

Beyond Boundaries: Transdisciplinary pathways in exploring Late Quaternary human-environmental interaction

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Abstract:

Hunter-gatherer research has always been, and remains, increasingly positioned at the crossroads of the environmental sciences, where new approaches are redefining how we understand long-term human–environmental dynamics. Across Eurasia, the Weichselian Lateglacial (14,700–11,600 BP) marks a critical period of climatic and ecological transition – from glacial to Holocene environments—when human groups adapted to rapidly changing landscapes. Yet, evidence of human activity during this time remains ephemeral, shaped by high mobility, low population densities, and subtle environmental imprints. Tracing these fleeting signals of human presence requires truly transdisciplinary research that bridges archaeological, palaeoecological, and geoscientific methods.

This session invites contributions that push the methodological and conceptual limits of how we detect, reconstruct, and interpret human–environmental interactions during this pivotal interval. We welcome studies that integrate datasets and techniques across scales – from biomolecular and sedimentary proxies to spatial modelling and palaeoclimate reconstructions. Topics may include human adaptation to rapid climate shifts, landscape transformation, resource exploitation, and the feedbacks between cultural practices and environmental change.

By focusing on the Lateglacial across Eurasia, the session aims to foster comparative perspectives that go beyond regional and disciplinary boundaries. How can we better identify faint traces of human presence? What innovative frameworks enable us to link social and environmental processes within complex datasets?

Through open dialogue and cross-disciplinary collaboration, this session seeks to identify the frontiers of transdisciplinary archaeology in detecting the ephemeral – where environmental

sciences and archaeology converge to illuminate the subtle yet significant role of humans during one of the most dynamic episodes of late Quaternary history.