

Comparison of the helminth communities of *Apodemus agrarius* and *Apodemus flavicollis* in urban and suburban populations of mice

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The urban environment creates many habitats and ecological niches to be used by species able to adapt to specific conditions in urban areas. Urbanization affects also the parasite species vectored by their hosts into the city. The study analyzes the impact of urbanization of land on the helminth community of two species of mice, *Apodemus flavicollis* and *A. agrarius*.

The helminth communities of two species of *Apodemus* (*A. agrarius*, *A. flavicollis*) trapped in city parks (urban areas) and managed forest (control areas) were examined. The rodents were trapped at four sites: two localized in Warsaw and at two localized in the vicinity. Trapping sessions took place in September 2010 and 2011. Wooden traps were placed along 600 m long, two traps were set at 30 trapping points. Trapping was carried out during seven subsequent days in each location. The captured animals were killed by cervical dislocation, weighed, sexed and measured. Helminth species were identified using the key and reference samples derived from rodent species.

In total, six species of helminths belonging to Nematoda, Digenea and Cestoda were detected. Higher species richness was found in a field mouse in urban areas compared to rural areas; for the yellow-necked mouse, greater species richness was recorded in natural areas. Previous studies have indicated a higher extent and intensity of infestation in the field mouse than in the yellow-necked mouse.

Research on the communities of intestinal parasites in mouse species *A. flavicollis* and *A. agrarius* harvested from areas with different degrees of urbanization may help to determine the environmental impact of urbanization on the parasite.