## Filling the gap: Evidence from Dvoynaya Cave on the Pleistocene-Holocene boundary in the North Caucasus

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## Abstract

Evidence on the human occupation during the Younger Dryas remains scarce both in the South and in the North Caucasus. The number of stratified sites with layers radiocarbon dated to the Pleistocene/Holocene boundary and the initial Holocene being extremely small, this lead to the idea of the Northwest Caucasus depopulation during the mentioned periods (Golovanova et al, 2012; Golovanova, 2016). The existing chrono-cultural schemes based on the materials from Mezmayskaya Cave and the Badynoko Rockshelter suggest that the geometric microliths - predominantly backed lunates - gradually became widespread in the region around 15-13 cal kyr BC (Golovanova et al., 2012; Seletsky et al., 2017), with the pressure technique emerging synchronously (Seletsky, Shnaider, 2018; Nedomolkin, 2019), several millennia earlier than in the Near East.

An entirely different picture emerges due to the analyses of Dvoynaya Cave materials (Leonova, Aleksandrova, 2012; Leonova, 2014; Alexandrova, Leonova, 2017). The site, located in the Gubs Gorge in the foothills of the northern slopes of the Western Caucasus, produced a stratigraphic sequence with three layers ranging in dates from the Upper Paleolithic to the Late Mesolithic and locally divided by horizons of small rock debris. A tool-kit dominated by the backed lunates and notched blades is characteristic of the second 'Early Mesolithic' layer, the lunates being concentrated at the bottom of the layer. The dates from the lower part of the second layer are within the interval of 12.1–9.2 cal BC. We tend to see the occurrence of two lunates in the underlying Upper Paleolithic layer as a minor contamination, not as evidence on the genesis of a new tradition. Lithic technology of the second layer is characterized by the strictly unidirectional debitage aimed at the production of narrow blades and bladelets, with probable usage of indirect percussion. There is no evidence of pressure technique use in the second or in the underlying third Upper Paleolithic layer. It is only in the uppermost first cultural layer, tentatively dated to 8.8–7.1 cal BC, that evidence of pressure blade making (Mode 3) is found.

No roots of the lithic technology characteristic of the occupational episode dated to the Pleistocene-Holocene boundary could be found in the local Upper Paleolithic. On the other hand, the predominance of a specific armature type - the backed lunates - might point at a possible connection with the synchronous cultural units: the 'Caspian' Mesolithic in the

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southeast of the Caspian Sea and the Late Natufian in the Near East. Acknowledgement: This project is supported by the Russian Foundation for Basic Research, project no. 20-09-00388 ('Upper Palaeolithic and Mesolithic cultures of North-West and Central Caucasus: changes in stone tool-kits and lithic technology').

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