

Our Ref:



an agency of the
Department of Arts and Culture

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South African Heritage Resources Agency | 111 Harrington Street | Cape Town
P.O. Box 4637 | Cape Town | 8001
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Enquiries: Ragna Redelstorff, PhD

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CaseID: 22496

Date: Wednesday October 25, 2023

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Letter

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

Attention: Mrs Elisabeth Hempel
University of Potsdam
Potsdam University Evolutionary and Adaptive Genomics
Institute for Biochemistry and Biology Faculty for Mathematics and Natural Sciences
Karl-Liebknecht-Str. 24-25, Haus 29, Raum 2.69 D-14476 Potsdam

The mission of South African Heritage Resources Agency, Heritage Western Cape and the National Museum Bloemfontein is to manage and promote South Africa's unique natural and cultural heritage. The recently extinct blue antelope (*Hippotragus leucophaeus*) (~1800 AD) is an iconic species, historically known only from the Western Cape; it symbolizes the diverse ecosystems of the region, but at the same time it also represents the first historical large mammal extinction on the continent. Our recent studies have shown that it is possible to retrieve complete palaeogenomes from African samples as old as ~9,550 cal years BP. The greatest chance to retrieve even older genomes is from petrous bones. These extremely dense cranial bones have not been identified previously for blue antelopes in a condition that would promise high quality sequencing results. With the recognition of blue antelope cranial specimens that preserve petrosals from the Last Glacial Maximum hyena den at Besaansklip, this has changed and promises high chances for DNA retrieval from a time period where this has not been attempted before for this species. Analysing time sampled genomes promises a much deeper understanding of the extinction and evolutionary history of the blue antelope than possible before. **Western Cape Northern Cape**

Dear Dr Lloyd Rossouw and Ms Elisabeth Hempel,

Thank you for your application to permanently export bone samples of fossil antelope *Hippotragus leucophaeus* from Besaansklip, Western Cape Province, as well as samples of historical specimens for DNA sequencing at the University of Potsdam, Germany.

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

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/625473>

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.