

Dmanisi and the Plio-Pleistocene Occupation of Eurasia: Implications for Assessing the Evolutionary Ecology of Early Homo

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Dmanisi preserves a rich record of past environments, archaeology and fossils of early Homo, dating from just before to just after the Olduvai-Matuyama reversal at ca. 1.78 Ma. The hominin fossils, now including five skulls and numerous post-cranial remains, suggest separation from African populations before significant increases in brain size and stature had appeared. Both the geographic expansion of human populations to Eurasia, and the successful adaptations to temperate environments are significant for assessing broader implications of Plio-Pleistocene environmental change to the evolution of early Homo. The archaeological record at Dmanisi indicates serial occupations, possibly associated with high mobility, and a consistent pattern of lithic importation that included unmodified cobbles and small boulders, as well as flakes on higher quality raw materials that were manufactured off-site. Bone breakage patterns and cut marks on bone offer evidence of carnivory, which is assumed to have been seasonally obligatory in the temperate context of the Dmanisi occupations. Although Dmanisi is a singular case for the earliest Pleistocene occupation of Eurasia, it demonstrates that our broader investigations into adaptive responses of early Homo to environmental change are no longer restricted to African contexts.