CZU: 567.8:616.99

THE ROLE OF *PELOPHYLAX RIDIBUNDUS* (PALLAS, 1771) IN THE FORMATION AND MAINTENANCE OF PARASITIC ZOONOSES

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Amphibians as definitive, intermediate, complimentary and reservoir hosts, for various species of parasites, are "vector" organisms which, being obligatory in the development of parasites, constitute the favorable environment for the penetration, development and conservation of evolutionary forms of parasitic agents.

Amphibians are a category of biological vectors that, moving from the aquatic environment to the terrestrial one, ensure development and multiplication, at least for one biological stage, which gives them the role of source of a pathogen and, at the same time, transmits a variety of parasitic forms. They have a special role in the contamination of areas favorable to certain parasites and participate directly in the formation of parasitic zoonoses.

The role of amphibians in formation and mentenance the zoonosis, it started when it was amplified the direct human contact with animals and has expanded with the introduction of domestication of different vertebrate animals.

According to the helminthological investigations performed on *Pelophylax ridibundus* species, amphibians from Ranidae family, in the center and southern area of the Republic of Moldova, the presence of 19 helminths species was established: *Haematoloechus variegatus* Rudolphi, 1819; *Codonocephalus urniger* Rudolphi, 1819; *Opisthioglyphe ranae* Froelich, 1791; *Paralepoderma brumpti* Buttner, 1951; *Prosotocus confusus* Looss, 1894; *Tylodelphys excavata* Rudolphi, 1803; *Diplodiscus subclavatus* Pallas, 1760; *Parastrigea robusta* Szidat, 1928, *Strigea falconis* Szidat, 1928; *Gorgodera varsoviensis* Sinitzin, 1905; *Haplometra cylindracea* Zeder, 1800; *Pleurogenoides medians* Olsson, 1876, *Cosmocerca ornata* Dujardin, 1845; *Oswaldocruzia filiformis* Goeze, 1782; *Icosiella neglecta* Diesing, 1851; *Spirocerca lupi* Rudolphi, 1809; *Toxocara canis* Werner, 1782; *T. leonina* Linstow, 1902 and *Acanthocephalus ranae* Schrank, 1788, which from a taxonomic point of view fall into 3 classes, 7 orders, 17 families and 18 genera.

According our helminthological investigations performed on amphibians from the families *Ranidae* and *Bufonidae*, we are established their role as hosts for two species of helminths *Toxocara canis* and *T. leonina* with an impact on the health, in the foreground, of humans and animals (cats, dogs).

Infestation of amphibians with the nematode species *Spirocerca lupi* Rudolphi, 1809 is another proof of their role as vectors, but also their participation in the formation and maintenance of parasitic zoonoses. The species *Spirocerca lupi* causes spirocercosis - one of the parasitic diseases of both domestic and wild vertebrates, it was spread all over the world. This species of nematode forms spirocercosis in carnivores (dog, fox, wolf), and accidentally in goats, horses, cattle, pigs, etc., it is located in the esophagus, clinically characterized by digestive, cardiovascular and general disorders. By detecting the trematode species *Codonocephalus urniger* Rudolphi, 1819 - a trematode with trixene life cycle, the role of amphibians as "biological vectors" is also asserted, because

various species of birds such as: *Botaurus slellaris* Linnaeus, 1758, *Ixobrychus minutus* Linnaeus, 1766, *Ardea purpurea* Linnaeus, 1766, *Egretta garzetta* Linnaeus and other, are the definitive hosts. *Parastrigea robusta* Szidat, 1928, from the Strigeidae family is another species of trematode, that was detected in amphibians in the muscles and less often on the mesentery. The larval form of this species (metacercarie) is also found in fish: *Abramis brama, Atherina mochon pontica, Alburnus alburnus* and other. The adult forms are parasitic in the intestines of herons and of day predators, especially of the Ardeiformes order - *Ardea cinerea, A. purpurea*. The infection of birds with trematode of *Parastrigea robusta* species, this is causes parastrigeosis.

The *Strigea falconis* Szidat, 1928 is a trematode species similar to family Strigeidae that was found in amphibians under the muscular fascias around the neck, chest, legs, under the serosa of the esophagus and goiter, in the connective tissue between the trachea and esophagus, under the skin of the neck, chest and legs. Adult forms parasitize in the bird intestines of different orders: Falconiformes, less often Strigiformes and accidentally Passeriformes (*Oriolus melanocephalus*), Galliformes (*Meleagris gallopavo*), Gharadriiformes (*Charadrius dubius*) and Columbiformes (*Streptopelia chinensis*) causing Strigeosis. The larval forms of meso- and metacercariae are found in birds of the Ardeiformes, Columbiformes, Ralliformes, Steganopodes, Anseriformes, Charadriiformes, Lariformes, Falconiformes, Coraciiformes, Galliformes, Strigiformes, Piciformes, Passeriformes orders, as well in amphibians *R. lessonae* species.

Based on the above, the *Pelophylax ridibundus* species, represent of vertebrates species with an amphibiont lifestyle that directly participates in the formation and maintenance of outbreaks of parasitic agents specific to fish, birds, mammals and humans. Therefore, out of the 19 helminths species detected as a result of laboratory helminthological investigations, all species have faunal importance, bioindicators and contribute to solving the problems regarding the zoogeographic reasoning, of which, 6 species are of medical-veterinary importance, through which is afirm the role of amphibians as vectors of various groups of parasites specific too other groups of animals, both domestic, wild, pets and humans

From the above, in the Republic of Moldova, these results for the first time to demonstrate that the amphibian host may be a vector of parasitic agents and suggests that we should begin to consider the role of amphibians in the dissemination and control of some parasitic agents. This aspect be particularly important in coming years, as warmer temperatures are known to increase feeding of amphibians rates, which means that expected warming from climate change may exacerbate the potential role of amphibians as vectors.

***Acknowledgments*:** The research was carried out with the support of the institutional project - state program: Diversity of hematophagous arthropods, zoo- and phyto-helminths, their vulnerability and tolerance strategies to climatic factors and elaboration of innovative procedures for integrated control of species with socio-economic value: 20.80009.7007.12 F

Keywords: amphibians, biological vectors, parasitic zoonoses, helminthological investigations.