



Revisiting Umhlatuzana Rock Shelter, South Africa: First geoarchaeological results

Sifogeorgaki Irini¹; Dusseldorp Gerrit^{1,2}

1: Leiden University, Faculty of Archaeology 2: Palaeo-Research Institute, University of Johannesburg

e.sifogeorgakis@arch.leidenuniv.nl

INTRODUCTION

In 2018 we initiated a geoarchaeological investigation of Umhlatuzana rock shelter. Our aim is to clarify the depositional environment of the Middle and Later Stone Age (MSA-LSA) assemblages (~70 – 20 ka), in light of suggestions of post depositional sediment movement (Kaplan 1990). The Pleistocene sequence shows few visible stratigraphic boundaries. Sedimentological analysis allows us to evaluate the depositional environment.

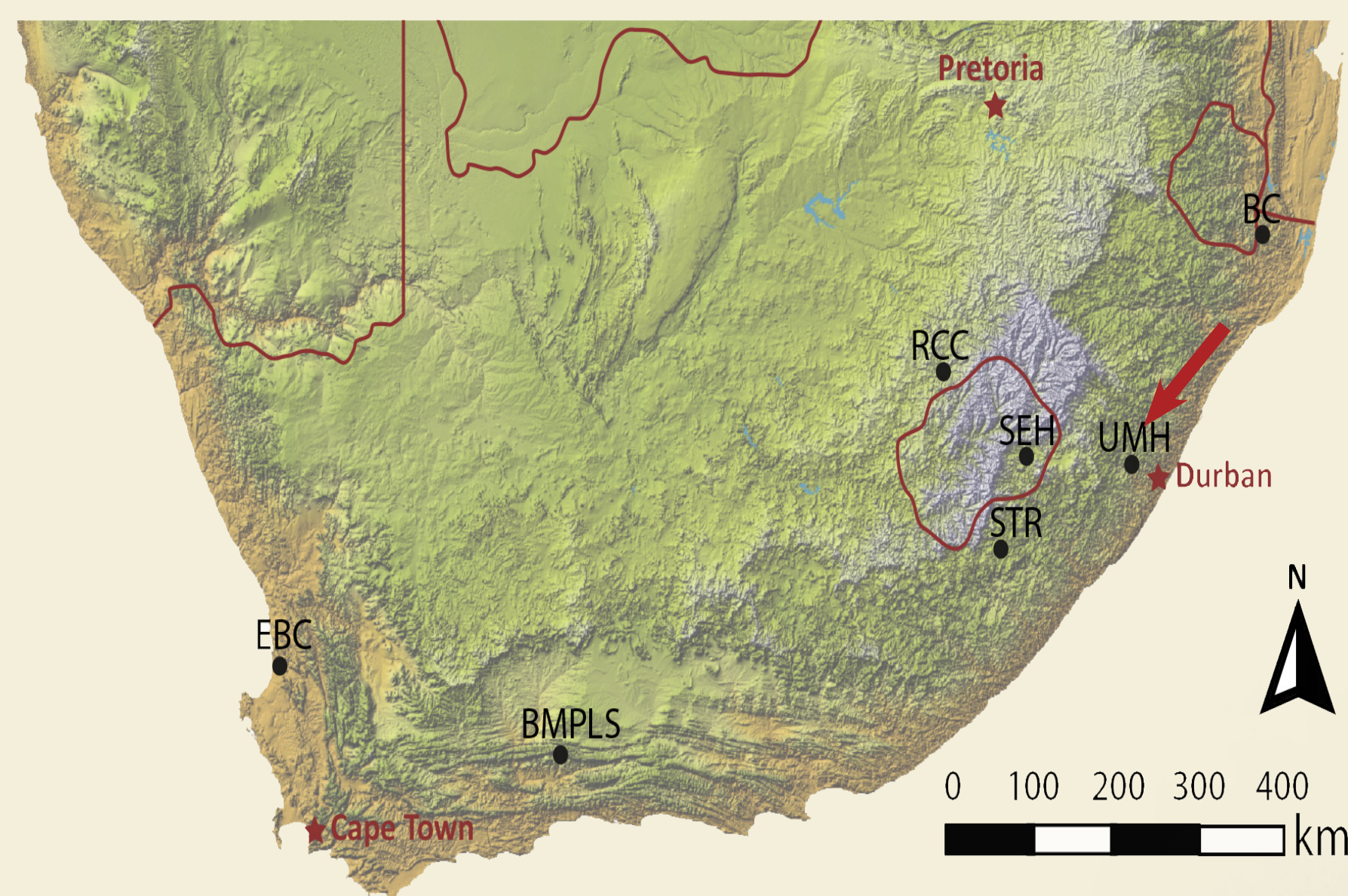
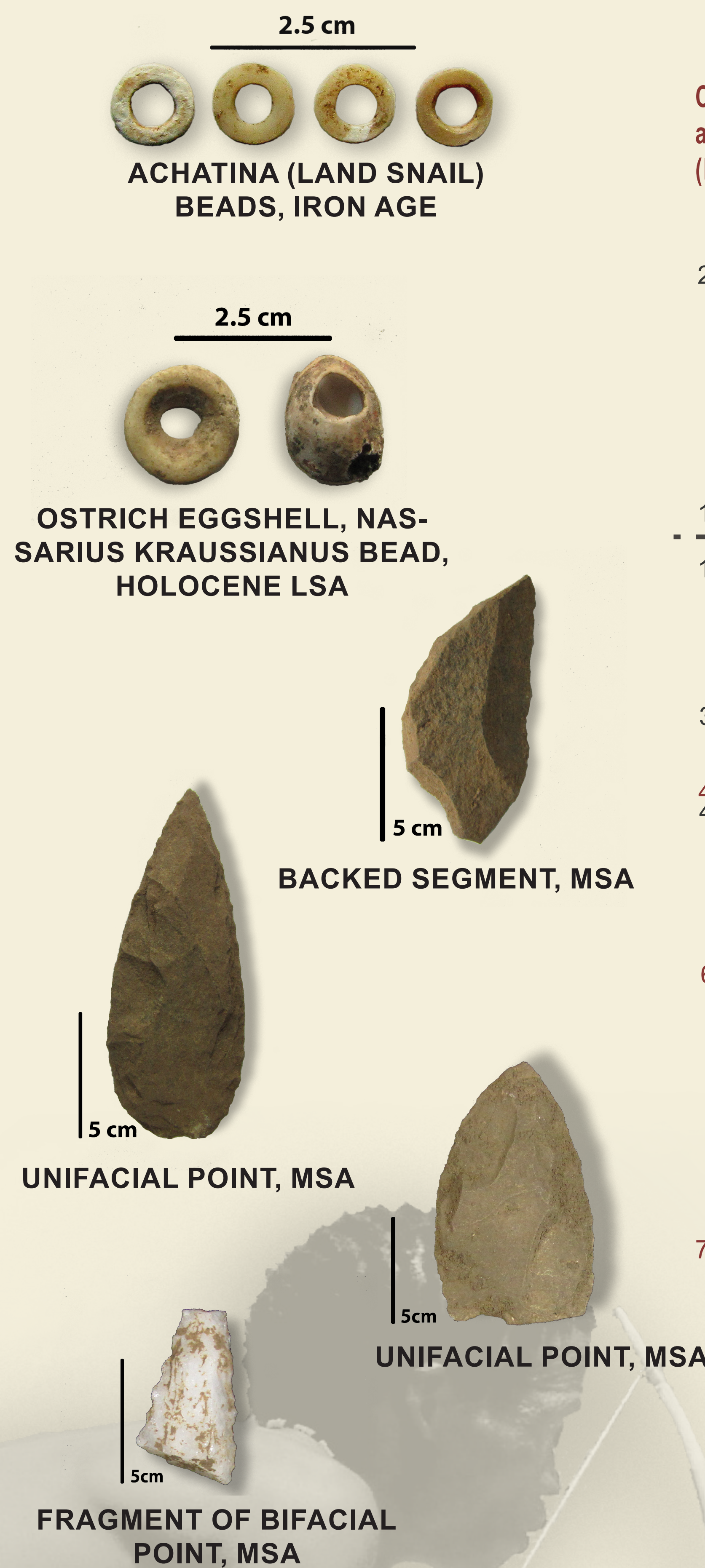
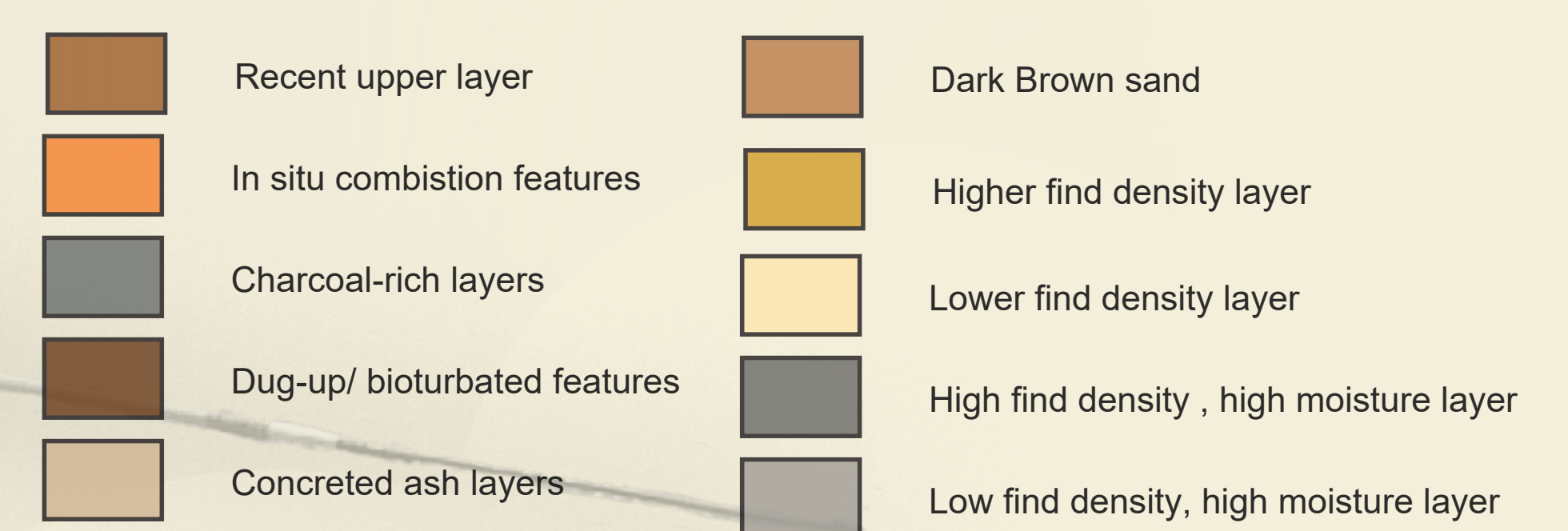
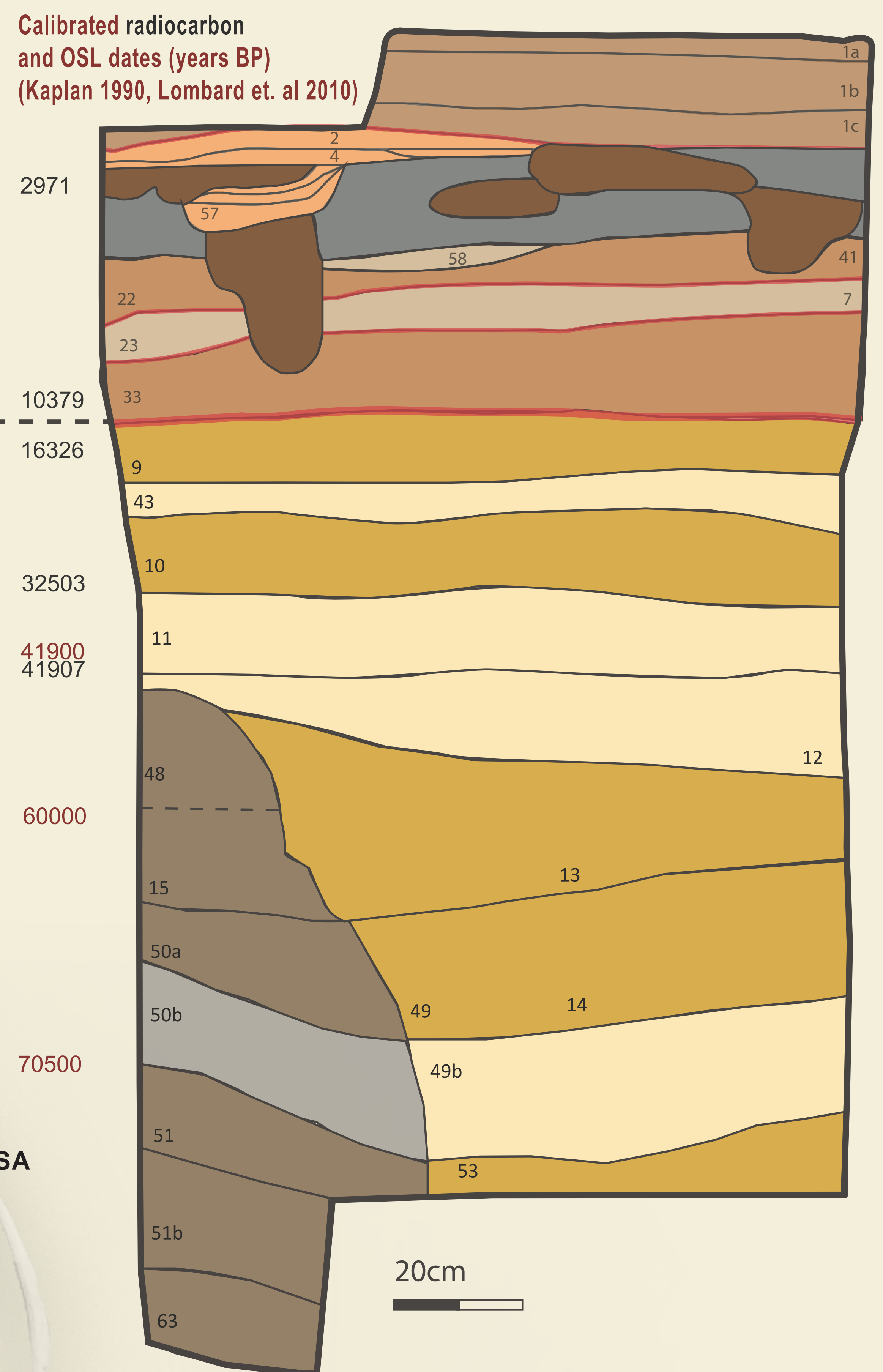


Figure 1 Map illustrating sites with MSA-LSA sequences in South Africa. BMPL: Boomplaas Cave; BP: Border Cave; EBC: Elands Bay Cave; RCC: Rose Cottage Cave; SEH: Sehonghong rock shelter; STR: Strathalan B. rock shelter; UMH: Umhlatuzana rock shelter.



Umhlatuzana stratigraphy

West Profile



METHODS

Our stratigraphic assessment is based on field observations combined with geospatial data of the piece-plotted finds over 2cm. To assess depositional and post-depositional processes, we have conducted grain-size using a laser diffractor, pH, and Loss on Ignition analyses. Analysis of the piece-plotted finds sheds light into potential mixing of the finds and distinguishes levels of high occupation intensity.

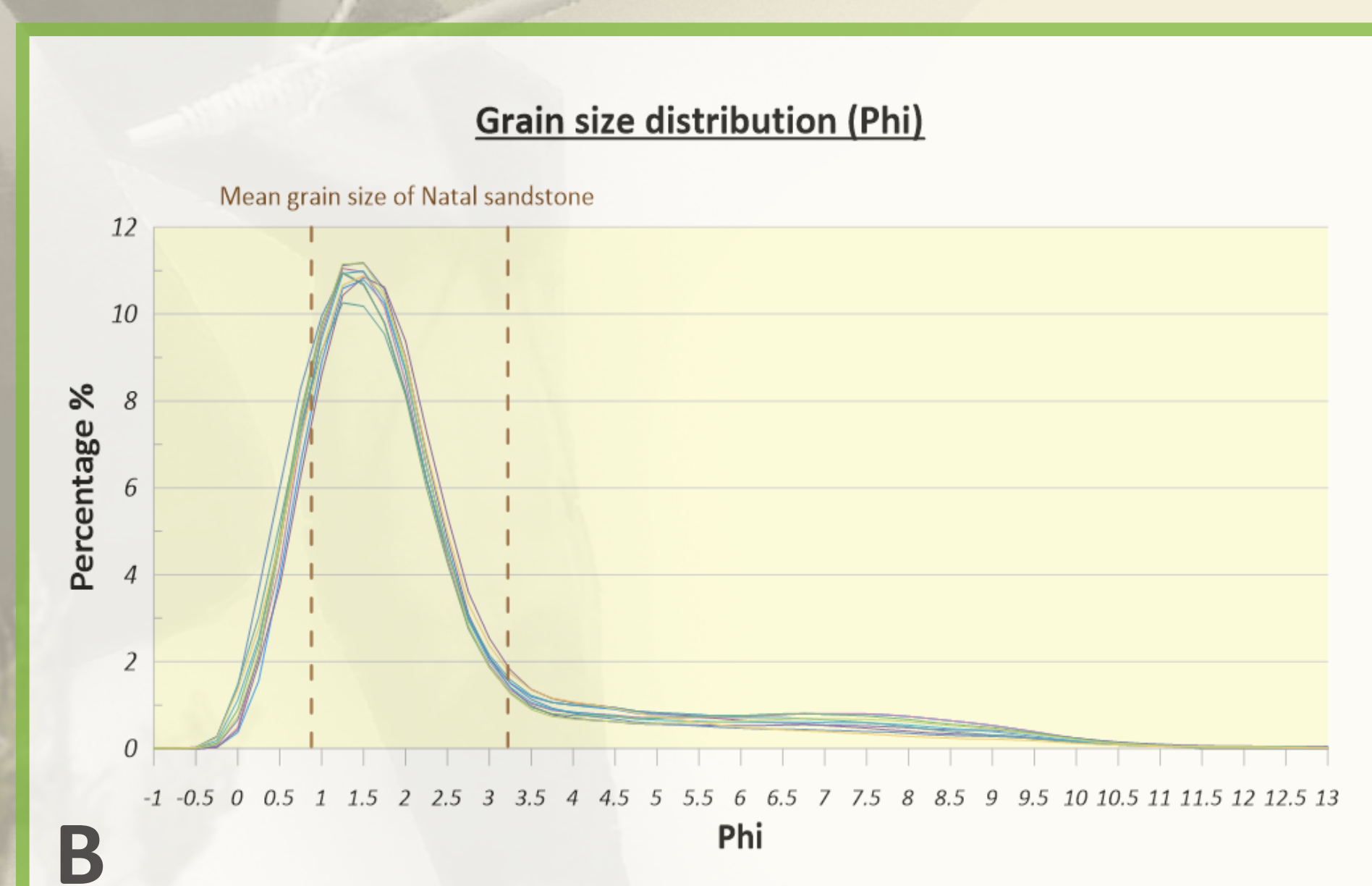
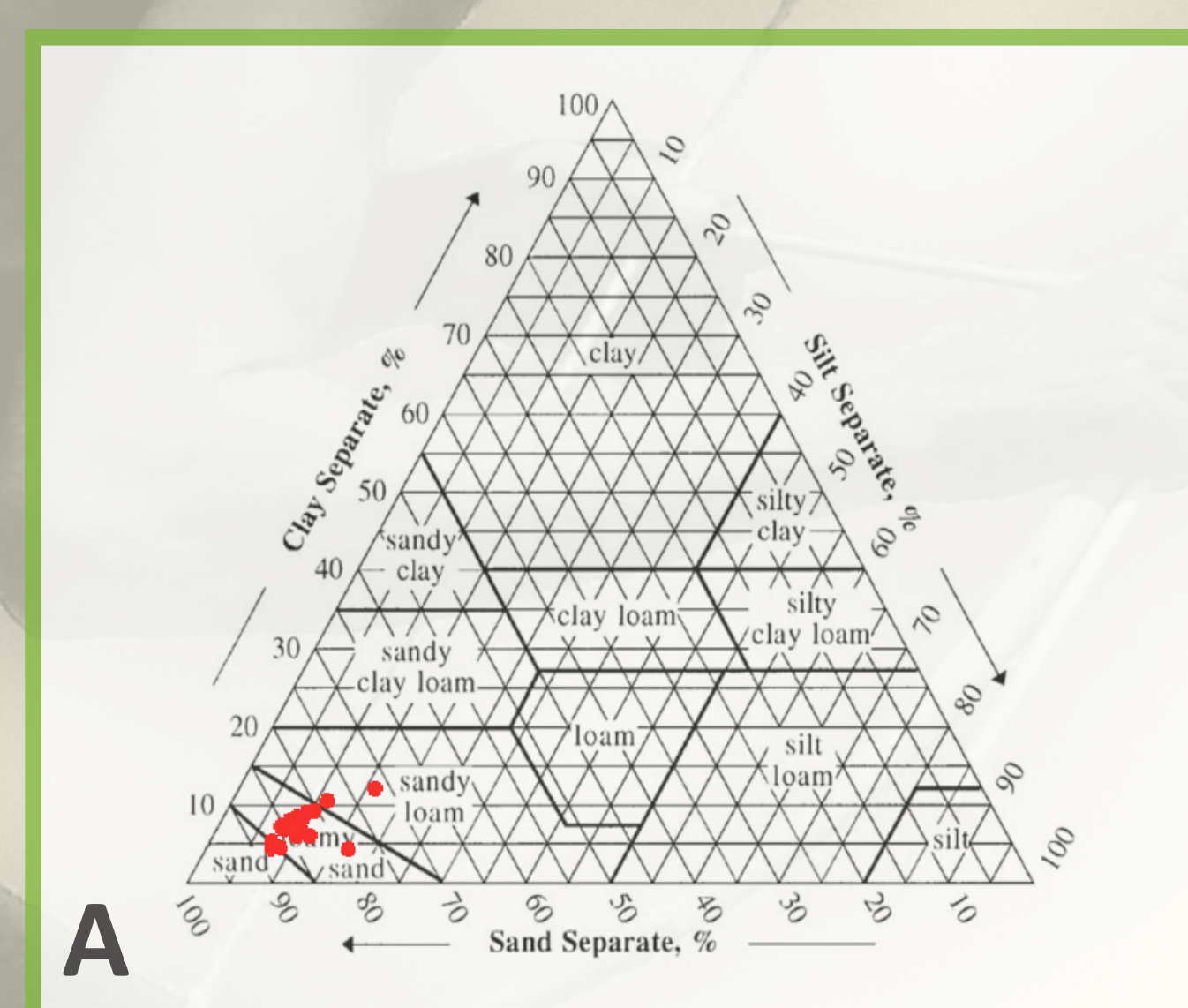


Figure 2 A Ternary graph of grain size, B Particle size distribution curves for identified stratigraphic units 1b, 5, 7, 9, 10, 11, 15, 33, 48, 50. The mean grain size of the rock shelter was derived from Bell and Lindsay 1999.

RESULTS & CONCLUSIONS

- Discrete high and low find density layers
- Horizontal orientation of find density pattern suggests limited post-depositional movement
- Sedimentary colour difference in Pleistocene due to high-moisture units
- Grain size analysis suggests continuous sedimentation through in situ weathering of rock shelter
- Low- and high- density layers probably relate to low- and high- occupational events

ACKNOWLEDGEMENTS

Victor Klinkenberg for his help with find cluster analysis
VU Amsterdam Lab for the grain size and LOI analyses

