



V 47 Renatured areas as focal points for tick-borne pathogens in Saxony, Germany

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The hard ticks *Ixodes ricinus* and *Dermacentor reticulatus* can carry several pathogens. Both the distribution of these tick species as well as that of the tick-borne pathogens *Anaplasma phagocytophilum*, *Babesia* spp., and *Rickettsia* spp. were investigated in renaturation areas in former brown coal mining sites south of the city of Leipzig, Saxony, where questing ticks were collected with the flagging method in 2009.

Altogether, 2070 ticks (814 *D. reticulatus*, 1256 *I. ricinus*) were collected. After DNA extraction, *D. reticulatus* and *I. ricinus* were screened by molecular methods for *Babesia* spp. and *Rickettsia* spp. and the *I. ricinus* also for *A. phagocytophilum*. Overall prevalences found were: 9.2% *A. phagocytophilum* in *I. ricinus*; 0% *Babesia* spp. in *D. reticulatus* and 4.5% in *I. ricinus*; 67.4% *Rickettsia* spp. in *D. reticulatus* and 9.8% in *I. ricinus*.

The rickettsial species detected were *R. raoultii* exclusively in *D. reticulatus* and *R. helvetica* only in *I. ricinus*. *R. raoultii* may cause tick-borne lymphadenopathy (TIBOLA) in humans, whereas the pathogenicity of *R. helvetica* remains unclear. The *Babesia* species detected were *B. microti*, *B. divergens*, and *B. sp. EU1*, all of which may cause human babesiosis, even though cases in Europe have been rare. *A. phagocytophilum* is the causative agent of granulocytic anaplasmosis in domestic animals and also humans.

Renatured recreation areas where tick-borne pathogens are that prevalent provide efficient interfaces for transmission to humans and companion animals. Thus, studies which thoroughly investigate renatured areas as new biotopes for hosts and vectors are warranted. The results, especially for the sympatric existence of different rickettsial or other pathogens, will allow a clearer understanding of the epidemiology of these pathogens and may be used as the basis for preventive measures against these pathogens.