

Variation in parietal bone thickness and structural arrangement in Eastern African *erectus*-like *Homo*: comparative evidence from late Early Pleistocene Uadi Aalad and Mulhuli-Amo, Danakil depression of Eritrea

CLÉMENT ZANOLLI¹, LUCA BONDIOLI², FRANCESCA CANDILIO³, ALFREDO COPPA³, DAVID W. FRAYER⁴, YOSIEF LIBSEKAL⁵, TSEGAI MEDIN^{5,6}, LORENZO ROOK⁷, DAWIT TESFAY^{3,8}, and ROBERTO MACCHIARELLI^{9,10}.

¹UMR 5288 AMIS CNRS-Université de Toulouse Paul Sabatier, France, ²Sezione di Bioarcheologia, Museo Nazionale Preistorico Etnografico "Luigi Pigorini", Rome, Italy, ³Dipartimento di Biologia Ambientale, Università di Roma "La Sapienza", Italy, ⁴Department of Anthropology, University of Kansas, Lawrence, KS, ⁵National Museum of Eritrea, Asmara, Eritrea, ⁶Institut Catala de Paleoecologia Humana i Evolució Social, Universitat Rovira i Virgili, Tarragona, Spain, ⁷Dipartimento di Scienze della Terra, Università di Firenze, Italy, ⁸Northern Red Sea Regional Museum, Massawa, Eritrea, ⁹UMR 7194 CNRS-Muséum national d'Histoire naturelle, Paris, France, ¹⁰Département Géosciences, Université de Poitiers, France.

Cranial vault thickness behaves as a highly variable feature in extant and fossil humans. While traditionally used to define *H. erectus s.l.* because of its relatively thick-walled bones, recent estimates show that, along the mid-sagittal plane and at the frontal and parietal eminences, bone thickness does not markedly differ between *H. erectus s.l.* and anatomically modern humans, nor does it reliably distinguish African and Asian *erectus*-like representatives. However, compared to the parasagittal areas, paleoanthropological information on thickness variation along the lateral parietal wall is scarce.

By using direct, CT- and microCT-based observations, we quantified the tabular and diploic thickness in two circa 1 Ma parietal bones from the 4.7 km apart but stratigraphically correlated sites of Uadi Aalad and Mulhuli-Amo, Eritrean Danakil depression. The first belongs to the nearly complete UA 31 cranium, noted for its blend of *erectus*-like and derived morphoarchitectural features. The second parietal bone is part of an incomplete cranium preliminarily labelled MA 64-88-378, assembled from nine elements collected on the surface in 2011-2014, whose global shape closely resembles UA 31.

While our records do not systematically sample homologous landmarks but rather comparable regions in UA 31 and MA 64-88-378, their relative thickness at various sites is nearly invariably diploë>outer≥inner table, even if proportions vary site-specifically. In all cases, intra-individual thickness variation tends to exceed that commonly observed in extant humans. We found a similar pattern, but expressing even more contrasted values, in the chronologically slightly younger parietal specimen from Gombore, at Melka Kunture, Ethiopia.

Funding support provided by: Italian Ministry for University and Research, Univ. "La Sapienza" of Rome ("Grandi Scavi"), Italian Ministry for Foreign Affairs, French CNRS.

Preferred presentation medium: poster
Appropriate session: Paleoanthropology