

gravel beds. Two exposures could be considered as key-sections: Gam with OSL-dates ~101-92 kyr BP (Lyså *et al.* 2014) and Yaren'ga (Zaretskaya *et al.* in press).

Two key sections of the 2<sup>nd</sup> 15 m river terrace are located in the very upper (Kur'jador) and lower (Baika) reaches of Vychehga and contain the continuous record of MIS 3 and 2 (Byzovo, upper-middle Weichselian, Leningradsky and Polar, upper Weichselian and Ostashkov horizons). Fluvial deposits forming the Byzovo horizon are different facies of alluvium (from active channel to oxbow lake) containing organic layers. OSL dates comprise the time interval 67-47 kyr BP (at Kur'jador, Lyså *et al.* 2011), radiocarbon - ~ 44 – 26 <sup>14</sup>C (48 – 30 cal) kyr BP and <sup>230</sup>Th/U – 50 – 38 kyr BP (Maksimov, Zaretskaya *et al.*, 2015). Pollen data shows the presence of *Picea* in the organic-bearing sediments (Andreicheva *et al.* 2015).

Sediments of the LGM Ostashkov (Polar) horizon are represented by the 1st terrace alluvium with cryoturbations (IRSL date of 23.1±2.0 (RLQG 2362-085)) and aeolian silts and sands of the upper parts of Kur'jador and Baika sections. Another generation of the 1st terrace contains the deposits of deglaciation time (17-11 cal kyr BP) (Zaretskaya *et al.* 2014). Holocene is represented by floodplain deposits dated from 11700 cal BP till now (Chernov *et al.* 2015).

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## **Variations in yellow-necked mouse (*Apodemus flavicollis* Melch., 1834) dental morphologies of the Nizhneirginsky Grotto sediments (Middle Urals) in a phylogeographical context**

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### **Session 1: Poster**

The yellow-necked mouse (*Apodemus flavicollis* Melch., 1834) is a typical representative of the European fauna, whose distribution range is confined to the broad-leaved forest zone and occupies a considerable territory of Eurasia from Great Britain and northern Spain to the Urals [1,2]. The Urals is the eastern boundary of the distribution of the yellow-necked mouse. More recently, the most northeastern habitat for the yellow-necked mouse has been described [3]. Also in this area the yellow-necked mouse molars were found in the late Holocene sediments of Nizhneirginsky Grotto (56°51' N, 57°24' E). In our work, we analyzed the variability of molars of the yellow-necked mouse from modern populations (marginal and from the main part of the range) and fossil molars in the phylogeography context of the yellow-necked mouse.

A comparative analysis of the morphological variability of the yellow-necked mouse molars was performed using a set of the non-metrical dental characters. The complex of the non-metrical dental characters was based on those described earlier and on own research [4,5].

We considered the first and second upper and lower molars of the yellow-necked mouse of recent populations: Zhitomir region (Ukraine), n(molars)=76; Republic of Bashkortostan (Russia), n(molars)=84; Sverdlovsk region (Russia), n(molars)=68 and of Grotto Nizhneirginsky sediments (Sverdlovsk Region, Russia), n(molars)=43.

Populations from the main part of the range (Zhitomir region, Republic of Bashkortostan) have a similar phenotypic. Late Holocene molars from the territory of the Middle Urals are phenotypically close to the recent populations from the main part of the range. The population from the northeastern edge of the yellow-necked mouse range is characterized by greatest specificity of the molars morphology that may indicate isolation of this population due to a reduction in the range of the yellow-necked mouse in the Middle Urals in the late Holocene.

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# **Quaternary Stratigraphy in Karst and Cave Sediments**

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