„PROJEKT WASCHBÄR"


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Free-ranging raccoons in northern Germany:

# Parasitology, pathology and feeding ecology investigation


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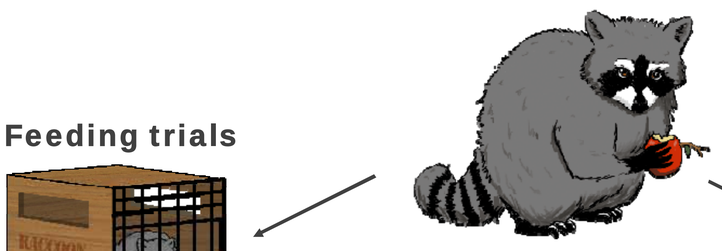
## Introduction

Invasive animal species like the North American raccoon (*Procyon lotor* L., 1758) play a significant role in the ecologic balance of their newly encountered biotope, particularly as their habits might overlap and compete with that of native animals. Being introduced in Germany for more than 70 years ago, two main raccoon populations in central and northeast Germany are differentiated these days. Against the background of a vast increase of raccoon numbers in Germany within the last years, a controversial discussion arose regarding the influence of the new inhabitant on indigenous resp. protected species and the potential transmission of diseases and parasites.

In the United States and Canada numerous studies on biology and veterinary aspects of raccoons have been published whereas comparable investigations are lacking for Europe. Aiming to elucidate the wildlife biology of this invasive species, a large perennial project has been initiated in 2006 in the northeastern area of distribution (Müritz-Nationalpark, Mecklenburg-Western Pomerania). Consisting of several sub studies, this research project on raccoon population biology also involves **A)** the analysis of **feeding ecology** as well as **B) pathological and parasitological investigations** in deceased animals. Investigations have started a few months ago and will last until 2013.




## A) Feeding ecology investigation

**Scat analysis regarding the quantitative and qualitative composition of nourishment categories.**

**Determination of a raccoon specific conversion factor on the basis of feeding trials with encountered animals.**

Extensive knowledge about the effects of raccoon settlement, primarily in natural landscapes, and the possible occupation of an ecological niche in the autochthonous fauna is lacking entirely so far. As raccoons are highly adaptable, especially in terms of different food sources, it is difficult to evaluate the nourishment composition against the bag drop of a potential threat to indigenous species - yet scat analysis is currently the most informative approach. In order to elementarily evaluate and interpret quantitative statements regarding the nourishment categories of raccoons it is furthermore essential to establish a special conversion factor.

## B) Pathology & parasitology investigation

**What kind of pathological lesions and infectious agents occur in raccoons in Müritz-Nationalpark and what is the prevalence for such agents?**

**Does the zoonotic parasite *Bayliscascaris procyonis* occur in this raccoon population?**

More than 100 carcasses of road killed and hunted raccoons were collected from the research area. A full necropsy is performed and various biometrical measurements are registered. Tissue samples of selected organs are fixed in 4% formalin, processed routinely and stained with haematoxylin-eosin for histology analysis. Further samples are stored for virology and bacteriology investigations. Additionally, the gastrointestinal tracts are examined for the presence of adult helminths. Moreover, as previous investigations indicated the presence of a parasite within the raccoons' tongues tissue samples are stored frozen for subsequent species identification of this parasite.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