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Palaeodiet and palaeoecology of a Late Pleistocene cave bear population in the Romanian Carpathians

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Over the last decades, analysis of the stable isotopes of C and N has been extensively used for palaeodietary reconstruction of the MIS 3 fauna from the Romanian Carpathians. The faunal assemblages from the majority of the well-known cave sites from this region are dominated by bears, thus leaving fewer opportunities for stable isotopic analyses on other taxa. Muierilor Cave (Southern Carpathians), however, is an exception and has sedimentary deposits that yielded a taxonomically rich Late Pleistocene palaeofauna including red deer, cave bears, cave lions, wolves and hyaenas. δ15N and δ13C values derived from the bone collagen of 40 mammal individuals from this cave indicated a clear delimitation of dietary behaviors among studied faunas. In addition, red deer and carnivores from the same bone assemblages display δ15N and δ13C values similar to those of the Central and Western European MIS 3 populations. The richness of the large mammal fauna and the large sample size allowed for a better understanding of the palaeoecological relationships among these species. This study demonstrates the usefulness of δ15N and δ13C analysis in sites with a complex fossil faunal context and shows a good agreement between the newly obtained data and those reported for other European Late Pleistocene large mammals.

Key words: Marine Isotope Stage 3, large mammal fauna, cave bears, stable isotope analyses.

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