Variation in Middle Stone Age landscape-use behaviour in the Tankwa Karoo (Northern Cape, South Africa)

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Abstract

Southern Africa is a critical location for understanding the origins of modern human behaviour in the Middle Stone Age (MSA), about 300 to 40 ka. Current evidence from excavated, often coastal, cave sites indicates the emergence of complex technological, social and symbolic behaviours at least 100 ka. However, cave sites considered alone give a spatially and temporally restricted picture of MSA lifeways, overlooking human behaviour beyond the cave. The restricted environmental focus on coastal and near-coastal montane ecosystems further limits the scope for capturing variation in MSA behaviour in the South African interior. In this paper, I examine the open-air surface artefact record of the inland, marginal environment of the Tankwa Karoo in the Western/Northern Cape region. I ask whether variation in stone tool distribution and technology can be observed in time and space.
This paper presents the results of 'off-site' surveys in the Tankwa Karoo which have mapped the location of over 20,000 Earlier, Middle and Later Stone Age stone artefacts across the landscape. Artefacts lie on a deflated 'desert pavement' land surface, forming a rich palimpsest of evidence for past occupation of the region. These assemblages provide information on lithic technology, provisioning and site use, which can be dated on a relative techno-typological basis and used to track change through time and across environmental zones. The 100-km-long study area encompasses west-to-east transitions in vegetation, geology and aridity, allowing a detailed examination of variation in behaviour between these contrasting but contiguous settings.

My results show that settlement is tethered to the reliable water sources of the westerly mountain fringe in earlier time periods, but towards the later part of the MSA, more complex patterns of movement can be tracked through raw material transport, seeing substantial use of the arid desert to the east. Furthermore, new types of later MSA technological behaviour, previously unrecognised by coastal cave-oriented studies, have been identified. Cores and post-Howiesons Poort-like unifacial points using the Nubian preferential Levallois technique occur in large numbers at the open-air site, Tweefontein, as well as distributed across the landscape. I propose this technology represents a specific adaptation to this desert environment, bringing a new perspective to modern human behavioural flexibility in the MSA.
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