The raccoon (*Procyon lotor*) as a reservoir of zoonotic diseases

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Parasites may infect many wild and invasive species in Europe. One invasive species is the raccoon (*Procyon lotor*) which is a common inhabitant of rural and urban areas. Although its role in transmitting zoonotic diseases to humans remains little known, the raccoon roundworm (*Baylisascaris procyonis*) and intestinal protozoan belonging to the *Giardia* are widespread and could affect free-ranging raccoons. Some cases of bayliascariosis in humans have been noticed.

The present study was performed to determine the prevalence of helminths and intestinal protozoa in wild raccoons from Germany and Luxemburg. Fecal samples were collected from the rectums of 100 road-killed and selectively-hunted animals. The species and genotypes of nematodes and intestinal protozoan parasites were identified using morphometric analyses and molecular methods. Total DNA was extracted from *Giardia* cysts directly from each fecal sample and from obtained nematodes. DNA was amplified using primers directed to the fragments of β-giardin and 18S rRNA genes.

Sequencing of the PCR products revealed that *Giardia* isolated from the raccoons belonged to assemblage B and the nematodes were of the raccoon roundworm *B. procyonis*. The results suggest that raccoons are reservoirs of zoonotic *Giardia* isolate and *B. procyonis*, which is regarded as an emerging zoonotic pathogen of humans.