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**Ecological and faunistic analyses of the trematodes of the Little Grebe  
(*Tachybaptus ruficollis* (Pallas, 1764)) in Azerbaijan**  
Y.A. Mahmudova

The research was conducted from 1998 to 2019 at the nine water bodies of Azerbaijan. During the study, 94 individuals of the Little Grebes (*Tachybaptus ruficollis* (Pallas, 1764)) were examined by the method of complete helminthological dissection. As a result, 12 trematode species belonging to one order, seven families, and eight genera were found: *Patagifer bilobus*, *Petasiger megacantha*, *P. skrjabini*, *Echinochasmus coaxatus*, *E. dietzevi*, *E. mordax*, *Mesorchis pseudoechinatus*, *Cryptocotyle concavum*, *Metorchis intermedius*, *Eucootyle cohnii*, *Strigea falconis*, *Hysteromorpha triloba*. Of these, three species (*Petasiger megacantha*, *Echinochasmus coaxatus* and *E. dietzevi*) are specific grebe parasites, while the others infect various waterfowl. Except for *Strigea falconis*, whose cercariae penetrate actively into the bird's body and transform into metacercariae, all the trematode found are ingested by the birds and mature in their intestine. The grebe, as a fish-eating bird, is infected with six trematode species (*Patagifer bilobus*, *Petasiger megacantha*, *Mesorchis pseudoechinatus*, *Cryptocotyle concavum*, *Metorchis intermedius*, *Hysteromorpha triloba*) that parasite in fish at the stage of metacercaria. Other species use aquatic invertebrates as second intermediate hosts. We established that species diversity of the grebe trematodes depended on the reservoir size and the richness of its hydrofauna, increasing with the increase of both factors. The differences between the faunas of grebe trematodes in various water bodies depended on the distance between them and the similarity of their living conditions. Seven grebe trematode species (*Petasiger megacantha*, *P. skrjabini*, *Echinochasmus coaxatus*, *E. dietzevi*, *Cryptocotyle concavum*, *Metorchis intermedius*, *Eucootyle cohnii*) belong to the northern group of helminthes, while the five species (*Patagifer bilobus*, *Echinochasmus mordax*, *Mesorchis pseudoechinatus*, *Strigea falconis*, *Hysteromorpha triloba*) are ubiquitous. Southern trematode species were absent from the examined birds. Presumably, this can be explained by the dominance of grebes from northern populations wintering on the water bodies of Azerbaijan.

**Key words:** Azerbaijan, waterfowls, parasites, helminthes, Trematodes.

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**Introduction**

The Little Grebe (*Tachybaptus ruficollis* (Pallas, 1764)) is a widespread bird in the internal water bodies of Azerbaijan. It lives on the freshwater bodies and on the coast of the Caspian Sea. Most individuals are migratory; only an insignificant part of the birds spend winter in this region. The grebe feeds on little fish, amphibians, crustaceans, shell-fish and water plants. The helminth fauna of the little grebe in Azerbaijan was studied by S.M. Vaidova (1978), who recorded 11 trematode species throughout the country. Although the study of bird parasites, including grebe trematodes, has theoretical and practical importance, not a single work has been published since that time.

**Material and method**

The material was collected from 1998 to 2019 at nine water research stations in various regions of Azerbaijan: the Devechi Firth, the Small Gizilagach Bay, the coast of the Absheron Peninsula of the Caspian Sea, the Middle Kura River, the Lower Kura River, the Kura delta, the Mingechevir Reservoir, the Varvara Reservoir, and the Lower Araz River (Fig. 1). The birds and their helminth were studied all year round, but most observations were made in April-June and September-November. As a result, 97 specimens of the little grebe were examined by complete helminthological dissection (the method is described in Dubinina,

1971; Pronina, Pronin, 2007; Musselius et al., 2008; Dorovskikh, Stepanov, 2009). Only adult birds were subjected to autopsies; shooting of birds with scientific purposes was carried out with the permission of the Ministry of Ecology and Natural Resources of the Republic of Azerbaijan. The birds were used in a complex study by ornithologists and parasitologists. Some specimens were obtained from amateur hunters; birds that died from natural causes were also studied. In most cases, the birds were dissected on the spot; some individuals were frozen and delivered to the laboratory for complete helminthological dissection. All the trematodes found were collected and fixed in 70° alcohol, and then they were treated with carmine dye and identified.



**Figure 1. Map of the sampling localities.** (1 – Devechi Firth, 2 – Small Gizilgach Bay, 3 – Absheron Peninsula coasts of the Caspian Sea, 4 – Middle Kura, 5 – Lower Kura, 6 – Kura River Delta, 7 – Mingachevir Reservoir, 8 – Varvara Reservoir, 9 – Lower Araz)

The collected trematodes were identified using classical monographs and key guides McDonald, 1961; Bykhovskaya-Pavlovskaya, 1962; Gaevskaya et al. 1975; Smogorjevskaya, 1976; Ginetsinskaya T.A., Dobrovolsky, 1978 etc.). Faunistic similarity of the little grebe trematodes of various water bodies was assessed by the Czekanowski–Soerensen index (Czekanowski, 1913; Soerensen, 1948).

## Results

During the study, 12 trematode species were discovered in the little grebe. In systematic list, each species is provided with the following data: collecting localities, extensity (% of infected birds) and intensity (individuals per bird) of invasion, localization in the host body, and a brief information on species biology.

Class TREMATODA RUDOLPHI, 1808  
 Order FASCIOLIDA SKRJABIN ET GUSCHANSKAJA, 1962  
 Family ECHINOSTOMATIDAE Dietz, 1900  
*Patagifer bilobus* (Rudolphi, 1819)

Localities: Devechi Firth (28.67%; 2-4 specimens), Small Gizilagach Bay (33.3%; 4-16 specimens), Middle Kura (25.0% 1 specimen), Lower Kura (22.2%; 1-6 specimens), Kura River delta (15.4%; 1-4 specimens)

Localization: gut.

A parasite of fish-eating wetland birds; sometimes occurs in cranes and gallinules (Ginetsinskaya T.A., Kulik, 1952; Faltýnková et al., 2008).

*Petasiger megacantha* (Kotlan, 1922)

Localities: Mingechevir (10.0%; 1 specimen) and Varvara (6.7%; 2 specimens) reservoirs.

Localization: gut.

A parasite of grebes. Freshwater mollusks and fish are its intermediate hosts (Selbach et al., 2014).

*Petasiger skrjabini* Baschkirova, 1941

Localities: Mingechevir (18.2%; 1-2 specimens) and Varvara (13.3%; 1-3 specimens) reservoirs.

Localization: gut.

A parasite of Anserinae and grebes (Bykhovskaya-Pavlovskaya, 1962).

Family ECHINOCHASMIDAE Odhner, 1910

*Echinochasmus coaxatus* Dietz, 1909

Localities: Devechi Firth (35.7%; 3-5 specimens), Small Gizilagach Bay (25.0%; 1-3 specimens), Kura River delta (7.7%; 3 specimens).

Localization: gut.

Mainly parasitizes grebes, sometimes occurs in other water birds; first intermediate hosts are gastropods (Chikhlyayev et al., 2012).

*Echinochasmus dietzevi* Issaitschikoff, 1927

Localities: Lower Kura (11.1%; 2 specimens).

Localization: gut.

A parasite of grebes (Bykhovskaya-Pavlovskaya, 1962).

*Echinochasmus mordax* Looss, 1899

Localities: Mingechevir reservoir (10.0%; 2 specimens).

Localization: gut.

A parasite of grebes and Pelecaniformes, sometimes occurs in other water birds (Bykhovskaya-Pavlovskaya, 1962).

*Mesorchis pseudoechinatus* (Olsson, 1876)

Localities: Devechi Firth (21.4%; 1-3 specimens), Small Gizilagach Bay (33.3%; 2-7 specimens), Absheron Peninsula coasts (9.1%; 3 specimens), Kura River delta (7.7%; 2 specimens).

Localization: gut.

It parasitizes mainly gulls, rarely Anserinae, toadstools and Pelecaniformes; the first intermediate hosts are gastropods; the second are fish (Urazbaev, Kurbanova, 2006; Shakarboev et al., 2012).

Family HETEROPHYIDAE Odhner, 1914

*Cryptocotyle concavum* (Creplin, 1825)

Localities: Devechi Firth (14.3%; 2-6 specimens), Absheron Peninsula coasts (9.1%; 2 specimens), Kura River delta (7.7%; 1 specimen).

Localization: gut.

A parasite of fish-eating birds; the second intermediate hosts are various fishes (Wootton, 1957).

Family OPISTHORCHIDAE Braun, 1901

*Metorchis intermedium* Heinemann, 1937

Localities: Small Gizilagach Bay (25.5%; 2-9 specimens), Absheron Peninsula coasts (18.2%; 1-3 specimens), Lower Araz (20.0%; 2 specimens).

Localization: gut, bile ducts of liver.

A parasite of various fish-eating birds; the first intermediate hosts are water-shells; the second intermediate hosts are various fishes (Razmashkin, 1978; Linnik, 1984; Isakova, 2008).

Family EUCOTYLIDAE Skrjabin, 1924

*Eucoyle cohni* Skrjabin, 1924

Localities: Mingechevir reservoir (21.4%; 1-2 specimens), Varvara reservoir (20.0%; 2-3 specimens).

Localization: kidneys.

Mainly is parasitic on divers (*Gavia*) and grebes; sometimes occurs in other waterfowls (Turemuratov, 1964; Aliyev, 2006).

Family STRIGEIDAE Railliet, 1919

*Strigea falconis* Szidat, 1928

Localities: Devechi Firth (28.6%; 3-9 specimens), Small Gizilagach Bay (41.7%; 1-3 specimens), Lower Kura (22.2%; 2-3 specimens), Kura River Delta (23.1%; 1-2 specimens).

Localization: subcutaneous fat tissue and connective tissue, esophagus and trachea, fascia of the neck and head muscles.

Definitive hosts are birds of the Falconiformes order; mesocercaria localizes in the tissues of amphibians, metacercariae – in different tissues of the waterfowls (Lunaschi, Drago, 2009).

Family DIPLOSTOMATIDAE Poirier, 1886

*Hysteromorpha triloba* (Rudolphi, 1819)

Localities: Middle Kura (12.5%; 2-5 specimens), Lower Kura (33.3%; 2-5 specimens).

Localization: gut.

A parasite of cormorants and grebes; the first intermediate hosts are water-shells; the second intermediate hosts are different fishes (Iskova, 1983).

The 12 trematode species found in the examined grebes belong to one order, seven families and eight genera. Of these only three species – *Petasiger megacantha*, *Echinochasmus coaxatus*, and *E. dietzevi*, are specific grebe parasites, the rest infect various water birds. Nine trematode species of our collection occurred only in the gut, one species was found in the liver bile-duct and in the gut, one species in kidneys, and the one in subcutaneous fat and connective tissues, esophagus, trachea, neck and head muscles' fascia. Out of all the trematodes found, only *Strigea falconis* uses water birds as intermediate hosts. Its cercaria penetrates actively into the bird's body and transforms into metacercaria. The definitive hosts are predator birds of the Falconiformes order. For the other trematode species, water birds are definitive hosts; they are infected via ingestion of fishes, frogs and/or aquatic invertebrates

As the grebe is fish-eating bird, 6 species (*Patagifer bilobus*, *Petasiger megacantha*, *Mesorchis pseudoechinatus*, *Cryptocotyle concavum*, *Metorchis intermedius*, *Hysteromorpha triloba*) of 12 species trematodes that found in it, namely the half, parasites in the fish in metacercarial stage and infect birds when they feed on a fish.

Species richness of the trematode fauna depends of environmental conditions of the water body and diversity of its flora and fauna, which created favorable conditions for all members of the parasite life cycle. The three water bodies studied, the Devechi Firth, the Small Gizilagach Bay and the Kura River delta are the richest in mollusk, fish and bird fauna. Each of them hosted five trematode species. Four species were recorded from the Lower Kura and the Mingechevir Reservoir, three species from the Absheron Peninsula and the Varvara Reservoir, two species from the Middle Kura, and one species from the Lower Araz (Table 1).

**Table 1. Distribution of the little grebe trematodes in the study area.** (Abbreviations: Dev – Devechi Firth, SQ – Small Gizilagach Bay, Ab – Absheron Peninsula coast of the Caspian Sea, MK – Middle Kura, LK – Lower Kura, KD – Kura River Delta, Min – Mingechevir Reservoir, Var – Varvara Reservoir, LA – Lower Araz)

Species	Localities								
	Dev	SQ	Ab	MK	LK	KD	Min	Var	LA
<i>Patagifer bilobus</i>	+	+		+	+	+			
<i>Petasiger megacantha</i>							+	+	
<i>P. skrjabini</i>							+	+	
<i>Echinochasmus coaxatus</i>	+	+				+			
<i>E. dietzevi</i>					+				
<i>E. mordax</i>							+		
<i>Mesorchis pseudoechinatus</i>	+	+	+			+			
<i>Cryptocotyle concavum</i>	+		+						
<i>Metorchis intermedius</i>		+	+			+			+
<i>Eucotyle cohnii</i>							+	+	
<i>Strigea falconis</i>	+	+			+	+			
<i>Hysteromorpha triloba</i>				+	+				
Total	5	5	3	2	4	5	4	3	1

Comparison of the little grebe trematode faunas of the studied water bodies showed that it includes the same species in the Devechi Firth and the Kura River delta ( $K_{cz-s}=100\%$ ). Similarity indices were also high in the pairs Small Gizilagach Bay / Devechi Firth, Small Gizilagach Bay / Kura River Delta – 66.7% each; Lower Kura River / Small Gizilagach Bay – 51.1%, and Middle Kura River / Lower Kura River – 50.0%.

**Table 2. Species similarity of the little grebe trematode faunas of the studied water bodies. (Czekanowski-Soerensen index, %).** For abbreviations, see Table 1.

	LA	Var	Min	KD	LK	MK	Ab	SQ
Dev	0	0	0	100.0	28.6	16.7	33.3	66.7
SQ	20.0	0	0	66.7	51.1	16.7	33.3	
Ab	33.3	0	0	33.3	0	0		
MK	0	0	0	16.7	50.0			
LK	0	0	0	28.6				
KD	0	0	0					
Min	0	75.5						
Var	0							

The closely located Mingechevir and Varvara reservoirs are inhabited by one population of the little grebe. It is isolated from the populations of other water bodies and has no trematode parasites in common with them. On the contrary, similarity index of the trematode species composition in the little grebes of the two reservoirs amounts for 75.5%. Therefore, faunistic similarity of the trematodes depends on the distance between the water bodies and the similarity of their living conditions.

In the previous article (Mahmudova, Ibrahimov, 2020), we divided all the waterfowl trematode species of Azerbaijan into three groups: northern, southern and ubiquitous, in accordance with the division proposed by V.A. Dogel (1949), M.M. Belopol'skaya (1966), and A.A. Smogorzhevskaya (1976). The first group can infect birds only in the northern part of their range during the nesting period, the second group infects them only in the south during wintering, and the third one is able to infect birds throughout their range. Of the trematodes recorded in our study, seven species (*Petasiger megacantha*, *P. skrjabini*, *Echinochasmus coaxatus*, *E. dietzevi*, *Cryptocotyle concavum*, *Metorchis intermedius*, *Eucotyle cohnii*) belong to the northern group, while five species (*Patagifer bilobus*, *Echinochasmus mordax*, *Mesorchis pseudoechinatus*, *Strigea falconis*, *Hysteromorpha triloba*) are ubiquitous. The southern species were absent. The noticeable predominance of the members of the northern trematode group and the absence of southern ones, apparently, should be explained by the prevailing of the birds of northern grebe population in Azerbaijan, which do not fly into wintering areas of southern populations and therefore they are not available for the southern species of trematodes.

Of the trematodes found in the little grebe, only *Strigea falconis* is the causative agent of bird diseases. Its metacercariae are localized in various tissues and infect wild and domestic birds. That results in birds' weakening and a significant decrease in the quality of their meat (Krone, Streich, 2008; Drago et al., 2014; Olinda et al. 2015).

### Conclusion

Parasitological studies of the 94 little grebe individuals at nine water bodies of Azerbaijan revealed 12 trematode species. The research was conducted in 1998-2019. Only three species are specific grebe parasites. Differences of the grebe trematode faunas of various water bodies depended on the distance between them and similarity of their living conditions. Seven species in the studied trematode fauna belong to the northern group of helminths, while the five ones are ubiquitous.

### References

- Aliyev Sh.K. (2006). Ecological-faunistic and epizootological characteristics of the parasitic complex of hunting and fishing birds of the North Caucasus. Abstract of the thesis for the Degree of the Candidate of Biological Sciences. M., 52 p. (in Russian)
- Belopol'skaya M.M. (1966). Sandpiper trematodes of the Black Sea coast, Proc. Sci. Conf. of the Vavilov Society of Geneticists, pt. 3. p. 35. (in Russian)

- Bykhovskaya-Pavlovskaya I.E. (1962). Trematodes of birds of the fauna of the USSR (ecological-geographical survey). M.-L.: Publishing house of the Academy of Sciences of the USSR. 407 p. (in Russian)
- Chikhlyayev I.V., Kirillova N.Y., Kirillov A.A. (2012). Life cycle characteristics of trematodes (Trematoda) of terrestrial vertebrates of the Middle Volga. *Bulletin of Samara Scientific Center of the Russian Academy of Sciences*, 14(5), 132–142. (in Russian)
- Czekanowski J. (1913). *Zarys metod statystycznych*. Vol. 2. Warszawa. 178 s.
- Dogel V.A. (1949). Biological features of the parasitic fauna of migratory birds. *Bulletin of the Academy of Sciences of USSR, Biological Series*, 1, 99–107. (in Russian)
- Dorovskikh G.N., Stepanov V.G. (2009). *Methods for collecting and processing parasitological materials (textbook)*. Syktyvkar: Publishing house of Syktyvkar University. 131 p. (in Russian)
- Dubinina M.N. (1971). *Parasitological study of birds*. L. 140 p. (in Russian)
- Faltýnková A., Gibson D.I., Kostadinova A.A. (2008). Revision of Patagifer Dietz, 1909 (Digenea: Echinostomatidae) and a key to its species. *Systematic Parasitol.*, 70, 159–183. <https://doi.org/10.1007/s11230-008-9136-8>
- Gaevskaya A.V., Gusev A.V., Delyamure S.L. et al. (1975). *Keys to vertebrate parasites of the Black and Azov seas*. Kiev: Naukova Dumka. 552 p. (in Russian)
- Ginetsinskaya T.A., Dobrovolsky A.A. (1978). *Private parasitology*. M.: Higher school. 303 p. (in Russian)
- Ginetsinskaya T.A., Kulik T.N. (1952). Deciphering the developmental cycle of the trematode Patagifer bilobus (Rud., 1819). *Proceedings of the USSR Academy of Sciences*, 85(5), 1189–1192. (in Russian)
- Isakova N.P. (2008). Reproduction of parthenitis of the redioid species of trematodes. Abstract of the thesis for the Degree of the Candidate of Biological Sciences. St. Petersburg. 23 p. (in Russian)
- Iskova N.I. (1983). Family Echinostomatidae. In: Shigin, A.A. (Ed.). *Trematodes of birds of the Black Sea and Caspian Sea regions*. M.: Nauka. 1983, 73–96. (in Russian)
- Krone O., Streich W.J. (2000). *Strigea falconis* in Eurasian Buzzards from Germany. *J. wildlife diseases*, 36(3), 559–561. <http://dx.doi.org/10.7589/0090-3558-36.3.559>
- Linnik V.Ya. (1984). Helminthic zoonoses in Belarus transmitted from fish (epizootology, pathogenesis, prevention). Abstract of the thesis for the Degree of the Candidate of Biological Sciences. Minsk. 47 p. (in Russian)
- Lunaschi L.I., Drago F.B. (2009). Digenean parasites of six species of birds from Formosa Province, Argentina. *Rev. Mex. Biodivers.*, 80, 39–46.
- Mahmudova E.A., Ibrahimov Sh.R. (2020). Dependence of trematode fauna of the waterbirds of Azerbaijan on their seasonal migration. *Inland Water Biology*, 13, 455–462. <https://doi.org/10.1134/S1995082920030116>
- McDonald M.E. (1961). *Key to Trematodes in waterfowl*. Washington: Resource Publication. 157 p.
- Musselius V.A., Vanyatinsky V.F., Vikhman A.A. (2008). *Laboratory workshop*. M.: Light and food industry. 296 p. (in Russian)
- Drago F.B., Lunaschi L.I., Draghi R. (2014). Digenean fauna in raptors from northeastern Argentina, with the description of a new species of *Strigea* (Digenea: Strigeidae). *Zootaxa*, 3785(2), 258–270. <https://doi.org/10.11646/zootaxa.3785.2.8>
- Olinda R.G., de Souza M.C., Dias G.F. et al. (2015). *Strigea falconis* infection in *Buteo magnirostris* in Brazil. *Acta Scientiae Veterinariae*, 43(1–4), 76–95.
- Pronina S.V., Pronin N.M. (2007). *Methodical handbook on hydroparasitology (Part 1. Technique of parasitological research)*. Ulan-Ude. 52 p. (in Russian)
- Razmashkin D.A. (1978). On the species belonging of metacercariae of the genus *Metorchis* (Trematoda, Opisthorchidae) from fishes of Western Siberia. *Parazitologiya*, 12(1), 68–78. (in Russian)
- Selbach C., Soldánová M., Georgiyeva S. et al. (2014). Morphological and molecular data for larval stages of species of *Petasiger megacantha* (Kotlan, 1922) (Digenea: Echinostomatidae) with an updates key to the known cercariae from Palearctic. *Syst. Parasitol.*, 89, 153–166. <https://doi.org/10.1007/s11230-014-9513-4>
- Shakarboev E.B., Akramova F.D., Azimov D.A. (2012). *Trematodes are parasites of vertebrates in Uzbekistan*. Tashkent: Chinor. 192 p. (in Russian)
- Smogorjevskaya A.A. (1976). *Helminthes of waterfowl and wetland birds of the fauna of Ukraine*. Kiev: Naukovaya dumka. 416 p. (in Russian)

- Soerensen T.A. (1948). A method of establishing groups of equal amplitude in plant sociology based on similarity of species and its application to analyses of the vegetation on Danish commons. *Kgl. Danske vidensk. Selsk.*, 5(4), 1–34.
- Turemuratov A. (1964). Helminths of fish-eating birds of the Aral Sea basin (taxonomy, faunistics, ecology). Abstract of the thesis for the Degree of the Candidate of Biological Sciences. M. 18 p. (in Russian)
- Urazbaev A.N., Kurbanova A.I. (2006). The parasite fauna of the Far Eastern fish introduced into the water bodies of the Southern Aral Sea region. *Bulletin of zoology*, 40(6), 535–540. (in Russian)
- Vaidova S.M. (1978). *Helminths of birds of Azerbaijan*. Baku: Elm. 238 p. (in Russian)
- Wootton D.M. (1957). The Life History of *Cryptocotyle concavum* (Creplin, 1825) Fiscoeder, 1903 (Trematoda: Heterophyidae). *J. Parasitol.*, 43(3), 271–279.

### Екологічний аналіз трематод малої поганки – *Tachybaptus ruficollis* (Pallas, 1764) в Азербайджані Є.А. Махмудова

У 1998–2019 рр. на 9 водоймищах Азербайджану методом повного гельмінтологічного розтину було досліджено 94 особин малої поганки – *Tachybaptus ruficollis* (Pallas, 1764), виявлено наступні 12 видів трематод, що належать до одного ряду, 7 родин та 8 видів: *Patagifer bilobus*, *Patagifer bilobus*, *Echinochasmus coaxatus*, *E. dietzevi*, *E. mordax*, *Mesorchis pseudoechinatus*, *Cryptocotyle concavum*, *Metorchis intermedius*, *Eucotyle cohnii*, *Strigea falconis*, *Hysteromorpha triloba*. З них 3 види (*Petasiger megacanth*, *Echinochasmus coaxatus* та *E. dietzevi*) є специфічними паразитами лише поганок, інші паразитують і в інших водоплавних птахів. За винятком *Strigea falconis*, церкарії якого активно потрапляють в організм водоплавних птахів і перетворюються там на метацеркарії, всі знайдені види досягають статевої зрілості в організмі водоплавних птахів. Мала поганка, як рибоїдний птах, заражена 6 видами трематод (*Patagifer bilobus*, *Petasiger megacantha*, *Mesorchis pseudoechinatus*, *Cryptocotyle concavum*, *Metorchis intermedieus*, *Hysteromorpha triloba*), які паразитують у риб на стадії метацеркарія. Дослідження показали, що видова різноманітність трематод поганки залежить від розмірів водойми та ступеня багатства його гідрофауни. Більше видів трематод було виявлено у водоймах з більшими розмірами та більш багатою гідрофауною. Відмінності фауни трематод поганки у різних водоймах залежать від відстані між ними та подібності умов проживання. Серед трематод поганки 7 видів (*Petasiger megacantha*, *P. skrjabini*, *Echinochasmus coaxatus*, *E. dietzevi*, *Cryptocotyle concavum*, *Metorchis intermedieus*, *Eucotyle cohnii*) належать до північної групи гельмінтів, а 5 видів (*Patagifer bilobus*, *Echinochasmus mordax*, *Mesorchis pseudoechinatus*, *Strigea falconis*, *Hysteromorpha triloba*) є убиквістами. Південні форми були відсутні у фауні трематод цього птаха. Це, мабуть, можна пояснити тим, що в Азербайджані серед особин малої поганки значно переважають представники північних популяцій, які зимують у цьому регіоні.

**Ключові слова:** Азербайджан, водоплавні птахи, паразити, гельмінти, трематоди.

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