

FIRST REPORT ON TICK-BORNE PATHOGENS AND EXOSKELETAL ANOMALIES IN *IXODES PERSULCATUS* SCHULZE (ACARI: IXODIDAE) COLLECTED IN KOKKOLA COASTAL REGION, FINLAND

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ABSTRACT - Thirty ticks collected in Kokkola coastal region (64°N, 23°E) in 2004 were identified as *Ixodes persulcatus* Schulze and studied for the presence of tick-borne pathogens and exoskeletal anomalies. One of the ticks was positive for tick-borne encephalitis virus. Ticks positive for several species of *Borrelia* were also detected, including *B. afzelii* (n = 12), *B. garinii* (n = 7), *B. burgdorferi* sensu stricto (n = 2), some other species of *B. burgdorferi* sensu lato group (n = 3), *Ehrlichia muris* (n = 5) and *Babesia microti* (n = 1). The total proportion of infected ticks was 63% (19 of 30), of which 12 were multiply infected. Forty percent of the ticks had exoskeletal anomalies, and these ticks had more multiple infections (6/12) than morphologically normal ones (6/18). In conclusion, this small sample size suggests that several important tick-borne pathogens apparently circulate in the newly detected focus of *I. persulcatus* in the Kokkola region. The results warrant further epidemiological studies on the incidence and prevalence of tick-borne diseases and on mapping the distribution of different *Ixodes* species in Finland.

Key words - Acari, Ixodidae, *Ixodes persulcatus* Schulze, *Babesia*, *Borrelia*, *Ehrlichia*, exoskeletal anomalies, tick-borne encephalitis virus, Finland.

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