
Taxonomy Genetics

Comparative study of striped field mouse *Apodemus agrarius* from continental and insular populations: the result of five microsatellite loci analysis

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The striped field mouse inhabits a wide geographical area from central Europe to the Pacific coast of Asia including adjacent islands. The species range is subdivided into two isolated fragments (European-Kazakh-Siberian versus Russian Far East-Chinese-Korean) with disjunction in Transbaikalia. We compared the level of genetic variability and differentiation within and between these isolates using 4 regional group samples (30 animals in each group). The fragment analysis of GTTDS8, GATAE10A, CAA2A, GTTF9A and GSADT7 (selected from Makova et al 1998) was carried out. It was shown that allelic diversity in the western isolate was lower than in the eastern one. High affinity of regional groups within each of the isolates and a bit greater genetic differentiation between these isolates were found. The second aim of our investigation was to compare population structure and differentiation of mainland and island local populations of the eastern lineage. 263 mice from 6 continental localities of Russian Far East as well as 3 islands of the Peter the Great Bay (Sea of Japan) were analyzed. The allele numbers in the continental populations were higher than in the island ones. Tests for HWE indicated significant heterozygote deficiency in both types of populations. Island populations were more significantly different both from each other and in comparison with continental populations. This suggests the importance of genetic drift in the formation of their genetic structure, especially on the islands. The work was supported by grant № 18-4-031 of "Far East" Program of RAS.

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Book of Abstracts



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