Genetic relationships between populations and intraspecific subdivision of Elaphe longissima (Laurenti, 1768) as suggested by plasma protein electrophoresis and DNA fingerprinting

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Abstract

Specimens from the whole range of Elaphe longissima were analyzed for geographical variation of plasma proteins and DNA fingerprint loci. Albumins were identical throughout the range of the species, except for Sicilian specimens of E. l. romana which share bands with E. persica rather than with E. longissima. Transferrins indicate that Central European populations originate from the East, whereas Western European populations are indistinguishable from Northern Italian ones. DNA fingerprints reveal a low effective population size in Central European isolates with only few bands that could be informative for intraspecific groupings. Most of the repeated sequences are located on the female w-chromosome.