

ARE FREQUENCES OF B CHROMOSOMES IN POPULATIONS OF
YELLOW-NECKED MOUSE, *APODEMUS FLAVICOLLIS*,
INFLUENCED WITH TYPE OF HABITAT?

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B chromosomes (Bs) are supernumerary elements to the standard chromosome set, characterized by a dispensable nature. They are maintained like parasites if they possess any mechanism of accumulation. Otherwise they must confer some selective advantage to the carriers. Poverty of evidence for a beneficial effect led to the dominating opinion that Bs are genomic parasites. Populations of the yellow-necked mouse, *Apodemus flavicollis*, are characterized by a frequent presence of Bs, even though no mechanism for their accumulation has been found. The aim of the present work was a comparison of the phenotypic variability of populations of *A. flavicollis* in the context of the presence of B chromosomes.

Head morphology was compared in three populations of this species with different frequencies of animals with Bs (f_B). Two of the localities (Mt. Avala, $f_B=0.37$ and Mt. Cer, $f_B=0.31$) are typical forest habitats and are about 100 km far from each other, while the third locality (Ada, $f_B=0.19$) is a quite different habitat located less than 5 km from Mt. Cer. Discriminant analysis of morphological traits separated the locality Ada from Mt. Avala, while the population from Mt. Cer, besides its internal variation, included variation from both other localities (Ada-like and Mt. Avala-like). The frequency of animals with Bs in the Ada-like group (in the Mt. Cer population) was significantly different from that in the Ada population (0.19 vs. 0.43). Differences in f_B , found in phenotypically/genotypically similar groups in different habitats, point to the existence of adaptive effects of Bs at the level of populations. These adaptive effects could result from the influence of Bs on the overall genetic variability.