The Role of the Western Georgian Refuge Zone on Expansion of Neanderthals and Anatomically Modern Humans: Impact of Tectonic and Volcanic Processes on Human Beings During the Middle and Upper Paleolithic

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The Caucasus was a migration corridor which periodically enabled hominin dispersals and migrations between Anatolia, the Near East, Europe and Central Asia. The Southern Caucasus, and especially Georgia, have yielded numerous Paleolithic sites dated to the Middle and Upper Pleistocene, located at the foot of the Greater Caucasus barrier. Among about 500 Paleolithic sites, 200 are represented in the Rioni-Kvirila basin, Imereti Region (refuge zone) in Western Georgia and South Ossetia.

Several cultural groups are based on local technological trends or on behaviors coming from other areas (Near East, Zagros, Eastern Europe). One of these, named Djruchula-Koudaro, groups sites from the Imereti and South Ossetia areas in northern and northwestern Georgia. These sites yields lithic assemblages with common traits, such as the proportion of blades and the use of bifacial retouch, in particular, to shape the tip of elongated artifacts.

Based on the study of the lithic industry and results of dating, we suppose that some kind of cultural influences from the Near East started during the Lower Paleolithic (Late Acheulean). Later, a local evolution of Middle Paleolithic culture, cultural influences from the Near East (Zagros) and Northern Caucasus, the merging of these different features and a local development of the culture took a place in the Middle Paleolithic. The goal of one of our projects is to research Neanderthal evolutionary history in the Caucasus and their replacement by Anatomically Modern Humans, which could result from natural catastrophes. We found evidence of paleo-earthquakes during the Pleistocene in some of the caves of Western Georgia.

In some caves the RESET project (RESponse of humans to abrupt Environmental Transitions) has carried out research on microtephras (i.e. distal ash fall from past volcanic eruptions) to correlate European and circum-Mediterranean geological, environmental and archaeological events over the last 100,000 years. One of the most interesting aspects of our research deals with refining the chronology of late Neanderthal and early Modern Human occupations in Europe between 60-25 ka BP by identifying tephra stratigraphic markers of known age and provenience and integrating these site datasets into high-resolution climate change records. In some Upper Paleolithic layers we have found microtephras which come from local volcanoes. This may have been one of the reasons of movement (local, long distance?) of some groups of humans.

THE ROLE
OF CULTURE
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– Refuge, Hub or Source Area?

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