Responses to Coastal Environment Diversity in Middle and Late Stone Age Fish Harvesting Practices, Southern Cape, South Africa

Our Ref:



an agency of the Department of Arts and Culture

T: +27 21 462 4502 | F: +27 21 462 4509 | E: info@sahra.org.za South African Heritage Resources Agency | 111 Harrington Street | Cape Town P.O. Box 4637 | Cape Town | 8001 www.sahra.org.za

Enquiries: Ragna Redelstorff, PhD

Tel: +27 (0)21 202 8651

Email: rredelstorff@sahra.org.za

CaseID: 20402

Date: Monday April 03, 2023

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#### Letter

In terms of Section 32(19) of the National Heritage Resources Act (Act 25 of 1999)

Attention: Dr Asia Alsgaard

Centre for Early Sapiens Behaviour University of Bergen, Norway

Overview This postdoctoral project was developed in collaboration with the above participants. The project is designed as part of the Center for Early Sapiens Behavior (SapienCE) project, contributing towards answering the key research question: how adaptable were humans to environmental change and did climate impacts act as drivers for technological innovation and subsistence adaptation? Furthermore, as part of the European Leaders for Marine Sustainability (SEAS) programme at the University of Bergen, the research will contribute towards research on present day marine sustainability along the southern cape of South Africa. This research project will address two primary questions. Did coastal resource diversity increase between the Middle Stone Age (MSA) and Late Stone Age (LSA) along the southern Cape of South Africa in conjunction with estuary development and changes in the range of cold-water fishes? If diversity and stability increased in the LSA, did the human harvesting of marine resources increase? To test these questions, I will analyze fish teeth, seal teeth, and otoliths from the MSA using carbon and oxygen stable isotope analyses and fish and seal bone collagen from the LSA using carbon and nitrogen stable isotope analyses. I will conduct these analyses using fauna assemblages from Blombos Cave, Klasies River main site, Nelson Bay Cave and Hoffman's/Robberg Cave. These methods will allow me to address both changes in the diversity and stability of marine ecosystem along the southern Cape of South Africa and if human harvesting practices changed. The results have implications not just for ho the ecology of the southern coast of South Africa has changed up to present day, but also how humans respond to environmental changes such as the development of seasonal estuary abundance and sardine migrations.

Dear Dr Alsgaard and Prof Henshilwood,

Thank you for your application to sample 154 faunal remains (teeth, bone and otholiths) from the archaeological sites Blombos Cave, Hoffman's Cave, Klasies River Mouth and Nelson Bay Cave and permanently export the samples for isotope analysis at the Department of Earth Science, University of Bergen, Norway.

SAHRA has reviewed the application and has decided to approve it.

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We wish you every success with this project.

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Should you have any further queries, please contact the designated official using the case number quoted above in the case header.

Yours faithfully

Ragna Redelstorff, PhD

Heritage Officer

South African Heritage Resources Agency

Phillip Hine

Manager: Archaeology, Palaeontology and Meteorites Unit

South African Heritage Resources Agency

### ADMIN:

Direct URL to case: https://sahris.sahra.org.za/node/611483

### Terms & Conditions:

- 1. This approval does not exonerate the applicant from obtaining local authority approval or any other necessary approval for proposed work.
- 2. If any heritage resources, including graves or human remains, are encountered they must be reported to SAHRA immediately.
- 3. SAHRA reserves the right to request additional information as required.