

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: Elijah Dumisani Katsetse

Tel: 0214624502

Email: ekatsetse@sahra.org.za

CaseID: 16691

Date: Wednesday August 25, 2021

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Letter

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

Attention: Jovana Milic

Centre for Early Sapiens Behaviour University of Bergen, Norway

Overview Some of the earliest evidence of coastal exploitation by humans anywhere in the world is found in the archaeological sites along the southern coast of South Africa dating to the Middle Stone Age. Blombos Cave is one of the sites that are regarded as essential for our understanding of the evolution of anatomically modern humans and the development of modern behavior and cognition (Marean, 2010; Compton, 2011). In coastal southern Africa, one of the traits commonly associated with the emergence of modern human behavior is the exploitation of marine resources. Mollusc shells excavated at archaeological sites can yield crucial information on various aspects of early human occupation, including subsistence, seasonality, paleoenvironment, and chronology (Andrus, 2011; Langejans et al., 2012). Previous research by Nicholas Shackleton, Francis Thackeray, Mariagrazia Galimberti, and Emma Loftus, among others, has demonstrated the utility of the gastropod *Turbo sarmaticus* for paleoclimate research (Shackleton, 1973; Galimberti, 2010; Loftus, 2016; Thackeray, 2018). From the $\delta^{18}O$ values of the archaeological *Turbo sarmaticus* opercula, I aim to reconstruct the sea surface temperatures and environmental conditions throughout the Middle Stone Age sequence at Blombos Cave. The season of occupation and the possibility to construct an age model for the entire MSA sequence will also be in the scope of my research. This PhD project will contribute to a better understanding of the site-specific and regional paleoclimate variability in the southern coastal area of South Africa during Marine Isotope Stages 5 and 4 by providing detailed sea surface temperatures and seasonally resolved paleoclimate records. In a broader context, these records will indicate how and to what degree paleoenvironmental conditions affected early human development, adaptability, and resource procurement. On the other hand, a shell-based age model will complement other dating methods that have been employed to refine the Middle Stone Age chronology of Blombos Cave.

Dear Jovana,

RE: Reconstructing Middle Stone Age Lifeways and Palaeotemperatures using Shellfish as Proxies: A Perspective from southern Cape, South Africa

Thank you for your permit application for temporary export for destructive analysis of 187 shellfish samples

Reconstructing Middle Stone Age lifeways and paleotemperatures using shellfish as proxies: A perspective from southern Cape, South Africa

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from Blombos Cave, southern Cape, Western Cape. The SAHRA has successfully reviewed your application and approved it. Kindly note your permit is valid until 31 August 2022.

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

Yours faithfully

Elijah Dumisani Katsetse
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/576625>

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.

Reconstructing Middle Stone Age lifeways and paleotemperatures using shellfish as proxies: A perspective from southern Cape, South Africa

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3. SAHRA reserves the right to request additional information as required.