

Late Quaternary Megafaunal Extinctions: New Evidences and Emerging Perspectives

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The Late Quaternary witnessed a cascade of large-mammal disappearances that reshaped the terrestrial ecosystems worldwide. Once framed as a uniform, climatically driven event or a consequence of human expansion, new data now reveal a far more intricate story—one of asynchronous population declines, regional resilience, and episodic environmental shocks that together transformed the biosphere at the end of the Pleistocene.

This session seeks to re-examine the extinction process through a global lens of comparative, integrating evidence from the Americas, Eurasia, Africa, and Australia. Recent discoveries—ranging from improved radiocarbon chronologies and sedimentary aDNA records to isotopic and paleoecological proxies—highlight the importance of localized catastrophes such as drought pulses, volcanic events, abrupt temperature reversals, and ecosystem collapses. These short-lived but high-impact episodes may have accelerated extinction trajectories or triggered cascading failures in already stressed megafaunal populations.

We invite papers that explore how regional conditions shaped extinction pathways: climatic volatility in the North American plains, human fire regimes in Sahul, aridification in southern Africa, or the complex faunal turnovers in Central and Northeast Asia and relatively a smooth transition in South Asia. Contributions combining paleoenvironmental, archaeological, geochemical, physiological and modelling approaches are encouraged, particularly those examining feedback loops among climate change, landscape transformation, and species survival. By weaving together local and continental-scale records, this session aims to move beyond binary explanations of climate versus humans. Instead, it frames the Late Pleistocene extinctions as multifactorial processes—punctuated by localized catastrophes and ecological tipping points—that reveal the delicate interdependence of species, environment, and disturbance. Through this synthesis, we seek to build a more nuanced global understanding of extinction as both a biological and environmental phenomenon shaping the transition to the Holocene world.