

Podium Presentation Session 2, Thursday 14:20-16:00

Assessment of Pleistocene *Homo sapiens* dental remains from the Middle Awash study area of Ethiopia

Maria Martinon-Torres^{1,2}, Laura Martin-Frances^{1,3}, Leslea J. Hlusko¹, Gen Suwa⁴, Tomohiko Sasaki⁵, Tim D. White⁶

1 - CENIEH (National Research Center on Human Evolution), Burgos, Spain · 2 - Department of Anthropology, University College London (UCL), London, UK · 3 - Centro Mixto UCM-ISCIH de Evolución y Comportamiento Humanos, Madrid, Spain · 4 - The University Museum, The University of Tokyo, Tokyo 113-0033, Japan · 5 - The Kyoto University Museum, Kyoto University, Kyoto 606-8501, Japan · 6 - Department of Integrative Biology, University of California, Berkeley, CA 94720-3140, USA

The emergence of *Homo sapiens* represents one of the most fundamental questions in human evolutionary studies. Given its abundance, location and established chronostratigraphic context, the hominin fossil record from the Middle Awash (Ethiopia) plays a critical role in exploring the anatomy of the populations ancestral to modern humans. Here, we present for the first time a preliminary detailed morphological assessment of the dental samples recovered from the Herto Member of the Bouri Formation and the Halibee Member of the Upper Dawatoli Formation, both in the Middle Awash. The outer enamel surface (OES) and enamel dentine junction (EDJ) of these teeth are compared to a large sample of early and recent *H. sapiens* and Neanderthals by means of classic and geometric morphometric techniques. The small Herto sample (~160 ka) is characterized by the preservation of cingular features that are commonly lost in recent and early modern humans, although in shape and cusp configuration it falls within *H. sapiens* variation. The primitive traits comprise the expression of a protoconal cingulum; cingulum-protcone and trigonal-hypocone crests; extensive crenulations; and several distoconules that are commonly absent in *H. sapiens* and more typically found in Middle Pleistocene teeth. The primitive character of the Lower Halibee's Chai Baro's dentition (>158 ka; likely older than Herto) is even more pronounced than in Herto, with a combination of discrete traits more typical of Middle Pleistocene *Homo*, and a general shape conformation of molars and premolars that falls peripheral to the *H. sapiens* distribution. The younger Faro Daba fossils (~100 ka) are comparatively more derived than Herto and Chai Baro in lacking cingular derivatives, and in the shape and spatial cusp arrangement. However, their massive and column-like roots approach morphologies more typically seen in Middle Pleistocene specimens. The Herto and Halibee dentitions represent a unique opportunity to begin to understand a spatially and geochronologically constrained succession of hominin populations approaching anatomical modernity. The integration of the dental evidence with the data derived from other skeletal parts, as well as its contextualization in the archaeological, ecological and environmental settings of the Middle Awash region, can contribute with critical information to understanding the biological and cultural emergence of our species.

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