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DEVELOPMENTAL STABILITY, B CHROMOSOMES AND SUSCEPTIBILITY TO PARASITISM IN THE YELLOW-NECKED MOUSE *APODEMUS FLAVICOLLIS*

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Developmental stability (DS), along with canalization, represents an element of developmental homeostasis (DH). DH is defined as the mechanism responsible for ensuring phenotypic constancy in organisms despite the great variability of genetic and environmental features. DS is usually measured by fluctuating asymmetry (FA) which refers to the minor, random differences between the two sides in bilaterally symmetric traits. The factors that cause FA can be either genetic or environmental in origin. In this study we used 276 mandibles and 323 crania of adult yellow-necked mice (*Apodemus flavicollis*) featured by the frequent presence of supernumerary B chromosomes (Bs). We investigated the associations between developmental stability and susceptibility to nematode parasitism in this species in the context of Bs presence or absence. In agreement with prevailing view that Bs are genomic parasites, B carriers would possess lower level of DS, i.e. higher level of FA, compared to non-carriers. We hypothesized that parasitized individuals should be more asymmetric as well. By applying landmark-based geometric morphometrics, we estimated the levels of FA (FA10a indices) for mandibular size and shape and cranial shape in non-parasitized B non-carriers (NPB0), parasitized B non-carriers (PB0), non-parasitized B carriers (NPB+) and parasitized B carriers (PB+). According to the hypotheses mentioned above, NPB0 mice would possess the lowest FA10a indices. Although our results revealed no significant differences in the levels of FA, NPB0 individuals are characterized by the lowest FA10a index for mandibular size, but the highest FA10a index for cranial shape. Additionally, the similar levels of FA estimated for PB0 and PB+ mice indicated that B chromosomes are not linked to developmental stability and susceptibility to nematode parasitism in this species.

CRANIUM, DEVELOPMENTAL HOMEOSTASIS, FLUCTUATING ASYMMETRY, GEOMETRIC MORPHOMETRICS, MANDIBLE