

# Abstracts – 7th European Congress of Mammalogy

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## P.16 Maria Fominykh

### Relationship between dental microwear patterns and diet in *Cl. glareolus* in a natural population and in two feeding experiments

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**Abstract for poster** Dental microwear, the pattern of marks on the tooth surface, is an important basis for understanding the diets of mammals. We study the microwear patterns on the flat occlusal surface of *Cl. glareolus* molars from a natural population in the Middle Urals (Russia) and dietary variation during four seasons (in winter, spring, summer and autumn) based on the analysis of stomach content data. The enamel surfaces were examined using a SEM TESCAN VEGA3. As a result, the relationship between the seasonal dietary preferences and number of microwear patterns was revealed. Also we carried out two experimental studies with fixed diet composition (monodiet with one type of food and composite diet consisting of different food items) to determine the correspondence between food components and enamel microwear of voles. Taken together, these results will allow us to improve the accuracy the reconstruction of vole diet. The study is supported by RFBR grants 14-04-32179, 14-04-32018.

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## P.17 Maria Fominykh

### Clethrionomys and Craseomys species in Quaternary faunas of the Urals

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**Abstract for poster** Arvicolinae rodents are extensively used in Quaternary studies. *Clethrionomys* and *Craseomys* species related to nemoral and boreal forests and their proportions in fossil faunas may serve as indicators of forest biotopes. The Pleistocene and Holocene sites are located in different landscape zones in the Urals. It allows to analyze the distribution and proportion as well as the variability of red-backed voles in the gradient of environmental conditions. It was shown that they expanded the ranges to the north since Late Pleistocene to Holocene. Their molars are retained the roots that may characterize their relative age. It was studied the age structure of fossil *C. rufocanus* and *Cl. rutilus* from the different layers in Holocene sites and found the differences in proportions of age stages which are related with the process of remains accumulation due to the available age group of voles for the predator in different seasons. The study is supported by RFBR grants 14-04-32179, 13-04-00847.

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**P.58 Sergey Zykov**

**Comparative analysis of dental enamel microstructure in the late quaternary and modern *Microtus gregalis* in the Urals**

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**Abstract for poster** Because of its relatively early divergence (among *Microtus*), rapid evolution, wide distribution and abundant fossil record, the phylogenetic lineage of *Microtus* (*Stenocranius*) *hintoni* - *Microtus* (*S.*) - *gregaloides* - *Microtus* (*S.*) *gregalis* is commonly employed in Quaternary biostratigraphy across northern Eurasia. Evolutionary changes within the terminal taxon - *Microtus gregalis* - appear to be good chronological markers when morphotype characters and measurements of the first lower molar (m1) are considered. Here, we explore the potential usefulness of dental enamel microstructure to reveal evolutionary significant changes within *M. gregalis*. The study aims to investigate the spatio-temporal and ontogenetic patterns of the cheek tooth enamel microstructure variation in *Microtus gregalis* from different parts of the present-day disjunct range and from the Late Pleistocene and Holocene localities of the Middle Urals. The work was supported by the RF President Grant MK-331.2014.4.

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