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# Reconstructing the local environment of Neanderthals and Modern Humans: Preliminary zooarchaeological analysis of the micromammals of Shanidar Cave (Iraqi Kurdistan)

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## Abstract

The extinction of Neanderthals and the expansion of Anatomically Modern Humans (AMH), between approximately 50,000 to 30,000 years BP in Eurasia, is a transition that continues to spark debate amongst archaeologists and palaeoanthropologists. Various theories have been put forward to explain the replacement of Neanderthals by AMH, and in recent years there has been a particular focus on whether Neanderthals were less resilient to abrupt climate change in MIS 3 than AMH. Palaeoclimatic and palaeoenvironmental studies are important as they allow testing of these climatic theories and help to build our knowledge of the climatic resilience of each species and their probable ecological niche. A major methodological challenge for the debate about whether climate was a major driver in Neanderthal extinctions and AMH dispersals is that the best climatic records have tended to be distant from areas of hominin occupation - for example from marine sediment and ice cores. High resolution, independent climatic proxies, which can be closely mapped onto sites of known Neanderthal and AMH occupation are therefore required. The microfaunal deposits of Shanidar Cave offer such an opportunity for this research. Microfauna are a valuable source of environmental information due to their relatively small ecological niches, small home range, short life span and abundance in zooarchaeological assemblages. In this poster I present the preliminary zooarchaeological analysis of the micromammals of Shanidar Cave excavated in the latest series of fieldwork beginning in 2014. Material has been taken from Middle and Upper Palaeolithic sample columns allowing changes in the micromammal community to be tracked throughout the sequence. From this it is possible to make inferences about the local environment of Shanidar Cave throughout the sequence which can then contribute to the debate on the factors involved in Neanderthal extinction and the subsequent success of Modern Humans in the region.

**Keywords:** Micromammals, Palaeoecology, Palaeoenvironment

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