



Linkages between Late Pleistocene climate change, early human migration, genomics, ethnicity, culture and language in Southern Africa

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Archaeological and genetic data concur that anatomically modern humans (AMHs) arose in Africa some 200 thousand years ago (ka). Whereas the oldest AMH skeletal remains suggest an east African origin, southern Africa is home to contemporary populations representing the earliest branch of human phylogeny. Maternally-derived mitogenomes are valuable for establishing timelines, prehistory and dispersal pathways. In this study we generate the largest mitogenome resource for the deepest-rooting L0 branch of the AMH mitochondrial tree. More than 1000 L0 mitogenomes from individuals in South Africa are analysed and lineage coalescence time estimates are then compared with timelines of astronomically-driven climate events. Our data suggest a linkage between astronomical forcing, climate, vegetation, early human dispersal, present-day population, cultural and language diversity within Southern Africa.