



ABSTRACT SUBMISSION

Connecting the dots: a biomolecular approach to human mobility and gene-flow during the Neolithic in Southwest Asia

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Abstract

In recent years, isotopic and genetic analyses have facilitated the study of short and long term processes of human mobility. Available biomolecular data in Neolithic Southwest Asia is, however, very limited and geographically and chronologically sparse, due to limited sample availability and suboptimal molecular preservation. To fill in the gap in knowledge, we generated the first available human isotopic and genetic profiles from individuals from a 3,000-year time transect in the Middle Euphrates region, that we interpreted alongside pre-existing archaeological, genetic and isotopic evidence.

Isotopic studies in SW Asia point to an overall decrease in human mobility during the PPNB, followed by a marked increase during the Late Neolithic, coinciding with the abandonment of PPNB sites and population dispersal, albeit regional differences can be observed. Genetic studies show strong regional genetic differentiation during the Epipalaeolithic but increasing levels of gene-flow from the Holocene, evident as early as the PPNB, in all core regions. We hypothesize that changes in patterns of interregional mobility paralleled profound shifts in group identity and connection to place. Inclusive burial practices, where both local and non-local individuals shared funerary space, documented across periods suggest societies were permeable to migrants, in agreement with the observed generalised gene-flow.

Keywords

isotopes, DNA, funerary, mobility, Neolithic

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