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Peopling the desert: The role of African and Arabian drylands in facilitating ancient human migration.

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Consensus holds that anatomically modern humans (AMH) evolved in Africa, and subsequently migrated or diffused into adjacent areas, becoming the globally distributed species of today. The deserts of North Africa and the Arabian Peninsula have traditionally been regarded as formidable barriers to this dispersal. However, recent research has demonstrated that deserts in both regions have experienced numerous periods of increased humidity, during which human habitation would have been possible. Furthermore, sparse vegetation cover and limited human activity in the present day makes these regions attractive for archaeological research.
To understand fully the nature of ancient human occupation of drylands, it is critical that the contemporary environmental conditions are also understood. Ancient lakes offer the opportunity to link environmental data to evidence for human presence, since ancient populations were drawn to water bodies and left a particularly rich archaeological record at their margins. This is especially true in the Nefud Desert of Saudi Arabia, where numerous lake sediment outcrops with associated archaeology have been studied. Palaeohydrological mapping of the region demonstrates that waterways provided viable north-south migration routes, while dating of numerous lakes suggests that several windows of opportunity existed for migration. Detailed sedimentology, lithic and faunal analysis and stable isotope work indicate that during these humid periods, perennial freshwater lakes were abundant, and the landscape supported a range of mammal species. In combination, these data demonstrate that repeated oscillations in climate allowed the Nefud Desert to act as a conduit for, rather than a barrier to, human migration.