

The parasites of wild ungulates from the Vysoké Tatry region of Slovakia

Jerzy Kowal[1], Barbara Chovancová[2], Gabriela Chovancová[2], Mateusz Okrutniak[1], Anna Wyrobisz[1], Paweł Nosal[1]

[1]Department of Environmental Zoology, Institute of Animal Sciences, University of Agriculture in Krakow, al. Mickiewicza 24/28, 30-059 Krakow, Poland
[2]Research Station and Museum of the Tatra National Park, 059 60 Tatranská Lomnica, Slovak Republic

Corresponding Author: Jerzy Kowal; e-mail: j.kowal@ur.krakow.pl

The aim of the study was to identify the parasitic fauna of wild ungulates (i.e. boar *Sus scrofa*, roe deer *Capreolus capreolus* and red deer *Cervus elaphus*) from the Vysoké Tatry region of Slovakia (part of the Tatra National Park). Faeces samples (in total 91) were collected in April 2015 directly from the vicinity of feeding racks. The samples were obtained from boar (11 samples from enclosure and 24 from free-living individuals), roe deer (20) and red deer (36). A coproscopical study was performed according to McMaster with some modifications. In addition, the analysis of cervid samples was supported by a modified Baerman method to assess the presence of lungworm larvae.

The coproscopical analyses of boar samples revealed the presence of the following parasitic groups: coccidia of the order *Eimeria* (48.57% of all analyzed samples), lungworms of the genus *Metastrongylus* (11.43%) and gastrointestinal nematodes (14.29%). The mean intensity of eggs (EPG) or oocysts (OPG) was 1153 (from 50 up to 9000) OPG, 112 (50 – 200) EPG, 160 (50 – 350) EPG, respectively. Moreover, eggs of *Trichuris suis* (50 OPG) were found in one sample.

The conducted research showed that both cervid species were infected with the same parasitic groups, i.e. coccidia, tapeworms of the genus *Moniezia*, gastrointestinal nematodes of the order Strongylida (including *Nematodirus* sp.) and those of the order *Trichuris* and *Capillaria*. The mean intensity of egg (EPG) or oocyst (OPG) output was low and did not exceed 150 OPG and 100 EPG, respectively for coccidian and nematodes. Furthermore, *Varestrongylus capreoli* larvae were observed in the faecal samples of roe deer (51.25% of all analyzed), while *Elaphostrongylus cervi* (51.43%) and *Varestrongylus sagittatus* (31.43%) were found in those of red deer. The obtained results shown that endoparasites are widely distributed in wild ungulates in the studied area.

This research was financed by the Ministry of Science and Higher Education of the Republic of Poland.