New localities of Dermacentor reticulatus tick (vector of Babesia canis canis) in central and eastern Poland

W. Zygner¹, P. Górski¹, H. Wędrychowicz¹,²

¹ Division of Parasitology and Parasitic Diseases, Department of Preclinical Sciences, Faculty of Veterinary Medicine, Warsaw University of Life Sciences – SGGW, Ciszewskiego 8, 02-786 Warsaw, Poland
² W. Stefański Institute of Parasitology, Twarda 51/55, 00-818 Warsaw, Poland

Abstract

Dermacentor reticulatus tick is a vector and final host of Babesia canis canis, protozoan parasite of the dog. In Poland and other European countries, endemic regions for canine babesiosis caused by B. canis canis are the same as endemic regions for D. reticulatus. In many of these regions, canine babesiosis is the most prevalent tick-borne disease in dogs. In Europe, increasing range of geographical distribution of D. reticulatus is observed. A consequence of this fact may be increasing range of canine babesiosis. D. reticulatus is one of the most common ticks occurring in Poland, however, it occurs mainly in the north-eastern and eastern part of the country, and there are many areas in which this species has not been reported yet. In this study, D. reticulatus ticks were collected from March 2007 to November 2008 in central and eastern Mazowsze region, and in some localities in Białystok and Lublin regions. Twenty four new sites for D. reticulatus, mainly in central and eastern regions of Mazowsze Province have been found. 18 localities are placed on banks of the fishing ponds or in river valleys and 6 are forests borders or barren lands and meadows, not situated near rivers or other water reservoirs. All tick-rich sites are localized in river valleys or on pond banks. However, statistical analysis showed that there were no differences in the density of ticks between groups of areas. These results show that the occurrence of D. reticulatus in newly detected areas has became endemic.

Probably woodless, unregulated river valleys are important migration tracts for this species of tick and enable them to penetrate new territories. It seems likely that geographical range of D. reticulatus is widening from east to west of Poland what can induce an increase in the number of canine babesiosis cases in areas non-endemic for B. canis canis and its vector. Climate change may be also partially responsible for earlier beginning of tick’s seasonal activity as well as for bigger faunal diversity (more potential host species both for adults and immature stages).

Key words: Dermacentor reticulatus, Babesia canis, distribution, Poland