Phylogeography – Session 1

The chromosomal variability of lesser blind mole-rat populations (*Nannospalax*, *Spalacinae*, *Rodentia*) in Greece

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Extreme chromosomal variability is a common trait in several rodent taxa and lesser blind mole-rats (*Nannospalax*, *Spalacinae*) constitute an excellent example, with dozens of chromosomal races described so far. The genus has been extensively studied cytogenetically in its Asian range, but comparatively less in Europe, with virtually no data from differentially stained chromosomes! Regarding Greece, only two karyological studies – more than thirty years old – exist. However, each of the four localities studied in the past revealed a different chromosomal race with 2n=52, 56, 58 (continental Greece) and 2n=38 (Lesvos island), respectively, implying a rather remarkable chromosomal diversity for Nannospalax in Greece, which this study aspired to unravel. Thus, mole-rats were collected from several continental and one island locality of Greece and the karyological study was conducted on G– and C– banded metaphase spreads. All individuals from continental Greece were verified to belong to the super-species *Nannospalax leucodon*. Interestingly, despite the large distance between most collected populations (ranging from Peloponnese to E. Macedonia), all were characterized by 2n=56/NF=84 and had an identical autosomal morphology, with the exception of one specimen. In fact, this chromosomal form constitutes a new, rather widespread, chromosomal race for the species, whereas at the same time the existence of the race, previously described as 'Hellenicus', with 2n=58/NF=88 was not confirmed! Remarkably, the single specimen from Viotia, E. Sterea Ellada with a slightly different karyotype, due to pericentric inversions in two autosomal pairs, resembled the "Epiroticus" race, which, however, lies ca. 250 km to the NW! On the other hand, the population from Limnos island with 2n=38/NF=74 is formally placed in the super-species *Nannospalax xanthodon* ('Anatolicus' race). Based on the overall study results, the phylogenetic relationships among the Greek chromosomal races of *Nannospalax* and those of neighbouring countries are discussed and the next research steps are proposed.

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6th International Conference of Rodent Biology and Management and 16th Rodens et Spatium

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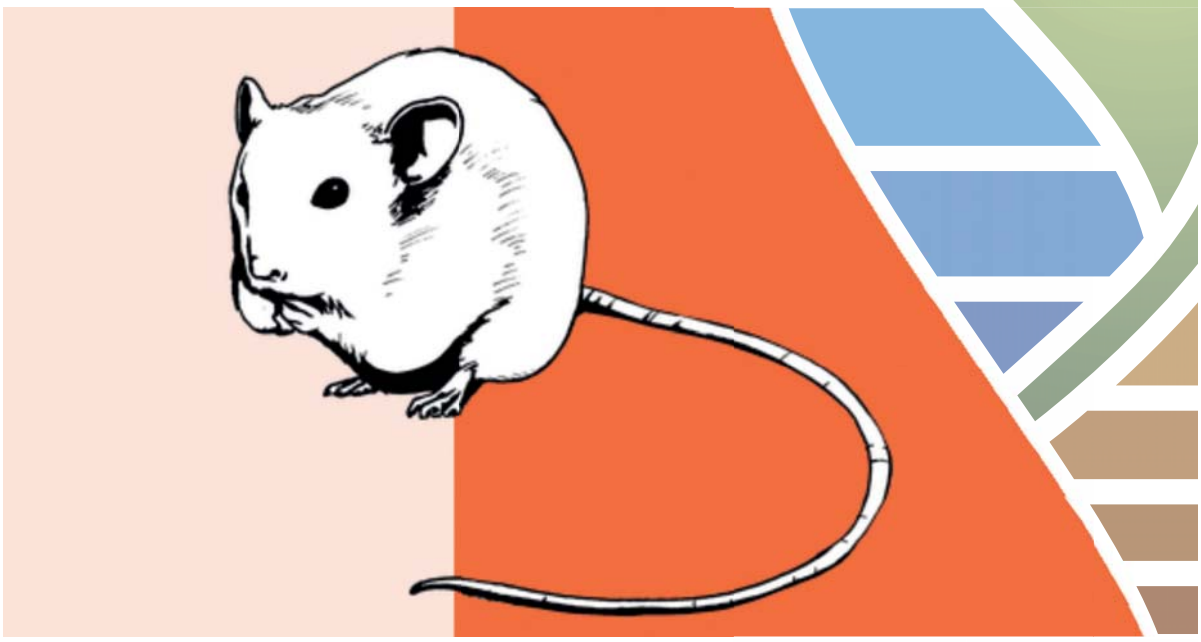

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