

# MOLECULAR IDENTIFICATION OF *SARCOCYSTIS* SPECIES IN MUSCLES OF THE HERRING GULL (*LARUS ARGENTATUS*) IN LITHUANIA

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*Sarcocystis* are protozoan parasites characterised by an obligatory prey-predator two-host life cycle. Sarcocysts are formed mainly in muscles of intermediate hosts, while sporocysts develop in small intestine of definitive host. In the period of 2015-2018, having examined leg muscles of 46 herring gulls in Lithuania, sarcocysts were detected in 12 birds (20.1%). *Sarcocystis* spp. were characterized using light microscopy (LM) and first internal transcribed spacer (ITS1) region sequences analysis. By LM, one morphological type of sarcocyst was distinguished. Sarcocysts were microscopic, ribbon-shaped, had smooth and thin (about 1  $\mu\text{m}$ ) cyst wall, and contained banana-shaped bradyzoites. Based on molecular analysis, four *Sarcocystis* species, *S. wobeseri*, *S. lari*, *S. halioti* and *S. columbae* were identified. It should be noted that it was impossible to distinguish *Sarcocystis* species detected by LM. Species identified in the herring gull were previously found in birds of families Anatidae, Columbidae, Laridae and Phalacrocoracidae. Thus, *Sarcocystis* species using the herring gull as intermediate host are not host specific. Furthermore, it was demonstrated that one infected bird can harbour morphologically indistinguishable *Sarcocystis* species. In conclusion, we recommend examining several *Sarcocystis* isolates from one bird of genus *Larus*.