

## Parasite found in parakeets - Study on 167 birds

### Parazitofauna întâlnită la peruși – Studiu pe 167 de păsări

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**Key words:** budgerigar, *Cnemidocoptes pilae*, *Eimeria dusingi*  
**Cuvinte cheie:** peruși, *Cnemidocoptes pilae*, *Eimeria dusingi*

#### Abstract

The budgerigar (*Melopsittacus undulatus*) is a small, long-tailed, seed-eating parrot. Parakeets are the only species in the Australian genus *Melopsittacus*, and are found wild throughout the drier parts of Australia where this species has survived harsh inland conditions for the last five million years. The researches were conducted in two counties, Timiș and Mehedinți throughout nine months, including 167 birds which were parasitologically controlled. The results that were analyzed to Faculty of Veterinary Medicine from Timișoara revealed: 18,56 % (31 birds) for *Eimeria* spp., next were the feathers lice, 16,16% (27 birds), scaly leg mites 8,38% (14 birds) and at the fine ascaridiasis (1%).

#### Rezumat

Perușul (*Melopsittacus undulatus*) este un papagal mic cu coadă lungă, care consumă semințe. Perușii sunt singurele specii din genul australian *Melopsittacus* care se găsesc încă în libertate de-a lungul coastelor australiene unde specia a supraviețuit condiții aspre pentru ultimii cinci milioane de ani. Cercetările s-au desfășurat în județele Timiș și Mehedinți timp de nouă luni și a inclus 167 de păsări care au fost supravegheate parazitologic, probele fiind analizate în cadrul Facultății de Medicină Veterinară Timișoara. Rezultatele au relevat că ponderea afecțiunilor parazitare la peruși a fost deținută de genul *Eimeria* 18,56% (31 de păsări), pediculoza penelor a afectat 16,16% (27 de păsări), acarienii crustoși ai membrilor 8,38% (14 păsări), în 1% din cazuri fiind identificată ascaridioza păsărilor.

#### Introduction

The budgerigar (*Melopsittacus undulatus*) is a worldwide well-known bird species. It was not until the early 19<sup>th</sup> century when Australia began to export worldwide this little bird.

In Romania, the budgerigars were introduced in the last decades of the nineteenth century. From the outset the question of refreshing the genes by using birds brought from other areas, this being achieved by importing 10 birds in 1901, directly from Australia.

The number parakeets increased rapidly, reaching to match, even exceed, by more the number of the old guests in our country, canaries.

For parakeets, diseases aren't a problem as long as a correct diet program is respected,

also deworming, adequate ventilation, natural light as possible and enough space flight.

Disinfection and deworming are mandatory, twice a year, spring and fall, by cleaning and whitewashing the loft.

Avoid overcrowding and introducing new birds without quarantine in advance.

Since data on parakeets parasites in Romania are sporadic and parakeets' growth flourished not so great as in Australia, we proposed: epidemiological, clinical, coproparasitological, necropsy and histopathology investigations.

#### Materials and Methods

The study was conducted at the Faculty of Veterinary Medicine Timișoara, over a period of 9 months (01.09.2011-14.06.2012), on a plot of

167 parakeets, both from pet shops and breeders from the two counties in western and south-western Romania, Timis and Mehedinti.

For the coproscopic diagnosis Willis were effectuated. He collected some of the intestine of a dead bird, suspected to be affected by coccidiosis for the execution histopathological coccidiosis.

### Results and discussions

In the clinical examination of the birds, we were able to highlight the characteristic lesions

produced by *Cnemidocoptes pilae*, "scaly face" and "scaly legs" to one of two keepers addressed in Timis County. The birds affected were newly acquired, being introduced from the start in quarantine loft.

The budgies that manifested scaly legs were visibly affected, maintaining and hardly moving on brunches.

Only one parakeet manifested an older such disability, at this one the upper beak valve was visibly deformed, irreversible condition even after applying any treatment.



**Figure 1.** Parakeets affected by *Cnemidocoptes pilae*- scaly legs (left - top), scaly face (right-bottom), Timis (Orig)

Also through clinical examination, the majority of the birds from the loft situated in Mehedinți were infested with feather lice.

Some darker birds showed characteristic signs of this infestation, feather being eroded near the central axis, manifested noticeable to the naked eye.

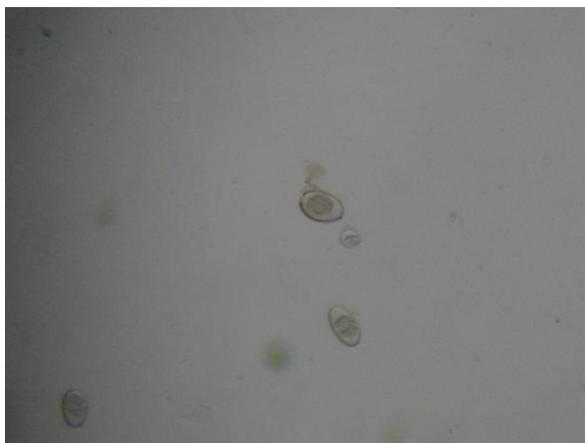
At the necropsy of a corps, urates deposits were observed on the surface of the intestines, and, when were opened them up, highly infestation with roundworms were observed.



**Figure 2.** Parakeets' roundworms - Mehedinti (Orig).



**Figure 3.** Feather lice on the top right-adult parakeets, right down eggs of the parasite- Mehedintți (Orig.).



**Figure 4.** Coccidia oocysts in parakeets - objective 40 (Orig.).

The fecal exam managed to highlight the oocysts of coccidia in all fecal samples from pet shops in Timis.

The birds were about 3 months old, originated entirely from a breeder in Arad. Before asking for a fecal exam, within three days 3 young parakeets died suddenly.

The birds did not showed clinical signs before being found dead and the bodies showed feathers around the anus agglutinated due to diarrhea.

The bodies of two birds were emaciated and when the necropsy exam was done we could see intestinal congestion and inflammation due to *Eimeria* spp infestation.

From the intestinal mucosa there were executed scraped that were then displayed on the slide and examined under the electronic microscope with the 10 and 40 objective but the results were negative, none *Eimeria* spp. being observed.

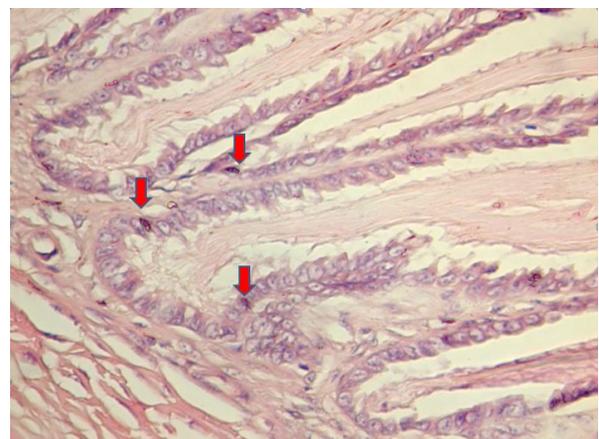
Histopathological examination revealed a decreased lymphocyte infiltration at the base of the Lieberkuhn glands and *Eimeria* trophozoites infiltrated in the intestinal mucosa, at glandular level.



**Figure 5.** Dead young budgerigars infected with *Eimeria* spp., Timis (Orig.).



**Figure 5.** Dead young budgerigars infected with *Eimeria* spp., Timis. Highlighting injuries caused by eimeria- congestion and inflammation of the intestines - Timis (Orig.).



**Figure 6.** Trophozoites in glandular cells, staining HEA (Orig.).

## Conclusions

From studies conducted in Romania during the 9 months, a very short time if we consider the 18 years of activity of Dr. Rob Marshall, the group of 167 parakeets held captive both in pet shops and at the 4 private lofts in the two districts, Timis and Mehedinți resulted the following conclusions:

After examination with method Willis of the faeces collected from the Timis pet shop, there were identified coccidia oocysts.

The clinical examination revealed massive infestation with feather lice in the Mehedinți loft and a scabies infection in a loft from Timis.

Necropsy examination revealed characteristic lesions caused by *Eimeria* spp infestation, and a case of round worm infestation in Mehedinți.

In clinical studies effectuated at the clinic of Parasitology and Parasitic Diseases from the Faculty of Veterinary Medicine, out of 167 birds, subjected to observation, eimeriosis held 18.56% (31 birds) of all cases presented, followed by feather lice infestation, which in turn held 16.16% (27 cases), ascariosis 1% (1

case), and scabies 8.38% (14 cases). The remaining birds, 94 were clinically healthy.

So far, in Romania, this is the first work that dealt parasite found in parakeets also the histopathological smear was the first one to be done from the intestine of a parakeet.

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