

INTESTINAL PARASITES IN *RUPICAPRA* SPP. POPULATIONS: STUDY IN THE FRAMEWORK OF THE RELEVANT ITALIAN PROJECT (PRIN)

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Intestinal parasites can seriously threaten the performances and well-being of wild ungulates. In this study, we investigated the occurrence and parasitic burden of protozoans and gastro-intestinal helminths (GIH) in *Rupicapra* spp.

From September 2013 to January 2016, 352 fresh fecal samples were collected from *Rupicapra rupicapra rupicapra* in the Alps (N=262) and from *Rupicapra pyrenaica ornata* in the Apennines (N=90). Samples were examined using standard copro-parasitological methods for *Eimeria* and GIH and an immunofluorescence test for *Cryptosporidium* and *Giardia duodenalis*. Parts of *gp60* and *ssRNA/gdh/βgiardin* genes were used to identify these protozoa species/genotypes.

In *R.r.rupicapra* and in *R.p.ornata*, 7 and 6 parasite taxa were identified, respectively, with a mean number of 1.7 species/host (min-max 0-5) and 2.05 (min-max: 0-4), respectively.

Overall, 85.3% (95%, C.I.=81.5-89.1) of the animals investigated scored microscopically positive to *Eimeria* spp. with a mean intensity of emission (m.i.e.) of up to 776 o.p.g.; 5.4% (95%, C.I.=3.07.7) were positive to *G. duodenalis* and 82% (95%, C.I. 77.91-86.15) to GIH with a m.i.e. of up to 147 e.p.g. Prevalence in *R.r.rupicapra* was 81.2% with a m.i.e. of 380 o.p.g. for *Eimeria*, 6.87% for *Giardia*, and 77.45% for GIH with a m.i.e. of 142 e.p.g. Prevalence in *R.p.ornata* was 94.4% with m.i.e. of 1,093 o.p.g. for *Eimeria*, 1.1% for *G.duodenalis*, and 94.4% for GIH with a m.i.e. of 151 e.p.g. Assemblages A/AI and E were identified in *R.r.rupicapra* and assemblage A/AIII in *R.p.ornata*. None of the animals tested positive for *Cryptosporidium*.

The results show that the prevalence of *Eimeria*, *G.duodenalis* and GIH in both host species is nonnegligible, with a significantly higher parasitic burden in *R.p.ornata*. The detection of *G. duodenalis* in *Rupicapra* spp. is noteworthy.

This study updates the data on parasitic fauna of these wild bovids. The impact of these parasites on chamois population dynamics will be inferred from the results/variables obtained throughout the entire interdisciplinary project.

The study was funded by MIUR- Relevant Italian Project (PRIN n. 2010P7LFW4) - Genomics and host-pathogen interactions in chamois and by L.A.I.F.F. Project - Rete di laboratori per l'innovazione nel campo degli alimenti funzionali (codice n. 47); "PO Puglia FESR- 2007-2013, Asse I, Linea 1.2. Accordo di Programma Quadro in materia di Ricerca Scientifica. Intervento "Reti di Laboratori Pubblici di Ricerca"