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# **QUATERNARY STRATIGRAPHY AND PALEONTOLOGY OF THE SOUTHERN RUSSIA: connections between Europe, Africa and Asia**

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## NEW SMALL MAMMAL FAUNAS OF LATE PLIOCENE – EARLY PLEISTOCENE FROM NORTHERN CAUCASUS AND LOWER DON AREA

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Northern Caucasus remains a relatively poorly studied region in terms of the fossil record of Late Cenozoic mammalian faunas. In recent years several new fossil assemblages of Late Pliocene have been discovered shedding new light on faunal history of small mammals in this area. These new discoveries are reviewed below in stratigraphic order.

Zhukovskiy Mayak (47°38'26"N 42°29'29"E). The site was discovered in 2007. It is located in the cliff of the Tsymla Reservoir, near the Zhukovskaya village (Rostov Region). The bone bearing cross-bedded fluvial sands belong to the upper part of the Nagavskaya Formation. The assemblage includes *Desmana* sp. (1), *Beremendia* sp. (1), cf. *Petenya* sp. 1, *Sorex* cf. *minutus* (1), Leporidae gen. (1), *Allactaga* sp. (2), *Allocrietus* sp. (1), *Mimomys hajnackensis* (61), *Mimomys* sp. (2), *Borsodia novoasovica* (82), *Pliomys ucrainicus* (1), *Micromys* cf. *praeminutus* (2), Muridae gen. (4). The fauna can be dated to Late Pliocene (Piacenzian), Akchagylian, the zone MN16a, and the regional zone MNR5. This fauna is very similar to the fauna of Shirokino (Ukraine).

Terskiy (44°11'39" 43°20'29"). The site, located in Stavropol Region near the town of Georgievsk, was discovered by G.A. Pismenskaya in 2004. It was briefly described (Tesakov, Pismenskaya, 2005). Fossiliferous sands of fluvial origin overlie the Akchagylian marine deposits. The scarce available material includes Leporidae gen., *Nannospalax* sp., *Apodemus* sp., *Mimomys praepliocaenicus*, and *Clethrionomys* cf. *primitivus*. The fauna is dated to earliest Pleistocene (Gelasian), late Villanyin, MN17, regional zone MNR3. This level has no faunal matches in the Northern Caucasus.

Sopatyi Kurgan (45°26'6"N 40°52'16"E). The site was discovered in 2007. The bone bearing bed (greenish sandy silts with carbonate and manganese concretions) occurs at the base of thick subaerial sequence in the right bank of the Kuban River at the upper margin of Temizhbebskaya village (Krasnodar Region). The scarce assemblage includes *Clethrionomys* cf. *kretzoi*, *Mimomys reidi*, and *Mimomys* sp. This association is dated to earliest Pleistocene (Gelasian), late Villanyin, MN17, and regional zone MNR1. The fauna is a probable analog of Psekups small mammal fauna (Tesakov, 2004).

Forstadt 2 (45°1'19"N 41°9'52"E). The site was found in 2004. The bone bearing horizon is exposed in the old clay pit at the Forstadt village near the town of Armavir (Krasnodar Region). The fauna includes *Ochotona* sp. (2), *Spermophilus* sp. (2), *Spalax* sp. (2), *Allophaiomys* vel *Chionomys* (12), *Lagurodon arankae* (5), *Prolagurus* cf. *panonicus* (2), *Lagurini* gen. (22), *Mimomys* ex gr. *pusillus* (2), Muridae gen. (1), *Cricetus* sp. (2), and *Cricetulus* sp. (1). The fauna is dated to Early Pleistocene (Eopleistocene of the Russian scheme), 'Calabrian', early Biharian, and regional zone MQR8.

Iskra (45°21'9"N 36°49'52"E). This site was discovered in 2008. The fossiliferous offshore brackish and fresh water deposits outcrop in a clay pit near Beregovoi settlement (Taman Peninsula, Krasnodar region). The source deposits contain abundant shells of *Dreissena* spp., and *Unio* (*Pseudosturia*) sp. Small mammal material includes *Allophaiomys pliocaenicus* and *Lagurini*. This fauna dates to Early Pleistocene ('Calabrian'), early Biharian, and regional zone MQR8.