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# MAPEEG-2022

PROGRAM &  
ABSTRACTS

MODERN ACHIEVEMENTS IN  
POPULATION, EVOLUTIONARY AND  
ECOLOGICAL GENETICS

MAPEEG ELEVENTH MEETING

VLADIVOSTOK & VOSTOK MBS

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**ONE'S MORE ABOUT GENETIC DIFFERENTIATION IN EASTERN LINEAGE OF STRIPED FIELD MOUSE (*APODEMUS AGRARIUS*): STUDY OF 6 MICROSATELLITE LOCI**

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The striped field mouse inhabits a wide area from central Europe to the Pacific coast of Asia including nearest islands. The species range is subdivided into two allopatric parts with disjunction in Transbaikalia. Due to the investigation of 5 microsatellite loci it was found higher affinity of continental populations within each of the lineages and somewhat greater genetic differentiation between these lineages (Frisman et al., 2019). The aim of a current work was to investigate the polymorphism and differentiation of islands and mainland populations in eastern lineage of the species. Animals were caught on 4 islands of the Peter the Great Bay in Sea of Japan as well as in 6 continental localities in Russian Far East. Mainland localities were distributed from the coast of the Sea of Japan in the southern Primorye to the northwestern end of the area of the lineage in the Amur region. Local samples contained between 21 and 30 specimens, and total sample size comprised 278 individuals. Six microsatellite loci were selected for the analysis, CAA2A, GSADT7, GTTDS8, GATAE10A, GTTF9A that developed after Makova et al. (1998) and DSFM2 that developed according Wu et al. (2008).

A higher allelic diversity was found in the mainland part of the range than on the island part of the range. Opposite to that, a significantly higher level of genetic differentiation was found between islands' part of the range. On the mainland part of the range there was a decrease in allelic diversity in populations in the direction from south to north. The greatest differences for overall dataset were observed for the population of Big Pelis island. This island, characterized among those considered (Russkii, Popov's, Putyatin's), by the smallest area, the greatest distance and longest time of separation from the continent (9.5 thousand years) (Velizhanin, 1976). Populations of other islands different in size of area, but separated from the mainland by a distance of 0.6-1.6 km showed a level of differentiation comparable to the differentiation of the western and eastern continental lineages. The latter can be a confirmation of no more than the Holocene time of the division of the area of the striped field mouse in Transbaikalia.