REMOTE SENSING RECOGNITION OF *IXODES RICINUS* (L.) (ACARINA: IXODIDAE) TICK HABITATS (USING LANDSAT TM IMAGERY) REPRESENTING A HIGH EPIDEMIOLOGICAL RISK IN RECREATIONAL AREAS IN THE CZECH REPUBLIC

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In the Czech Republic, *Ixodes ricinus* is the main vector of two important tick-borne diseases: tick-borne encephalitis (TBE) and Lyme borreliosis (LB). Both these infections are frequently distributed in recreational areas among people coming there from Prague and from other large towns at weekend or living there in their summer cottages. Thus, both infections are very serious "recreational diseases".

To forecast the high incidence of *I. ricinus* tick habitats we utilized the knowledge that certain types of vegetation may indicate the presence of this species. In this way vegetation types can be used as indicators of an ecosystem suitable for the occurrence of ticks and their animal hosts, for the circulation of tick-borne pathogens, and accordingly, for the existence of natural foci of the infections mentioned.

An attempt was made to prepare the predictive maps of *I. ricinus* habitats having different tick-carrying capacities in recreational areas, above all lying along the basin banks of Vltava (Slapy and Orlík dams) and of other rivers in central, western and southern Bohemia. In these territories the woodlands (sometimes reduced to narrow stripes or small spots only) are very diversified and scattered in a mosaic of "islands" due to human economic activities. In such circumstances, methods of remote sensing make possible to determine the distribution of relevant tick-carrying plant types, and with knowledge of tick relations to them, to identify high-priority sites for the protection of the human population against ticks and tick-borne diseases. Nine forest classes are recognized and evaluated in the areas under study. The most important class (including young deciduous forest stands with highly heterogeneous structure) is well represented; the role of ecotones (border zones between different habitats) is emphasized. Predictive maps are realized both in digital and in printed forms at a scale 1 : 100,000 for an overall risk evaluation, and for detailed local orientation at a scale of 1 : 25,000.

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