



P 30 *Anaplasma phagocytophilum* and *Babesia* spp. in wild ungulates in Germany

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Anaplasma phagocytophilum, an obligate intracellular rickettsial bacterium transmitted by ticks, causes tick-borne fever of ruminants and granulocytic anaplasmosis of canines, equines, and humans. Based on high prevalences and mostly subclinical infections, wild ungulates are suggested as reservoir hosts for *A. phagocytophilum*.

Babesia spp. are tick-transmitted intra-erythrocytic protozoans causing febrile diseases in several mammals including humans. Currently *B. capreoli*, *B. divergens*, *B. ovis*, and *Babesia* sp. EU1 have been identified in wild ungulates in Europe; however, their occurrence varies importantly.

To survey these pathogens in wild ungulates in Germany, spleen samples from 147 mouflons (*Ovis orientalis musimon*), 170 roe deer (*Capreolus capreolus*), and 43 fallow deer (*Dama dama*) were collected in 13 locations of 7 federal states from May 2009 to October 2010. The molecular diagnosis in DNA extracted from spleen tissue was carried out by PCR. For *A. phagocytophilum*, an *msp2* real-time PCR was used, and *Babesia* spp. were detected by an 18S rRNA conventional PCR followed by sequencing for species identification.

A. phagocytophilum and *Babesia* spp. were detected in mouflons, roe deer, and fallow deer at 76% and 9%, 96% and 52%, and 72% and 7%, respectively. Sequencing revealed the presence of *B. capreoli*, *B. divergens*, and *Babesia* sp. EU1. Prevalences of both pathogens (*Anaplasma*, *Babesia* spp.) showed variations between the species and location of origin.

The study results indicate a wide dissemination of both pathogens in wild ungulates in Germany and thus strengthen the hypothesis that these animals may be reservoirs of *A. phagocytophilum*. Given that *Babesia* spp. may cause clinical infections in wild ungulates and with high zoonotic potential, further studies should be performed.