

The COSMO-ART Conference on Rock Art

Rock Art Site Management in Southern Africa: Towards a Cosmopolitan Approach

International Conference

30 Nov. — 06 Dec. 2025, Sol Plaatje University, Kimberley, South Africa

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WELCOME

Welcome to the Faculty of Humanities, to Sol Plaatje University (SPU), to Kimberley and the Northern Cape.

The COSMO-ART international conference “Rock Art Site Management in Southern Africa: Towards a Cosmopolitan Approach” aims to explore the challenges posed by overlapping issues involved in the management of rock art sites. The focus is on rock art sites in southern Africa, but case studies from other regions are welcome insofar as they are relevant for comparison.

Rock art heritage-making is a particularly complex process, involving multiple stakeholders with sets of values that sometimes overlap, but can also diverge. Managing rock art sites in an inclusive and sustainable manner therefore requires a holistic approach that recognises the diversity of practices and the different ways in which stakeholders define what constitutes heritage. This raises questions such as: Who are the users of the sites and to what extent? What are the values attributed to rock art and by whom? How are these values used, possibly adapted, and communicated (from education to tourism development)? What are the perceived threats to these sites? How can Western-inspired conservation measures and traditional custodianship systems work together?

To answer these questions, an international research project called COSMO-ART (The Cosmopolitan Approach as a New Paradigm for Rock Art Heritage Management in Southern Africa) was launched in 2022. It involves around 50 members (academics, heritage practitioners and students) from Australia, France, Namibia, South Africa and Switzerland, as well as local civil society partners (see <https://www.cosmo-art.org>).

The COSMO-ART international conference “Rock Art Site Management in Southern Africa: Towards a Cosmopolitan Approach” will mark the conclusion of this research project. It will both report on the methods developed within COSMO-ART and their results and open up discussion with international delegates to work together towards the effective implementation of a cosmopolitan approach to managing rock art sites.

Organising committee

- Riyaz Davids (Faculty Administrator, Faculty of Humanities, Sol Plaatje University)
- Mélanie Duval (EDYTEM, CNRS, Savoie Mont Blanc University & RARI, University of the Witwatersrand)
- Stéphane Hœrlé (PACEA, University of Bordeaux & RARI, University of the Witwatersrand)
- Sukayna Obaray (Faculty Manager, Faculty of Humanities, Sol Plaatje University)
- Lourenço Pinto (Heritage Studies Department, Sol Plaatje University)

Scientific committee

- Leïla Baracchini (Institut de sciences sociales des religions, University of Lausanne)
- Camille Bourdier (TRACES, Toulouse University)
- Sam Challis (RARI, University of the Witwatersrand)
- Catherine Cretin (National Museum of Prehistory & PACEA, University of Bordeaux)
- Mélanie Duval (EDYTEM, CNRS, Savoie Mont Blanc University & RARI, University of the Witwatersrand)
- Lenishwa Engelbrecht (National Heritage Council of Namibia)
- Stéphane Hoerlé (PACEA, University of Bordeaux & RARI, University of the Witwatersrand)
- Julien Monney (EDYTEM, Savoie Mont Blanc University)
- David Morris (McGregor Museum & Sol Plaatje University)
- Ndokuyakhe Ndlovu (SANParks & University of Pretoria)
- Ancila Nhamo (University of Zimbabwe)
- Gilbert Pwiti (Heritage Studies Department, Sol Plaatje University)
- Hugo Quemim (EDYTEM, Savoie Mont Blanc University)

Leïla Baracchini



Leïla Baracchini is currently with the Institute of Social Sciences of Religions (ISSR), at the University of Lausanne, Switzerland.

With COSMO-ART, she did a postdoc with Éco-Anthropologie (UMR 7206) at the Muséum National d'Histoire Naturelle (Paris) and looked at the relationship between San local communities and rock art heritage sites.

She received her PhD in social anthropology and art theory (Quai Branly Thesis Price 2019) from the EHESS-Paris and the University of Neuchâtel in 2019. Her research focuses on the politics of representation and the processes of commodification and patrimonialisation in indigenous contexts. She explores these topics principally in Botswana, South Africa and in the French Lesser Antille

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Sam Challis



Sam Challis is Head and Senior Researcher at the Rock Art Research Institute, University of the Witwatersrand. His focus is on the interaction between hunter-gatherers, pastoralists and farmers, as well as Europeans, as expressed in rock art around the world. His DPhil at Oxford focused on the acquisition of horses by creolized raider groups in the nineteenth-century, and his research programme in the mountains of Matatiele in the Eastern Cape, aims to redress the imbalance of this neglected former-apartheid region while training local community Field Technicians.

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Catherine Cretin



Catherine Cretin is Chief Heritage Curator within the National Museum of Prehistory (Ministry of Culture, France) since 2017. She oversees Upper Palaeolithic collections. She is specialised in Palaeolithic archaeology (PhD 2000) and rock art studies. She is attached to the PACEA research unit (UMR 5199, National Center for Scientific Research, Bordeaux University and Ministry of Culture) and is currently working or directs research on three Palaeolithic rock art sites in France (Font-de-Gaume, La Mouthe and l'abri du Poisson). She also has participated in research on rock art in Russia (region of Altai) and Mongolia

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Camille Bourdier



Specialized in the rock art of past hunter-gatherers' cultures from Western Europe (French Palaeolithic) and Southern Africa (LSA in Zimbabwe and Limpopo), I'm a senior lecturer at the University of Toulouse Jean Jaurès, member of the TRACES laboratory, and honorary research fellow of the Rock Art Research Institute. My research mainly investigates deep-time dynamics in the imagery with regard to the environmental conditions and the other spheres of the material culture; the socio-cultural functions attributed to the rock art sites, the social structuring, and the rock art landscapes; the audiences and uses of the rock art; the symbolic relationships towards the animal world (imagery, materials).

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WELCOME

Mélanie Duval



Specialised in heritage and tourism geography, Mélanie Duval is the coordinator of the COSMO-ART project. She is a researcher at the Edytem UMR 5204 CNRS Laboratory (University of Savoie Mont Blanc, France) and an honorary research fellow at the Rock Art Research Institute (University of the Witwatersrand, Johannesburg, South Africa). As a human geographer, her research is concerned with heritage making-process, sustainable tourism and archaeological sites (rock art, lake dwelling remains), particularly in mountain areas (South of France, French Antilles, Alps, Southern Africa). Within systemic and comparative approaches, she analyses the dynamic balance between heritage processes and tourism issues, with a focus on stakeholders' interplay and the role of local communities.
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Lenishwa Engelbrecht



Lenishwa Engelbrecht is an Archaeologist at the National Heritage Council of Namibia (NHC). With a specialization in Bioarchaeology, her main focus is on the evolution of human physiology and behaviour in relation to cultural practices. However, her current occupation has entailed her to venture into a number of archaeological topics, such as rock art, stone tools, palaeontology, anthropology and even tourism around the whole of Namibia.
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Stéphane Hoerlé



Stéphane Hoerlé is a researcher in material sciences. He is an honorary research fellow with PACEA UMR 5199 CNRS (University of Bordeaux, France) and the Rock Art Research Institute (University of the Witwatersrand, Johannesburg, South Africa). His research interests include the dynamics of rock art site transformation through natural factors and human uses, with applications to the conservation and management of sites.
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Julien Monney



Julien Monney is an independent researcher, affiliated to EDYTEM. He is a rock art specialist, with a background in prehistoric anthropology. His main focus of research is on the human-environment interactions as mediated by rock art, and, more broadly, on how rock images interplays with past and present societies. This led him to question rock art from a spatial (GIS), temporal (chronology) and anthropological perspective in different geographical contexts: Upper Palaeolithic rock art of South east France (Cosquer, Points cave, etc.), pre-Columbian engraved rocks of the Lesser Antilles (Guadeloupe) and now rock art of southern Africa.
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David Morris



Retired Head of Archaeology, now Honorary Research Associate at the McGregor Museum in Kimberley, having also been affiliated with Sol Plaatje University and lecturing modules in its inaugural archaeology and heritage programmes. My principal research interest is in Northern Cape/Karoo rock art, mainly rock engravings. My master's and doctoral research was centred on the site of Driekopseiland near Kimberley, considered in relation to indigenous perspectives on landscape and materiality and as a powerful place of ritual which was, given that ontological understanding, enhanced by accumulating imagery. From that viewpoint I have conjectured mechanisms behind variability in the sites and imagery that do not depend on ethnicity in the first instance. I have participated in developing public archaeology through the Wildebeest Kuil Rock Art Centre, Wonderwerk Cave and other museum and site contexts including displays at McGregor Museum, Mokala Park and Canteen Kopje. Publications include journal articles and co-authored books, on rock art, indigenous perspectives, and the history of archaeological research. I was recently elected to serve as President of the South African Archaeological Society (2022-4). dmorriskby@gmail.com

Ancila Nhamo



Ancila Nhamo Katsamudanga is a Professor in Archaeology and Heritage Management at the University of Zimbabwe, Harare, Zimbabwe. She is currently working as a Research Specialist in the Research Innovation and Industrialisation Directorate. Prof Nhamo's research interests lie in rock art interpretation, management, conservation and public dissemination of archaeological and heritage information in innovative ways ancie2002@gmail.com

Ndukuyakhe Ndlovu



Ndukuyakhe Ndlovu holds a PhD in Archaeology which he attained from Newcastle University in the United Kingdom in 2013. Prior to that, he had successfully completed a BA Degree majoring in Archaeology and Geography (2000), BA Honours Degree in Climatology and Environmental Studies (2001), a Postgraduate Diploma in Science (Rock Art Studies – 2003), and an MA (Anthropology – 2005) from the University of the Witwatersrand and Rhodes University respectively. Dr Ndlovu's research is focused on three areas: Southern African rock art, heritage management in Southern Africa, and the political history of archaeology. ndukuyakhe@googlemail.com

Lourenço Pinto



Lourenço Pinto was appointed a Lecturer at Sol Plaatje University in 2018 and teaches undergraduate and postgraduate Heritage Studies and Archaeology modules in the Heritage Department. He has worked with various communities from different social backgrounds. Working with these communities has allowed him to share his passion for southern African heritage and the importance of preserving such heritage.
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Hugo Quemim



Hugo Quemim is a PhD Candidate in Human Geography at University Savoie Mont-Blanc. His research explores the intersections of cultural heritage, tourism, and political recognition in Southern Africa. He focuses on the heritage-making of rock art sites, the moral economies of cultural tourism, and indigenous claims in postcolonial contexts. His research combines ethnographic fieldwork with critical discourse analysis and epistemological reflection.
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Gilbert Pwiti



Specialised in the management of rock art sites focussing on interpretation, community use and community engagement in rock art sites management. Currently Professor of Archaeology and Heritage Studies at Sol Plaatje University, Kimberley. Have previously taught Archaeology and Heritage Management at the University of Zimbabwe, the Institute of Archaeology, University College London and the University of Botswana. Research interests have included investigation of conflict resolution between formal heritage management systems and traditional community-based management systems in the context of rock art heritage values in relation to community spiritual values vs formal management values.
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PROGRAMME OVERVIEW

Sunday 30 November

10:00 Registration opens

12:00 Lunch

13:00 Cultural performance

13:35 Opening address

13:45 Introduction and context for Cosmo-Art project and conference

14:00 Keynote speakers

17:00 End of session

Monday 01 December

09:00 Session 1

10:30 Tea break

11:00 Session 1 (cont.)

12:30 Lunch

14:00 Session 3

15:30 Tea break

16:00 Session 3 (cont.)

17:00 End of session

17:30 Cocktail reception at the McGregor Museum

Tuesday 02 December

09:00 Session 3 (cont.)

10:30 Tea break

11:00 Session 5

12:30 Lunch

14:00 Session 5 (cont.)

15:30 Tea break

16:00 Session 5 (cont.)

17:30 End of session

18:00 Tour with the curators of the exhibition "Places in Me – The Voices of Platfontein's Youth"

Wednesday 03 December

Excursion to Wonderwerk Cave

08:30 Departure to Wonderwerk Cave

18:00 Back to Kimberley

Thursday 04 December

09:00 Session 2

10:30 Tea break

11:00 Session 2 (cont.)

12:30 Lunch

13:30 Session 2 (cont.)

14:30 Tea break

15:00 Session 4

16:30 End of session

17:00 Buyani (Returning to the Roots) - IREOLÚWA (Goodness of the creator), Northern Cape Theatre

Friday 05 December

09:00 Session 4 (cont.)

10:30 Tea break

11:00 Session 6

12:30 Lunch

14:00 Session 6 (cont.)

15:30 Tea break

16:00 Roundtable discussion

18:00 Final address

19:30 Gala dinner

SUNDAY

10:00 Registration opens

Tutorial Classroom 1 (Room 028)

12:00 Lunch

Moroka Hall of Residence dining hall

13:00 Cultural performance

Humanities Building Courtyard

13:35 Opening Address, Prof. Russel Viljoen, Dean of Faculty of Humanities

Auditorium 2

13:45 Introduction and context for COSMO-ART project and conference

Auditorium 2

Mélanie Duval

14:00 Keynote speakers

Auditorium 2

Prof. John Parkington

Emeritus Professor John Parkington is a Senior Research Scholar in the Department of Archaeology at the University of Cape Town. He is a field archaeologist with a history of excavation as well as a recorder of rock art, working for several decades through the University of Cape Town. He has tried to integrate these materials into a history of stone age hunter gatherers, primarily in the Cape Fynbos biome.

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Rock art and a distributed canvas

As others have argued rock paintings may be discontinuously distributed across landscapes but they form a continuous canvas that needs to be confronted as a whole. This highlights the distinction between sites and places and underpins the interanimation of people and places in a dwelt landscape.

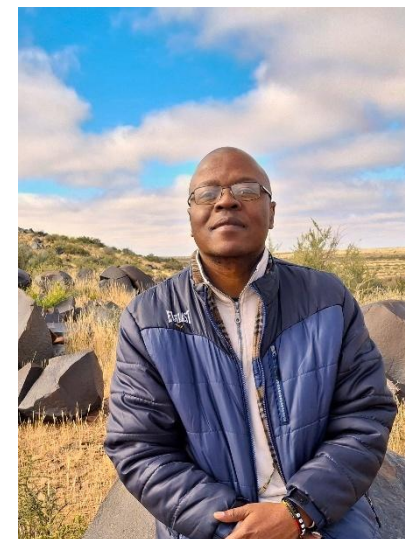
By examining rock art through this broader spatial and relational lens, the presentation will explore how imagery, movement, and sensory engagement jointly shape meaning. This approach invites us to reconsider rock art not only as a series of archaeological sites, but as an active, lived medium through which communities experienced, narrated, and negotiated their landscapes.

Dr Siyakha Mguni

Dr Siyakha Mguni is a Senior Lecturer at the Michaelis School of Fine Art, University of Cape Town. He is a rock art archaeologist with nearly 30 years of research and fieldwork experience across southern Africa and beyond. His curatorial experience working in museums spans museum and archival studies, heritage studies, and community-based archaeology. His brand of heritage scholarship involves delivering education and preserving southern Africa's prehistoric legacies, with a specific emphasis on ancient visual art forms. His interdisciplinary work, integrating archaeological, anthropological, and ethnographic research, has deepened the understanding of the meaning of rock art.

His work is especially known for the interpretive breakthrough on 'formlings', a previously enigmatic San rock art theme now widely accepted as depictions of termite nests. As an international recognition of this work, Antiquity journal awarded him the Ben Cullen Prize.

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Connecting the cave and the studio: recentring pre-colonial indigenous knowledge and rock art within a Fine Art school in southern Africa

What is the role of an art school in post-apartheid South Africa? In a context marked by enduring post-colonial complexities, a forward-looking art school must be more than a site for personal expression: it should foster a pedagogy aimed at social and political transformation. This implies rethinking inherited ideas about art, its sources, transmission, and purposes. Like education, art is never neutral; it can reproduce oppression or foster liberation, and a modern art school must navigate this tension carefully.

17:00 End of session

MONDAY

09:00 Session 1

Auditorium 2

09:00 The site does not exist (without us): towards a geographical pragmatics of rock art

Hugo Quemain and Mélanie Duval

09:30 Contribution of scientific writings to the definition of rock art sites: a South African example

Juliette Barthélémy

10:00 Rock archaeology: a living landscape of memory

Alice Parkington and John Parkington

10:30 Tea break

Tutorial Classroom 2 (Room 029)

11:00 Session 1 (cont.)

Auditorium 2

11:00 Extended socialities in storied landscapes: on what constitutes rock art 'sites' in the Northern Cape, South Africa

David Morris

11:30 A landscape approach to the conservation management of Mamuno engraving site complex, Western Botswana

Phillip Segadika and Miton Tapela

12:00 Cosmological, perceptual, and representational paradigms in spatial practice of rock art

Terance Xolani Nzuza

12:30 Lunch

Moroka Hall of Residence dining hall

14:00 Session 3

Auditorium 2

14:00 Conservation of prehistoric rock art of Zimbabwe: a diagnostic analysis of the damage at Makumbe cave

Welcome Takunda Chigwende

14:30 Revisiting the Matsieng and Manyana rock art sites in south-eastern Botswana

Louis Moroka

15:00 Conservation of rock art in Tsodilo World Heritage Site

Lebonetse Lynext Mathe

15:30 Tea break

Tutorial Classroom 2 (Room 029)

16:00 Session 3 (cont.)

Auditorium 2

16:00 Conservation and management of rock art sites: a case study of the Brandberg Mountain

Kaarina Shagwanepandulo Efraim and Henry Napandulwe Nakale

16:30 Applying the IPCC's risk framework to assess climate change risks to rock art in Africa

Blen Taye, Tim De Kock, and Scott Allan Orr

17:00 End of session

17:30 Cocktail reception at the McGregor Museum

Session 1: What is a 'rock art site'?

Chaired by Mélanie Duval (EDYTEM, CNRS, Savoie Mont Blanc University & RARI, University of the Witwatersrand) and David Morris (McGregor Museum & Sol Plaatje University)

What is a rock art site? As one of the basic units of management and study in rock art research, what one observer refers to as a 'site' may vary markedly from another observer. A 'site' is not a self-evident thing. A management perspective would usually demand precise legislative definition of 'site' as content and spatial extent, while the points of view espoused by different sets of 'users' – local people/communities, property owners, tourists, art historians, and more – would be much more various and ambiguous. Academics, from different disciplines or traditions of enquiry, may read 'site' in quite diverse ways according to focus or perception, expectations or the questions being addressed. For some a site is wholly material, and in ways not limited to the images that set 'sites' apart, while for others there would be intangible elements for which the 'site' is a nexus.

The goal of this session is to examine the diverse approaches and perspectives involved in defining a rock art site, recognizing that any definition is never neutral—it directly influences how these sites are considered within broader land-use and activity dynamics. Rather than simply contrasting different perspectives, this session aims to explore their points of intersection and how they can be integrated into a more comprehensive understanding. To achieve this, the session will feature oral presentations in the morning, followed by a roundtable discussion with selected speakers.

The site does not exist (without us): towards a geographical pragmatics of rock art

Hugo Quemin¹ and Mélanie Duval^{1, 2}

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Keywords: rock art site, pragmatics, geography, heritage, southern Africa.

What is a rock art site? A cluster of images? A scientific object? A tourist resource? A protected area? A vector for political claims? The notion of “site” seems self-evident, yet resists any stable definition. This instability reveals an uncertain geography, where sites are less fixed locations than operators of discourse, memory, and identity. What if a rock art site were not a specific, given place—as is often assumed—but precisely the effect of all these utterances? Based on fieldwork conducted in Namibia and South Africa, this paper proposes a geographical pragmatics of the rock art site: not as an archaeological entity or a heritage object in itself, but as an effect. A place that exists only through the practices that hold it together—those that designate it, isolate it, demarcate it, narrate it, mark it, and claim it.

This approach invites us to follow the lines of attachment that sustain—or fail to sustain—the site as such: embodied presences, narratives, practices of selection and closure, toponymic designations, scholarly discourses, legal texts, heritage logics, and gestures of visitation. The site is never given: it is a collective assemblage, always situated, always contested, where identities and spatial consistencies are co-produced. It brings certain histories to the fore, excludes others, generates profits, entails responsibilities, and distributes effects of recognition or marginalization. This perspective does not aim to disqualify archaeological definitions of the site—through stratigraphy, density, materiality, or cartography—but to re-situate them as forms of situated engagement, produced within specific epistemic regimes and institutional contexts, according to particular criteria. The very act of saying “this is a site” helps to produce a place—a place that exists only within the network of relations that sustains it, a

mode of site-making that is scientifically grounded, historically situated, and often politically charged. In this sense, the archaeologist’s site does not contradict the pragmatist reading—it exemplifies it. It is one modality among others for holding a site together as a space of knowledge, and thus as a geographical object in its own right.

This paper therefore offers a radical critique of the very concept of the site: not to propose a better definition, but to shift attention to the operations—always social, technical, affective—that make it thinkable, visible, and actionable. The site is neither awaiting discovery, nor produced once and for all: it must be understood as something that emerges from our relationships, our knowledge regimes, and our situated engagements. It is a place that exists only through the operations performed in its name. And in this process, we are all involved—researchers, guides, institutions, visitors, descendants—caught in the fold of the site we help to bring into being, and that in turn shapes us.

Author biographies

Hugo Quemin is a PhD Candidate in Human Geography at University Savoie Mont-Blanc. His research explores the intersections of cultural heritage, tourism, and political recognition in Southern Africa. He focuses on the heritage-making of rock art sites, the moral economies of cultural tourism, and indigenous claims in postcolonial contexts. His research combines ethnographic fieldwork with critical discourse analysis and epistemological reflection.

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Contribution of scientific writings to the definition of rock art sites: a South African example

Juliette Barthélémy¹

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Keywords: rock art, scientific discourses, publications, history of research, knowledge construction.

The definition of rock art sites has evolved over time, in step with their discovery and study. Initially few in number, scientific writings on the subject have multiplied alongside growing interest in these remains. Today, they serve as a primary resource for understanding our current perception of what constitutes a rock art site.

Through the study of publications on three South African rock art sites in the Karoo region—Wonderwerk, Driekopseiland, and Wildebeest Kuil—conducted as part of a research Master's in archaeology, I invite you to reflect on the role of scientific writings in defining rock art sites from the second half of the 18th century to the present day. More broadly, this also involves considering the development of rock art archaeology in this part of the world. This critical historiographical approach underpins a broader reflection on scientific discourse. Although considered scientific, it is collectively created and socially constructed, and therefore remains a reflection of the society of its time. As such, the definition of a rock art site has varied over time, shaped by prevailing ideologies and by the perspectives of the researchers who have studied them.

Author biography

Juliette Barthélémy is a second-year Master's student in Archaeology (Master Arts, Sociétés et Environnements de la Préhistoire et de la Protohistoire : Europe, Afrique). She holds a dual background in Law and Political Science (Bachelor's degree from the University of Capitole, Toulouse), as well as in Art History (Bachelor's degree from the University of Jean Jaurès, Toulouse).

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Rock archaee: a living landscape of memory

Alice Parkington¹ and John Parkington²

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Keywords: rock art, archive, landscape archive.

Rock art sites are archives, comprised of records of various aspects of hunter-gatherer life in the Western Cape. These records may be depictions of events of trance where a healer has later described their experiences and had those recorded in a painting; they may be paintings that relate to hunter-gatherer identity such as depictions of important game species such as eland and hartebeest; they may be elephants and therianthropes that provide insight into the relationship between people and animals in painters' minds; they may also be sites that served a purpose in the construction, understanding and communication of group identity, such as painted sites that are thought to be initiation scenes. Not all painted sites may have necessarily served the same purpose, it is as likely that people painted for a number of reasons as it is that they painted for one reason only (which is often argued). However, it is unlikely that the painters of rock art were unaware that their work would last multiple generations. Although we cannot know their specific motives when creating the paintings, "paintings are in several respects much like other assemblages whose material and informational qualities resemble the notion and constitution of what is called the 'archive' in modern-day semantics" (Mguni, 2013). We argue that the rock art forms part of the archaeological archive, the archaee, which holds what traces are left of the hunter-gatherers of South Africa. Each rock art site represents one point in a network of interconnected canvases, a memory network, which constitutes a vast landscape archive of San knowledge. This archaee is a place where time is compressed and layered, allowing the past, present and future to bleed into each other and rendering the lingering presence of painted people more visible.

Author biographies

Alice Parkington is a researcher for Dr Grant Parker at Stanford University. Their work focuses on the relationship between archives and community narratives with a specific focus on South African heritage. She holds a Masters Degree from the University of York in Women's Studies and Honours Degree from the University of Cape Town in Gender and Transformation. Her MA thesis focused on how to incorporate feminist research methodologies into understanding Cederberg rock art.

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John Parkington is an Emeritus Professor and Senior Research Scholar in the Archaeology Department at the University of Cape Town. His research interests are in the long-term history of hunters and gatherers in the Fynbos Biome. To this end he looks primarily at shell midden sites, rock paintings and landscape use in the Western Cape.

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Extended socialities in storied landscapes: on what constitutes rock art ‘sites’ in the Northern Cape, South Africa

David Morris^{1,2}

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Keywords: rock art, site, Driekopseiland, Northern Cape, extended sociality, assemblage.

This paper builds on thoughts about Driekopseiland and other Northern Cape rock art sites to characterise their nature and histories not so much in terms of cultural ‘contexts’ – in passive relation to which people and things reflect a ‘culture’ or ‘tradition’, or their mixing. Rather the focus is on active ‘assemblages’ or ‘alliances’, of people, varying manifestations of animist ‘personhood’, materials, and circumstances, which together express extended socialities within storied landscapes. These might also be termed entanglements, perhaps more thickly knotted in the places and events that have tended to be called ‘sites’. Through time, they would be generative in processes of on-going reassembly both in situ and in elaborations or contractions across landscapes.

Author biography

David Morris is a Visiting Professor, Department of Heritage Studies, Sol Plaatje University, and Honorary Research Associate (retired), McGregor Museum, Kimberley. His doctoral work (University of the Western Cape), and museum research, focused on rock art of the Northern Cape and Karoo. He has contributed to developing public archaeology through a range of museums and sites, including the Wildebeest Kuil Rock Art Centre, and was involved in defending heritage from mining impacts. His publications include research articles and co-authored books on rock art, indigenous perspectives, and the history of archaeological research. A past-President of the South African Archaeological Society, he currently serves on the Council of the William Humphreys Art Gallery in Kimberley.

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A landscape approach to the conservation management of Mamuno engraving site complex, Western Botswana

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Keywords: Mamuno, landscape, site, development planning, engravings, clusters, phenomenology.

Mamuno site complex is made up of several clusters of engravings spread across a large part of the low lying sandstones near Mamuno Gate staff housing, on the Botswana side of the border between western Botswana and Namibia. The most engraved surfaces are found in an area of about 1 km by 1 km. Three more engraving clusters of this complex, the furthest being about 9 km away from this main zone, fall within a larger Mamuno territory. Several conservation management concerns were identified in the documentation research that was carried out in the years 2012 and 2013. These include a hotel that was under construction at the time of the site documentation, the increased border traffic, a small housing scheme, and Zionist religious uses of one section of the engravings zone, over and above the long-standing use of the area as a grazing pasture. This paper references the 2007 EIA that preceded the hotel development project in terms of its recommendations. It then proposes that while the process was well within the legal and policy framework's parameters, it stemmed from situating the engravings as a site rather than a landscape, concepts that call for different approaches to conservation management. This paper calls for policy revision and public education, specifically to refine definitions of site and landscape as heritage concepts that need be central to conservation management, tourism and development planning.

Author biography

Phillip Segadika is Head of the Archaeology and Monuments Division at the Botswana National Museum and is the 2025 Resident Scholar at the Metropolitan Museum of Art in New York. With nearly three decades of field and museum experience across southern Africa, his work spans heritage site management, museum pedagogy, human origins and indigenous knowledge systems. Segadika has authored multiple heritage management plans and is a leading advocate for inclusive heritage practices rooted in local cultural narratives.

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Milton Tapela is the Principal Curator at the Maun Regional Office of the Botswana National Museum. With extensive experience in heritage site management and rock art documentation, he has played a central role in preserving and interpreting cultural sites across northern Botswana. His curatorial work integrates community engagement, archaeological research, and conservation strategy, with a special focus on the rock art traditions of the Okavango, Tsodilo and Mababe regions. Tapela's current research revisits the Savuti rock paintings first recorded in 1969, combining field reassessment with comparative analysis of stylistic elements from Tsodilo and other regional sites. His work contributes to broader debates on cultural continuity, symbolic landscapes, and the challenges of managing vulnerable heritage in ecologically dynamic zones.

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Cosmological, perceptual, and representational paradigms in spatial practice of rock art

Terance Xolani Nzuza¹

¹Wits Film & Television

Keywords: cosmological symbolism, archaeoastronomy, immersive perception, round vision, image space.

This article investigates the intersection of cosmological symbolism, immersive perception, and interdisciplinary representation through a synthesis of ancient and contemporary spatial practices. Building on Koitsiwe's (2020) articulation of the astronomical function of rocks and boulders and Sitchin's (2004) interpretation of these geological forms as celestial instruments, the study foregrounds the role of natural elements in indigenous and archaeoastronomical knowledge systems. Grau's (2003) concept of an image space that addresses the observer from all sides and Toddi's (2016) notion of round vision are employed to explore non-linear, enveloping modes of visual engagement that challenge the traditional perspectival gaze. Celant's (2009) theorization of a polyvalent, totalling space—one that integrates diverse creative vocabularies from art and music to politics and commerce—extends this inquiry into a post-medium, post-disciplinary domain. Together, these frameworks propose a reconceptualization of space as a dynamic, interactive, and cosmologically infused environment that transcends conventional boundaries of representation, offering a holistic, multi-sensory experience that redefines the relationship between observer, object, and environment.

Author biography

Terance Xolani Nzuza is a Johannesburg-based interdisciplinary creative in the medium of film and visual art and a PhD candidate in Film and Television at University of Witwatersrand where he completed his Masters in Fine Arts and a Bachelor Arts in Television Studies. Terance has collaborated both locally and internationally across various contexts of media including painting, theatre, film and television.

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Session 3: Conservation and management of rock art sites

Chaired by Catherine Cretin (National Museum of Prehistory & PACEA, University of Bordeaux), Lenishwa Engelbrecht (National Heritage Council of Namibia) and Stéphane Hoerlé (PACEA, University of Bordeaux - RARI, University of the Witwatersrand)

The conservation and management of rock art sites is confronted with a number of practical and theoretical issues, such as identifying what needs to be protected, determining why and for whom it needs to be protected, how to deal with the intangible, accommodating the constraints and expectations of different interest groups, or combining modes of action from different cultural backgrounds.

The session *Conservation and management of rock art sites* will explore these critical issues and concerns. Topics of interest include, but are not limited to:

Management Practices: Examining effective site management strategies, including site access, monitoring, and sustainable tourism;

Raising Awareness: Strategies to promote public understanding and appreciation of rock art sites, emphasizing their cultural and historical significance;

Intangible Cultural Heritage: Approaches for integrating the intangible cultural heritage associated with rock art, such as oral traditions, rituals, and community engagement, into management and promotion efforts;

Conservation Challenges: Addressing the degradation and preservation of rock art sites due to environmental, human, and technological factors;

Intervention efforts: Mitigating degradation processes.

We welcome practical and theoretical contributions that highlight innovative solutions, case studies, and interdisciplinary approaches to these critical issues.

Conservation of prehistoric rock art of Zimbabwe: a diagnostic analysis of the damage at Makumbe cave

Welcome Takunda Chigwende¹

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Keywords: conservation, rock art, Zimbabwe, dust, soot.

Southern Africa is endowed with magnificent rock art sites with several on the UNESCO World Heritage List. These include Twyfelfontein, Namibia and Tsodilo Hills, Botswana. Many others are part of UNESCO World Heritage Landscapes such as Matobo (Zimbabwe), Dedza (Malawi), and Mapungubwe (South Africa) etc. Most of these sites are susceptible to accumulation of dust, smoke and other pollutants. Locals use many for various purposes, including as meeting venues for open-air church groupings. Although there are other threats to rock art in the region, dust and soot are the most damaging thus, conservators have to be prepared to remedy these. At the moment, however, there has been very little research on how to treat rock art sites affected by dust and/soot. This has resulted in no action being taken and many images being 'lost' behind layers of dust and soot. In Zimbabwe, sites including Nswatugi and Pomongwe have been adversely affected by dust. Due to smoke and accumulation of soot on the walls, Makumbe Cave gives us a glimpse of the kind of damage that sites can suffer when exposed to fire. Based on these observations, the study embarked on scientific research to find cleaning agents for the two threats dust and soot and diagnosis on the other threats on the site. Working with the Chemistry Department at the University of Zimbabwe, we used Makumbe as a sample for testing the effectiveness of the cleaning agents. Although the research is at its germination stage, the results are encouraging towards the conservation of rock art. This paper presents preliminary results and discusses the potential applications of the research findings in the context of rock art.

Author biography

Welcome Takunda Chigwende is a doctoral student at the University of Witwatersrand, focusing on rock art in Zimbabwe's Matobo Massif. His thesis investigates rock painting technology through experimental archaeology at Pomongwe Cave, aiming to understand cultural and technological developments in prehistoric art. He has conducted extensive fieldwork and presented his findings at various conferences. Committed to preserving cultural resources, he collaborates with Indigenous communities and explores ways to benefit them through heritage commodification.

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Revisiting the Matsieng and Manyana Rock Art Sites in South-Eastern Botswana

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Keywords: rock art conservation, monitoring, Matsieng, Manyana, heritage continuity.

This paper revisits two of south-eastern Botswana's most symbolically rich heritage sites of Matsieng and Manyana. The sites were first documented by Nick Walker and L.B. Robbins, respectively, in the late 1970s. More than two decades after their publication, field investigations were conducted to assess the current condition of the petroglyphs and paintings, evaluate signs of deterioration, and reconsider the cultural narratives and authorship of the rock art. At Matsieng, where pecked footprints surround a sacred waterhole, many engravings have eroded but remain discernible. Recent observations reaffirm the site's dual legacy: rooted in San ritual practices and reinterpreted through Tswana cosmology. At Manyana, extensive fading has impacted the visibility of giraffe and crocodile-man images, but a recent survey from about 2010 (Markovich) proves the importance of systematic recording for conservation monitoring purposes. Through photographic comparisons, some community interviews, and updated stylistic analysis, the study explores the intersection of conservation monitoring, heritage continuity, spiritual symbolism, and environmental vulnerability. The findings highlight the urgent need for renewed conservation monitoring efforts, while opening pathways for multi-vocal interpretations that position these sites within broader southern African rock art traditions and cosmopolitan heritage discourse.

Author biography

Louis Moroka is the Principal Curator for Archaeology and Monuments in the Kanye Regional Office, Botswana. He is responsible for community heritage development projects, management plan implementations and Community Trusts mentoring services. In his region there are at least 7 recorded rock art sites two of which are the subject of discussion in this paper.

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Conservation of rock art in Tsodilo World Heritage Site

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Keywords: conservation, management strategies, legislation, threats and monitoring.

Rock art is a form of painting, engraving or other graphic representation on a fixed rock surface or loose stone, executed by a human and is older than 100 years and helps us to know about our past. Crucial lessons and philosophies can be related via the art. In that way, it expresses regardless of its artistic qualities and purpose, the capability of humans to adapt to all kinds of geographical and environmental conditions. Therefore, it also constitutes one of the most valuable cultural heritage categories of humanity. Conservation and management strategies at Tsodilo include legislations, community involvement programs, visitor management plans, and preventive conservation measures. The basic principle of cultural heritage conservation is that cultural sites are valuable, scarce and non-renewable once rock art is damaged it cannot be replaced. The overall aim of conservation is to provide for the long term in-situ maintenance, protection and retention of the cultural- historical significance of the site and to maintain the authenticity and integrity of the OUV. This paper intends to focus on the threats adversely affecting the paintings in Tsodilo which in the long run may be detrimental leading to their diminishment and also demonstrate the effectiveness of community-based management in the conservation of rock paintings and promoting sustainable tourism practices. The paper also highlights the need for ongoing monitoring and adaptive management to address the long-term challenges of climate change and natural weathering, ultimately contributing to the preservation of rock paintings in Tsodilo for future generations. It will conclude by proposing for the necessary actions to mitigate or remedy the situation. Tsodilo as the first World Heritage Site in Botswana should be used as a model of best practice in terms of how to conserve our rock art sites.

Author biography

Lebonetse Lynext Mathe is a Principal Curator under the division of Archaeology and Monuments in the department of Botswana National Museum and Monuments based in Francistown. Mathe holds a Bachelor degree in Archaeology and Environmental Science from the University of Botswana. My job initially entails but not limited to, conservation assessments as well as condition reports of heritage sites, supervised the development of heritage sites into tourist destinations, facilitated the implementation of heritage sites conservation plans.

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Conservation and management of rock art sites: a case study of the Brandberg Mountain

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Keywords: conservation, heritage, site, management, rock arts.

The Brandberg is Namibia's highest mountain and home to significant rock art in Southern Africa. Brandberg Mountain is located in northwestern Namibia in the Erongo Region. The mountain is known for its rich concentration of prehistoric rock art, including the iconic "White Lady" painting. As one of the most significant archaeological and cultural heritage sites in Southern Africa, the Brandberg offers critical insight into the region's ancient hunter-gatherer societies. However, despite its cultural value, the site faces increasing threats from natural erosion, human interference (illegal mining), and inadequate conservation infrastructure. This research examines the current state of conservation and management of rock art sites within the Brandberg highlighting threats such as natural weathering, human interference, and assesses the effectiveness of existing practices aimed at protecting this heritage. Through field assessments and a review of institutional frameworks, the research identifies gaps in existing conservation frameworks and proposes integrated strategies that balance heritage preservation with community involvement, institutional collaboration and sustainable tourism in safeguarding the site. The findings aim to inform national efforts to safeguard Namibia's rich archaeological heritage. Findings reveal significant conservation challenges, including physical deterioration of paintings and limited site monitoring. Although some preservation initiatives have been implemented, such as signage and restricted access zones, these measures remain insufficient.

To address these challenges, strong conservation and management strategies grounded in community engagement, education, and capacity-building are recommended. Further recommendations include the introduction of digital

documentation tools and the integration of local knowledge into conservation efforts. This case study emphasizes the need for a balanced approach that protects Brandberg's cultural heritage while fostering local socio-economic development. By highlighting both the threats and opportunities associated with rock art conservation, the research aims to contribute to national and regional conversations on heritage preservation in Namibia and beyond.

Author biographies

Kaarina Shagwanepandulo Efraim is a curator for archaeology at the National Museum of Namibia. She holds a Master's in Archaeology, a Postgraduate Diploma in Education and a BA Honours in History and Sociology. Currently, she is pursuing a PhD in Archaeology with the University of Pretoria, focusing on the impact of mining on the archaeological landscape in Namibia.

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Henry Napandulwe Nakale is a Namibian archaeologist and heritage practitioner currently working as an Assistant Curator at the Windhoek City Museum. He holds degrees in Tangible Heritage Management, Archaeology and Heritage Studies. Henry is currently pursuing a PhD in Archaeology at the University of the Witwatersrand, focusing on lithic analysis. His work centers around preserving Namibia's cultural heritage and advancing archaeological research in Southern Africa.

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Applying the IPCC's risk framework to assess climate change risks to rock art in Africa

Blen Teye¹, Tim De Kock¹, and Scott Allan Orr²

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²Institute for Sustainable Heritage, University College London

Keywords: bio-colonisation, standing stones, petroglyphs, risk, rock art.

Climate change presents significant challenges to the preservation of cultural heritage globally. Recent research has highlighted geographic gaps in climate change and cultural heritage research, particularly that the focus is predominantly on Europe and North America. Africa, however, is experiencing a more rapid increase in surface temperature than the global average, with the intensity of rainfall increasing in a majority of the continent. There are thousands of rock art sites across the continent, representing diverse traditions. Rock mass failure, surface material loss, discoloration and biocolonisation are reported in the literature as the main climate related risks for rock art sites. However, the lack of detailed data on rock art locations, types and material properties and coarse climate projections complicate understanding risks to these sites. This study develops an approach that factors in these limitations for assessing climate risks to African rock art and uses the IPCC AR6 risk assessment framework and 16 UNESCO World Heritage Sites as case studies. Results show that rock art sites in Gabon, Senegambia, Ethiopia and Chad will face an increase in rainfall intensity (Rx1 day > 5mm/day) and prolonged high temperatures (consecutive days above 25°C). This will exacerbate moisture-related hazards and affect biological activity. Vulnerability assessments highlight the role of rock art type (e.g., standing stones and petroglyphs) in determining the level of risk. Effective responses, such as water runoff mitigation strategies demonstrated in South African rock art sites, are essential to prevent loss.

Author biographies

Blen Teye is a postdoctoral fellow at the Antwerp Cultural Heritage Sciences. She is conducting a 3-year research project on the impact of climate change on rock art and architecture in Africa. She is an architect by training and has a PhD in Geography and the Environment (University of Oxford) and a master's degree in Archaeological Material Sciences (Sapienza University of Rome and University of Evora).

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McGregor Museum



The McGregor Museum, located in Kimberley in South Africa's Northern Cape, is one of the province's leading cultural, scientific, and heritage institutions. Officially founded on 24 September 1907, the museum owes its existence to a significant act of philanthropy: Mrs. McGregor, the widow of former Kimberley mayor Alexander McGregor, donated the funds needed to establish it after several earlier attempts had failed. Its formal name, the Alexander McGregor Memorial Museum, has affectionately evolved over the past century into simply "the McGregor."

Today, the museum serves as a multidisciplinary museum and a primary research institute for the Northern Cape, covering a broad spectrum of natural and cultural history. Its areas of expertise include zoology, botany, general history, South African struggle history, archaeology, and social anthropology. The McGregor Museum curates major collections and archival materials, supporting an active research agenda that includes international collaborative projects.

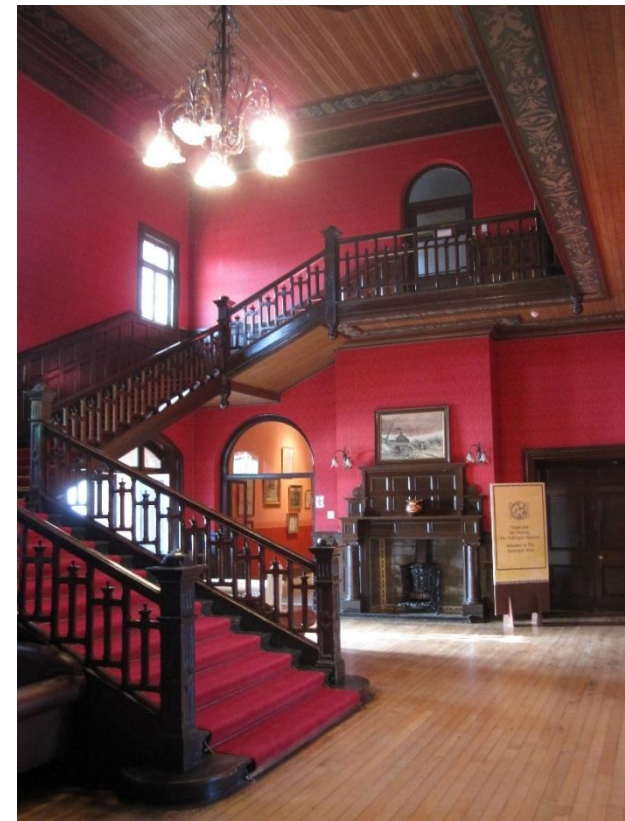
Beyond its research and conservation mandate, the museum plays a central role in education and community outreach, engaging local communities as well as audiences across the province. It also maintains a strategic relationship with the School of Heritage, which is to form part of Sol Plaatje University, thereby contributing directly to the development of heritage-related education and training in the Northern Cape.

Spread across several historic buildings in Kimberley, the McGregor Museum offers a rich variety of exhibitions featuring:

- local history, including the diamond rush and the Siege of Kimberley;
- archaeology and anthropology, with strong representation of early human settlement, Khoe and San communities, and contemporary societies;
- natural sciences, highlighting the biodiversity of the Kalahari and the Karoo;
- military heritage linked to the region.

As a centre of memory, research, and education, the McGregor Museum stands as an essential custodian of South Africa's heritage, offering unique insights into the historical, cultural, and environmental richness of the Northern Cape.

<https://museumsnc.co.za>



TUESDAY

09:00 Session 3 (cont.)

Auditorium 2

09:00 Participatory heritage management and the conservation of rock art: case studies from the Maloti-Drakensberg Park buffer zones

Makhotso Malefane

09:30 The preservation of rock art within national parks

Boitumelo Machaba

10:00 “Salvaging” Rock Art in the name of conserving and managing the arts

Dimakatso Rosina Tlhoaele

10:30 Tea break

Tutorial Classroom 2 (Room 029)

11:00 Session 5

Auditorium 2

11:00 From desert to display: recasting Tsodilo rock art at the Metropolitan Museum of Art

Phillip Segadika

11:30 Rock art presentation: a comparative analysis between the uKhahlamba Drakensberg Park, South Africa and the Vézère Valley, France

Curtis Jeaven

12:00 Tourism and rock art in postcolonial context: the case of Botswana’s rock art sites

Gladys B. Siphambe

12:30 Lunch

Moroka Hall of Residence dining hall

14:00 Session 5 (cont.)

Auditorium 2

14:00 Tourism and rock art in a postcolonial context: Zimbabwean experience so far

Loveness Serudzai Gupure and Ancila Nhamo

14:30 Tourism and rock art in a postcolonial context: the case of Zambia

Macmillan Mudenda

15:00 To what extent does rock art heritage tourism benefit local communities in the Erongo Mountains?

Mélanie Duval and Hugo Quemin

15:30 Tea break

Tutorial Classroom 2 (Room 029)

16:00 Session 5 (cont.)

Auditorium 2

16:00 Tourism and rock art: the case of Mapoka, Nlapkhwane and Zwenshambe, north east Botswana

Mugabe Kuda

16:30 Community management and rock art management: comments and reflections on 25 year’s of rock art guiding and management

Raphael Sicelo Mnikathi

17:00 A successful, community-run public rock art site: the case of Nsangwini, Eswatini

Thembi Russell

17:30 End of session

18:00 Tour with the curators of the exhibition “Places in Me – The Voices of Platfontein’s Youth

Exhibition Venue (Room G20)

Participatory heritage management and the conservation of rock art: case studies from the Maloti-Drakensberg Park buffer zones

Makhotso Malefane¹

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Keywords: rock art sites, threats, buffer zone, manage, local communities.

The Maloti-Drakensberg Park World Heritage Site, shared between Lesotho and South Africa, is internationally recognized for its exceptional concentration of San rock art. While the core of the site is protected, the surrounding buffer zones remain vulnerable to various threats—many of which originate from human activity and could be mitigated through more effective local management. This paper investigates the nature and frequency of threats to rock art sites within the buffer zones of Sehlabathebe National Park in Lesotho and the uKhahlamba Drakensberg Park in South Africa. Specific focus is given to human-induced threats such as kraaling, the use of fire, and the burning of cow dung—activities that result in environmental and chemical damage to rock surfaces, including defacement and staining of images. The paper further explores how differing cultural perceptions of rock art influence conservation outcomes. While some traditional healers and local groups in South Africa maintain a strong spiritual connection to the sites, similar cultural value is less evident among local communities in Lesotho. This discrepancy affects levels of community engagement and, by extension, the success of conservation strategies. The study argues that integrating local communities into heritage management—through awareness, education, and participatory conservation—can significantly reduce preventable damage. It concludes by recommending context-sensitive approaches to community involvement that balance the need for protection with cultural accessibility and sustainable use of heritage resources.

Author biography

Makhotso Malefane (Cultural Heritage Officer) is a graduate from the National University of Lesotho, where she obtained Bachelor's degree in Cultural Studies. She has been working for the Ministry of Tourism, Sports, Arts and Culture for the past 12 years, based at The Maloti Drakensberg Park World Heritage Site. She has participated in various projects such as Sehlabathebe National Survey in 2015 and Rock Art Monitoring and Risk Assessment in 2022.

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The preservation of rock art within national parks

Boitumelo Machaba¹

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Keywords: SANParks, rock art, conservation, trails.

South African National Parks (SANParks) has a rich tapestry of cultural heritage, ranging from palaeontology, archaeology, and historical period. One of these resources is rock art, which has been found at several national parks around the country – but their presence is often not known. This is primarily due to the historical emphasis on biodiversity conservation, which often resulted in cultural heritage receiving comparatively less attention. I wish to briefly review the nature of the rock art found within landscapes under SANParks' custodianship, and to discuss rock art trails designed to showcase this imagery to a broader range of tourists—offering an experience that extends beyond biodiversity alone.

Author biography

Boitumelo Machaba holds a Bachelor of Arts and a BA Honours degree in Archaeology from the University of Pretoria, with a specialization in southern African San rock art. She currently serves as a Heritage Officer in the Cultural Heritage Unit of South African National Parks (SANParks), where she is responsible for the ongoing assessment and management of heritage sites across the 21 national parks under SANParks' custodianship.

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“Salvaging” Rock Art in the name of conserving and managing the arts

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Keywords: Ebusingatha rock-art, salvaging, conservation, managing.

The term salvaging or to salvage is a term widely used in heritage spaces as a way to “safe keep” artefacts especially rock-art slabs that have fallen down from their main shelter or would be destroyed by the building of a dam etc. After they are salvaged they are placed or housed in museums spaces whether as exhibitions or just kept in collections rooms. One typical example are the fallen rock-art slabs now housed/ stored at KwaZulu-Natal Museum removed from a site known as uMhwabane (eBusingatha) in the Foothills of uKhahlamba mountains (Drakensberg), Bergville area. The Ebusingatha rock-art slabs were not removed by KwaZulu-Natal Museum. The at Ebusingatha rock-art has a complicated history regarding how the shelter got destroyed, whereby the locals believe that the great snake known as “uMhwabane” is responsible for one of the overhang rocks that fell to signal its departure from the cave. Others believe that it was the British royal family in the late 1940s that contributed to the site being destroyed, whatever the case, the Rock-Art panels are now stored at the KwaZulu-Natal Museum, some piece(s) shown to the public (‘The Elephant Man’), and the majority away from the public. This paper endeavours to look at the idea of ‘salvaging’ Rock-Art pieces as the way to conserving and managing the rock art heritage using the Ebusingatha Rock-Art housed at KwaZulu- Natal Museum as a case study. The questions I posed are: 1) Are we really conserving and managing the Rock-Art by keeping it away from the public to see it? 2) Are the museum exhibition spaces equipped to carry the weight of the salvaged slabs?

Author biographies

Dimakatso Tlhoale is a research technician in Human Science Department at KwaZulu-Natal Museum. She works mainly with collection, data capturing and basic collection intervention. Additionally, she assists researchers that come to do research on the collection housed at KwaZulu-Natal Museum to have access to the material. Furthermore, she deals with loans (collection loaned to other institutions from KwaZulu-Natal Museum).

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Session 5: Tourism and rock art in a postcolonial context: By whom? How? For whom? What content? Which issues?

Chaired by Mélanie Duval (EDYTEM, CNRS, Savoie Mont Blanc University & RARI, University of the Witwatersrand) and Ancila Nhamo (University of Zimbabwe)

The objective of this session is to discuss the issues associated with the development of rock art sites for tourism. The focus will be on postcolonial contexts, which raise specific questions concerning the challenges of associating different types of actors, access arrangements and the content of discourses on rock art sites. As cultural sites in southern Africa, rock art sites can be the subject of very different tourism development, ranging from sites with a high level of tourist traffic (the Twyfelfontein site in Namibia, for example) to sites with more limited tourist traffic (the Makgabeng sites in the Limpopo province of South Africa). By putting different case studies into perspective, the objectives of this session are to examine: (i) the different ways of developing tourism at rock art sites, and to question the way in which the link between preservation and development issues is managed; (ii) the different forms of accessibility and what it means to 'make a rock art site accessible'; (iii) the types of actors involved and the way in which so-called 'local' communities are or are not involved, which also means questioning the term 'local community' and (iv) the discourse surrounding rock art sites, which also means questioning the issues of guide training and discourse construction. By putting them into perspective, the various selected papers will provide an overview of the issues observed and avenues for action to consider a sustainable and inclusive tourism approach for rock art sites. However, the session remains open to proposals for other case studies, insofar as these will enable a better understanding of what happens in cultural contexts marked by postcolonial issues.

From desert to display: recasting Tsodilo rock art at the Metropolitan Museum of Art

Phillip Segadika¹

¹Botswana National Museum

Keywords: rock art, site presentation, exhibition, heritage consumption.

I explore the recent inclusion of Tsodilo rock art in the new African art wing of the Metropolitan Museum of Art (MET) in New York. The paper is a case study of how rock art is reframed for global audiences. Positioned as the oldest known art form on the continent, rock art at the MET functions as both an aesthetic introduction and a narrative anchor to Africa's artistic legacy within the museum's renowned Michael C. Rockefeller Wing (MCRW). Through a critical review of the introductory film on Tsodilo presented at the MET, the paper interrogates how the museum curates African heritage for its predominantly Western visitors. What does it mean for ancient rock paintings, once hidden in the arid cliffs of northwestern Botswana, to be interpreted for consumption in a climate-controlled gallery thousands of miles away? What rock art and cultural elements are emphasised, simplified, or excluded? Which voices are privileged and why? How would a local version play out? The analysis considers the broader implications for African rock art site managers: how can temporary or rotating exhibitions abroad serve not only as exposure, but as a strategic invitation to potential tourists and supporters of African heritage sites? The paper argues that such international visibility demands a rethinking of local museum practices that blends mobility, storytelling, and participatory curatorial methods to maintain cultural depth while attracting global interest. Ultimately, the Tsodilo film becomes a mirror: reflecting how heritage is translated across borders, but also suggesting how Africa's rock art custodians might reframe their narratives to reclaim interpretive sovereignty while inviting the world in. The paper closes by proposing hybrid models of film and exhibition productions that position African sites not only as destinations but as dialogical spaces within a global museum ecosystem.

Author biography

Phillip Segadika is Head of the Archaeology and Monuments Division at the Botswana National Museum and is the 2025 Resident Scholar at the Metropolitan Museum of Art in New York. With nearly three decades of field and museum experience across southern Africa, his work spans heritage site management, museum pedagogy, human origins and indigenous knowledge systems. Segadika has authored multiple heritage management plans and is a leading advocate for inclusive heritage practices rooted in local cultural narratives.

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Rock art presentation: a comparative analysis between the uKhahlamba Drakensberg Park, South Africa and the Vézère Valley, France

Curtis Jeaven¹

¹Sol Plaatje University

Keywords: rock art presentation, World Heritage Sites, Vézère Valley, uKhahlamba Drakensberg Park, thematic content analysis.

Global research on rock art presentation remains limited with studies focusing on rock art presentation in South Africa particularly scarce. Similarly, there is a notable gap in literature, addressing rock art presentation in the Vézère Valley. This research is significant as it contributes to the expanding body of literature on rock art presentation in a regional comparative context. From this perspective, this thesis analyses the factors shaping rock art presentation in two World Heritage Sites that are home to some of the most remarkable rock art in the world. By adopting a qualitative research approach, this study employed observations and semi-structured interviews with tour guides to provide insights of rock art presentation. Data were collected during a four-month research stay in the Vézère Valley and a one-month research period in the uKhahlamba Drakensberg Park, with access granted by relevant cultural and heritage authorities. Thematic content analysis was used to systematically identify patterns and themes in the data, following Braun and Clarke's six-step framework. The analysed themes revealed a striking difference in rock art interpretation, interpretative infrastructure, sustainability and accessibility. This thesis further provides recommendations on how rock art presentation can be improved internationally.

Author biography

Curtis Jeaven is a noble Laureate winner for research excellence. He has a background in the fields of Heritage, Archaeology, History, and English. He is currently a second year Master of Arts candidate specialising in Heritage Studies at Sol Plaatje University, Northern Cape, South Africa. His research is entitled "*Rock art presentation: A comparative analysis between the uKhahlamba Drakensberg Park, South Africa and the Vézère Valley, France*". Jeaven holds a Bachelor of Social Science Honours in Heritage Studies, a Bachelor of Arts, and a Higher Certificate in Heritage Studies subsequently obtained from Sol Plaatje University. In respect of professional associations, Jeaven is as an Academic Facilitator at Sol Plaatje University and serves as Council Member at the national William Humphreys Art Gallery and Chairperson of the Northern Cape Heritage Pioneers. Lastly, Mr Jeaven is an associate researcher of the Cosmo-Art International Research Project.

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Tourism and rock art in postcolonial context: the case of Botswana's rock art sites

Gladys B. Siphambe¹

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Keywords: tourism, rock art, postcolonial context, Botswana.

Heritage is central to Africa's development and self-definition. Therefore, a more inclusive, African-led heritage sector that empowers communities, honours African values, and meaningfully contributes to the aspirations of its people is both desirable and necessary. Issues of authorship, cultural ownership, and ancestry become especially potent in postcolonial contexts, where past inequities must be addressed even as the complexities of contemporary identities emerge. Independent former colonies face the additional challenge of forging cohesive national narratives that honour cultural diversity and pluralism. In this context, the development of rock art sites for sustainable tourism in postcolonial Botswana presents inherent tensions. These manifest between different layers of authority at national, regional, and local government as well as among dominant and minority cultural groups and the multiple identity narratives they promote. This paper interrogates these dynamics, exploring how Botswana navigates the intersections of heritage, tourism, and postcolonial identity through its rock art sites.

Author biography

Gladys B. Siphambe is a heritage manager, tourism specialist, and Principal Curator of Education at the Botswana National Museum. She is responsible for the National Museum education programmes, which, include interpretive and outreach activities at heritage sites across the country. With professional experience spanning over three decades, she has served in the Archaeology and Monuments Division, overseeing heritage management and the development of heritage destinations in collaboration with local communities. Her work includes partnerships in community based organizations-led projects, joint ventures, and private sector heritage initiatives. Her research interests focus on heritage tourism, sustainable community livelihoods and beneficiation through heritage tourism.

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Tourism and rock art in a postcolonial context: Zimbabwean experience so far

Loveness Serudzai Gupure¹ and Ancila Nhamo¹

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Keywords: rock art, tourism, postcolonialism, cultural heritage, sustainable tourism.

This paper explores the complex interplay between cultural heritage and tourism in postcolonial Zimbabwe, focusing on the country's rich rock art traditions. It looks at lessons learnt from challenges such as limited domestic visitation due to a weak tourism culture, declining international tourism linked to political tensions with source markets, and the need to empower local communities for revenue generation. It also looks at the positive trajectory that Zimbabwe has seen in recent years in addressing all these issues. Sustainable tourism has been proposed as a pathway to balance conservation with economic development. Community-based initiatives in areas like the Matobo UNESCO World Heritage Landscape show promise in fostering local ownership. Although challenges such as insufficient funding, vandalism, and climate change may threaten long-term sustainability of rock art tourism if not addressed, there is promise in the future. This paper argues for a decolonial approach to heritage tourism that prioritizes indigenous knowledge, equitable participation, and innovative strategies to diversify tourism markets. By analyzing Zimbabwe's experiences, it highlights the need for different policies that address structural barriers, enhance local capacity for revenue generation, and foster resilient tourism models in the post colonial period. Ultimately, the study advocates for a reimagined heritage tourism framework centered on sustainability, inclusivity, and postcolonial justice.

Author biographies

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Ancila Nhamo is an Associate Professor of Archaeology and Heritage Management at the University of Zimbabwe. With over 20 years of experience, she has taught archaeology and heritage management at both undergraduate and postgraduate levels. Professor Nhamo's research interests lie in rock art interpretation, management, and conservation. She currently works as a Research Specialist in the Research, Innovation, and Industrialisation Directorate, where she collaborates with multidisciplinary teams from across the university's faculties to transform research into impactful solutions. A dedicated scholar and innovator, Ancila is committed to advancing knowledge and fostering sustainable development.

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Tourism and rock art in a postcolonial context: the case of Zambia

Macmillan Mudenda¹

¹National Heritage Conservation Commission

Keywords: rock art, cultural tourism, postcolonial heritage, conservation challenges, community participation.

Zambia has abundant cultural heritage and is also home to some of the most significant rock art sites in Southern Africa. Zambia has several rock paintings which depicts the country's early inhabitant. In the postcolonial era, these rock paintings have taken a different dimension and significance of not only being archaeological treasures but also as a potential driver of cultural tourism, economic diversification, and national identity. The postcolonial context brings in challenges of choosing between conservation and commercialization, heritage and economic development. In some case the increase in population around heritage sites has resulted in the high demand of resources found in these areas. Tourism is a growing sector in Zambia's economy and was recently classified as an economic sector. Tourism in Zambia has been traditionally centered around natural attractions such as Victoria Falls and visits to national parks. However Cultural tourism involving rock art painting remains underdeveloped but holds significant potential. A site like Mwela rock art site in Kasama located in the Northern Province has the potential to attract niche travelers interested in history, archaeology, indigenous knowledge systems and cultures.

Despite this potential, Zambia has yet to fully integrate rock art sites into its mainstream tourism offerings. Several challenges persist, including inadequate infrastructure, limited public awareness, insufficient funding for conservation, and a lack of adequately trained heritage professionals. The management of cultural heritage in Zambia is governed by the National Heritage Conservation Commission (NHCC) ACT cap 173 of the laws of Zambia, this law establishes Commission which manages both immovable cultural and natural heritage and are custodian of heritage sites, continues to operate within a top-down framework

where decisions are made at the national level with limited community participation. In the postcolonial context, there is an urgent need to decolonize heritage management and this should involves recognizing that rock art is not simply an archaeological artifact, but a form of living heritage with deep spiritual and historical connections for local communities. As the country navigates its postcolonial identity, the tourism potential of rock art must be approached with both ambition and caution.

Author biography

Macmillan Mudenda is a Senior Conservation officer and Acting Director heading the Conservation Services of the National Heritage Conservation Commission in Zambia. In the past 25 years his work spans from conducting cultural heritage impact assessment, rock art conservation and management historic building conservation and management, heritage site management planning, and land use planning. Mudenda has authored several site management plans for various sites in Zambia and is currently leading a team reviewing the National Heritage Commission Act and has spearheaded community led sensitization meeting in the Kafue Flats Man and Biosphere Reserve on the management of the Reserve.

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To what extent does rock art heritage tourism benefit local communities in the Erongo Mountains?

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Keywords: rock art heritage tourism, involvement, local communities, stakeholders, Erongo Mountains, Namibia.

In postcolonial contexts, the development of local cultural heritage for tourism is often promoted by development agencies (NGOs), state institutions and tourism agencies as a means of involving local communities in tourism dynamics. Building on this assumption, this presentation examines the extent to which the tourism development of rock art sites actually engages the communities living in proximity to them. This question is particularly relevant, since rock art—largely attributed to hunter-gatherer populations—is frequently portrayed in official discourses as a form of cultural heritage especially well-suited to fostering community involvement.

Our analysis focuses on rock art sites developed for tourism in the Erongo Mountains, drawing on three case studies: (i) rock art sites located within the boundaries of the *Erongo Mountain Rhino Sanctuary*; (ii) sites situated on the foothills of the massif in the Tubusis area; and (iii) sites developed for tourism in the Spitzkoppe massif. By focusing on the main rock art sites developed for tourism in these 3 cases studies areas, we will examine the existing forms of tourism and types of visits, as well as the actors involved and the benefits for local communities. This analysis will lead to an examination of the modes of collaboration between Namibian landowners of German descent and local Namibian communities of various origins, accompanied by an in-depth reflection on what is meant by “local communities” in these three contexts. Finally, we will conclude with recommendations aimed at improving relations between these two main categories of stakeholders, with a view toward sustainable and equitable

tourism development. The study draws on several field campaigns conducted in 2022, 2023, and 2024, which combined phases of participant observation with semi-structured interviews involving a range of actors engaged in these tourism processes.

Author biographies

Mélanie Duval is a senior researcher at the Edytem UMR 5204 CNRS Laboratory (University of Savoie Mont Blanc, France) and an honorary research fellow at the Rock Art Research Institute (University of the Witwatersrand, Johannesburg, South Africa), specializing in heritage and tourism geography. As a human geographer, her research is concerned with heritage making-process, sustainable tourism and archaeological sites (rock art, lake dwelling remains), particularly in mountain areas (South of France, French Antilles, Alps, Southern Africa). Within systemic and comparative approaches, she analyses the dynamic balance between heritage processes and tourism issues, with a focus on stakeholders’ interplay and the role of local communities.

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Hugo Quemín is a PhD Candidate in Human Geography at University Savoie Mont-Blanc. His research explores the intersections of cultural heritage, tourism, and political recognition in Southern Africa. He focuses on the heritage-making of rock art sites, the moral economies of cultural tourism, and indigenous claims in postcolonial contexts. His research combines ethnographic fieldwork with critical discourse analysis and epistemological reflection.

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Tourism and rock art: the case of Mapoka, Nlapkhwane and Zwenshambe, North East Botswana

Mugabe Kuda¹

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Keywords: rock paintings, local community, tourist attractions, Mapoka, Nlapkhwane.

Rock paintings exist along the Mapoka, Nlapkhwane and Zwenshambe hills although little research has been done in these areas. The hills in these villages have attractive and unique rock paintings associated with Plumtree (Zimbabwe) rock painting. The paintings are not found in one hill but several hills within a village. These areas receive limited tourist traffic but have potential to be an attractive tourist destination. Currently the rock paintings are visited by few tourists and are not marketed like other rock art sites like Manyana rock paintings. The local community plays a valuable role in the preservation or development of these rock paintings. The paper will look into how the local communities of these villages are utilizing the rock painting to attract tourists and ways in which the rock painting sites can be developed to attract more tourists.

Author biography

Mugabe Kuda is graduated from the University of Botswana with a Bachelor of Arts degree in Archaeology. Her career as a consulting archaeologist has seen her undertake several projects in the mining, construction, water and environment industries. She is passionate about rock art and has attended several rock art workshops and conference.

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Community management and rock art management: comments and reflections on 25 year's of rock art guiding and management

Raphael Sicelo Mnikathi¹

¹Rock Art Guide – Game Pass Shelter – Kamberg Nature Reserve

Keywords: cultural tourism, heritage management, Southern African rock art, site management, Game Pass.

Since the democratic elections in 1994, government, civil society and institutions of learning have been working to promote interest in southern African cultures and history both for South Africans themselves and foreign visitors. The encouragement of community participation and beneficiation of local communities from tourism has been a vital part of tourism initiatives.

In 2000 several agencies and institutions cooperated to establish a tourism centre at the Kamberg Nature Reserve, In KwaZulu-Natal South Africa. The rock art site of Game Pass is one of the best preserved and largest rock art sites in South Africa and has played an important role in rock art research. A visitors' centre was constructed including an audio-visual presentation, a bookshop and a restaurant. The nearby community of Tendela was included in the planning of the centre, with the aim of educating and creating employment for people in the area.

Some 25 years later, it has become clear that there is a gap between the original plans and ambitions for Game Pass rock art site. Expected visitor numbers did not materialise. The restaurant and book shop which were intended to be self-funding closed after three years. The number of guides has dropped from the original nine people who were trained, to two guides, who earn less than the equivalent of a full monthly salary. Rafael reflects on the question of whether Game pass has reached its limit in terms of the number of tourists it can attract and invites discussion of these and other issues from delegates.

Author biography

Rapahel Sicelo Mnikathi is a guide with 25 years' experience, from Tendela village. In this presentation, he gives an overview of the Game Pass tourism experience. He will share his impressions and experiences of the Game Pass tourism initiative by discussing the facilities and infrastructure of the Kamberg rock art centre, points of interest and significance along the way to the site, as well images of the rock art site and the images.

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A successful, community-run public rock art site: the case of Nsangwini, Eswatini

Thembi Russell¹

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Keywords: community, rock art, Nsangwini, Eswatini, sustainability.

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In southern Africa, researchers commonly emphasize that spiritual and ancestral connections between a local community and a rock art site is essential for the protection of a site (Ndlovu 2005, 2009, 2011, 2016; Jopela 2011, 2017; Little and Borona 2014; Changwe *et al.* 2022). This paper presents the results of a project among the community who live around and run the public rock art site of Nsangwini in Eswatini which offers an interesting and different perspective. This community did not make the rock art at Nsangwini, nor did their ancestors, and yet they guard it fiercely.

Fieldwork here from 2017 to the present revealed that it is conserved, protected and valued as an economic asset through the money generated by tourists visiting the site. The paper reflects on the sustainability of public rock art sites in this region by comparing the Nsangwini case to others in southern Africa to try to understand the reasons for its success where others have struggled.

Author biography

Thembi Russell is a senior lecturer and the curator of the archaeological collection at the University of Witwatersrand, Johannesburg. Her research interests include the last 2000 years of southern African history, and the interactions of southern African pastoralist, hunter-gatherers and pastoralists as revealed in the spatio-temporal distribution of their rock art, pottery, ostrich eggshell containers, and other types of archaeology. Her more recent interest in ethnography among modern day, small-scale subsistence farmers in Eswatini is led by a curiosity about their resilience to past natural disasters and climatic change as is evidenced in their millennia old archaeological practices from past to present, and what this might teach us about sustainability in today's world.

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Places in Me The Voices of Platfontein's Youth

This exhibition was created to share the results of a participatory photography project (based on the so-called “photovoice” approach) carried out in 2022 in Platfontein (Northern Cape) by Leïla Baracchini as part of her postdoctoral research with the international research programme COSMO-ART (The Cosmopolitan Approach as a New Paradigm for Rock Art Heritage Management in Southern Africa). As the people of Platfontein have a long history of displacement and resettlement, this participatory photography project aimed to explore, with a group of young people, how they perceive and use their everyday environment, both to reconnect with their memory and heritage and to negotiate their place in contemporary South African society.

Both the photovoice project and the exhibition are the result of a partnership between COSMO-ART and two Platfontein-based non-profit organisations: the Southern African San Development Organisation (SASDO) and the San Community Development (SANCD).



The grand opening of the exhibition took place on 1 July 2023 at the !Xunhwesa Combined School in Platfontein. It was an occasion of great celebration with speeches from key community members and performances by local traditional dance and hip-hop groups.



The exhibition remained on display at the !Xunhwesa Combined School for a week to allow people from Platfontein to see it at their leisure. During this week a visit to the rock art site at Wildebeest Kuil and the Rock Art Centre was organised with a group of 18 people from Platfontein. This was followed by a workshop where participants discussed the meaning of heritage to them, their vision for the future development of the Rock Art Centre, and how the community could be involved. A follow-up public meeting was held in Platfontein in March 2024 to give the whole community feedback on the outcomes of the workshop.

As the school had to be returned to the pupils and teachers after the school holidays, the exhibition then moved to Sol Plaatje University (SPU) with a second official opening on 7 July 2023. This was also an opportunity for the photovoice participants, key community members and academics to meet and explore potential joint initiatives. SPU is deeply engaged with community, particularly in addressing educational and social challenges. The university operates within a context of extreme poverty, unemployment, and illiteracy, with the local community suffering from a lack of essential basic services and infrastructure.

Through partnerships with communities like Platfontein, SPU aims to enhance democratic practice and social justice in society through its academic programs



PLACES IN ME
A PHOTOVOICE EXHIBITION

TJUSING GEA MI
 N+GA DJI TI KI DJI
 PLEKKE BINNE MY
 MO MAFELONG A ME

**THE VOICES OF
 PLATFONTEIN'S YOUTH**

View of Platfontein

SATURDAY 15 MARCH 2025 | 2-6PM
ORIGINS CENTRE, WITS

and research.

It then moved to the William Humphreys Art Gallery (Kimberley) for a month in September 2023 and to the Origins Centre (Johannesburg) in March and April 2025.

The exhibition consists of 17 pull-up banners with a selection of photographs and quotes from the photovoice project, expressing the perspectives young people in Platfontein have on their local environment and their cultural heritage. As well as how they define and relate to South African society. A small companion booklet was offered to visitors. It reproduces all the photographs in the exhibition and the quotes in five languages: English, Khwedam, !Xuntali, Afrikaans and Setswana. As San culture is strongly rooted in oral tradition, and in order to promote the San languages, the exhibition was also accompanied by a film with the photos and the quotes said in both Khwedam and !Xuntali. These audio recordings are also available via QR codes printed in the companion booklet.

The story of this exhibition and how and why it was created is summarised in a short film.



WEDNESDAY

Excursion to Wonderwerk Cave

Meeting point: Parking lot, Humanities Building, Central Campus

Departure time: 8:00 for 8:30

Transport will be by bus, which will take about 2.5 hours.

Lunch is included.

Delegates should be back to Kimberley by 18:00.

Participants will be divided into three groups for the cave visit, based on their focus group.

Each group will visit the cave in turn and be asked to reflect on one of the following questions:

Groups 1 et 2

Given Wonderwerk Cave's exceptionally long sequence of occupation, what interpretive approaches could help visitors understand the rock art not as an isolated feature, but as part of an evolving cultural narrative? What are the risks of misrepresentation when rock art is presented without its archaeological context?

Groups 3 et 6

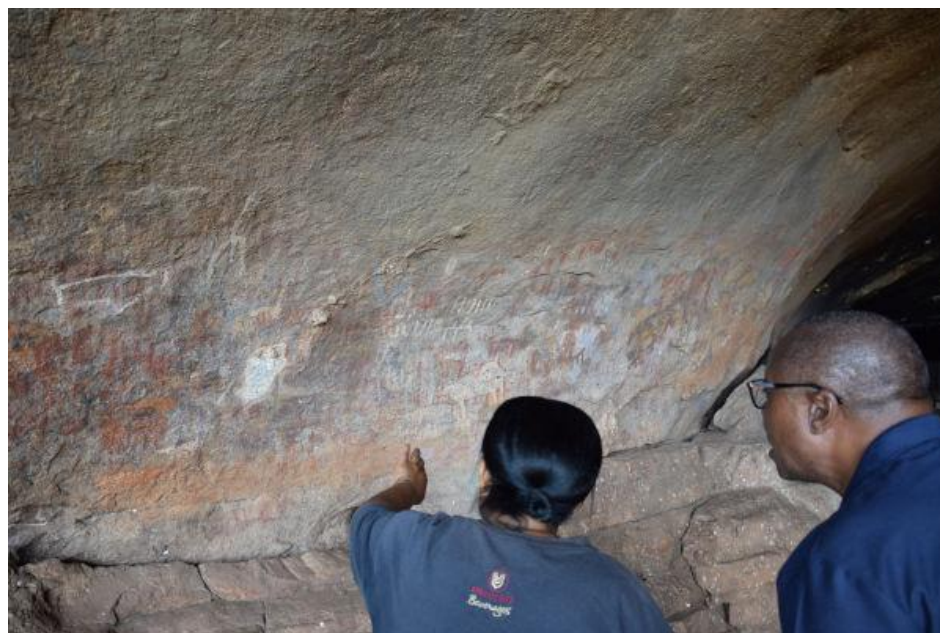
In conserving, managing and presenting the rock art at Wonderwerk Cave, how should heritage practitioners navigate the tensions between scientific archaeological narratives and local/community understandings of the cave's significance? What does 'responsible interpretation' look like in a site where deep-time archaeology meets living cultural memory?

Groups 4 and 5

How can heritage managers at Wonderwerk Cave meaningfully present and interpret the site's rock art in ways that do not overshadow—or become overshadowed by—the cave's deep and complex archaeological record? What strategies could ensure that both the visual heritage and the stratified material heritage are communicated as interconnected elements of a cultural landscape?

Once all groups have visited the cave, they will have more time to discuss the question. They will then present their answers to all participants during a feedback and discussion session.

Please familiarise yourself with all of the questions, even those that you will not be working on, in order to participate actively in the feedback and discussion session.





Wonderwerk Cave is about 200 km north-west of Kimberley. The cave is a large tunnel-like cavity measuring 140 m long, 10 to 25 m wide and 3 to 7 m high above modern ground.

There is rock art on both walls, in the partially lit entrance area. It consists of painted figures, mainly finger-painted geometries in black, white, red, orange and yellow. There are also animal figures of varying degrees of realism. No artefacts have been found below the surface of the floor during the various excavations, which suggests that it is relatively recent, or at least cannot be dated using archaeological levels.

The cave has yielded a wealth of archaeological remains. The oldest remains date back to the Early Stone Age, with 2-million-year-old levels in the entrance area attributed to the Oldowan. They raise the question of the early use of fire, as they contain burnt bones while no fire structures are visible. A series of Acheulean levels in the entrance area are characterised by the presence of handaxes and well-preserved plant and animal remains. In the cave, the Early Stone Age ends with the Fauresmith. This complex can be found at the bottom of the cave and has been dated to between 780,000 and 187,000 years ago. It has been suggested that the remains show traces of symbolic behaviour with the

collection of non-utilitarian crystals, pebbles and incised stone slabs. Early Middle Stone Age levels are found at the end of the entrance. Ochre is present in these levels, but there are no traces of the symbolic behaviour typical of this period. Finally, the Later Stone Age levels in the entrance area have been extensively excavated. This occupation lasted from 12,900 to 900 years ago. It yielded 5 engraved stone slabs depicting animals and geometry, which at the time of their discovery were the oldest pieces of art mobilier in southern Africa. Pigments are present in all the Later Stone Age levels. Two stone slabs are interpreted as palettes.



In the 19th century, one of the main roads leading to the Moffat Mission in Kuruman passed right by the cave. This mission was one of the main stops for travellers heading north when the country was being colonised. At that time, the Kuruman hills were still inhabited by hunter-gatherers, and the cave was reportedly used to hide stolen livestock and to collect water. The paintings are also briefly mentioned, but without any comment on their condition. In 1906, however, a report to the Cape Town Legislative Assembly stated that the paintings had “nearly all been destroyed, visitors having scribbled over and otherwise defaced them.”

Between 1909 and 1911, the cave was occupied by the Bosman family while they built their farmhouse. They then used the cave to store farm equipment and house livestock until the 1930s. In 1921 Maria Willman, then director of the McGregor Museum in Kimberley, made three watercolour copies of some of the paintings in the cave. In the early 1940s, the Bosman family carried out extensive work in the cave to remove the guano-rich sediments and sell them as fertiliser. This work had a destructive effect on the upper archaeological levels, but led to the discovery of archaeological remains and attracted the attention of archaeologists, who quickly began excavations that continue to this day. In the 1960s, J. and I. Rudner and G. and D. Fock reported on the cave paintings in their surveys of rock art in the region. Throughout the 20th century the cave was visited by people from nearby towns and farms. They often wrote their names and dates on the walls, often above the rock art. Recreational use of the cave slowed in the 1970s when a fence was erected to control access to the cave. In 1993, the cave and surrounding public easement were declared a National Monument (reclassified as a Grade 1 National Heritage Site in 2010) and work was undertaken to regulate public access to the cave. Accommodation and a small exhibition area have been built. Inside the cave, a path has been laid out to restrict and make safe the route taken by visitors. Restoration work was carried out by the artist Steven Bassett to remove the graffiti that had covered the paintings. Since then, the cave has been managed by the Wonderwerk Cave Committee, which consists of the McGregor Museum, the owner of the surrounding farm and a representative of the Kuruman Municipality. A management plan was drawn up in 2008 in preparation for upgrading the cave's status in 2010. The cave continues to be a spiritual place for the local communities. People come here to perform rituals related to syncretic religious beliefs.

<https://wonderwerkcaves.com/scientific-info>

<https://museumsnc.co.za/wonderwerk-cave-qr>



THURSDAY

09:00 Session 2

Auditorium 2

09:00 Lessons learnt from eCRAG, a group of volunteers documenting rock art in the Cederberg region and now South Africa's most prolific rock art recording group

Nicholas Wiltshire and Juliette Lily Rabie

09:30 Reflections on the implementation of digital tools for rock art surveys in Southern African contexts: Wildebeest Kuil (RSA) and Erongo Massif (Namibia)

Julien Monney, Laurent Bruxelles, Kaarina Efraim, Stéphane Høerlé, David Morris, Alma Nankela, and Lourenço Pinto

10:00 Documenting the rock art landscape of the Matobo Hills: integrating archival data, fieldwork, and GIS

Léa Jobard

10:30 Tea break

Tutorial Classroom 2 (Room 029)

11:00 Session 2 (cont.)

Auditorium 2

11:00 Quantitative documentation of rock art: numbers and collaborations count

Dawn Green

11:30 Bamboo Mountain: a documentary history

Justine Wintjes, Stephen Wessels, and Ghilraen Laue

12:00 3D modeling and photogrammetry techniques for the conservation of archaeological sites: a case study of the Makay prehistoric rock art, in southwest Madagascar

Mex Ranson Tafitasoa

12:30 Lunch

Moroka Hall of Residence dining hall

13:30 Session 2 (cont.)

Auditorium 2

13:30 Non-invasive recording for sustainable research of rock art. A case study from the Borana zone of Oromia Region (southern Ethiopia)

Marina Gallinaro, Costanza Cucci, Picollo Marcello, and Bekele Tadele Solomon

14:00 Documenting the Late Stone Age art of Zimbabwe: a prototype digital archival database of Nswatugi rock art cave, Matobo cultural landscape

Yvonne Dube and Yolanda Nhende

14:30 Tea break

Tutorial Classroom 2 (Room 029)

15:00 Session 4

Auditorium 2

15:00 Zimbabwe's efforts to safeguard rock art in the Mavhuradonha Wilderness amidst power struggles and land use conflicts

Kelvin Machiwenyika and Stanley Nyamagodo

15:30 Visual clues to clan identity: a rock art-based investigation of San social structures in Sehlabathebe

Mokotjo Mabokang

16:00 Understanding the management of rock art sites and stakeholder engagement in South Africa: Wildebeest Kuil, Kimberley

Shanty Joy Fisher

16:30 End of session

17:00 Buyani (Returning to the Roots) - IREOLÚWA (Goodness of the creator), Northern Cape Theatre (Entry – R50)

Session 2: Current challenges, and perspectives in documenting rock art in Africa

Chaired by Camille Bourdier (TRACES, Toulouse University), Sam Challis (RARI, University of the Witwatersrand) and Julien Monney (EDYTEM, Savoie Mont Blanc University)

This session will explore the challenges, limitations, and tested solutions in documenting rock art in Africa. The scope ranges from the data to be documented (imagery, other archaeological remains, geological and geomorphological features of the rock, location, surroundings etc.), including the techniques and related logistics to data collection, to data management, archives and sharing. A special focus will be made on the applications of digital technologies, whether 3D models, Geographic Information Systems (GIS), or serious games.

Contributions may address topics such as the need to standardize documentation practices; strategies for systematic surveys of wide/rich rock art regions, including in an inter-team collaboration discussion; or challenges related to managing, sharing, and access to digital data by multiple stakeholders. In order to share on our experiences and practices, concrete case studies showcasing innovative solutions and research perspectives in logistical, legal, and/or technical domains are especially welcome. We also strongly encourage contributions from diverse areal, archaeological, geomorphological, or conservation contexts.

Lessons learnt from eCRAG, a group of volunteers documenting rock art in the Cederberg region and now South Africa's most prolific rock art recording group

Nicholas Wiltshire¹ and Juliette Lily Rabie²

¹OpenHeritage NPC

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Keywords: Rock Art Documentation, Recording Techniques, Heritage Management, Survey

The eastern Cederberg Rock Art Group (eCRAG) was formed in 2007 and has documented nearly 2000 rock art sites in the Cederberg region of the Western Cape Province of South Africa. The group of volunteers consists of a small number of archaeologists leading the excursions and members of the South African Archaeological Society (ArchSoc). More recently, archaeology students from the University of Cape Town have become part of eCRAG and are assisting in the rock art surveys and organisational needs of the group. The team utilises a number of free open source tools such as QGIS and the KoboForm Recording App, which works on all smartphones in order to upload and store the data recorded on South Africa's national heritage management system, SAHRIS. eCRAG is aiming to record for another 20 years to locate the remaining estimate of 4000 sites in the region. The paper will cover the lessons learnt by the group over the last 18 years with the hope that other archaeologists will set up their own recording groups in other areas of the country.

Author biographies

Nicholas Wiltshire is the Director of OpenHeritage, established in 2015. He holds an MSc in Archaeology from the University of Cape Town, specialising in rock art, Stone Age archaeology, and GIS studies. With over 20 years of experience in the heritage sector, Nicholas has conducted numerous Heritage and Archaeological Impact Assessments. From 2008 to 2010, he served as a senior heritage officer at Heritage Western Cape. Between 2011 and 2013, he was the SAHRIS Project Manager and lead developer of the SAHRIS heritage information system. Following this, he founded CTS Heritage and OpenHeritage. Nicholas has implemented similar national heritage systems in Namibia (2014–2017) and Kenya (2017 to present). As part of the eastern Cederberg Rock Art Group, HWC and SAHRA, Nic has been closely involved in the compilation of a number of Heritage and Conservation Management Plans and various guidelines and policies related to minimum standards and best practice in conservation management. During his time at Heritage Western Cape, he was responsible for declaring three Provincial Heritage Sites.

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Juliette Lily Rabie is an MPhil student in Archaeology at the University of Cape Town. Her research focuses on San rock paintings in South Africa, with particular attention to depictions of bags in the Western Cape. Her current project investigates examples from inland sites in the northern Cederberg as well as coastal sites at Elands Bay. As an active member of the eastern Cederberg Rock Art Group (eCRAG), Juliette has gained valuable experience in rock art recording for academic research and heritage conservation. She is also a committee member of the Western Cape Branch of the South African Archaeological Society (ArchSoc). In 2024, Juliette trained under Dr Camille Bourdier in digital tracing techniques and photography, and participated in the IRN-RAHMSA workshop “*Presenting Rock Art Sites*” in France, gaining valuable international experience in heritage documentation and collaborative research.

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Reflections on the implementation of digital tools for rock art surveys in Southern African contexts: Wildebeest Kuil (RSA) and Erongo Massif (Namibia)

Julien Monney¹, Laurent Bruxelles², Kaarina Efrain³, Stéphane Hœrlé^{4,5}, David Morris^{6,7}, Alma Nankela⁸, and Lourenço Pinto⁷

¹EDYTEM, CNRS, Savoie Mont Blanc University (Chambéry, France)

²IFAS-Recherche (Johannesburg)

³National Museum of Namibia

⁴PACEA, University of Bordeaux (France)

⁵Rock Art Research Institute, University of the Witwatersrand

⁶McGregor Museum

⁷Sol Plaatje University

⁸RCHS – Archaeosciences & Consultants

Keywords: rock art survey, spatial analysis, cultural landscape, geomorphology, digital technologies.

Over the last two decades, rock art research has largely benefited from the digital resources available for recording and studying rock art.

As part of the ANR Cosmo-Art project, two rock art areas in Southern Africa — Wildebeest Kuil (RSA) and the Erongo Mountains (Namibia) — were selected for rock art surveys. These areas present differing characteristics, challenges, and research objectives, and were investigated using a variety of digital tools (GIS, GPS, photogrammetry, digital image processing, etc. including smartphone apps). In this communication, we present the methodological approaches employed, along with the benefits and limits encountered.

At Wildebeest Kuil, the primary objective was to document and analyse the relationships between rock engravings and other types of archaeological remains present at the site, in order to explore their potential chronological and symbolic connections. To this end, a geospatial inventory of each graphic entity

was carried out with decimetric accuracy within a GIS environment. In parallel, other traces of human activity observed on the site's rock surfaces — such as percussion marks and polishing zones — as well as man-made stone structures composed of displaced blocks, were recorded and processed in a similar manner.

In the Erongo Mountains, due to the vast size of the massif, our work focused primarily on its northwestern part, in an area that had already been partially investigated. The aim was to examine potential gaps in the current spatial distribution of rock art, and to assess whether these gaps could be explained by topographical, geological, alteration-related, or other factors. To this end, targeted surveys were conducted in key areas by teams working both collectively and in pairs.

During these surveys, various smartphone applications were tested, both for tracking the survey routes and for detecting traces of rock paintings. This process also prompted reflection on recording strategies to be implemented in the field, depending on the time available and the specific research objectives. Ultimately, this experience highlights the challenges of conducting research across an extensive rock art region, where comprehensive work necessarily involves the coordination of multiple research teams, in close collaboration with landowners and local communities.

Author biography

Julien Monney is a rock art researcher holding a Phd in prehistoric anthropology. His research interests focus on establishing the sociocultural contexts of prehistoric rock art creation and uses in different regions of the world and chronological contexts: Upper Palaeolithic cave art of Southeastern France (Ardèche river, Cosquer cave), Pre-Columbian petroglyphs of the Lesser Antilles and rock art of Southern Africa (South Africa, Namibia) as part of the CosmoArt project.

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Documenting the rock art landscape of the Matobo Hills: integrating archival data, fieldwork, and GIS

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Keywords: Late Stone Age rock art, landscape, archives, GIS, chrono-stylistic.

The Matobo Hills (Zimbabwe), a granite massif, is classified as a UNESCO World Heritage, with more than 4000 rock art sites (1). While most of the paintings are attributed to the Late Stone Age (LSA) hunter-gatherers, they display a high degree of diversity in terms of location, composition, technique, shape and theme. Archaeological excavations have shown that rock painting in the Matobo Hills dates back as far as 13,000 years BP and was practised throughout the chrono-cultural sequence of the Matobo Hills' LSA (2). The present landscape, where rock art is omnipresent, thus appears as an accumulation of multiple painting events spanning several millennia, resulting from different cultural groups who occupied their landscape differently, and possibly used rock art in varied ways.

My PhD research project aimed to 1) propose a chrono-stylistic sequence of the iconography, 2) characterise painted sites variability in terms of infrastructure and experience, and 3) understand the distribution of the rock art variability across time and space. Tackling these issues required to collect exhaustive and contextualised data about the iconography and the landscape, encompassing a wide diversity of motifs and sites. When I began my project, existing data were either incomplete or unavailable, and the Covid 19 crisis delayed fieldwork. Consequently, I had to adopt a multi-source approach, integrating unpublished prospection archives by archaeologist Nick Walker, two weeks of fieldwork and GIS-base landscape modelling, constantly crosschecking the reliability and relevance of the data regarding my research questions and objectives.

In this paper, I will present how I built a robust iconographic and landscape corpus, showing the value of investigating archival sources and using heterogeneous data, as well as the issues of GIS model and analysis, especially in terms of resolution and significance of the results. By reflecting on the logistical, methodological, and interpretive challenges I faced, and the solutions tested, this case study offers insights into documentation practices for complex, large-scale rock art landscapes in Southern Africa.

1 Fowler P. J., 2003, *World heritage cultural landscapes 1992-2002*, UNESCO World Heritage Centre.

2 Walker N., 1995, *Late Pleistocene and Holocene Hunter-Gatherers of the Matopos*, Uppsala, Societas Archaeologica Upsaliensis.

Author biography

Léa Jobard is recently graduated as a doctor in African Prehistory, at the University of Toulouse Jean Jaurès. She's interested in the relationships between rock art and landscape. Her PhD project focused on the hunter-gatherers' rock art of the Matobo Hills (Zimbabwe) and questioned the rock art sites' functions and their spatial organisation, and explored the elements of change and continuation through the Late Stone Age.

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Quantitative documentation of rock art: numbers and collaborations count

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Keywords: collaboration, quantitative recording, rock art; slow science; southern Africa.

Documenting rock art 'sites' forms the core of research, management and conservation because this practice enables a multitude of research questions, and contextual, site-specific management and conservation plans. In addition, this information guides whether rock art sites are suitable for community tourism developments. This unusual relevance and significance of rock art documentation to multiple sectors both academic and social, emphasises the importance of collaborative approaches using all the instruments we have at our disposal. One of these instruments is contextual quantitative recording which is rarely used with some researchers shying away from a perceived naïve empiricism. But numbers do count, borne out by the Maloti-Drakensberg Park's UNESCO inscription which is based on the numbers and variety of sites and images. Pager, Vinnicombe and Lewis-Williams established these foundational statistics for paintings in the Maloti-Drakensberg. While these numbers may not be accurate and ratios differ, the patterns identified in comparative image classes hold and are still used. Identifying patterns is central to all evidence-based research and these patterns in categories provide understanding for past persons lived experience. General patterns in image classes in an area and the patterns identified in specific spaces and places are both important. These patterns should be supported by numbers, not merely the researcher's opinion. Problems can arise with the categories and types used to identify patterns, because the categories themselves may be a matter of interpretation. Equally problematic, is the risk of forcing images into specific categories and an endless splintering of categories within categories. However, avoiding these problems by not using quantitative recording does not provide solutions. Sharing our

successes and failures can provide learning for this type of recording *and* the rock art. A public record of types of images in site/s is useful for all researchers no matter their specific focus. In addition, using quantitative approaches requires a detailed examination of every image and thus, is both micro and macro. With the real possibility of dating colouring materials in paints, quantitative recording may also be important to understand variance of change in time. These contributions enhance our doing slow science and remaining care-full. When more researchers are using quantitative documentation of rock art and making their results public, these collaborations will lead to better systems, technologies and inspire research projects. These collaborations, in turn, will enhance research, management and conservation.

Author biography

Dawn Green is a PhD candidate at the Department of Archaeology, University of Cape Town. She researches the rock art of the Maloti-Drakensberg and northeastern Stormberg. Her research is inspired by posthumanism feminisms and relational ontologies. Dawn plays an active role in heritage conservation, management and education for the Eastern Cape Province, South Africa.

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Bamboo Mountain: a documentary history

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Keywords: Bamboo Mountain, (KwaZulu-)Natal Museum, rock art removal, history of recording, digital visualization.

In 1910, Trooper A. D. Whyte was appointed to 'locate, catalogue, photograph, or trace all paintings in the Berg between East Griqualand border and Giant's Castle'. There was great worry at the time that the art was fast disappearing and people felt that the only way to protect it was to cut it out and put it into safekeeping in museums. Stonemason R. Clingan was employed to remove paintings from several sites in the survey area. A large panel from a rock shelter on Bamboo Mountain was broken up into 12 smaller pieces and transported to the Natal Government Museum (now KwaZulu-Natal Museum) in Pietermaritzburg. 11 of these 12 pieces have been on display ever since. In the 1980s Paul den Hoed and Colin Campbell traced and redrew the panel. Patricia Vinnicombe, Patrick Carter and John Hone, among others, took photographs of the imagery that remained behind at the rock shelter. The documentary history of the Bamboo Mountain panel thus provides an interesting case study to look at the many facets and changing techniques of rock art recording and the ways in which the representations can influence the viewer. The panel in the museum stands in isolation, divorced from the rest of the shelter to the extent that it has been given a separate site code in the ARADA database. The black-and-white redrawing gives an accurate two-dimensional rendering of the panel, but missing are the colours, the contours and the context. We look at the opportunities afforded by digital techniques to integrate pre-digital and digital records and understand the site more fully. Photogrammetry allows us to 'reassemble' the panel digitally and place it back in the context from where it was removed – a digital repatriation of sorts. Digital enhancement gives insight and makes clearer

certain details. We also explore how digital visualization can bring a site 'to life' and how this can all be brought together in a 3D format that offers a more comprehensive and immersive representation in comparison to traditional 2D methods.

Author biographies

Justine Wintjes is an art historian, archaeologist and occasional artist. She is curator in the Department of Human Sciences, KwaZulu-Natal Museum and Research Associate of Wits School of Arts at Wits University. Her research areas include the visuality and visual representation of rock art.

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Stephen Wessels is a Geomatician and digital heritage specialist with over 18 years of experience in 3D scanning heritage sites and objects in Africa and Asia. He previously worked at the Zamani project where he was a chief scientific officer at the University of Cape Town. He is currently pursuing his PhD working at the intersection of virtual reality technologies, 3D scanning, and heritage materials.

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Ghilraen Laue is an archaeologist whose principal focus is southern African hunter-gatherer rock art and the Later Stone Age. She is curator in the Department of Human Sciences, KwaZulu-Natal Museum and is an Honorary Research Fellow at the Rock Art Research Institute at Wits University. Her present research interests include rock art interpretation and regional differences. She is currently working on long term projects in the Waterberg and Southern Cape.

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3D modeling and photogrammetry techniques for the conservation of archaeological sites: a case study of the Makay prehistoric rock art, in southwest Madagascar

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Keywords: 3D modeling, photogrammetry, archaeological sites, Makay prehistoric rock art, Southwest Madagascar.

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The preservation of archaeological sites is crucial for safeguarding cultural heritage and facilitating research. Traditional methods of site documentation often fail to capture the complex details and spatial relationships inherent in ancient art and architecture. This paper explores the application of 3D modeling and photogrammetry techniques in the conservation of archaeological sites, with a particular focus on the Makay Prehistoric Rock Art in Southwest Madagascar. The Makay region is renowned for its complex and ancient rock art, which holds significant cultural and historical value. However, these fragile art forms are threatened by environmental factors such as erosion, as well as anthropogenic impacts, vandalism, tourism and climate change. Through a case study approach, this paper investigates the use of photogrammetry to create high-resolution 3D models of rock art panels, enabling precise documentation and analysis. The research demonstrates how digital preservation techniques can complement traditional conservation methods by providing a non-invasive means of recording and studying fragile rock art. The findings suggest that 3D modeling and photogrammetry offer significant advantages in monitoring changes over time, improving the accuracy of restoration efforts, and enhancing public access to cultural heritage through virtual reconstructions. The use of 3D modeling and photogrammetry not only enhances the preservation efforts for the Makay Rock Art but also contributes to the broader field of digital archaeology.

This study underscores the potential of advanced digital tools in supporting the conservation of the archaeological sites in remote and vulnerable regions Southwest Madagascar.

Author biography

Mex Ranson Tafitasoa is a Ph.D. Student in Land Resources Management, Department of Land Resources Management, China University of Geosciences, Wuhan, Hubei, China. His research interests are in Digital Archeology, Cultural Heritage Protection, and Rock Art Conservation. He's been working on the MAKAY Prehistoric Rock Art since 2022.

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Non-invasive recording for sustainable research of rock art. A case study from the Borana zone of Oromia Region (southern Ethiopia)

Marina Gallinaro¹, Costanza Cucci², Picollo Marcello², and Bekele Tadele Solomon³

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Keywords: paintings, pigments, hyperspectral imaging, sustainability.

Rock art constitutes a unique but highly critical visual archive of the past in terms of its preservation and role in scientific research. Paintings and engravings located on open-air rock surfaces, walls in rock shelters or caves are often located in remote areas, difficult to reach, and exceptionally complex to document and analyze.

Over the past decade, theoretical and methodological approaches have shifted toward more interdisciplinary studies and non-invasive analytic techniques, enabling researchers to better address some of the critical issues that have marginalized rock art studies, such as (i) obtaining reliable radiometric dating to place rock art in specific contexts and times; (ii) having accurate documentation of the depicted motifs; and (iii) improving interpretations. Recent literature demonstrates an increasing number of regional case studies worldwide, highlighting the critical contributions of studies from the African continent.

This contribution presents preliminary data from the Dhaka Kura rock shelter, located in the Borana Zone of southern Ethiopia, that is investigated with an interdisciplinary perspective aimed at a comprehensive understanding of the paintings in terms of archaeological significance, as well as conservation and dissemination issues, employing archaeological, archaeometric, geological, biological, and physical-chemical analyses. In particular, the challenge of obtaining accurate and detailed recordings of the painted motifs, as well as a

deeper understanding of the pigments used, will be addressed. Besides the application of in-field traditional techniques, this presentation will discuss the feasibility of innovative approaches like Reflectance Hyper-Spectral Imaging (HSI) implemented with portable cameras of new generation, highlighting their potential and limitations.

HSI is indeed a well-established technique widely applied in the field of Cultural Heritage for both non-invasive diagnostics and the documentation of polychrome surfaces. Although HSI has been primarily applied to the investigation of museum objects (paintings, manuscripts, etc.) so far, the recent availability of portable HSI cameras has encouraged exploring novel approaches based on remote-sensing modes to extend HSI applications outdoors, also including rock art sites. However, application of HSI technique to rock paintings is technically challenging and requires experimentation in the field.

This presentation will examine the current use of HSI applications in rock art studies, tracing the development from early methods to recent experiments utilizing compact HSI cameras, pointing to the need to improve the accuracy and resolution of non-invasive techniques to gain a deeper understanding of the cultural and historical significance of these complex artworks in the Horn of Africa and beyond.

Author biographies

Marina Gallinaro is an Associate Professor in Prehistory at Sapienza University of Rome, with experience in northern (Egypt, Libya) and eastern Africa (Sudan, Ethiopia, Kenya, Tanzania), Italy, and Oman. She directs projects in Ethiopia, Tanzania, and Italy. Her research focuses on human-environment relationships in drylands, particularly pastoralism in Africa, with a particular emphasis on rock art. It also explores cultural heritage management and sustainable development projects on cultural landscapes and rock art sites.

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Costanza Cucci is a Senior Researcher at CNR-IFAC. She holds Physics degree and PhD in Conservation Science from the University of Florence (Italy). Since 2000's she has carried on research activity in different areas of Photonics and Applied Spectroscopy. Currently her research interests are in non-invasive spectroscopic methods for Cultural Heritage with a focus in: hyperspectral imaging and other imaging spectroscopy techniques; data-analysis with

multivariate/statistical techniques and Machine Learning methods; museum lighting (monitoring, preventive conservation, and guidelines).

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Marcello Picollo is a Senior Researcher at CNR-IFAC holds a PhD in Photonics from the University of Eastern Finland (UEF), Faculty of Science and Forestry, Joensuu (Finland) and graduated in geology from the University of Florence. He has been working on spectroscopic investigations of works of art since 1991 and his main research focus is on artists' material characterization using non-invasive spectroscopic and imaging techniques.

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Bekele Tadele Solomon is a Senior archaeologist at the Ethiopian Heritage Authority (EHA) with extensive international experience. He has also served as CEO for the Ethiopian Heritage Research Department. His research focuses on the archaeology of the emergence and expansion of pastoralism through the study of rock art, particularly in the Borana Zone of the Oromia region. He conducts research on this topic in the East and West Hararghe zones, the Dire-Dawa, and the Harari Region. He is currently involved in heritage conservation, documentation, and community participation projects.

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Documenting the Late Stone Age art of Zimbabwe: a prototype digital archival database of Nswatugi rock art cave, Matobo cultural landscape

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Keywords: digital preservation, archival database, conservation, cultural heritage and environmental degradation

This research focuses on preserving Late Stone Age rock art at Nswatugi Cave in the Matobo cultural landscape of Zimbabwe, which faces serious threats from environmental degradation, human activity, and a lack of advanced documentation technologies. The study aimed to develop a prototype digital archival database system to support the preservation and conservation of this valuable heritage. Using a quantitative methodology, the researchers conducted site visits, photographic documentation, and image processing, and developed the digital system using Ruby on Rails and PostgreSQL. This system stores images, descriptions, metadata, and geolocation data, providing a sustainable method of safeguarding the rock art. The research addressed key questions about effective documentation methods, essential components of a digital database, and the relationship between digital preservation and physical conservation. Findings showed that digital preservation improves access for researchers, educators, and the public, while minimizing site disturbance.

Challenges encountered by the researcher include observing that the site was already experiencing signs of deterioration, that is the fading of the rock art depictions on the other side of the rock making the rock art nearly invisible due to leaching, hence it was difficult to capture that part of the rock art. Also, travel and logistical constraints were faced by the researcher as the site was far out of town and had high costs. Another challenge, encountered was of limited resources such as limited access to software licenses such as Heroku, an online

hosting server, can be charged when one wants to launch the database system online. The study concludes that digital archiving is an effective tool for protecting rock art and should be expanded to other sites as rock art continues to deteriorate from both natural and human-induced factors.

Author biographies

Yvonne Dube is a level 4.2 student at the University of Zimbabwe pursuing a Bachelor's degree in Archaeological Sciences and Human Development. Focus areas include digital preservation and heritage conservation, with contribution to a digital archive for Nswatugi Cave to protect prehistoric rock art.

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Yolanda Nhende is a level 4.2 student at the University of Zimbabwe studying Archaeological Sciences and Human Development, with research interests in rock art conservation and public archaeology.

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Session 4: The politics of managing rock art heritage in southern Africa

Chaired by Hugo Quemain (EDYTEM, Savoie Mont Blanc University) and Ndukuyakhe Ndlovu (SANParks & University of Pretoria)

This session seeks to explore the political challenges defined by management approaches and accessibility issues with regard to rock art heritage. Rock art, often considered an essential component of cultural heritage, is increasingly embroiled in debates surrounding ownership, how it is managed and presented, and the politics around accessibility, particularly for rituals. Who controls access to these rock art sites, and under what conditions is such access granted, and what management regime is applied, is a fundamentally political matter? Different stakeholders – ranging from interested parties, Indigenous groups, government agencies, tourists, to scholars – often hold divergent views on what constitutes ‘ownership’, what it means to ‘preserve’ and ‘present’ cultural heritage for broader appreciation, and how access to these sites is granted. These divergent views have been elevated following the formal end of colonialism in southern Africa, with calls for decolonisation becoming enhanced in the postcolonial contexts. The purpose of this session is to examine these conflicts through a series of theoretical discussions and case studies, where rock art is not only a symbol of cultural identity, but also a resource that is defined by much contestation. In particular, we will explore (i) how the commercialisation of rock art sites for tourism can serve to both protect and commodify these cultural resources, often in ways that overlook and marginalise Indigenous perspectives, (ii) establish what the implications are for these communities when their heritage is turned into an asset managed and profited from by others, (iii) assess how management approaches, whether top-down or participatory, impact on the accessibility and sustainability of rock art heritage, and (iv) review the extent to which management strategies can both reinforce and challenge existing power dynamics. Ultimately, the aim of this session is to move beyond simply acknowledging these issues to develop a more nuanced understanding of how they shape rock art heritage management practices in southern Africa.

Zimbabwe's efforts to safeguard rock art in the Mavhuradonha Wilderness amidst power struggles and land use conflicts

Kelvin Machiwenyika¹ and Stanley Nyamagodo¹

¹National Museums and Monuments of Zimbabwe

Keywords: rock art, Mavhuradonha Wilderness, cultural heritage, legislative protection, mining legislation.

The Mavhuradonha Wilderness, situated in northern Zimbabwe, is a remarkable cultural and natural landscape, celebrated for its Rock Art, Late Stone Age tool sites, Zimbabwe Culture-type ruins, Liberation History landmarks, and diverse natural heritage. Among its cultural treasures are iconic rock paintings, such as palm prints and zebra depictions, which embody the historical and artistic legacy of the region. Recognized for its significance, the area was proclaimed a wilderness in 1988 through Government Notice 369 of 1988 and later designated as a National Monument in 2017 under the National Museums and Monuments Act (NMM) 25:11, ensuring legal protection of its heritage. However, the integrity of this landscape is under severe threat due to the rise in chrome mining activities, which have encroached upon the wilderness at an alarming rate. Mining operations risk physically destroying the rock art and jeopardizing their preservation through dust accumulation on open rock shelters. Conflicting interests among government entities—including Muzarabani Rural District Council, Zimbabwe Parks and Wildlife Management Authority, and Mines and Minerals authorities—have exacerbated land use disputes, undermining cohesive management efforts. This paper calls for an urgent review of Zimbabwe's heritage legislative framework to resolve jurisdictional conflicts and enhance protection mechanisms for the Mavhuradonha Wilderness's invaluable cultural assets.

Author biographies

Kelvin Machiwenyika is a seasoned archaeologist who served as Curator at the Zimbabwe Museum of Human Sciences (2009–2018). He is currently Senior Curator in the Northern Region of the National Museums and Monuments of Zimbabwe, specializing in Rock Art, Dzimbahwe traditions, and indigenous knowledge systems. He has participated in diverse research projects including MATOBART.

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Stanley Nyamagodo is a curator in the archaeology department at the Natural History Museum in Western Zimbabwe and site manager for the Matobo Hills World Heritage Cultural Landscape. His research interests include hunter-gatherer rock art, material culture analysis, the decolonisation of museums, heritage discourse, and the materiality of liberation war sites.

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Visual clues to clan identity: a rock art-based investigation of San social structures in Sehlabathebe

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¹Sehlabathebe National Park

Keywords: rock art, San clan identities, social marker, inter-clan interactions, stylistic analysis.

The San, known for their nomadic hunter-gatherer lifestyle, are considered the earliest known inhabitants of Southern Africa, having occupied the region for over 8000 years (Prinsloo et al., 2008). Among their most enduring legacies is their rock art, scattered throughout the Maloti-Drakensberg World Heritage Site (Cornhill, 2007). However, given the absence of living San descendants connected to the Sehlabathebe National Park rock art sites (Challis), it remains challenging to correlate specific stylistic patterns, motifs, or site arrangements with individual clans. This research explores the potential of San rock art to serve as a social marker, particularly in identifying clan identities and deciphering patterns of inter-clan interaction. By examining stylistic variations, recurring symbolic motifs, and the spatial distribution of rock art across different sites within Sehlabathebe, the study seeks to uncover visual indicators that may be linked to specific clans. This analytical framework integrates art-historical methodologies with anthropological insights, drawing from cross-cultural comparisons and ethnographic analogies to enrich interpretation of the visual data. The findings of this research will not only shed light on the internal social organization of the San but also address broader questions of mobility, land use, and symbolic communication. Ultimately, this study contributes to the broader discourse on Southern African rock art and indigenous knowledge systems. It aims to enhance heritage-preservation efforts and interpretative frameworks for rock art sites across Lesotho, with a particular focus on Sehlabathebe National Park. By decoding these ancient visual texts, the research aspires to reconstruct aspects of a complex yet largely invisible San social landscape.

Author biography

Mabokang Mokotjo is a dedicated heritage conservation professional with a Master's degree in Tangible Heritage Conservation from the University of Pretoria. She is a Cultural Heritage Site Officer at Sehlabathebe National Park, part of the Maloti-Drakensberg World Heritage Site. Her work focuses on rock art conservation, management, research, and community development, covering both tangible and intangible heritage projects.

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Understanding the management of rock art sites and stakeholder engagement in South Africa: Wildebeest Kuil, Kimberley

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Keywords: rock art, Wildebeest Kuil, community, stakeholders.

This paper assesses stakeholder engagement in the management of rock art sites in Southern Africa, through an analytical study of the different site management plans of one relevant prehistoric rock art site of Wildebeest Kuil rock art site in the Northern Cape, South Africa. This includes understanding site management and stakeholder engagement. Wildebeest Kuil is known for its significant rock art engravings, including scenes of hunting, dancing, and symbolic representations, offering a window into the spiritual lifeways of the San people (Morris, 2012). The way data collection for the study was done through means of a qualitative desktop study collectively with work on the field involving the different stakeholders. This type of research design is referred to as an analytical way of gathering information. For the research paper questions the use of the qualitative research design method of gathering information was taken to conduct the study (van Wyk, 2012) The paper analysed data from grey literature, secondary sources, field community engagements, and site documentation through a thematic content analysis (Morris, 2012, Duval et al 2022). The key discussion points of the paper examined the relevance of community involvement for various dimensions of site management. These included considering different stakeholders such as the National Heritage Council, various institutions concerned with heritage and rock art sites in South Africa, as well as local communities. The results of the research and data collection have shown that the involvement of marginalised and lower social status communities is important for the management of the studied site. As well as highlighted that the community and the community organisations are showing interest in the site. Moreover, the results also indicated that the site has been prone to wildfires

ruining walkways to most of the rock art engraving which poses a conservation management hazard.

Author biography

Shanty Fisher is graduated from the Sol Plaatje University with BA general degree majoring in heritage studies. After obtaining an honours degree from Sol Plaatje University with specialisation in Heritage studies, she obtained an International Erasmus Mundus Master degree in Quaternary and Prehistory at the Instituto Politécnico de Tomar (Portugal). She successfully defended her master's dissertation in September 2024, and is currently employed at the Sol Plaatje University working on a project with Local Communities in the Namakwa District.

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FRIDAY

09:00 Session 4 (cont.)

Auditorium 2

09:00 Sustainable community heritage tourism: the case of Manyana and Matsieng rock art in south-eastern Botswana

Phenyo Churchill Thebe

09:30 Participation and preservation: managing stakeholder dynamics at Twyfelfontein or /Ui //aes World Heritage Site, Namibia

Agnes S.M. Shiningayamwe

10:00 Archaeology and rock art education: a cross-cultural examination of the changes in the curriculum in France and South Africa from 1994 to the present

Zola Daniels

10:30 Tea break

Tutorial Classroom 2 (Room 029)

11:00 Session 6

Auditorium 2

11:00 Rethinking custodianship: community empowerment and decolonial Approaches to heritage practice in Namibia

Tuuda Haitula

11:30 Redefining rock art heritage interpretation: community voices and participatory practice at Tsodilo

Powell Motsumi

12:00 Understanding of cultural heritage in Tsodilo Hills through community perspectives

Stella Basinyi

12:30 Lunch

Moroka Hall of Residence dining hall

14:00 Session 6 (cont.)

Auditorium 2

14:00 Participatory practices, a win-win for all: lessons from San communities in South Africa

Julie Grant

14:30 Mahemeng Cave: a rock art site in Mahemeng village, Mokhotlong district, Lesotho

Malesetla Alice Sepamo

15:00 Design science research and participatory action research application in co-designing a cultural heritage public engagement tool

Martha Mosha, Øyvind Eide, and Lorenzo Cantoni

15:30 Tea break

Tutorial Classroom 2 (Room 029)

16:00 Roundtable discussion

Auditorium 2

18:00 Final address

Auditorium 2

19:30 Gala Dinner

Multipurpose Hall on South Campus

Sustainable community heritage tourism: the case of Manyana and Matsieng rock art in south-eastern Botswana

Phenyo Churchill Thebe¹

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Keywords: rock art, cultural tourism, stakeholder engagement, subaltern theory, site museums.

Sustainable community based cultural tourism around rock art sites involves navigating a complex web of political, social, and economic factors. Here, it is particularly true concerning Manyana and Matseing rock art sites in south-eastern Botswana. The rock art is associated with the ancestors of modern San people who are indigenous hunter gatherers communities of Southern Africa. These 'silent' sites offer alternative means of managing rock art beyond the common and mega sites like Tsodilo World Heritage Site. In this paper, I argue that rock art sites hold economic, cultural and historical significance for the Bahurutshe and Bakgatla Tswana communities. These are originally descendants of the dominant farmer communities. I argue that rock art is a voice and agency of the subordinate class. It is a heritage associated with subaltern and/or the underclass but is enjoyed nationally. Site museum developments have been initiated at Manyana and Matsieng. A successful tourism engagement project has potential to develop rock art tourism in south-eastern Botswana as a package to the emerging cultural heritage festivals and archaeo-heritage sites. Despite this potential, presenting rock art that in-situ at the sites encounters a series natural and human threat. Several ideas are advanced to solve these obstacles including advocating for fully developed museums, replicas, exhibitions and digital platform of presenting rock art as part public archaeology and cultural tourism. The long term benefits of the project will be to develop methodological approaches for researchers and heritage practitioners to form the cornerstone for the implementation of sustainable rock art management. This imperative of sustainable management is crucial in south-eastern Botswana

where there are efforts to diversify tourism beyond premier tourism areas in northern Botswana.

Author biography

Phenyo Churchill Thebe is a Senior Lecturer in Archaeology at the University of Botswana (UB). Early in his career, Dr. Thebe worked as Tsodilo Hills Project Coordinator where he oversaw the implementation of the management plan and the nomination of Tsodilo Hills as a World Heritage Site. He is also working on the use of indigenous knowledge to improve live hoods of local communities. He has a kin interest on the politics of managing rock art sites.

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Participation and preservation: managing stakeholder dynamics at Twyfelfontein or /Ui //aes World Heritage Site, Namibia

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Keywords: rock art, stakeholder dynamics, heritage management, Namibia, community participation.

This paper examines the complexities inherent in managing rock art heritage, focusing on the Twyfelfontein /Ui //aes World Heritage Property in Namibia. Despite the presence of community-based tourism initiatives such as craft shops, observational and interview data indicate minimal community involvement in broader heritage-management and decision-making processes. A lack of formal regulatory frameworks exacerbates these issues, resulting in fragmented collaboration among governmental bodies, private sectors, and local communities. Quantitative data further underline these challenges, revealing mixed results regarding stakeholder participation: only 37.3% of community survey respondents confirmed active involvement in heritage activities, closely matched by 34.9% reporting no engagement at all. Approximately 27.7% expressed confusion or uncertainty concerning their role, highlighting significant gaps in clarity and communication.

Interview evidence strongly reinforces these findings, revealing feelings of exclusion among local representatives, who emphasized the absence of effective platforms for raising community concerns. Stakeholders advocated for formalized Joint Management Committees (JMCs), routine stakeholder meetings, and integrative management approaches. They further recommended the inclusion of community representatives at strategic decision-making levels to enhance transparency and responsiveness.

Grounded in the principles of UNESCO's 1972 Convention, which underscores the imperative of inclusive community participation in heritage management, this

study demonstrates that effective and sustainable management of rock art heritage requires dismantling structural and political obstacles through the development of participatory governance frameworks. Such frameworks should integrate Indigenous knowledge systems, prioritize the equitable distribution of benefits to local communities, and foster coordination across multiple sectors.

Author biography

Agnes S.M. Shiningayamwe is a heritage scholar holding a Master's in Education, a Postgraduate Diploma in Heritage Conservation and Management, and a Bachelor of Education with Honours in History and Geography from the University of Namibia. She is pursuing a PhD in Eco-Tourism and Protected Area Management at the International University of Management. Agnes works as a Regional Heritage Officer at the National Heritage Council of Namibia and previously managed the Twyfelfontein World Heritage Site.

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Archaeology and rock art education: a cross-cultural examination of the changes in the curriculum in France and South Africa from 1994 to the present

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Keywords: archaeology, rock art, curriculum; national identity, post-apartheid education.

This study presents a comparative analysis of how archaeology and rock art are represented in the school curricula of South Africa and France from 1994 to the present. It investigates how each nation's educational system incorporates these elements to construct national identity. Using Critical Discourse Analysis (CDA) as a theoretical framework, the research examines curriculum documents, textbooks, and policy statements, alongside interviews with educators, policymakers, archaeologists and tour guides. The study is grounded in the belief that introducing archaeology and rock art to learners at an early stage fosters historical consciousness, cultural sensitivity, and inclusive citizenship. In South Africa, post-apartheid reforms have aimed to decolonise the curriculum and reclaim Indigenous heritage, particularly through the inclusion of San rock art. France, by contrast, presents rock art within a universalist, Eurocentric framework that emphasises prehistoric achievements as national milestones. Through qualitative methodologies including document analysis, interviews, and site observations the study identifies ideological patterns in educational materials and evaluates the tension between policy and practice.

Author biography

Zola Daniels is a Master's student in Archaeology at Sol Plaatje University, with a research focus on the integration of archaeology and rock art representation. Her thesis, titled: "Archaeology and Rock Art Education: A Cross-Cultural Examination of the Changes in the Curriculum in France and South Africa from 1994 to the Present," explores how educational approaches to archaeology and rock art have evolved in both countries over the past. Through her research, Zola aims to uncover how shifts in curriculum reflect broader cultural, political, and historical changes, particularly in post-apartheid South Africa and post-colonial France. With a strong academic foundation and practical experience, Zola Daniels is committed to advancing archaeological research and contributing to the preservation of Southern Africa's cultural heritage.

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Session 6: Redefining heritage practices: Participatory approaches and community involvement in archaeological heritage – new perspectives and unresolved issues

Chaired by Leïla Baracchini (Institut de sciences sociales des religions, University of Lausanne) and Gilbert Pwiti (Sol Plaatje University)

Research on archaeological heritage, particularly rock art heritage, has long been characterized by approaches that lacked genuine involvement from local communities. However, recent decades have seen the emergence of participatory and/or collaborative approaches aimed at rethinking the relationships between researchers, heritage institutions, and the communities concerned. These approaches are often seen as a new way to transform conventional practices, redefine heritage management, and empower people, particularly indigenous and local communities who have lost their rights to their heritage through colonialism. Nevertheless, the practical implementation of participatory or collaborative (co-constructive) approaches with “the communities” and their tangible effects have been the subject of debate. Several authors have offered critical perspectives on the current use of the “rhetoric of community”, which is often employed to make us “feel good”, without necessarily leading to profound changes in the relationships between scientists, heritage experts and local communities, nor challenging dominant conceptions of what constitutes heritage and how it should be managed.

Working with “the communities” indeed raises numerous questions, starting with: What do we mean by “community”? How do we determine who to engage with, and what implications does this have for various groups within the community? How do we ensure participatory engagement with stakeholders if we control most or all the decision-making power regarding research priorities? What does it do *to* and *for* those engaging in collaborative or participatory projects? How can we better reconcile the interests/priorities/needs of communities with the requirements of long-term scientific studies?

Drawing from case studies and fieldwork experiences, this panel invites an examination of the practices, challenges, and impacts of participatory and collaborative research in the study and valorization of archaeological heritage in

Africa and globally, with a focus on rock art sites. We welcome contributions that explore the following themes: (i) Methodologies and tools employed to integrate local communities into research, knowledge production and heritage conservation projects; (ii) Tensions and negotiations surrounding archaeological knowledge, particularly between scientific and local knowledge systems; (iii) The effects of participatory and collaborative approaches on the perception and ownership of heritage by the communities involved and (iv) The ethical, legal, and political implications of local community participation in research.

Rethinking custodianship: community empowerment and decolonial approaches to heritage practice in Namibia

Tuuda Haitula¹

¹National Museum of Namibia

Keywords: restitution, decolonisation, community participation, Namibia, heritage practice.

This paper reflects on the changing landscape of heritage practice in Namibia through the lens of restitution, community empowerment, and participatory heritage management. Drawing on my experience as Curator for Underwater Archaeology and former Museum Development Officer at the Museums Association of Namibia, I explore how heritage institutions in Namibia are engaging with restitution debates and transitioning towards more inclusive models of custodianship.

Focusing particularly on recent efforts related to the restitution of cultural property and the interpretation of archaeological and rock art heritage, the paper examines how heritage professionals are navigating tensions between institutional authority and community expectations. It interrogates the limits of “participation” as often practiced, where local communities are engaged as passive stakeholders, and proposes a shift towards co-creation of knowledge and practice grounded in indigenous epistemologies.

Case examples include community consultations around the Oranjemund Shipwreck, and my ongoing research into the National Museum of Namibia’s readiness to safeguard restituted material culture. The paper draws parallels between underwater heritage and rock art conservation, especially regarding questions of ownership, representation, and value systems. It further critiques the rhetorical use of “community involvement” and proposes practical mechanisms for shared authority, including language justice, multivocal narratives, and local capacity building.

In the spirit of COSMO-ART’s call to redefine heritage practices, I argue for a decolonial framework that not only acknowledges historical injustices but also centers the agency of communities historically excluded from heritage discourse. By rethinking custodianship and valorizing alternative heritage ontologies, Southern African institutions can take meaningful steps toward dismantling colonial legacies embedded in heritage policy and practice.

This contribution aims to provoke reflection and offer concrete insights for a cosmopolitan approach to heritage management, one that embraces diversity, fosters genuine collaboration, and redefines what it means to “manage” heritage in postcolonial Africa.

Author biography

Tuuda Haitula is the Curator for the Oranjemund Shipwreck at the National Museum of Namibia and a 2023 MuseumsLab fellow. He holds a postgraduate diploma in Heritage Conservation and Management and has led multiple projects on museum development and restitution. He is currently researching the readiness of the National Museum of Namibia to serve as custodians of restituted material culture.

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Redefining rock art heritage interpretation: community voices and participatory practice at Tsodilo

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Keywords: Tsodilo, participatory heritage, African heritage theory, rock art interpretation, community custodianship, resource for dignity.

This paper explores the redefinition of heritage interpretive practices at the Tsodilo World Heritage Site in Botswana, under the Department of National Museum and Monuments, which is a sacred landscape shaped by the spiritual, cultural, and historical relationships of the San and Hambukushu communities. Drawing on the author's experience as site manager from 2017 to 2023, the paper presents a series of community-based interventions that repositioned local actors as co-creators of heritage meaning and site governance while also reflecting on the institutional and epistemological barriers that shaped the process.

Tsodilo's inscription under UNESCO World Heritage criteria brought global recognition to its rich archaeological and artistic record. It also introduced conservation frameworks that often marginalised local narratives and spiritual relationships with the land. These frameworks prioritised technical preservation and scientific interpretation while undervaluing local custodianship and oral knowledge systems. In response, three initiatives were implemented to strengthen community leadership and restore interpretive agency: the revitalisation of the Tsodilo Community Trust, the launch of an annual Heritage Walk rooted in storytelling and performance, and the reopening of a community-managed campsite to promote local economic benefit and stewardship.

Framed through African heritage theory, particularly the work of Ndoro, Abungu, and Munjeri, the paper critiques the authorised heritage discourse and argues for participatory models that recognise the interconnection of tangible, intangible, and natural heritage in African cultural landscapes. It demonstrates that when

heritage is approached as a lived relationship rather than a static object, co-created interpretation and community engagement lead to more sustainable and locally relevant outcomes.

The paper also reflects critically on the challenges encountered, including organisational delays, disagreements between local groups, and professional resistance to shifting interpretive authority. Despite these tensions, the experience at Tsodilo illustrates a rational and culturally grounded alternative to top-down heritage management. By contributing to ongoing conversations on decolonisation, shared custodianship, and plural interpretation, the paper supports the COSMO-ART vision of a cosmopolitan approach to rock art heritage. It concludes that living heritage must be interpreted and sustained by those who inhabit, use, and remember it. Rock art heritage will further be given a longer conservation sustainability when it is perceived by residents as a source that adds value to their dignity and addresses bread-and-butter issues.

Author biography

Powell Motsumi is a Senior Curator at the Botswana National Museum. From 2017 to 2023, he served as site manager at Tsodilo World Heritage Site, where he led participatory heritage initiatives integrating community governance, storytelling, and cultural livelihoods. His work focuses on African heritage frameworks, landscape-based conservation, and inclusive interpretation. He holds academic qualifications in archaeology and heritage studies and contributes to regional dialogues on decolonising heritage practice.

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Understanding of cultural heritage in Tsodilo Hills through community perspectives

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Keywords: collaboration, engagement, narratives, interpretation.

The concept of "community participation" in heritage management often remains superficial, as local perspectives are frequently overlooked or relegated to the background in decision-making and the construction of heritage narratives. This paper re-examines concepts of community involvement, engagement and collaboration in rock art sites, concentrating on the interpretations and uses of the site by the community within the Tsodilo Hills cultural landscape. The research explores the ways in which rock art narratives have been (re)constructed and the impact this has had on the community in and near the Tsodilo Hills. The central guiding question is, how do various stakeholders create and benefit from the archaeological narratives, however problematic? This study employs a qualitative case study research approach. Comprehensive, semi-structured, open-ended interviews were employed to collect the data. Thematic analysis using NVivo was conducted to recognise categories and themes in the data discussed in this paper. The examination of interviews from this case study highlights that Western heritage management methods have a lasting influence on individuals and heritage in Africa.

Author biography

Stella Basinyi is a lecturer in the Department of Archaeology at the University of York, UK. She has a PhD from the Justus Liebig University in Giessen, Germany. Her projects at the Tsodilo Hills World Heritage site in Botswana unpack the intended and unintended impacts of the World Heritage programme. Her research interest includes public archaeology, ethnography, localised cultures, heritage management and Rock Art Studies.

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Participatory practices, a win-win for all: lessons from San communities in South Africa

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Keywords: ‡Khomani San, !xun and Khwe San, participation, Kgalagadi Transfrontier Park, Wildebeest Kuil Rock Art Centre.

In recent years participatory practices regarding heritage, tourism and conservation etc. have been popularised due to their alleged potential to result in *Win-Win* outcomes for all involved. While ethically and in theory, the approach has much to commend it, associated complexities and difficulties are often overlooked. This paper draws on the author's 20 years of research fieldwork and NPO experience to consider these complexities. Through exploring the experiences of the ‡Khomani San of the southern Kalahari, South Africa, and to a lesser degree, the !xun and Khwe San of Platfontein, Kimberley, also in South Africa, the challenges of participatory practices are considered; based on these, suggestions for improvements to the process to encourage more successful implementation, processes and/or improved sustainable outcomes will also be highlighted in regard to sites such as Twee Riverian interpretation Centre, Kgalagadi Transfrontier Park, and Wildebeest Kuil Rock Art Centre, Platfontein, South Africa.

Author biography

Julie Grant has been a researcher and NPO worker within the ‡Khomani Bushmen community, South Africa since 2006, working with the !xun and Khwe Bushmen, Kimberley, South Africa to a lesser degree since 2009. She explores issues of participation, development, poverty, representation etc. A Senior Research Associate at the University of Johannesburg since 2014, in 2022 became editorial coordinator for the journals *Critical Arts* and the *Journal of African Cinemas*.

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Mahemeng Cave: a rock art site in Mahemeng village, Mokhotlong district, Lesotho

Malesetla Alice Sepamo¹

¹University of the Witwatersrand

Keywords: rock art conservation, heritage management, community engagement, Lesotho archaeology, traditional custodianship.

The presence of rock paintings in the Mokhotlong district, Lesotho is well-documented, with research by Ambrose et al. (2000) attributing them to the San (Bushmen) hunter-gatherers who occupied the area in prehistoric times. Rock art forms the foundation of Lesotho's archaeological history, representing some of the earliest evidence of human presence and symbolic expression in the country. Mahemeng Cave, as recognized by local villagers, particularly herdsman, once featured paintings of Africa's largest antelope. These drawings are thought to have been created by the San hunter-gatherers. These hunter-gatherers inhabited the area and performed shamanic rituals in the cave many years ago. The area chief confirmed that the cave once contained numerous paintings, but many were damaged due to fire smoke from herdsman who used the site for shelter.

According to those who visited the site before its destruction, the rock art also depicted scenes of hunting, stick-fighting, and rainmaking ceremonies. For many years, the cave served as an educational site for nearby primary schools. Students were taken to the cave to learn about the rock art paintings and the history of the San people. This demonstrates the potential of rock art sites as educational resources in Lesotho.

Currently, only one clear painting remains. Although it serves as the primary evidence of the cave's historical significance as a rock art site, it also shows lack of awareness, and limited preservation measures threaten rock art sites in Lesotho. Additionally, the cave has a spring inside, which may have been a crucial water source for the San hunter-gatherers. Wetlands are also located very

close to the cave. This further supports the idea that the site provided essential resources for its past inhabitants.

While Lesotho government bodies such as the Department of Tourism and Culture have taken steps to protect rock art and heritage sites, stronger collaboration between local communities, researchers and policymakers is necessary to ensure long-term preservation. The irreversible destruction of Mahemeng Cave demonstrates the urgent need for conservation efforts to protecting the country's heritage for future generations. It reflects broader concerns about the balance between traditional custodianship and formal conservation effort, which is a key issue in rock art management.

This paper contributes to the ongoing discussion by proposing community-driven awareness initiatives and policy interventions that integrate local knowledge with sustainable conservation strategies.

Author biography

Malesetla Alice Sepamo is a Master's student at Wits University, South Africa. Having studied the historiography of archaeology in Lesotho, from the pre-colonial to the post-colonial period—she recognises that rock art forms the foundation of the country's archaeological history. However, these sites face severe conservation challenges. Many people still do not fully understand their significance, and as a result, they remain vulnerable to destruction. She is deeply committed to contributing to the preservation of Lesotho's rock art heritage.

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Design science research and participatory action research application in co-designing a cultural heritage public engagement tool

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Keywords: co-design, design science research, participatory action research, digital public engagement, cultural heritage.

The use of Design Science Research (DRS) as a research paradigm in the field of Information Systems (IS) has grown over the years and currently it is evolving into multidisciplinary areas. It has been noted that it is possible to use Action Research methods under DSR as the two approaches are compatible. However, this combination still needs additional developments. This paper reports on planned research combining the two approaches in the co-designing of a public engagement digital tool with the local community. Co-design was chosen because it allows for multiple perspectives from the participants and allows for local identity and ownership of the project.

The African Archaeology Archive Cologne (AAArC), University of Cologne's content is hosted on ARACHNE, an open access repository with digitised archaeological research documents from as far back as 1963. ARACHNE is home to the most extensive digitisation of rock art in the Brandberg National Monument Area (BNMA) in Namibia. The BNMA is one of the most researched prehistoric rock art sites and is acknowledged by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) as having a high concentration of rock art. Researchers have yielded a substantial number of publications and research projects from the Repository over time, with some still in progress. ARACHNE is however not frequently used by the public despite its being open access with a Creative Commons licence.

Participatory Action research (PAR) method founded on the Access, Better, Connect, Disintermediate, Educate (ABCDE) framework would be used all under

the DSR paradigm. The research project will engage the use of a co-design approach with the local community in order to arrive at a good solution. The objectives for the paper include to; unearth the use of DSR and PAR in cultural heritage, examine the combined use of DSR and PAR in digital tool design, and compare the DSR and PAR approach with existing co-design methodologies in digital heritage.

Author biographies

Martha Mosha is a digital humanities enthusiast with experience in media and communication. Her interests are in areas where digital media merges with science communication and technology enabled learning. Martha holds a Master's degree in Design Science (Digital Media) and a first degree in Design (D&T Education). Martha is currently pursuing a Ph.D. in Digital Humanities at the University of Cologne.

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Øyvind Eide is a professor in Digital Humanities at the University of Cologne. He was the European Association for Digital Humanities (EADH) chair from 2016–19, and 2025. His research interests are focused on transformative digital intermedia studies as a tool for critical engagement with media differences, especially the relationships between texts and maps as media of communication. He is engaged in the theoretical studies of modelling in the humanities and beyond.

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Lorenzo Cantoni is full professor at USI – Università della Svizzera italiana (Lugano, Switzerland), Faculty of Communication, Culture and Society, where he is director of the Institute of Digital Technologies for Communication. He is chair-holder of the UNESCO chair in ICT to develop and promote sustainable tourism in World Heritage Sites, established at USI in 2013, and director of the Master in International Tourism.

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Focus groups and roundtable discussion

Focused discussion groups have been created to support an efficient and meaningful “meet and greet” process by helping attendees get to know one another, thereby strengthening networking and fostering new collaborations from the outset. These smaller, intentional groupings will also stimulate deeper debate during the conference by creating spaces where participants feel encouraged to share perspectives, challenge ideas, and workshop emerging insights. Importantly, the focus groups will lay the groundwork for a productive end-of-conference roundtable by prompting early reflection on the conference and COSMO-ART project goals, preparing participants to contribute to a collective, forward-looking dialogue.

On Wednesday, during the conference excursion to Wonderwerk Cave, the focus groups will be paired up and take turns to visit the cave. They will also discuss 3 topics related to the conservation, management and promotion of the cave, and then provide feedback to the other participants, after which we will discuss these issues together.

On Friday afternoon, the focus groups will take a leading role in the roundtable discussion. This session will conclude the conference by bringing all the participants together for a collective synthesis of the week’s work.

The focus groups will be divided into 6 teams, each assigned to one of the sessions (see below). At the start of the roundtable session, the teams will have 30 minutes to prepare an overview of the discussions from their assigned sessions. This should highlight critical issues, points of convergence, and ongoing debates and challenges related to the management of rock art sites.

They will then have 10 minutes to present a summary of their session. After that, they will debate with all the participants for 5 minutes.

We expect this roundtable session to provide a dedicated space for critical discussion of the conference topics, formulation of recommendations and exploration of avenues for innovative research likely to foster future scientific collaborations at regional and international levels.

Focus Groups

Group 1	BARTHÉLÉMY, Juliette	GRANT, Julie	MALEFANE, Makhotso	MANAKA, Mpho
	MORRIS, David	NZUZA, Terance	PARKINGTON, John	PINTO, Lourenço
	PORETTI, Gemma	TAFITASOA, Mex		
Group 2	BOURDIER, Camille	GREEN, Dawn	HAITULA, Tuuda	LAUE, Ghilraen
	MANENGENA, Cathrine	MANIKI, Ida	MUDENDA, Macmillan	MOROKA, Louis
	SEGADIKA, Phillip			
Group 3	CHIGWENDE, Takunda	ENGELBRECHT, Lenishwa	FISHER, Shanty	HENDERSON, Abenicia
	HOERLÉ, Stéphane	MATHE, Lebonetse	SEPAMO, Malesetla	TLHOAELE, Dimakatso
	WILTSHIRE, Nicholas			
Group 4	DANIELS, Zola	LE POULLENNEC, Annael	MACHIWENYIKA, Kelvin	MGUNI, Siyakha
	MOKOTJO, Mabokang	NDLOVU, Ndukuyakhe	QUEMIN, Hugo	SHININGAYAMWE, Agnes
	TAYE, Blen	WIERSMA, Erica		
Group 5	DUVAL, Mélanie	JEAVEN, Curtis	MACHABA, Boitumelo	MUGABE, Kuda
	PARKINGTON, Alice	SIPHAMBE, Gladys	TAPELA, Milton	THEBE, Phenyo
	WINTJES, Justine			
Group 6	BARACCHINI, Leïla	DUBE, Yvonne	EFRAIM, Kaarina	JOBARD, Léa
	MASITENG, Itumeleng	MNIKATHI, Raphael	MOTSUMI, Powell	PWITI, Gilbert
	RABIE, Lily	RUSSEL, Thembi		



Deploying research
Sharing science
Transforming the future