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ECTOPARASITE FAUNA OF DOMESTIC WATERFOWL IN THE NORTHERN REGION OF THE REPUBLIC OF MOLDOVA

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Abstract

A study on the ectoparasite fauna of domestic waterfowl (ducks and geese) from the Anatidae family in the northern region of the Republic of Moldova showed that domestic ducks (Anas platyrhynchos domesticus, Linnaeus, 1758) were infested with six species of chewing lice: Trinoton querquedulae, Anatoecus icterodes, Anatoecus dentatus, Anaticola crassicornis, Anaticola anserinum, and Menopon obscurum, as well as the gamasid mite Dermanyssus gallinae.
Domestic geese (Anser anser domesticus, Linnaeus, 1758) were found to host ten species of ectoparasites, including eight species of chewing lice: Trinoton querquedulae, Trinoton anserinum, Anatoecus icterodes, Anaticola crassicornis, Anaticola anserinum, Anatoecus adustus, Menopon obscurum, and Lipeurus caponis. In addition, geese were infested with the gamasid mite Dermanyssus gallinae and the argasid tick Argas persicus.These findings indicate a high diversity of ectoparasites infesting domestic ducks and geese in the northern region of the Republic of Moldova, with differences between host species. The presence of lice, mites, and ticks highlights the need for monitoring and controlling ectoparasite populations in order to maintain the health of domestic waterfowl in this region.

Key words*: ectoparasite fauna, habitat, mixtinvasions, monoinvasions, waterfowl*

INTRODUCTION

Domestic waterfowl, particularly ducks and geese belonging to the family *Anatidae*, represent an important component of poultry production systems worldwide. Due to their high adaptability to diverse environmental conditions, their ability to utilize natural aquatic resources, and their economic value as sources of meat, eggs, and feathers, these birds are widely reared in both traditional household systems and intensive commercial farms. In many regions, including Eastern Europe and the Republic of Moldova, domestic waterfowl are commonly raised in close association with natural or artificial water bodies, such as ponds, lakes, irrigation channels, and wetlands. While these environments offer favorable conditions for growth and productivity, they also expose birds to a wide range of parasitic organisms, including ectoparasites, which pose significant health, welfare, and economic challenges.

Ectoparasites are organisms that live on the surface of the host's body or temporarily feed on it, including lice, mites, ticks, fleas, and blood-sucking dipterans. In domestic waterfowl, ectoparasitic infestations are often underestimated compared to endoparasitoses, despite their substantial negative impact on bird health and production. Ectoparasites cause direct damage through blood feeding, skin irritation, and tissue injury, and indirect damage by acting as vectors for bacterial, viral, and protozoan pathogens. Heavy infestations may lead to anemia, stress, reduced body condition, impaired thermoregulation, feather damage, and increased susceptibility to secondary infections. In severe cases, ectoparasitoses can result in decreased productivity, poor growth performance, reproductive disorders, and even mortality, particularly in young or immunocompromised birds (Didă, 1996; Niculescu & Didă, 1998; Marquardt et al., 2000; Erhan, 2024).

The epidemiology of ectoparasitic infestations in waterfowl is closely linked to environmental, climatic, and management-related factors. Warm temperatures, high humidity, and the presence of organic matter favor the survival and reproduction of many ectoparasite species. Aquatic and semi-aquatic habitats provide optimal microclimatic conditions for ectoparasites, while nesting sites, bedding material, and shelters act as reservoirs for different developmental stages. Furthermore, traditional rearing systems, characterized by free-range access, mixed-species flocks, limited biosecurity measures, and close contact with wild birds, significantly increase the risk of infestation. Wild waterfowl often serve as natural reservoirs for ectoparasites and play a key role in maintaining and disseminating parasite populations across different ecosystems (Olteanu et al., 1991; Șuteu & Cozma, 2007; Rusu, 2021a; Erhan, 2024).

From a veterinary and public health perspective, ectoparasites of domestic waterfowl deserve increased attention due to their role in the transmission of zoonotic agents. Several ectoparasite species are known vectors of pathogens such as *Borrelia*, *Rickettsia*, *Salmonella*, *Pasteurella*, and various arboviruses. Through bites, mechanical transmission, or contamination of skin lesions, ectoparasites can facilitate the spread of infectious diseases among birds, livestock, and humans. In rural areas, where close contact between humans and domestic animals is common, the presence of ectoparasites on poultry represents a potential public health risk, especially for farm workers and households involved in traditional waterfowl farming (Hudson, 1996; Erhan, 2020).

In addition to their epidemiological significance, ectoparasites have a pronounced economic impact on poultry production. Infested birds exhibit reduced feed intake, lower feed conversion efficiency, decreased egg production, and inferior carcass quality. Feather damage caused by lice and mites diminishes the commercial value of feathers and down, while stress-induced immunosuppression increases veterinary costs associated with disease prevention and treatment. Moreover, ectoparasitic infestations may lead to increased use of chemical insecticides and acaricides, which raises concerns regarding environmental contamination, development of resistance, and the presence of chemical residues in animal products. These issues highlight the need for sustainable and integrated approaches to ectoparasite control in domestic waterfowl.

The diversity of ectoparasite fauna associated with domestic waterfowl is considerable and varies depending on geographic region, climate, host species, and rearing conditions. Common ectoparasites of ducks and geese include chewing lice (order *Phthiraptera*), such as *Anaticola crassicornis* and *Trinoton anserinum*; mites (order *Acari*), including *Dermanyssus gallinae* and *Knemidocoptes* spp.; ticks (*Ixodidae*), which may parasitize birds during certain stages of their life cycle; and hematophagous insects, such as mosquitoes and biting flies. Understanding the composition and structure of ectoparasite communities is essential for assessing infestation dynamics and identifying species of major veterinary importance (Gherman et al., 2003; Dărăbuș et al., 2006).

In the Republic of Moldova, the study of ectoparasites in domestic waterfowl remains limited, despite the widespread distribution of ducks and geese and the favorable ecological conditions for parasite development. The temperate-continental climate, characterized by warm summers and relatively mild winters, combined with the presence of numerous aquatic ecosystems, creates optimal conditions for ectoparasite survival and transmission. Anthropized habitats, such as agricultural wetlands, irrigation systems, and small rural ponds, further contribute to maintaining ectoparasite populations and facilitating contact between domestic and wild birds. These factors underscore the importance of conducting comprehensive investigations into the ectoparasite fauna of domestic waterfowl at the national and regional levels (Erhan, 2017; Rusu, 2020).

Monitoring ectoparasite fauna provides valuable information for the development of effective control and prevention strategies. Accurate identification of ectoparasite species, assessment of infestation prevalence and intensity, and analysis of seasonal dynamics are essential components of integrated parasite management programs. Such data allow

veterinary specialists to tailor control measures to local conditions, optimize treatment timing, and reduce reliance on chemical control methods. Furthermore, ectoparasitological studies contribute to a better understanding of host–parasite interactions and the ecological factors that influence parasite distribution (Bejsovec, 1972).

In recent years, increasing attention has been directed toward sustainable and environmentally friendly approaches to parasite control. Integrated ectoparasite management strategies combine chemical, biological, and ecological methods, emphasizing prevention, improved hygiene, habitat management, and host resistance. The use of biological products, plant-based insecticides, and natural repellents has gained interest as alternatives to conventional synthetic compounds. These approaches aim to minimize negative environmental impacts, reduce the risk of resistance development, and ensure food safety by avoiding chemical residues in meat and eggs. For domestic waterfowl, which are often raised in close association with natural ecosystems, such strategies are particularly relevant (Olteanu et al., 1993; Erhan et al., 2001; Rusu et al., 2023).

Given the veterinary, economic, and public health significance of ectoparasitic infestations, comprehensive studies on ectoparasite fauna are essential for improving the health and productivity of domestic waterfowl. Detailed knowledge of ectoparasite diversity and epidemiology supports the development of evidence-based control programs and contributes to the sustainability of waterfowl production systems. Moreover, such research aligns with modern requirements for animal welfare, environmental protection, and food safety (Erhan, 2024; Rusu et al., 2020).

The present study aims to investigate the ectoparasite fauna of domestic waterfowl, focusing on ducks and geese reared under different management conditions. By identifying the main ectoparasite species, assessing their prevalence and distribution, and analyzing the factors influencing infestation, this research seeks to provide a scientific basis for improved ectoparasite control and prevention. The results are expected to contribute to a better understanding of ectoparasitism in domestic waterfowl and to support the development of effective, sustainable strategies for enhancing bird health, productivity, and biosecurity (Rusu, 2021a).

The study of ectoparasite fauna in domestic waterfowl is of major scientific, veterinary, and socio-economic importance, as it addresses a complex problem situated at the intersection of animal health, public health, and environmental sustainability. Domestic ducks and geese are frequently reared in semi-intensive and extensive systems, often in close contact with natural aquatic ecosystems, which creates favorable conditions for the persistence and transmission of ectoparasites. Despite this, ectoparasitoses in waterfowl remain insufficiently studied compared to those affecting terrestrial poultry, leading to gaps in knowledge regarding parasite diversity, epidemiology, and control strategies (Olteanu et al., 2001; Şuteu & Cozma, 2003).

From a veterinary health perspective, ectoparasites significantly affect the welfare and productivity of domestic waterfowl. By causing chronic stress, blood loss, skin lesions, and feather damage, ectoparasitic infestations reduce growth performance, feed efficiency, reproductive capacity, and overall resistance to disease. The identification and characterization of ectoparasite species provide essential information for understanding infestation dynamics and for developing targeted, species-specific control measures. Consequently, this study contributes to improving diagnostic accuracy and enhancing the effectiveness of prophylactic and therapeutic interventions (Olteanu et al., 1999; Erhan, 2024; Rusu et al., 2011).

The epidemiological relevance of the study is closely linked to the role of ectoparasites as vectors of infectious agents. Many ectoparasites are capable of transmitting bacterial, viral, and protozoan pathogens, some of which have zoonotic potential. Domestic waterfowl may serve as a bridge between wild avifauna and human-managed environments, facilitating the circulation of pathogens across ecological boundaries. By analyzing ectoparasite fauna and infestation patterns, the study supports the early identification of potential epidemiological threats and strengthens surveillance systems aimed at reducing zoonotic and epizootic risks.

From an ecological standpoint, the research provides valuable insights into host-parasite-environment interactions within anthropized aquatic ecosystems. Ectoparasite populations are strongly influenced by climatic factors, habitat characteristics, and host behavior. Understanding these relationships is essential for predicting changes in parasite distribution under conditions of environmental alteration, climate variability, and intensified agricultural activity. The results of this study may therefore contribute to ecological risk assessments and to the development of adaptive management strategies in waterfowl production systems (Goldova, 2006).

The economic impact of ectoparasitic infestations further underscores the importance of this research. Reduced productivity, increased veterinary costs, and losses associated with poor carcass and feather quality represent significant financial burdens for poultry producers. In traditional and small-scale farming systems, these losses can threaten the viability of waterfowl production. By providing data on ectoparasite prevalence and risk factors, the study supports the optimization of control measures, helping to reduce economic losses and improve farm profitability (Olteanu et al., 1999; Rusu, 2021a).

In the context of food safety and consumer protection, the study has additional significance. The increasing demand for residue-free animal products has highlighted the limitations of intensive chemical control of ectoparasites. Excessive use of insecticides and acaricides may lead to environmental contamination and the accumulation of chemical residues in meat and eggs. The findings of this research can inform the development of integrated and sustainable ectoparasite management strategies, reducing dependence on chemical treatments and supporting the production of safe, high-quality food products (Olteanu, 1991; Erhan, 2020).

Finally, the study holds practical importance for veterinary practice and policy development. By generating region-specific data on ectoparasite fauna in domestic waterfowl, it provides a scientific basis for the formulation of guidelines, recommendations, and biosecurity measures adapted to local conditions. Such evidence-based approaches are essential for improving animal health management, enhancing biosecurity, and ensuring the long-term sustainability of waterfowl farming (Didă, 1996; Olteanu et al., 2001; Gherman et al., 2003).

In summary, the impact of this study extends beyond the descriptive characterization of ectoparasite fauna. It contributes to advancing scientific knowledge, improving veterinary and public health, supporting sustainable agricultural practices, and strengthening food safety. Through its multidisciplinary relevance, the research addresses current challenges in waterfowl production and provides a foundation for future studies and innovative control strategies (Rusu, 2021b; Erhan, 2024).

MATERIALS AND METHODS

Research aimed at establishing the ectoparasite fauna of domestic waterfowl from various anthropized biotopes in the northern region of the Republic of Moldova was conducted during 2024–2025 at the Laboratory of Parasitology and Helminthology of the Institute of Zoology, Moldova State University. Biological material was collected from domestic waterfowl raised in private households in different localities of the northern region, within anthropogenic ecosystems. The study focused on determining the extent and intensity of ectoparasitic infestations in ducks and geese maintained under traditional rearing conditions.

A total of 460 birds were examined, including 240 domestic ducks (*Anas platyrhynchos domesticus*, Linnaeus, 1758) and 220 domestic geese (*Anser anser domesticus*, Linnaeus, 1758). The birds were kept in extensive or semi-intensive systems, with access to outdoor environments and natural water sources. Sampling followed a cross-sectional design, with birds randomly selected from different households. Biological samples were collected at various times of day (morning, midday, and evening) to ensure comprehensive detection of ectoparasites.

Several methods for collecting ectoparasites from birds are described in the scientific literature. The classical manual collection method from dead or hunted animals (Dubinina, 1971) involves mechanically removing ectoparasites using forceps and a scalpel. However, this method is labor-intensive, time-consuming, and does not ensure complete

collection, as many parasites leave the host shortly after death. It is also unsuitable for rare or protected species whose capture or hunting is prohibited.

Other approaches include the prophylaxis and treatment of ectoparasites using plant-based preparations, such as Ectogalimol (short-term invention patent MD 408 Z, 31.03.2012), applied in poultry (Rusu et al., 2011).

The method described by Luncașu and Zamornea (2007) uses ether as an immobilizing agent for live birds. While effective, it has significant disadvantages, including high toxicity, rapid volatilization, and risk to both the operator and the bird, as well as potential loss of collected material in field conditions.

In the present study, a modern biological method, developed and optimized at the Laboratory of Parasitology and Helminthology (Rusu et al., 2021b), was employed. This method allows for efficient collection of ectoparasites from live birds without harming either the parasites or the host. It involves spraying the bird with a 5.0% aqueous solution of Ectogalimol, administered at a dose of 50 ml per bird. Ectogalimol is a biologically active plant extract obtained from the dried aerial parts of *Pyrethrum cinerariifolium*, with proven insecticidal and acaricidal properties.

After spraying, the bird is placed in a nylon bag of appropriate size (20-25 × 30-35 cm or 30-35 × 40-55 cm, depending on body size), with the opening secured around the neck while leaving the eyes and beak exposed. The bird is held horizontally on a flat surface for 5-10 minutes until ectoparasites are immobilized. The bird is then removed, and the ectoparasites are shaken into a white plastic container to avoid material loss.

Collected ectoparasites were transferred to individually labeled test tubes containing 70% rectified ethyl alcohol for preservation. Labels included bird species, date of collection, locality, and the name of the collector.

Ectoparasites were identified in the laboratory using stereomicroscopy and standard taxonomic keys, based on morphological characteristics, at the species level where possible.

Ectoparasites targeted by Ectogalimol include chewing lice (*Cuclotogaster heterographus, Eomenacanthus stramineus, Goniocotes gallinae, Goniocotes maculatus, Goniodes dissimilis, Lipeurus caponis, Menopon gallinae, Menacanthus cornutus, Menacanthus pallidulus*), fleas (*Ceratophyllus gallinae, C. hirundinis*), and gamasid mites (*Dermanyssus gallinae, D. hirundinis*). Experimental studies conducted between 2016 and 2019 demonstrated up to 100% immobilization of ectoparasites within 5-10 minutes, without adverse effects on birds or personnel. These results established the 5.0% concentration of Ectogalimol for use in this study.

Parasitological indices were calculated to evaluate infestation levels, including prevalence (percentage of infested birds), mean intensity (average number of parasites per infested host), and relative abundance. Data were statistically analyzed to describe the structure and distribution of ectoparasite communities.

The method proved to be safe, efficient, and well-adapted for field conditions, ensuring complete collection of ectoparasites while preserving their integrity and posing no risk to birds or operators.

RESULTS AND DISCUSSIONS

As a result of parasitological studies conducted over several years on the ectoparasite fauna, it was established that both domestic and wild birds, as well as mammals, are infested with a wide range of parasitic agents.

Thus, approximately 300 species of mallophagans were identified, belonging to the orders Amblycera and Ischnocera (families Menoponidae and Philopteridae), as well as two species of fleas and two species of gamasid mites. In domestic birds from the Republic of Moldova, 18 species of mallophagans, 2 species of fleas, and 2 species of parasitiform mites had previously been recorded (Luncașu et al., 2007), which confirms the high diversity of the avian ectoparasite fauna.

Parasitological research carried out in 2024 2025 on domestic waterfowl – ducks (*Anas platyrhynchos domesticus*) and geese (*Anser anser domesticus*) – from the northern region of the Republic of Moldova revealed a high level of ectoparasite infestation. In total, 11 species of ectoparasites were identified, belonging to the classes Insecta and Arachnida, classified into 6 families (Trinotonidae, Philopteridae, Menoponidae, Lipeuridae, Dermanyssidae,

Argasidae) and 7 genera (Anatoecus, Anaticola, Trinoton, Menopon, Lipeurus, Dermanyssus, Argas) (Table 1).

Table 1. Taxonomic structure of ectoparasite species identified in ducks and geese

No.	Parasite species	Family	Genus
1.	*Anatoecus icterodes* (Nitzsch, 1818)	Philopteridae	Anatoecus
2.	*Anatoecus dentatus* (Scopoli,1773)	Philopteridae	Anatoecus
3.	*Anaticola crassicornis* (Scopoli, 1763)	Philopteridae	Anaticola
4.	*Anaticola anserinum* (Linnaeus, 1758)	Philopteridae	Anaticola
5.	*Trinoton querquedulae* (Linnaeus, 1758)	Trinotonidae	Trinoton
6.	*Trinoton anserinum* (Fabricius, 1805)	Trinotonidae	Trinoton
7.	*Menopon obscurum* (Piaget, 1880)	Menoponidae	Menopon
8.	*Lipeurus caponis* (Linneus, 1758)	Lipeuridae	Lipeurus
9	*Anatoecus adustus* (Nitzsch in Giebel,1874)	Philopteridae	Anatoecus
10.	*Dermanyssus gallinae* (De Geer, 1778)	Dermanyssidae	Dermanyssus
11	*Argas persicus* (Oken,1818)	Argasidae	Argas

In domestic ducks (*Anas platyrhynchos domesticus*, Linnaeus, 1758), six species of mallophagans and one species of gamasid mites were identified. According to the synthesized data and correlated with the study summary, the most frequent mallophagan species were: *Anaticola crassicornis* – EI 26.0%, *Anatoecus dentatus* – EI 22.0%, *Anaticola anserinum* – EI 16.0%, *Menopon obscurum* – EI 13.0%, *Anatoecus icterodes* – EI 11.0%, *Trinoton querquedulae* – EI 1.0%.

In addition, the presence of the gamasid mite *Dermanyssus gallinae* was recorded, with an infestation extent (EI) of 21.0%. The highest infestation levels were recorded for *Anaticola crassicornis* and *Anatoecus dentatus*, while *Trinoton querquedulae* and *Anatoecus icterodes* showed the lowest values (Figure 1).

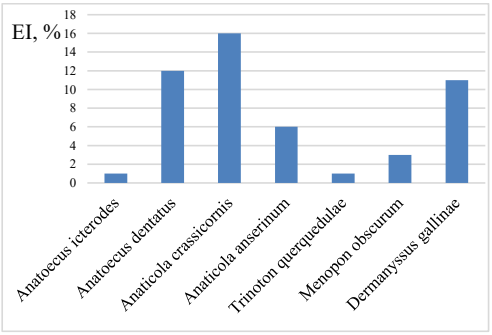

Figure 1. Extent of ectoparasite infestation in ducks (*Anas platyrhynchos domesticus*)

Mixed invasions consisting of two species (*Anaticola crassicornis* + *Trinoton querquedulae*; *Anatoecus dentatus* + *Menopon obscurum*; *Anatoecus icterodes* + *Anaticola anserinum*; *Dermanyssus gallinae* + *Anatoecus dentatus*; *Trinoton querquedulae* + *Anatoecus dentatus*) were recorded in 47.0% of cases.

Three-species parasitic agent combinations (*Anaticola crassicornis* + *Dermanyssus gallinae* + *Anatoecus icterodes*; *Menopon obscurum* + *Anatoecus dentatus* + *A. crassicornis*; *Anatoecus dentatus* + *Anaticola anserinum* + *Trinoton querquedulae*; *Dermanyssus gallinae* + *Anatoecus dentatus* + *Menopon obscurum*) were recorded in 26.0% of cases; four-species combinations (*Trinoton querquedulae* + *Dermanyssus gallinae* + *Menopon obscurum* + *Anatoecus dentatus*; *Trinoton querquedulae* + *Dermanyssus gallinae* + *Anaticola crassicornis* + *Anatoecus dentatus*) were recorded in 5 cases.

In ducks (*Anas platyrhynchos* L.), it was found that 26.4% were infested as mono-invasions, while 73.6% were infested as poly-invasions. Polyparasitic associations consisting of two parasite species were estimated in 44.5% of cases; three-species associations in 24.3% of cases; and four-species associations in 4.8% of cases (Figure 2).

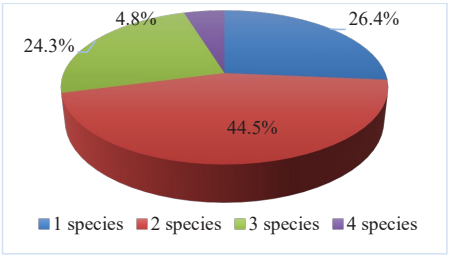

Figure 2. Ectoparasite associations in ducks (*Anas platyrhynchos* L.) from the Republic of Moldova

In domestic geese (*Anser anser domesticus*, Linnaeus, 1758), a higher ectoparasite diversity was observed compared to ducks. Ten ectoparasite species were identified, including eight species of mallophagans, one species of gamasid mites, and one species of argasid ticks. The most frequent mallophagan species in geese were: *Anaticola anserinum* – EI 36.0%, *Anatoecus icterodes* – EI 27.0%, *Anaticola crassicornis* – EI 25.0%, *Trinoton querquedulae* – EI 23.0%, *Lipeurus caponis* – EI 20.0%, *Menopon obscurum* – EI 18.0%, *Trinoton anserinum* – EI 17.0%, *Anatoecus adustus* – EI 14.0%. Additionally, infestation with *Dermanyssus gallinae* (24.0%) and the argasid tick *Argas persicus* (22.0%) was recorded (Figure 3).

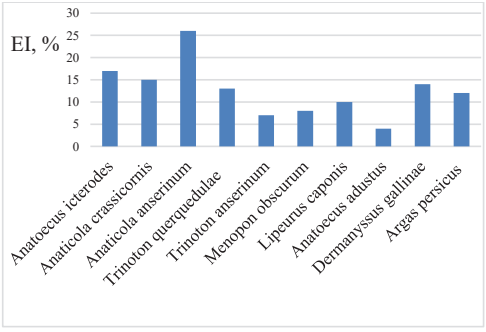

Figure 3. Extent of ectoparasite infestation in geese (*Anser anser domesticus*)

Mixed invasions consisting of two species were recorded in 64.0% of cases: mallophagans (*Trinoton querquedulae* + *Anatoecus icterodes*; *Anaticola anserinum* + *Menopon obscurum*; *Trinoton anserinum* + *Dermanyssus gallinae*; *Lipeurus caponis* + *Argas persicus*; *Anaticola crassicornis* + *Anatoecus adustus*).

Ectoparasite associations consisting of three species (*Menopon obscurum* + *Anaticola anserinum* + *Dermanyssus gallinae*; *Trinoton querquedulae* + *Anaticola crassicornis* + *Lipeurus caponis*; *Argas persicus* + *Trinoton querquedulae* + *Anatoecus icterodes*; *Trinoton anserinum* + *Anatoecus adustus* + *Dermanyssus gallinae*) were recorded in 53.0% of cases, while polyinvasions consisting of four ectoparasite species (*Anatoecus adustus* + *Dermanyssus gallinae* + *Menopon obscurum* + *Anaticola anserinum*; *Anaticola crassicornis* + *Lipeurus caponis* + *Argas persicus* + *Menopon obscurum*; *Dermanyssus gallinae* + *Anaticola crassicornis* + *Anatoecus adustus* + *Trinoton anserinum*) were recorded in 7 cases.

In geese (*Anser anser* L.), it was found that 13.9% were infested as mono-invasions, while 86.1% were infested as poly-invasions. Polyparasitic associations consisting of two parasite species were estimated in 44.5% of cases; three-species associations in 36.8% of cases; and four-species associations in 4.8% of cases (Figure 4).

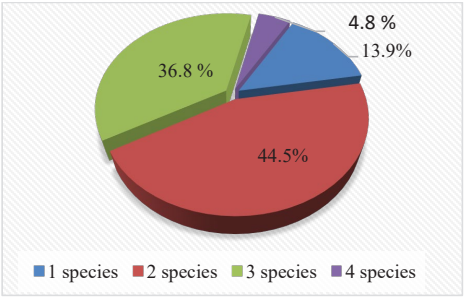

Figure 4. Ectoparasite associations in geese (*Anser anser domesticus*) from the Republic of Moldova

Among the identified species, two mallophagan species stand out: *Lipeurus caponis*, which is common to both domestic and wild gallinaceous birds, and *Trinoton anserinum*, which parasitizes many species of wild waterfowl, including swans and geese. *T. anserinum* also serves as an intermediate host in the life cycle of *Sarconema eurycerca*, a nematode from the family Filarioidea, which causes cardiac infection and subsequently leads to their death.

The gamasid tick *Dermanyssus gallinae* serves as a host for numerous species of wild birds and mammals, including humans. The argasid tick *Argas persicus* identified in geese is hazardous and transmits multiple pathogens (e.g., *Borrelia anserina*) to animals, including humans;

therefore, these parasites pose a significant health risk.

Thus, a high level of infestation of domestic waterfowl with various parasitic agents was established in both natural and anthropogenic ecosystems across different regions of the Republic of Moldova. This further demonstrates that they participate in maintaining the epizootic chain of these diseases and play an important role in the infestation of migratory wild birds. Since controlling parasitic agents is difficult and very costly, preventive measures are the only effective and economical approach. At the same time, biocontrol measures can help minimize the spread of parasitic agents.

CONCLUSIONS

The parasitological investigations conducted on domestic waterfowl (*Anas platyrhynchos domesticus* and *Anser anser domesticus*) from the northern region of the Republic of Moldova revealed a high diversity of ectoparasites, confirming the significant parasitological pressure in both natural and anthropized ecosystems.

A total of 11 ectoparasite species belonging to the classes *Insecta* and *Arachnida* were identified, including representatives of the families *Philopteridae, Trinotonidae, Menoponidae, Lipeuridae, Dermanyssidae,* and *Argasidae*, demonstrating the complex taxonomic structure of ectoparasite fauna in domestic waterfowl.

Domestic geese showed a higher diversity and prevalence of ectoparasitic infestations compared to domestic ducks, which may be associated with species-specific biological traits, rearing practices, and increased contact with aquatic environments.

Among ducks, the highest infestation rates were recorded for the mallophagan species *Anaticola crassicornis* and *Anatoecus dentatus*, while *Trinoton querquedulae* and *Anatoecus icterodes* exhibited the lowest prevalence.

In geese, the dominant ectoparasite species were *Anaticola anserinum, Anatoecus icterodes,* and *Anaticola crassicornis*, alongside a considerable presence of the gamasid mite *Dermanyssus gallinae* and the argasid tick *Argas persicus*, both of which have high epidemiological relevance.

Polyparasitic infestations were predominant in both host species, particularly in geese, indicating frequent associations of two or more ectoparasite species and highlighting the complexity of host–parasite interactions in domestic waterfowl.

The presence of ectoparasite species with zoonotic and vector potential, such as *Dermanyssus gallinae* and *Argas persicus*, emphasizes the veterinary and public health significance of monitoring ectoparasite fauna in domestic waterfowl.

The high infestation levels observed underline the necessity of implementing effective prophylactic, monitoring, and biocontrol strategies aimed at reducing ectoparasite prevalence, improving animal welfare, and limiting the circulation of parasitic agents within anthropized ecosystems.

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