Palaeolithic adaptations to Asian mountain environments

Keywords: High-elevation occupation, Asia, Subsistence strategies, Neanderthals, Denisovans, Modern Humans, Palaeolithic

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Abstract:
This session explores how Palaeolithic populations navigated, inhabited, and adapted to the formidable mountain landscapes of Asia. These include the Caucasus Mountains and the Iranian Plateau in western Asia; the Tianshan and Altai Mountains in central Asia; the Loess Plateau in eastern Asia; and the vast and towering Tibetan Plateau. High-elevation environments present extreme challenges—hypoxia, cold stress, seasonality, and resource patchiness—yet archaeological, palaeoenvironmental, genetic, and geoarchaeological evidence increasingly shows that hominins repeatedly occupied these regions throughout the Middle and Upper Pleistocene. This session gathers diverse contributions examining technological innovations and adaptations, mobility patterns, subsistence strategies, and migratory routes that facilitated the survival of Palaeolithic hunters-gatherers in Asian rugged uplands. We highlight emerging discoveries of early high-altitude sites, the role of cultural buffering in mitigating environmental stress, or the interplay between climatic fluctuations and occupation intensity. By integrating multi-scale and multidisciplinary datasets, the session seeks to highlight together the diversity of adaptive pathways among Neanderthals, Denisovans, Modern Humans, and other Pleistocene Homo, offering new perspectives on how mountain ecosystems shaped human evolutionary trajectories across Asia.