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Kamennyj Ambar (Fig. A13, Appendix 12). The depth of the cover beds on the slopes increases towards the valley floor. In the soils of the Lower Terrace varying salt contents can be found, which occasionally almost reach the surface. In these places Mollic Solonetz were identified.

Cross sections of the excavation site in Kamennyj Ambar revealed differing influences of the past settlements on soil formation. While Chernozems have developed in the fillings of younger pit houses, usually Terric Regosols and Terric Solonetz were found in the layers of the older Sintashta culture. The Chernozem formation in the relicts of the younger settlement phase (presumably Srubno-Alakul Culture after Koryakova & Epimakhov, 2007) demonstrates the resemblance of pre- and post-settlement soil formation, assuming the substrate being similar to a natural one. Nevertheless it must be investigated, why in the Sintashta-layers no genesis of Chernozems has taken place.

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MYOSPALAX PSILURUS – A RELIC OF THE SOUTHEASTERN OUTSKIRTS OF THE MAMMOTH FAUNA

Key words: North China Zokor, Late Pleistocene, Holocene, distribution, Far East Russia

It has relatively recently been shown based on genetic and craniometric data that zokors inhabiting the Primorsky and Zabaikalsky Regions belong to two different species, *Myospalax psilurus* (Milne-Edwards, 1874) and *M. epsilanus*

(Thomas, 1912) (Puzachenko et al., 2011). The North China Zokor, *M. psilurus*, mostly inhabits stepped meadows. It is a rare endemic species of Eastern Asia that can be found in northeastern China and southern part of the Russian Far East. In Russia, the North China Zokor currently inhabits only four small isolated areas in the southwestern part of the Khanka plain (Fig. 1). The total number of this species in this area is less than 500. The species is inscribed on the Red Lists of the International Union for Conservation of Nature and Natural Resources, Russian Federation and Primorsky Region as a subspecies of *M. p. epsilanus*. It is considered to be a typical representative of the Mongolian-Daurian fauna that used to inhabit only the lowland areas of the Khanka plain. The main reason for the decline in its population size was land plowing.

Examination of the fossil samples collected from cave deposits in the Primorsky Region demonstrated that the habitat of the North China Zokor in the Late Pleistocen–Holocene was much larger. Bone remains of this species were found at the following locations:

1. Sukhaya cave located in Skalistaya Mountain, 5 km away from Barabash village in the southern Primorye, Khasansky district (110 m above sea level). When identifying the bone remains of animals found there during archeology excavations in 1998 (Kononenko et al., 2002), a zokor mandible was discovered in the third lithological unit of the exploratory shaft at a depth of 0.55–0.50 m. Sporopollen analysis showed that this unit corresponds to the Betula-Corylus-Pinus palynozone. The estimated

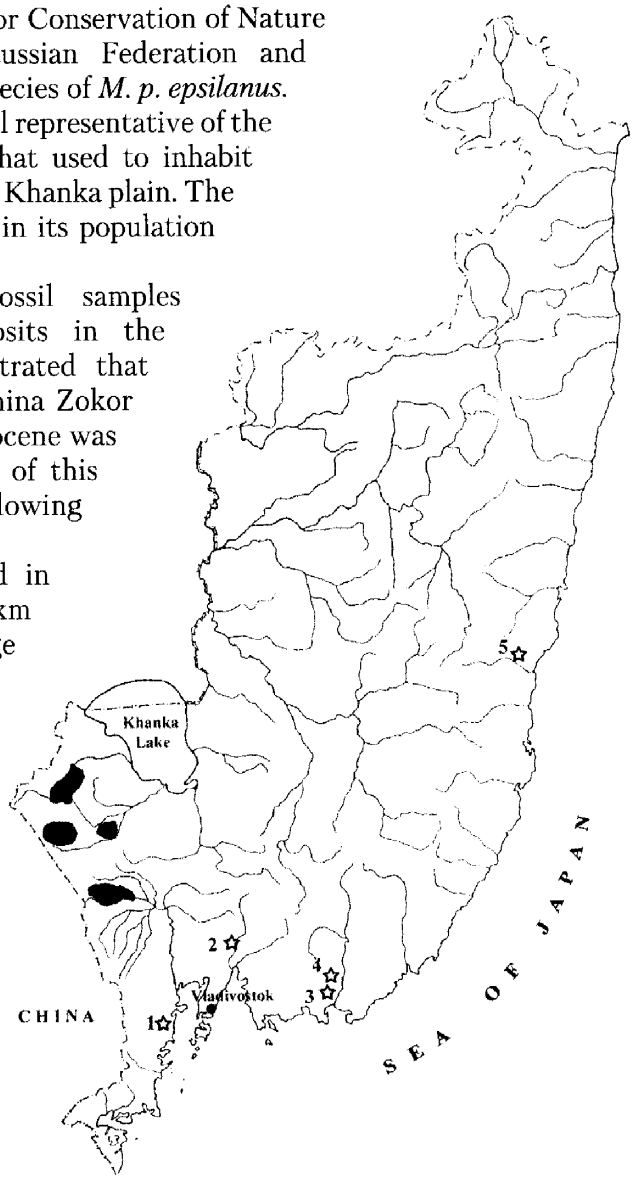

Fig. 1. Contemporary distribution of *Myospalax psilurus* (black areas) and the North China Zokor fossil samples (stars) in Primorsky Region

age is the early Boreal or mid-Preboreal period (9700–9300 years ago). The estimated age is the Pre-Boreal and Boreal phases of the Holocene Epoch (10500–7500 years ago).

2. Cave of Young Speleologists is located on the northern slope of Zhadov Mountain 1.5 km northeastwards away from Sudoverf village. The cave entrance is located 40 m away from the crest, under a rocky wall. The absolute altitude of the entrance is 228 m; the relative height above the level of the Artemovka River is 178 m. Individual teeth of the zokor were discovered at a depth of 0.60–0.35 m.

3. Bliznets cave resides in the southern slope of the Lozovy Ridge, a branch of the Sikhote-Alin Range, 25 km northwards from the city of Nakhodka. The entrance is located 300 m above sea level on the 40–50° slope. The entrance hole of Bliznets cave, with excavations carried out in its bottom, is a natural trap for numerous animals. Individual teeth of the zokor were found at a depth of 3.3–3.2 m (Alekseeva, 1986). The estimated age is the Subboreal phase of the Holocene (4800–2000 years ago) (Tiunov, 1997).

4. Medvezhiy Klyk cave resides in the Lozovy Ridge, 2.5 km away from Bliznets cave at a height of 465 m above sea level. The cave is a vertical karst cavity. Individual teeth of the zokor were found almost at all depths in the cave deposits. The age of the host deposits varies from 40,000 to 2000 years.

5. Tetukhinskaya cave is located northwards of the city of Dalnegorsk, deep in Late Triassic limestones. The cave entrance is located 410 m above sea level. Individual teeth of the zokor were found almost at all depths of cave deposits except for several upper horizons. The age of the uncovered deposits was estimated to be 30,000–3000 years.

The explored caves are located in the medium-altitude forest area 5–7 km away from the valleys of large rivers.

The excavations of bone fossils of the zokor in locations that currently belong to the typical forest zone of the southern Primorsky Region attest that open forest-steppe and steppe landscapes were more abundant in this area in the Late Pleistocene and Holocene. Meanwhile, it should be mentioned that bone remains of forest species are predominant in the layers where bone fossils of the zokor were found. This fact means that open landscapes were not predominant but were rather abundant at least along the river valleys and southern slopes of mountains. The disappearance of the zokor in the greatest area of the Primorsky Region over the past several millennia is obviously associated with degradation of its main habitats and prevalence of forest vegetation in these areas. The presence of bone fossils of the zokor in units corresponding both to warm and cold periods of the Late Pleistocene indicates that the previously existing ecosystem was stable. Kalyakin (2014) believes that it degraded only after the main edificators (proboscideans and large ungulates) had disappeared.

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THE PLIO-QUATERNARY DEFORMATION OF THE LAKE VAN BASIN (EASTERN ANATOLIA) FROM MULTI-CHANNEL SEISMIC REFLECTION PROFILES

Key words: Eastern Anatolia, Lake Van, Plio-Quaternary, Deformation, Faulting, Sedimentation

The Eastern Anatolia orogeny is the one of the best special areas along the Alp/Himalayan orogenesis in which to study deeper lake basins during collision and post-collisional periods (Fig. A14, Appendix 13). Lake Van is dome-shaped basin that lies in a tectonic depression formed through a combination of normal and strike-slip faulting and thrusting (Fig. A14). This faulting causes regional volcanism, earthquakes and hydrothermal activity. The geographic position of the lake is restricted to a critical region where the Afro/Arabian Plate from S