

## Stable Isotope Evidence for Early Modern Human Diet in Southeastern Europe: Peștera cu Oase, Peștera Muierii and Peștera Cioclovina Uscată

ERIK TRINKAUS, ANDREI SOFICARU, ADRIAN DOBOȘ, SILVIU CONSTANTIN, JOÃO ZILHÃO  
and MICHAEL RICHARDS

During the process of direct radiocarbon dating of four Early Upper Paleolithic modern humans from the Romanian sites of Peștera cu Oase, Peștera Muierii and Peștera Cioclovina Uscată, carbon and nitrogen stable isotope ratios ( $\delta^{13}\text{C}$  and  $\delta^{15}\text{N}$ ) were measured from their bone collagen. These individuals have  $\delta^{13}\text{C}$  values similar to other Late Pleistocene humans. Their  $\delta^{15}\text{N}$  values are well within the carnivore trophic level range, among the higher of the Middle Upper Paleolithic values, and significantly greater than those of preceding Middle Paleolithic and Initial Upper Paleolithic Neanderthals. These data suggest a shift towards a broader faunal dietary spectrum among these early modern humans, despite western and eastern European archeological evidence and human functional morphology indicating little change in faunal exploitation from the Middle Paleolithic to the Early Upper Paleolithic.