MITOCHONDRIAL VARIABILITY IN A GLACIAL RELICT, THE SNOW VOLE C*HI*ONO*MY*S N*IVALI*S (RODENTIA, ARVICOLIDAE)

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The snow vole Ch*i*ono*mys* n*ivalis* has a fragmented distribution restricted to the mountain and rocky regions from south-western Europe to the Caucasus and the Middle East. Several subspecies have been described on the basis of dental characters. The Israeli population from Mt. Hermon could represent a separate species because it shows high allozymic difference respect to the other European populations.
A fragment of 670bp of the mithocondrial gene of the cytochrome b has been sequenced from 23 individuals belonging to western and eastern Alps, central Italy, Slovenia, Macedonia, Turkey and Israele (Mt. Hermon). Sequences downloaded from GeneBank include haplotypes from Spain, Slovakia and Syria.
Phylogenetic trees obtained by Maximum Parsimony, Neighbor-Joining and Maximum Likelihood, show the same mitochondrial lineages, well supported by high bootstrap values. However the basal topology of the different lineages has not been resolved. These lineages show a rather low level of differentiation (2-4% of sequence divergence) indicating their recent origin. The clusters of haplotypes partially support previous data based on allozymes. Two different lineages are present in the alpine arc; one lineage includes haplotypes from Slovenia and Macedonia; one lineage includes all the haplotypes from Middle East together with the specimens from Mt. Hermon. Since these last specimens show a level of differentiation comparable with that found among the other populations, the specific status of this population is not confirmed by our data.