## New data on hunting weapon of the North Caucasus Neanderthals

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## Résumé

Our research provides new data on hunting weapon of two different Neanderthal populations in the North Caucasus. The combined typological and use-wear analyses allowed us to distinguish obsidian spearheads in the Zagros Mousterian industry at Saradj-Chuko Grotto, located in the Elbrus region, in the north-central Caucasus. The obsidian artifacts identified as spearheads have characteristic morphological features and show use-wear traces that allowed us to determine how these spearheads were attached to the spear shafts, likely made of wood. Obsidian spearheads are defined for the first time in the Middle Palaeolithic of the Caucasus. The associated fauna suggests the obsidian spearheads from Saradj-Chuko were used for hunting ungulates, especially the Caucasian goat.

A unique bone point found in the Eastern Micoquian industry at Mezmaiskaya Cave, in the north-western Caucasus, allows us to discuss the Mousterian origin of specialized bone-tipped projectile weapon in Europe long before arrival of the Upper Paleolithic modern human groups to the continent. Results of use-wear analysis, Fourier-transform infrared microspectrometry, and  $\mu$ CT scanning indicate that the bone point from Mezmaiskaya was hafted on a shaft, likely made of wood, using an adhesive mastic composed mainly of bitumen with addition of natural resin. Zooarchaeological data suggests the bone point could be used for hunting small mammals.

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**Mots-Clés:** Mousterian obsidian spearheads and bone projectiles, Neanderthal hunting weapon, North Caucasus

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