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# The Neanderthals from Grotta Breuil (Monte Circeo, Latium, Italy): a reappraisal

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## Résumé

Survival in geographical and climatological refugia might have been a critical aspect in the evolution and demise of the Neanderthals, in a way that makes it crucial to investigate human dispersal dynamics and paleoecology during the Late Pleistocene. South of the Alps, bound by the Appennines to the east and the Tyrrhenian coast to the west, Latium constitutes a possible refuge area during the Pleistocene, as also mirrored in the fossil record [Manzi et al. 2011]. In this perspective, we present a reappraisal of the Middle Paleolithic site of Grotta Breuil (Monte Circeo) [Bietti et al. 1991], within a multidisciplinary framework. The cave is a Mousterian site that was in use while, elsewhere in the Peninsula, Upper Paleolithic technocomplexes (e.g. the Protoaurignacian) were already present. Human fossil remains, associated with layers 5 and 6, with the former dated to about  $34,600 \pm 330$  BP (AMS uncalibrated date) [Grimaldi & Santaniello 2014], have been attributed to *Homo neanderthalensis* [Manzi & Passarello 1995]. Zooarchaeological analyses revealed changes through time in hunted species [Stiner 1994], as well as variation in adaptive strategies along the stratigraphic sequence, with lower layers showing residential use and upper layers associated with a more ephemeral occupation of the cave throughout the year. A new project of research on both the site and the material collected at Grotta Breuil envisages a paleo-anthropological, archaeological, and paleoecological investigation paired with a systematic isotopic study, aimed at reconstructing the paleoecology for the Neanderthals in this area. In this context, the human specimens have been imaged by X-ray microtomography ( $\mu$ CT), with the aim to perform detailed morphometric analyses. The isotopic investigation includes oxygen ( $\delta^{18}\text{O}$ ) and carbon ( $\delta^{13}\text{C}$ ) isotope ratios measured in the carbonate fraction of animal teeth (with multiple species available for our study) sampled from the whole stratigraphy at the site.

**Mots-Clés:** Neanderthal, Grotta Breuil, Italy, isotopes, carbon, oxygen

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