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A NEW SMALL MAMMAL FAUNA FROM THE LOWER TUROLIAN (11 MN) OF THE SOUTHERN UKRAINE

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A new locality of Early Turolian small mammals, Palievo (Southern Ukraine), is briefly described. The fauna of the bonebearing layer is preliminary dated to the end of the Early Turolian (MN 11). Taxonomic composition of the micromammal fauna from Palievo is presented and compared with other contemporary European localities.

The locality is situated in a narrow continental sedimental section, probably Upper Sarmatian (Khersonian) age, which is exposed in the Khadzhibeyski liman right bank between the villages of Palievo and Otradovo (Odessa region, Ukraine). The geological structure of location was not studied in detail. According to data of preliminary observation we indicated there was a section of greenish and yellowish clays with bands of fine-grained sand and gravel lenses which contain current oryctocenosis. The above-mentioned strata covered by oolitic limestone and greenish-clays. Presence of brackish limestone and heterogeneity of facial structure suggests alluvial-riverine genesis of location, which occurred in unstable coastal zone of Sarmatian Basin.

The greatest occurrences of osteological elements were yielded from several lenses of yellowish clayey gravel. It is represented mainly by isolated teeth, bones of postcranial skeleton and rarely by fragments of upper and lower jaws. Apart from micromammalian bones some teeth of small Mustelids, Gazellins and Hipparion jointly with bones of fishes, amphibians, reptiles and clamshells of freshwater mollusks (substantially Planorbids, Lymnaeids and Unionids) were yielded here. These fossils have been collected since the early autumn of 2008.


There is no doubt that the presented complex shows a gliroid-insectivore community, dominant group of which was composed with dwarf hamsters of genus Kowalskia and mice of genera Hansdebruijnia and Apodemus. Insectivores, pikas and Glirids are very common.

Taxonomical composition of micromammals from Palievo is close to fauna of Teruel-Alfambra region in Spain (specifically Los Mansuetos 2 and Masada Rueva 3) which is traditionally correlated with MN 12a (Van Dam J. A. et al., 2002).


From a paleoecology point of view the Lower Turolian second half of Eastern Paratethys is characterized by a distinct increase in species indicating of strong climate aridity (Nesin V. A., 1996; Nesin V. A. & Nadachowski A., 2001). The assemblage of small mammals from the Palievo locality is of special interest because of terrestrial moisture loving species of greater variety (e.g. gymnure, and urotrichine among insectivores, flying-squirrels and Glirudinus-like dormice among rodents) which is not typical in above-mentioned associations from Novoelizavetovka-2 and, especially Frunzovka-2.

Small mammal complex which when studied may be correlated to adequate Turolian faunas of Eastern Paratethys. Thus it takes its place in stratigraphic sequence of Lower Turolian second part (11 MN). In ecological aspect fauna of Palievo locality shows short-term period of climate humidification that was accompanied with expansion of mesophilous biotopes that existed in zone of semiarid steeps and savannas.


Ziegler R. (2006) Insectivores (Lipotyphla) and bats (Chiroptera) from the Late Miocene of Austria.- Annalen des Naturhistorischen Museums in Wien, 107a: 93-196.

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