GSA 2018 4–7 November Indianapolis, Indiana, USA
THE GEOLOGICAL SOCIETY OF AMERICA®

223-6: WHAT CONTINENTAL SCIENTIFIC DRILLING IS TELLING US ABOUT ENVIRONMENTAL HISTORY IN E AFRICA AND IMPLICATIONS FOR HUMAN EVOLUTION

Wednesday, 7 November 2018
09:55 AM - 10:10 AM
Indiana Convention Center - Sagamore Ballroom 5

Obtaining high-resolution, long-duration paleoenvironmental records is a critical requirement for evaluating the many models that have been proposed concerning how (and whether) climate or other aspects of environmental change may have acted as forcing factors in human evolution. Such records can be derived from outcrop, marine or lacustrine drill cores, ideally with the synergy of synthesizing the strengths of each approach. The strengths of drill core records from lake deposits lies in their ability to potentially capture paleoenvironmental events at extremely high resolution (down to annual events in some cases), coupled with the potential to collect these in the same basins as where the fossil discoveries have been made. Since 2005, long drill cores have been collected from numerous lake and paleolake basins in East Africa and the Levant in close proximity to important fossils hominin and archaeological sites. These records have provide near-continuous depositional archives of changes in climate, landscape/lakescape, vegetation, hydrology and fire, all of which may have been critical variables or resources impacting hominin survival, adaptation and extinction in the region. In this talk I will summarize some of the key paleoenvironmental discoveries from these projects and their implications for our understanding of critical events in human evolution, and how model-data comparisons are improving our exploration of these records. I will also put these findings into a broader context, using them in conjunction with marine and outcrop records to examine some of the key hypotheses linking directional environmental change or changes in environmental variability.

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Final Paper Number 223-6
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Day: Wednesday, 7 November 2018

Geological Society of America Abstracts with Programs. Vol. 50, No. 6, ISSN 0016-7592
doi: 10.1130/abs/2018AM-318452

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