

# Infection with parasites of European bison in the Bieszczady Mountains based on coprological investigation

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## MATERIALS AND METHODS

- 225 faecal samples from the European bison from the Bieszczady Mountains (Baligród, Komańcza, Lutowska Forest Inspectorates) were investigated in 2014 with the use of direct flotation, decantation and Baermann methods.
- 119 samples were collected in spring (March-April) and 108 in autumn (October-November)



Fig. 1. Egg of nematodes from the family Trichostrongylidae

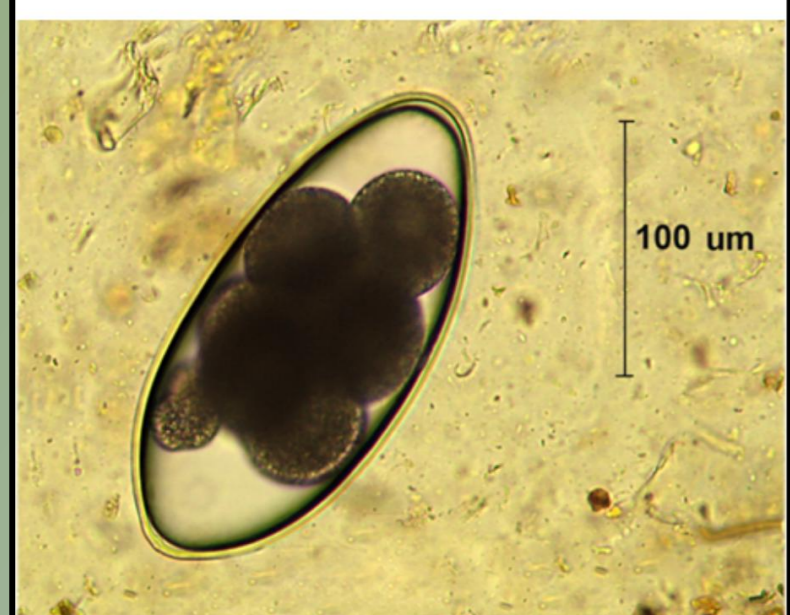


Fig. 2. Egg of nematodes from the genus *Nematodirus*

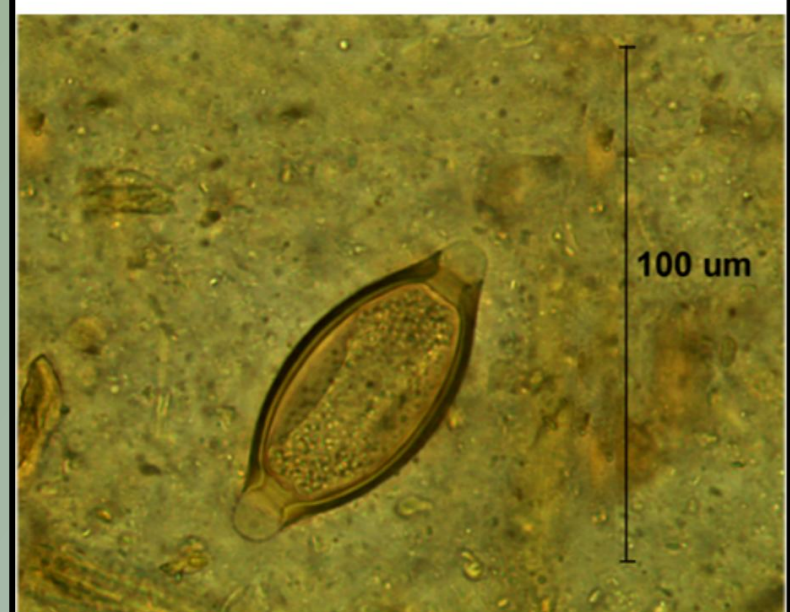


Fig. 3. Egg of nematodes from the genus *Trichuris*



Fig. 4. Egg of nematodes from the genus *Aonchotheca*

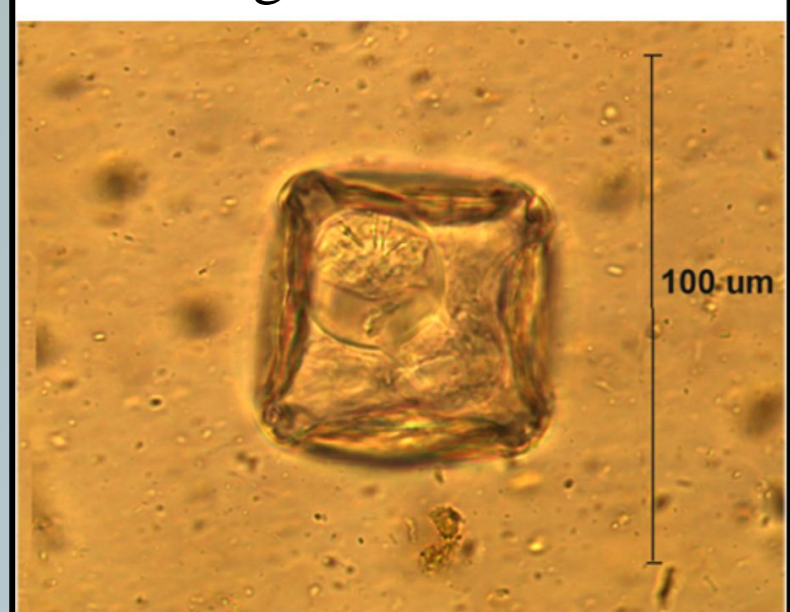


Fig. 5. Egg of tapeworm from the genus *Moniezia*



Fig. 6. Oocyst of *Eimeria bovis*

## RESULTS

- Eggs of gastro-intestinal nematodes from the family Trichostrongylidae, genus *Aonchotheca*, *Nematodirus* and *Trichuris* were diagnosed, as well as eggs of tapeworms from the genus *Moniezia* and four *Eimeria* spp. (*E. bovis*, *E. pellita*, *E. zuernii*, *E. bukidnonensis*)
- The highest prevalence was noticed in spring, reaching 93.5% for nematodes from the family Trichostrongylidae, 7.3% for nematodes from the genus *Trichuris* and 30.2% for *E. bovis*
- Lower prevalence was of these was observed in autumn (88.6%, 3%, 11.3%, respectively)
- In autumn, the highest prevalence and intensity of infection of gastro-intestinal nematodes from the family Trichostrongylidae and of protozoan *E. bovis* was seen among captive bison kept in the enclosure in Muczne.
- Neither the occurrence of lungworms *Dictyocaulus viviparus* nor liver fluke *Fasciola hepatica* were recorded in examined bison from the Bieszczady Mountains.
- Revealed level of parasitic infection in European bison did not cause the clinical signs of parasitosis

Table 1. Parasite infection in the European bison

PARASITE	SPRING n=109			AUTUMN n=97		
	Prevalence (%)	Intensity		Prevalence (%)	Intensity	
		Range	Mean		Range	Mean
Trichostrongylidae	93,5	1-299	39,5	88,6	1-406	44,7
<i>Aonchotheca</i> sp.	3,6	1-3	1,7	4,1	1-6	2,7
<i>Nematodirus</i> sp.	2,7	1-2	1,3	–	–	–
<i>Trichuris</i> sp.	7,3	1-167	38,2	3	15-30	22,6
<i>Eimeria bovis</i>	30,2	1-595	72	11,3	1-908	223
<i>E. pellita</i>	1,8	0-2	2	1	2	2
<i>E. zuernii</i>	–	–	–	1	1	1
<i>Moniezia</i> sp.	–	–	–	2	1-18	9,5

Table 2. Parasite infection in European bison in enclosure in Muczne

PARASITE	SPRING n=10			AUTUMN n=11		
	Prevalence (%)	Intensity		Prevalence (%)	Intensity	
		Range	Mean		Range	Mean
Trichostrongylidae	60	1-20	10	100	28-1098	309
<i>Nematodirus</i> sp.	–	–	–	36	1-53	26
<i>Trichuris</i> sp.	–	–	–	27	1-6	3
<i>Eimeria bovis</i>	90	2-524	104	63	12-350	39
<i>E. bukidnonensis</i>	20	7-20	13,5	–	–	–