undistinguished. Then the flukes were stained with carmine and mounted with Canada balsam.

Results and Discussion

All of the examined frogs turned up infected with various parasites. Some of them served as hosts for intestinal helminths only, but in most of frogs we found lung trematodes. Frog lungs contained individuals of *Skrjabinoeces breviansa* (Fig. 2) together with other representatives of the subfamily.

On 26 June 2004 in the Siverskiy Donets River near Martove, we collected 10 frogs of *R. ridibunda* in lungs of which we found trematodes. Among them, one specimen of *Skrjabinoeces breviansa* Sudarikov, 1950 was recorded.

A year later in July in a lake near Merefa in lungs of *R. esculenta*, we found 4 specimens of *S. breviansa*.

On 18 September 2006 in Lake Liman 10 adults of *R. ridibunda* were collected. In their lungs 4 specimens of this fluke were found.

Skrjabinoeces breviansa differs from other species of the genus in the absence of spines on its tegument (Fig. 1a). The body is flat, with narrowed anterior end and wide posterior one (Fig. 1b). The length is 3,90 mm, the maximum width is 1,0 mm. The oral sucker is larger then ventral one: the diameter of the former is 0,21 mm. The ventral sucker is located slightly anterior to the midline of the body. Its diameter is 0,114–0,142 mm. The tegument is smooth. The prepharynx is absent; the pharynx is spheroid or oval. Two testes are entire and located cornerwise in the posterior portion of the body. Both are of an equal size – 0,28

× 0,25 mm. The ovary is spheroid and entire, its diameter is 0,17–0,28 mm. There is a large seminal receptacle posterior to the ovary. The vitellaria are located in the anterior half of the body. The extracaecal loops of uterus extend till the anterior edge of the posterior testis. The eggs have a light-brown membrane; the size of an egg is 0,035 × 0,019 mm.

Thus the natural range of this species turned up wider than considered before (Fig. 3). The new information on its distribution suggests that the range is not disjunctive and does not consist of northern and southern parts. The trematode *S. breviansa* is rather a widespread parasite, which infects both *Rana ridibunda* and *Rana esculenta.*

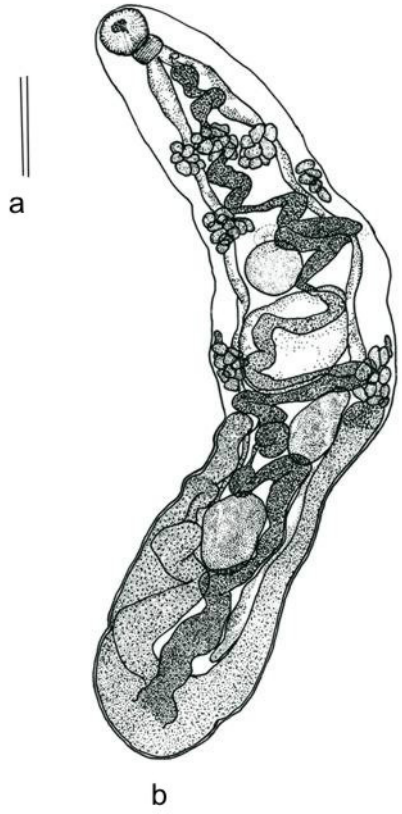

Fig. 1. *Skrjabinoeces breviansa* Sudarikov, 1950: a – feature of the integument, b – general view

Fig. 2. *Skrjabinoeces breviansa* preserved under the cover glass

Fig. 3. The distribution of *S. breviansa*: circle – previous studies, rhomb – points were *S. breviansa* was found since 2004 till 2006

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Первая находка лёгочного сосальщика лягушек *Skrjabinoeces breviansa* Sudarikov, 1950 (Trematoda: Plagiorchidae) на Украине

М.В.Коваленко

С 2004 по 2006 гг. в Харьковской области в трёх водоёмах были собраны зелёные лягушки *Rana ridibunda* и *Rana esculenta*, в лёгких которых были найдены трематоды *Skrjabinoeces breviansa*. Это редкий вид, известный лишь по находкам в России и Азербайджане. Он отличается от других видов рода *Skrjabinoeces* отсутствием шипиков на поверхности тела.

Ключевые слова: *Plagiorchidae, лёгочный сосальщик, амфибии, Skrjabinoeces breviansa, Rana ridibunda, Rana esculenta.*

Перша знахідка легеневого сисуна жаб *Skrjabinoeces breviansa* Sudarikov, 1950 (Trematoda: Plagiorchidae) в Україні

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З 2004 по 2006 роки в Харківській області в трьох водоймищах було зібрано зелених жаб *Rana ridibunda* і *Rana esculenta*, в легенях яких було знайдено трематоди *Skrjabinoeces breviansa*. Це рідкісний вид, відомий лише за знахідками в Росії та Азербайджані. Він відрізняється від інших видів роду *Skrjabinoeces* відсутністю шипиків на поверхні тіла.

Ключові слова: *Plagiorchidae, легеневий сисун, амфібії, Skrjabinoeces breviansa*, *зелені жаби, Rana ridibunda*, *Rana esculenta*.

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