

The Early Pleistocene Mustelidae and Hyaena Record of the Yuanmou Basin

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Abstract : This study delves into the Early Pleistocene fauna of the Yuanmou Basin, highlighting two significant findings. The first is the discovery of exceptionally well-preserved canid coprolites, which provide a rare glimpse into the diet and ecological niche of these ancient carnivores. The analysis of these coprolites has revealed a diet rich in diverse prey species, suggesting a complex food web and a dynamic ecological environment. This discovery not only sheds light on the dietary habits of these canids but also offers broader insights into the region's ecological dynamics during the Early Pleistocene. Additionally, the preservation of these coprolites allows for detailed study of the carnivore's role in the ecosystem, including their interactions with other species and the overall health of the environment. The second major finding is the identification of a mustelid species, *Eirictis yuanmouensis*, from the same fossil horizon as the coprolites. This discovery is crucial for understanding the diversity and evolution of Mustelidae in the region. The detailed analysis of cranial and dental morphology of *Eirictis yuanmouensis* indicates unique adaptations that suggest a specialized ecological niche. This finding, in conjunction with the coprolite analysis, provides a comprehensive view of the ecological niches occupied by both mustelids and hyenas, enhancing our understanding of their adaptations and interactions within this paleoenvironment. The study's significance is further amplified by the analysis of pollen data from the same horizon, which indicates a paleoenvironment characterized by rapid climatic changes and a dominant semiarid climate. This combination of faunal and floral data paints a detailed picture of the Early Pleistocene environment in the Yuanmou Basin, offering valuable insights into the interactions between different carnivore species and their adaptation strategies in response to changing environmental conditions.

Keywords : Yuanmou Basin, coprolite, Hyaena, *eirictis yuanmouensis*, early pleistocene

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