



## Intestinal parasites of *Myocastor coypus* (Rodentia, Myocastoridae) on animal farms in Eastern Ukraine

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Keeping and breeding of nutria *Myocastor coypus* (Molina, 1782) (Rodentia, Myocastoridae) is gaining popularity due to the biological characteristics of these animals and their undemanding habitat conditions. The study aimed to investigate the parasitofauna of nutria depending on the technology of their keeping under the conditions of fur farms in Eastern Ukraine (Kharkiv region). Fecal samples of 377 animals of different age and sex groups from farms in various districts of the Kharkiv region under aviary and cage conditions were examined. In addition, 30 samples of 10 g each from nutria carcasses (tongue, masticatory muscle, diaphragm) were analyzed for trichinosis. It was found that the infection rate of nutria on the farms of the Kharkiv region was, on average, 40.3% of the examined animals. The average infection rate in caged nutria is 36.7%, and in aviary breeding, 44.1%. The predominant endoparasites of nutria in the Kharkiv region are protozoa (28.4%), with a slightly lower percentage (8.2%) of helminths. Mixed infection of animals is noted in 3.7%. The detected parasitic agents belong to the classes Nematoda (Enoplea) Rudolphi, 1808, and Sporozoa Levine, 1970. *Eimeria myopotami* Yukimoff, 1933 (Eucoccidiorida, Eimeriidae) and *Strongyloides myopotami* Artigas et Pacheco, 1933 (Rhabditida, Strongyloidiidae) were found to be the most common parasites in the nutria. The prevalence of simultaneous infection with three pathogens (*Trichuris myocastoris* Enigk, 1933 (Trichocephalida, Trichuriidae), *Strongyloides myopotami*, *Eimeria myopotami*) was 8.7% in the aviary farm and 4.8% in the cage farm. The lowest prevalence of helminth infection in nutria was observed in animals aged 1–2 months (2.1%), and the highest prevalence of mixed infection was observed in nutria aged 6–8 months (9.2%). In aviary housing, *Eimeria* infection of nutria was observed throughout the year, with no worm infection in December and no mixed infection in February, May through October, and November. In cage housing, *Eimeria* infection was absent in January, and worm infection was absent in March, May through September, and December. Mixed infections were detected in January, April, and September, mainly in young females. Pathogens *Cryptosporidium* spp. Tyzzer, 1907 (Eucoccidiorida, Cryptosporidiidae) and *Giardia* spp. Künster, 1882 (Diplomonadida, Hexamitidae) were not found in nutria. Testing for trichinosis was negative. Prospects for further research include the development of modern, science-based measures for the prevention and control of parasitic diseases in commercial animals.

**Keywords:** nutria; keeping technology; parasitic diseases; helminths; Protozoa.

### Introduction

The livestock sector includes many areas, both priority and related. While areas such as cattle, pig, and poultry farming are industrialized, with constant research and innovation support and high profitability, fur farming is limited to small farms and private households. At the same time, fur farming provides fur and fur products and dietary meat to the population (Gruber, 2016; Saadoun & Cabrera, 2019). Among the animals that have gained popularity for keeping and breeding, the nutria *Myocastor coypus* (Molina, 1782) (Rodentia, Myocastoridae) occupies a rather important place (Glogowski et al., 2018; Lazăr et al., 2025).

Nutria are native to South America and were introduced to Europe for fur production in the late 1800s (Adolphi & Fleischmann, 2024). Under natural conditions, they settle on the shores of calm waters, live in deep burrows, and feed on shoreline vegetation and small fish (Adhikari et al., 2022). Nutria live in semi-colonies with one leader (a large adult male) and up to ten adult females. They resemble Eurasian beavers *Castor fiber* Linnaeus, 1758 (Rodentia, Castoridae) in appearance, but have a smaller tail, and the coat color of wild nutria is brown (Lee et al., 2021). Nutria have twilight and nocturnal activity throughout the year, with no significant difference

between the sexes. Daily activity does not differ significantly between seasons (Banjade et al., 2023). Due to uncontrolled reproduction in the wild, these rodents have become invasive in many countries (Kim et al., 2019; Kang et al., 2022; Coster, 2024).

The nutria was first introduced to Ukraine in the 1940s as a new species to enrich the hunting fauna, but its first acclimatization to natural conditions was unsuccessful. In 1931, 15 nutria were brought to Ukraine to the Askania Nova reserve for scientific research. In 1948, 59 individuals were brought to the Kherson region for semi-free breeding and obtaining valuable fur. The system of semi-free breeding included combined caged (fall and winter) and free (summer and fall) breeding of nutria. Within 2–3 years of seasonal free-range keeping, the animals destroyed aquatic and shoreline vegetation throughout the farm. As a result of unsatisfactory breeding on the farms, the number of females that did not participate in reproduction increased, and year-round feeding increased the cost of raising the animals, so nutria were transferred to aviary breeding. Most professional aviary nutria farms were organized in the southern regions of Ukraine. In the western regions of Ukraine, the first nutria farms were established in Lviv and Volyn in 1950 (Sachuk, 2013; Garlinska et al., 2017).

The first aviary nutria had a standard color, but breeders have developed many colored breeds. Nutria quickly get used to being kept in

a household. These animals can gain weight up to 8 kg. To raise this animal, you do not need to buy expensive feed; it is enough to stock up on grass, compound feed, carrots, and potatoes, but even with a satisfactory feed base, the death of animals is often recorded (Głogowski et al., 2018; Tümová et al., 2021).

The first parasitological studies of nutria were conducted in South America, which resulted in identifying several pathogens (Martino et al., 2012). Studies of nutria parasitic diseases have been conducted in Europe, some Asian countries, the USA, and Canada (Souza et al., 2021; Benovics et al., 2025; Mori et al., 2024). At the same time, gastrointestinal parasites were noted in the nutria: *Strongyloides chapini* Sandground, 1925 (Rhabditida, Strongyloididae), *Capillaria* spp. Zeder, 1800 (Enoplida, Capillariidae), Trematoda gen. spp. Rudolphi, 1808, *Eimeria* spp. Schneider, 1875 (Eucoccidiorida, Eimeriidae). In Japan, the parasites *Strongyloides myopotami* Artigas et Pacheco, 1933 (Rhabditida, Strongyloididae), *Capillaria hepatica* Bancroft, 1893 (Enoplida, Capillariidae), and *Fasciola* spp. Linnaeus, 1758 (Plagiorchiida, Fasciolidae) were isolated from nutria (Matsudate et al., 2003). The first cases of fascioliasis in wild nutria were confirmed in Korea (Kim et al., 2018). The first case of nutria infection with *Capillaria hepatica* was also reported (Park et al., 2014). Foreign authors consider the nutria a potential carrier of pathogens of dangerous parasitic diseases such as trichinellosis and toxoplasmosis (Moretti et al., 2001; Nicoletti et al., 2024).

The results published in scientific papers on invasive mammalian species and their impact on human health place nutria alongside rats and mice. Therefore, it is important to predict and diagnose nutria parasitoses in advance. An analysis of the literature shows that there are few studies on parasitic diseases of the nutria under modern environmental conditions. The research is mainly concerned with the study of species composition, fauna, and ecology of parasites of these animals. At the same time, the spectrum of parasites in nutria in Ukraine has hardly been studied. Existing publications are limited to the determination of the spectrum of nutria parasitofauna from amateur farms (Osadchaya & Zon, 2016). Today, it is important to study the parasitofauna and microbiome of nutria in Ukrainian farms, regardless of husbandry technology and production capacity.

The aim of the study was to determine the presence of parasitic pathogens in nutria on fur farms in Kharkiv region.

## Materials and methods

Laboratory studies were carried out in the Laboratory of Veterinary Sanitation, Parasitology, and Study of Bee Diseases of the National Scientific Center "Institute of Experimental and Clinical Veterinary Medicine" (Kharkiv).

During the experimental studies presented in this paper, all manipulations with the nutria involved in the research were carried out taking into account the basic principles of bioethics, according to Article 26 of the Law of Ukraine "On Protection of Animals from Cruelty", the European Convention for the Protection of Vertebrate Animals Used for Experimental and Other Scientific Purposes (1986) and the "General Ethical Principles for Animal Experiments" adopted by the First National Congress on Bioethics (2012).

The detection of infected animals was performed by helminthic ooscopic examination of nutria fecal samples. Fecal samples were collected individually from animals in plastic cups for laboratory examination. Each sample was labeled and delivered to the laboratory for testing. Feces were examined by the flotation method using a light microscope at a magnification of  $\times 100$ . For identification, the detected worm eggs were examined at a magnification of  $\times 400$ . The prevalence of *Eimeria* infection was determined after coproscopic examination of samples from nutria of different age groups (Dhakar et al., 2023; Labana et al., 2024). The centrifugal sugar flotation technique (sp gr, 1.27) was used to detect *Eimeria* oocysts in one gram of feces (Mumik et al., 2024). The presence of parasitic larvae of the genus *Trichinella* Railliet, 1895 (Trichocephalida, Trichinellidae) was examined by trichinelloscopy and the peptide digestion technique (Moretti et al., 2001).

In total, feces from 377 animals of different age and sex groups, 30 samples from carcasses (tongue, chewing muscle, diaphragm) of 10 g each were examined for trichinellosis. According to the research results, three types of parasites were detected. Thus, *Trichuris myocastoris* Enigk, 1933 (Trichocephalida, Trichuridae) is an intestinal parasite that is localized in the large intestine of the nutria. This parasite has a complex pathogenic effect on the body of animals, which is manifested in multiple biochemical changes (Mykhailiutenko & Kruchynenko, 2024). *Strongyloides myopotami* Artigas et Pacheco, 1933 (Rhabditida, Strongyloididae) is 3.7–4.7 mm long and 0.03–0.04 mm wide. Morphological features include protruding vulval lips, blunted conical tail, straight ovary type, and 8-chambered stoma (Choe et al., 2014). The oocysts of *Eimeria myopotami* Yukimoff, 1933 (Eucoccidiorida, Eimeriidae) are oval, ellipsoidal, or subspherical in shape, 33.0–22.7  $\mu\text{m}$  in size. The duration of sporogony is 70–120 hours. Endogenous stages are localized in the small intestine of the nutria (Nechybová et al., 2018).

Prevalence of infection (PI) was determined as the ratio of the number of fecal samples with worm eggs to the total number of fecal samples, multiplied by a factor (100) to convert to a percentage.

The prevalence of infection for each parasite species infecting animals was considered as the percentage of nutria infected with a particular pathogen, and parasite species richness was the average number of parasite species per infected host. Mean intensity (MI) was the number of helminth eggs (oocysts) in 1 g of feces. Mathematical processing of the digital data included the determination of the arithmetic mean ( $\bar{x}$ ) and the standard error of the arithmetic mean (SD).

## Results

During the epizootological examination of nutria for helminthic and protozoan diseases, the physiological condition of the animals at the beginning of the study was satisfactory, without any pronounced symptoms. Feces from 377 animals of different age groups from five farms in Kharkiv region of Ukraine were examined ooscopically (Table 1). The total infection rate of nutria on the farms of Kharkiv region was, on average, 40.3% of the surveyed livestock. The average PI index for caged nutria was 36.7%, which is 7.4% lower than the prevalence for aviary keeping of animals. The species spectrum of causative agents of nutria parasitosis was studied (Table 2).

Among the studied population, the highest infection rate was observed with protozoa (28.4%), which is 20.2% higher than with helminths and 24.7% higher than with mixed nutria infection. The highest prevalence of infection with helminths and protozoa separately was observed in Chuhuiv and Izium districts under free-range animal husbandry, and with mixed infection – in Kharkiv and Izium districts. Three species of nutria parasitic pathogens were identified (Table 3).

Among the infected animals, the identified pathogens included the classes Nematoda (Enoplea) Rudolphi, 1808 and Sporozoa Levine, 1970. The most common parasites were *Eimeria myopotami* and *Strongyloides myopotami*. In the case of aviary housing on the farm in Chuhuiv district of the Kharkiv region, monoinfection was detected in 91.3% of infected animals, and on the farm in Izium district, 90.7%. In caged animals, monoinfection was recorded in 89.5–91.3% of animals. *Eimeria myopotami* had the highest prevalence, regardless of animal keeping technology (68.4–71.6%), with a mean intensity of infection of 4.8–25.5 oocysts per 1 g of feces. Trichocephalosis was diagnosed in two farms with both aviary and caged animals, with a prevalence of 4.3% and 4.8%, respectively, with slightly different intensities. Along with the *Eimeria* pathogen, the pathogen *S. myopotami* was isolated on all farms. At the same time, the highest incidence of infection was recorded on the farms of Izium (21.0%), Kharkiv (21.1%), and Nova Vodolaha (21.7%) districts.

The infection of animals with three pathogens at the same time (*Trichuris myocastoris*, *S. myopotami*, *E. myopotami*) was detected on the farm with cage keeping in Chuhuiv district at a prevalence rate of 8.7%, and in the farm of Krasnohrad district with cage keeping at a prevalence rate of 4.8%. Different age dynamics of nutria endoparasitoses were observed (Table 4).

**Table 1**  
Infection of the nutria with parasites on farms

No.	Location, district	Keeping technology	Number of animals	Number of infected animals	Prevalence of infection (PI), %
1	Chuhuiv	aviary	105	46	43.8
2	Kharkiv	cage	45	19	42.2
3	Nova Vodolaha	cage	63	23	36.5
4	Izium	aviary	97	43	44.3
5	Krasnohrad	cage	67	21	31.3
Total			377	152	40.3

**Table 2**  
Prevalence of infection of nutria on farms

No.	Location, district	Keeping technology	Number of animals examined	Infection					
				helminths		protozoa		mixed infection	
				number of positive samples	PI, %	number of positive samples	PI, %	number of positive samples	PI, %
1	Chuhuiv	aviary	105	10	9.5	32	30.5	4	3.8
2	Kharkiv	cage	45	4	8.9	13	28.9	2	4.4
3	Nova Vodolaha	cage	63	5	7.9	16	25.4	2	3.2
4	Izium	aviary	97	9	9.3	30	30.9	4	4.1
5	Krasnohrad	cage	67	3	4.5	16	23.9	2	3.0
Total			377	31	8.2	107	28.4	14	3.7

**Table 3**  
Spectrum of nutria parasitofauna under different keeping technologies ( $x \pm SD$ )

No.	Location, district	Keeping technology	Number of infected animals	Species of pathogen	PI, %	MI, number of eggs (oocysts) in 1 g of feces
1	Chuhuiv	aviary	2	<i>T. myocastoris</i>	4.3	2.2 ± 1.2
			8	<i>S. myopotami</i>	17.4	10.5 ± 2.5
			32	<i>E. myopotami</i>	69.6	25.5 ± 5.5
			4	<i>T. myocastoris</i>		
			4	<i>S. myopotami</i>	8.7	–
2	Kharkiv	cage	4	<i>S. myopotami</i>	21.1	3.8 ± 1.2
			13	<i>E. myopotami</i>	68.4	4.8 ± 3.6
			2	<i>S. myopotami</i>	10.5	–
			2	<i>E. myopotami</i>		
3	Nova Vodolaha	cage	5	<i>S. myopotami</i>	21.7	7.7 ± 1.3
			16	<i>E. myopotami</i>	69.6	8.5 ± 5.5
			2	<i>S. myopotami</i>	8.7	–
			2	<i>E. myopotami</i>		
4	Izium	aviary	9	<i>S. myopotami</i>	21.0	12.5 ± 1.5
			30	<i>E. myopotami</i>	69.8	31.5 ± 1.5
			4	<i>S. myopotami</i>	9.2	–
			4	<i>E. myopotami</i>		
5	Krasnohrad	cage	1	<i>T. myocastoris</i>	4.8	3.0 ± 0.1
			2	<i>S. myopotami</i>	9.5	7.5 ± 1.5
			16	<i>E. myopotami</i>	76.1	13.5 ± 4.5
			1	<i>S. myopotami</i>	4.8	–
			1	<i>E. myopotami</i>		
			1	<i>T. myocastoris</i>	4.8	–

**Table 4**  
Age dynamics of nutria parasitosis

№	Age of nutria, months	Number of animals studied	Number of infected animals	Infection					
				helminths		protozoa		mixed infection	
				number of positive samples	PI, %	number of positive samples	PI, %	number of positive samples	PI, %
1	1–2	94	72	2	2.1	70	74.5	–	–
2	2–4	72	33	6	8.3	25	34.7	2	2.8
3	4–6	74	22	10	13.5	8	10.8	4	5.4
4	6–8	65	15	7	10.8	2	3.1	6	9.2
5	>8	72	10	6	8.3	1	1.4	3	4.2

The degree of helminth infection of nutria of different ages in cage and aviary systems of keeping showed that the lowest infection rate was observed in animals aged 1–2 months (2.1%). However, this age group was the most infected with *Eimeria* (74.5%). The highest prevalence of mixed infection was observed in nutria aged 6–8 months (9.2%). It was found that with age, PI by helminths in nutria was 8.3%, and PI by *Eimeria* decreased to 1.4%. Monthly otoscopic examination of fecal samples was used to study the seasonal and sex dynamics of nutria infection under different keeping technologies

(Table 5). In the aviary, of 89 infected nutria, 13 were males and 76 were females. At the same time, 25 were sexually mature and 64 were immature. Mixed infection was detected in one male and seven females. *Eimeria* infection of nutria was observed throughout the year, with no worm infection in December and no mixed infection in February, May through October, and November.

In the cages, 6 of the 63 infected nutria were males and 57 were females. Of these, 19 were sexually mature and 64 were immature. There were no other significant differences between parasite infection

and age or sex. *Eimeria* infection of nutria was absent in January, and helminth infection was absent in March, May through September, and December. Mixed infections were detected in January, April, and September, mainly in young females.

Throughout the study, no members of the genus *Cryptosporidium* spp. Tyzzer, 1907 (Eucoccidiorida, Cryptosporidiidae) and *Giardia* spp. Künstler, 1882 (Diplomonadida, Hexamitidae) were found in nutria. Testing 30 samples from nutria carcasses (tongue, masticatory muscle, diaphragm) was negative for trichinellosis.

**Table 5**  
Seasonal and sex dynamics of nutria infection

The period of research	Group of animals	Spectrum of parasitofauna							
		aviary keeping				cage keeping			
		number of animals	protozoa	helminths	mixed infection	number of animals	protozoa	helminths	mixed infection
January	males	2	1	1	–	0	–	–	–
	females	3	1	1	1	4	–	2	2
February	males	0	–	–	–	1	1	–	–
	females	3	2	1	–	3	1	2	–
March	males	0	–	–	–	1	1	–	–
	females	7	4	1	2	5	5	–	–
April	males	1	1	–	–	1	–	1	–
	females	6	2	2	2	5	2	1	2
May	males	1	1	–	–	0	–	–	–
	females	6	4	2	–	5	5	–	–
June	males	1	1	–	–	0	–	–	–
	females	6	4	2	–	5	5	–	–
July	males	1	–	1	–	0	–	–	–
	females	6	4	2	–	5	5	–	–
August	males	1	–	1	–	0	–	–	–
	females	10	8	2	–	5	5	–	–
September	males	2	1	1	–	2	2	–	–
	females	9	9	–	–	5	1	2	2
October	males	1	–	1	–	1	1	–	–
	females	10	8	–	2	5	3	2	–
November	males	1	–	1	–	0	–	–	–
	females	5	5	–	–	5	3	2	–
December	males	2	1	–	1	0	–	–	–
	females	5	5	–	–	5	5	–	–

## Discussion

Recently, the parasitic infection of animals kept on farms in different regions has become particularly important (Bogach et al., 2022; Križman et al., 2022). Understanding the current epizootic situation is the key to the timely elimination and prevention of parasitoses among susceptible populations (Bahk et al., 2018; Paliy et al., 2018).

In its native habitat, nutria can be infected with more than 30 species of different helminths (Fugassa, 2020). During the studies in the Morava River basin, 6 species of helminths were detected in the nutria using standard parasitological procedures. The highest prevalence was observed in *S. myopotami* (78.3%) and *T. myocastoris* (37.0%), both of which are specific nematodes of the nutria. A species with zoonotic potential is *S. myopotami*, which causes skin infections in humans known as “nutria itching.” Although it does not cause true strongyloidiasis, repeated exposure to larvae of this species can cause an outbreak of severe dermatitis. This species has previously been documented in nutria in the Czech Republic only among farm-bred animals (Nechybová et al., 2018). Previous studies of nutria in Korea found high prevalence rates of *S. myopotami* (up to 100.0%) (Choe et al., 2014).

Fasciolosis is known to occur in nutria in America and Europe, and due to its ecological and ethological characteristics, nutria is considered a potential reservoir of *Fasciola hepatica* Linnaeus, 1758 (Plagiorchiida, Fasciolidae) with a prevalence of more than 30% (Kim et al., 2018). Nutria in Ukraine, which are raised in aviaries with access to natural water bodies, may also be a potential reservoir of *F. hepatica*, although they were not isolated in our studies.

According to the available data, one of the representatives of zoonotic pathogens in the nutria in France, Germany and Slovenia is *Echinococcus multilocularis* Leuckart, 1863 (Cyclophyllidea, Taeniidae) (Romig & Wassermann, 2024). Its prevalence ranges from 0.4% to 5.9% among European nutria (Umhang et al., 2013). It has been found that among free-ranging nutria in Europe, the infection caused by oocysts of *Cryptosporidium* spp. is widespread. Infected animals excrete oocysts measuring  $4.8\text{--}5.2 \times 4.7\text{--}5.0 \mu\text{m}$  (Ježková et al., 2021).

It has been reported that nutria in Korea are a potential reservoir of zoonotic and antibiotic-resistant *Aeromonas* spp. Stanier, 1943 (Aeromonadales, Aeromonadaceae), which can cause an infection that is difficult to treat in humans. Thus, measures should be implemented to prevent contact between wild nutria and livestock and humans (Lim et al., 2019). However, other scientists point to the low potential for persistence and spread of antimicrobial-resistant enterobacteria by nutria (Nakatsubo et al., 2023).

In South America, nutria are infected with nineteen species, including Nematoda (82.0%), Sporozoa (46.1%), Trematoda (33.3%), and Cestoda (12.8%). The most common parasites are coccidia (*Eimeria* spp., *Isoospora* spp. Schneider, 1881 (Eucoccidiorida, Eimeriidae) and helminths *S. myopotami* and *T. myocastoris*. The diversity of parasites collected from individual animals varies from one to four species (Martino et al., 2012).

According to other researchers, the nematodes *S. myopotami*, *Trichuris orasa* Barker & Noyes, 1915 (Trichocephalida, Trichuriidae), and *T. myocastoris* (Babero & Lee, 1961) were common among nutria in Czechoslovakia.

Out of 23 sick animals, 73.9% were simultaneously affected by gastrointestinal parasites (GIP) (Strongylida gen. spp., *Strongyloides chapini*, *Capillaria* spp., Trematoda gen. spp., and *Eimeria* spp.) and mites *Amblyomma* Koch, 1844 (Ixodida, Ixodidae). The trematode *Hippocrepis hippocrepis* Diesing, 1850 (Plagiorchiida: Notocotyliidae) was found during the necropsy of one animal that died during the study. However, despite being infected, the animals did not show clinical signs of infection, indicating that they may be adapted to parasitism (Souza et al., 2021).

Benovics et al. (2025) found six species of helminths among nutria. The highest prevalence was observed for *S. myopotami* (78.3%) and *T. myocastoris* (37.0%), both of which are specific to the nutria. Only two taxa of trematodes were recorded (*Echinostoma* spp. Rudolphi, 1809 (Plagiorchiida, Echinostomatidae) and a representative of the family Psilostomidae). Also, the presence of alveolar hydatid cysts of *Echinococcus multilocularis* was recorded.

According to the results of other researchers, the spectrum of nutria parasitofauna on amateur farms in Sumy region of Ukraine is

represented by helminths of the genera *Trichuris*, *Strongyloides*, *Ascaris*, and protozoa *Eimeria*. It has also been demonstrated that the incidence of infection is primarily influenced by the season and the keeping conditions. The highest incidence of *Trichuria* infection was recorded, and the lowest – *Ascaris*. Most helminth infections were recorded in the winter (trichuriasis, strongyloidosis), and *Eimeria* infections in the spring (Osadchaya & Zon, 2016). *Eimeria* spp. (*E. stiedae* Lindemann, 1895, *E. nutriae* H. Prasad, 1960, *E. myopotami*, *E. pellucida* Yakimoff, 1936) are natural parasites of nutria, and eimeriosis is a major problem in fur farms, where young animals are primarily affected (Ouchi et al., 2025). In our study, we found *E. myopotami*, which is the largest of the *Eimeria* spp. Oocysts were oval or ellipsoidal, ranging from 29.9 to 38.6 µm in length and 20.9–25.9 µm in width.

Prusakova & Mazanny (2010) noted that among all age groups, nutria of 1–4 months of age are the most susceptible to eimeriosis. The prevalence of infection among them ranged from 70.0% to 77.8%, with its intensity of 8200–24100 oocysts per 1 g of material. In 4–9-month-old animals, the prevalence decreased to 23.9% with an MI of 1200–4000 oocysts per 1 g of material. The PI in nutria over 9 months of age was only 12.3%, with the detection of only single oocysts.

Dovgiy et al. (2013) noted that in the Zhytomyr region, the highest prevalence and intensity of infection were found in individual sectors in January, February, and mid-March (2008–2012). Among nutria aged 8–10 months, the prevalence of infection was 53%, and from 8 months to one year, up to 62%, with a high mean intensity (MI = 157–165 oocysts in 3 drops of flotation solution).

Although nutria is a relatively new species in the local fauna, its synanthropic behavior raises concerns about potential threats to human health, emphasizing the importance of caution when handling these animals (Benovics et al., 2025).

The solution to the problem of animal infection lies in a scientifically based system of animal husbandry, breeding, and feeding. At the same time, all technological components must meet the existing requirements. The use of high-quality and safe feed is the key to strong immunity and increased resistance of the animal body to adverse environmental factors (Strandin et al., 2018; Kolchyk et al., 2022). The management of animal welfare requires planned veterinary and sanitary measures, which should involve effective chemicals that are justified and efficient (Paliy, 2018; Mocho et al., 2021).

Given the relevance of the research, we consider it necessary to develop a comprehensive system for the control of parasitoses among animals, taking into account the resistance of pathogens to various chemical compounds.

## Conclusion

Parasitoses (Nematoda spp., Sporozoa spp.) and protozoa (*Eimeria myopotami*) are common in the nutria population of fur farms in Kharkiv region of Ukraine, regardless of the technology of animal husbandry and breeding. Animals are affected by both mono and mixed infections. The total infection rate of nutria on the farms reaches 40.3%. The lowest level of parasite infection was found in animals aged 1–2 months, and the highest prevalence of mixed infection was found in nutria aged 6–8 months. Infection of nutria with *Eimeria* is observed for a year in aviaries, and for 11 months in cages. The nutria population in the Kharkiv region is free from trichinellosis.

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