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GASTROINTESTINAL PARASITES OF CAPTIVE ANIMALS IN THE ZOO IN SKOPJE, NORTH MACEDONIA, 2020-2022

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The aim of this study was to investigate the prevalence of gastrointestinal parasites in 18 animal species (*Ovis aries*, *Lama glama*, *Capra aegagrus hirus*, *Bison bison*, *Taurotragus oryx*, *Giraffa camelopardalis*, *Equus ferus przewalskii*, *Hipopotamus amphibious*, *Sus scrofa domesticus*, *Vicugna pacos*, *Dolichotis patagonium*, *Equus quagga*, *Camelus dromedaries*, *Macropus rufogriseus*, *Canis lupus*, *Canis lupus arctos*, *Panthera leo* and *Pan troglodytes*) housed in the ZOO in Skopje, North Macedonia in a 3-year period (2020-2022). To detect the parasites, 105 fecal samples from 15 carnivores, 80 herbivores and 10 primates, were examined with a standard fecal flotation technique using saturated zinc sulfate solution. The overall prevalence of gastrointestinal parasites was 42%. The results showed presence of different parasite groups including protozoa (*Balantidium* sp., *Coccidia* sp., *Giardia* sp.), nematodes (*Nematodirus* sp., *Parascaris* sp., *Trichostrongylus* sp., *Toxascaris leonina*, *Trichuris* sp., *Ancylostoma* sp., *Strongyloides* sp.), and cestodes (*Anoplocephala* sp., *Dipylidium* sp.). No trematodes were detected during the study. Mixed helminth and protozoan infections were identified in 10 out of the 105 fecal samples (9.5%). Protozoan infections were more common in primates, while helminth infections were more common in carnivores and herbivores. The gastrointestinal parasites are common in captive animals which act as their potential reservoir. Regular monitoring as well as good hygiene practice and appropriate deworming protocols should be implemented in order to prevent the infection and minimize the spread of the parasites.

Key words: zoo animals, protozoa, cestoda, nematoda, helminth