

Internal parasites of bats living in the Lublin and Upper Silesia regions

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Bats are potential vectors and reservoirs of many infectious diseases, including zoonoses. This is especially important because the living environment of humans and bats more and more often overlap due to the devastation of the habitats of these mammals. As animals living in close proximity to humans (attics, barns, old farms, monuments), they deserve special attention. The main goal of our research was to determine the species diversity of endoparasites occurring in the bodies of bats inhabiting the areas of Lublin and Upper Silesia, especially parasites that can pose a threat to humans. So far in Europe, bat endoparasites have been observed mainly during autopsy. Currently, as all bat species in Poland are under species protection, the examination of bat endoparasites is only possible by examining faeces.

Three colonies of greater mouse-eared bat (*Myotis myotis*) from the province of Lublin (Puławy, Łęczna, Kluczkowice), two colonies from Upper Silesia (Siewierz, Siemonia) and two from the province Opole (Zagwizdzie, Dąbrówka Dolna) were analysed. Each of the colonies had from 20 to 200 individuals. The material for the research was feces collected from the bats' colony. The material

was collected for 5 days at the turn of April and May, after leaving the bats' wintering grounds and creating summer breeding colonies. Samples were taken directly from the colonies onto foil sheets (4 x 5 m). The material was secured in tubes, packed into shipping containers and placed at a constant temperature of 4°C throughout the collection period. For the purpose of parasitological evaluation, the samples were examined by the decantation and flotation method. In laboratory conditions, the samples were carefully analyzed under the Nikon YS100 light microscope.

The research showed the invasions of *Capillaria* spp. in the *Myotis myotis* bats in two of the four colonies (Dąbrówka Dolna and Zagwizdzie). Both the colony in Zemborzyce and in Dąbrówka Dolna revealed eggs from the Strongyloididae family. All samples presented eggs from arthropods, aquatic crustaceans, and Gregarin's cysts. Most of the stool samples tested by PCR were positive for *Cryptosporidium* sp. and *Giardia* sp.

The research to date and the results presented here constitute an introduction to a longer cycle of research on bat parasitofauna.