

## Tick, mite and flea infestation of small mammals at three locations in Germany

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Rodents serve as main hosts for the development and the distribution of several blood sucking ectoparasites such as ticks, fleas and mites. The aim of this study was to investigate the different ectoparasite species prevalence and mean intensity on rodents, to evaluate the rodents' role in the ectoparasites' development and maintenance. Small mammals were trapped during 2012 and 2013 at three different locations in Germany, determined to species level and examined for ectoparasites. In a descriptive analysis the overall number of small mammal species and ectoparasites as well as the number per location were examined. Prevalence and mean intensity were calculated for the overall number of animals caught and stratified for small mammal species. Chi-squared tests were used to test for differences between species.

Overall, 779 animals (689 in 2012, 90 in 2013) were caught during the study period. The rodents (n=775) comprised seven species with *Myodes glareolus*, (n=473) and *Apodemus flavicollis*, (n=247) being the two most common species. Most animals were trapped in the location Cospudener See (n = 498) followed by Tussenhausen (n = 241). Only 36 animals were trapped in Dörnberg Park, all of the species wood mouse *Apodemus sylvaticus*.

Three species of ticks, twelve species of mites and twelve species of fleas were found on the small mammals during the study period. *Ixodes ricinus* was the most prevalent tick species (68 %) but *Dermacentor reticularis* displayed the highest mean intensity of all ticks (8.07), *Laelaps agilis* the most prevalent mite species and had the highest mean intensity (19 %, 6.56) and *Ctenophthalmus agyrtes* the most prevalent flea species and had the highest mean intensity (50 %, 2.26). The distribution and co-occurrence of ectoparasites species will be the focus of further analysis.

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