

Preliminary investigations on the genetic structure with mitochondrial DNA in red deer (*Cervus elaphus*) from middle-eastern region of Poland

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The aim of this paper was to evaluate genetic parameters of red deer populations in the middle-eastern region of Poland by PCR-RFLP mtDNA method. Tissue samples for preparation of DNA were obtained from 32 red deer from middle-eastern region of Poland. Heterozygosity (H) and polymorphic information content (PIC) with CERVUS 2.0 was calculated. Eighteen alleles from 11 to 349 bp were selected. The number of alleles in loci was diversified and the values were from 2 (locus BspHI) to 5 (locus Tsp509I). The results indicated that evaluated loci showed the highest degree of polymorphism. The average values of heterozygosity factor were 0.655 and PIC 0.531. The most polymorphic locus in the evaluated population of red deer was Tsp509I. There is no polymorphism obtained in loci BspHI, MboI and RsaI. In the conducted investigations, value of PIC was very similar to that one of other authors but H was distinctly higher. On the other hand, the diversity of genetic material used in red deer introduction in the middle-eastern region of Poland allows concluding that polymorphism of red deer population is the highest one as compared to other regions of Poland.