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Scientific Journals Home Page Morphological and Biometrical Comparisons of Mesocricetus Nehring, 1898 (Mammalia: Rodentia) species distributed in the Palaearctic Region

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Abstract: Currently, 4 species, Mesocricetus auratus, Mesocricetus raddei, Mesocricetus newtoni, and Mesocricetus brandti of the genus Mesocricetus are accepted as the valid taxa based on karvotype and morphologic features. A potential fifth species, Mesocricetus nigriculus, is under dispute and is currently listed as a subspecies of M. raddei, along with Mesocricetus raddei raddei and Mesocricetus raddei avaricus. UPGMA cluster analyses performed with biometrical measures confirm, only partially, the common separation of Mesocricetus hamsters into a Transcaucasian group with Mesocricetus newtoni, Mesocricetus brandti, and Mesocricetus auratus, and a Ciscaucasian group including the M. raddei subspecies. The status of M. nigriculus could not be resolved by these analyses. Biometric measurements group M. nigriculus and M. auratus together. M. raddei were found to be the most divergent species according to its biometrical characteristics. In addition to this, there are no morphologic or biometric differences in the subspecies level between M. r. raddei and M. r. avaricus; however, the differences among taxa might be explained by the fact that the species inhabits mountainous areas and that body measures and coloration reflect ecological adaptation more than true phylogenetic position. Morphometric data revealed an increasing similarity in M. brandti from the eastern to the western part of its range. M. newtoni proved to be an intermediary between M. auratus and M. brandti.

Key Words: Mesocricetus spp, morphology, UPGM cluster, Palaearctic region

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