

Evaluating Early Upper Palaeolithic Open-Air Surface Finds from Northern Hungary and Southern Slovakia.

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The way in which Modern Humans first penetrated the European continent has been a recent focus of Upper Palaeolithic archaeological research. One hypothesis posits that the Danube River served as a main conduit for modern human movement from Southeastern into Central and Western Europe. However, a critical challenge to this theory has been the scarcity of Early Upper Palaeolithic sites along the Middle Danube catchment (Carpathian Basin). Though several sites with Early Upper Palaeolithic characteristics (Szeletian, Aurignacian) are known from surface prospections, very few have been archaeologically investigated.

Our aim was to elucidate this long-standing deficiency by evaluating six known-surface sites from the Northern Middle Danube Basin in the Cserhát and Mátra Mountains (Hungary) and the nearby Košice Basin (Slovakia) through a series of “keyhole” excavations. Our objectives were (1) to see if in situ stratified material still existed at these locations, (2) to characterize their archaeological assemblages and (3) to provide radiometric dates for these assemblages. Additionally, we employed sediment grain-size and color analyses to resolve if the surrounding sedimentary matrix was aeolian loess and/or if it had been mixed with underlying older deposits.

Our results suggest that many of the archaeological assemblages represent early Upper Palaeolithic assemblages experienced post-depositional mixing. However, two sites (Sena, Nagyréde) showed more nuanced taphonomic processes and may contain in situ artifacts warranting further exploration. These studies highlight the under-explored nature of archaeological and sedimentological research in the area and underscore the importance of integrating sedimentological research with archaeological investigations. It also suggests that the scarcity of archaeological sites in the region may in part be the result of a dynamic Pleistocene geomorphological evolution rather than a true demographic absence. Our results provide new insights into the Early Upper Palaeolithic settlement and the sedimentary dynamics of the Middle Danube Basin ultimately leading to a greater understanding of the early modern human settlement of Europe.