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SAHARAN LANDSCAPES: CONTEXTUALISED ROCK ART AS A CULTURAL HERITAGE RESOURCE IN LIBYA

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Abstract. Painted and engraved rock art sites in Libya represent one of the country's most valuable tourist assets and form a crucial part of the wider cultural heritage of the Sahara. However, with the rapid growth of industry and tourism, degradation and destruction of the rock art through human interference is increasing every year. Recent work in the Wadi al-Ajal in south-west Libya indicates the potential for identifying previously undocumented sites and also demonstrates the threats to rock art in Libya and the Sahara. Within the current context of developing tourism, the need for a coherent, informed approach to ensure long-term protection and sustainability of rock art sites is discussed and broad recommendations are proposed, based on the resources available in the Wadi al-Ajal.

Introduction

This paper draws attention to the value of Libyan rock art and its landscape context as an integral part of the cultural heritage of both Libya and the Sahara. Rock art images, archaeological sites and their associated landscapes in Libya and in the Sahara are currently exposed to growing threats from a variety of different sources, especially oil extraction industries and tourism (Keenan 2002). The impact of oil exploration is a critical issue and has been discussed elsewhere (e.g. Anag et al. 2002). Instead, this article focuses on the implications of tourism and small-scale human intervention, the effects of which can be equally as devastating. It uses recent survey work in the Wadi al-Ajal in south-west Libya as a case study to draw attention to the damage that these agents are already causing to rock art sites and to highlight how little their potential impact is currently acknowledged. This article also looks forwards and discusses possible future plans for protection and presentation of sites to the public.

The Wadi al-Ajal and similar 'small-scale' rock art areas currently fall under blanket protection from Libyan Antiquities legislation which, although strict, is not rigorously or consistently enforced. Although part of the Wadi al-Ajal falls within the area of a proposed 'Archaeological Park', there has been little movement in the establishment of this park (Liverani et al. 2000). The remainder of the Wadi al-Ajal, along with the majority of 'small-scale' areas of rock art, lies outside proposals for formal protection through the instigation of World Heritage or National Park status. Alternative initiatives are therefore needed in areas where no specific protection exists, to take into account and develop their unique conditions, resources and potential. In areas where more ambitious schemes are anticipated, there is also considerable room for the introduction of flexible sustainable management programs that can work in tandem

with the larger projects.

Saharan rock art as cultural heritage

The exceptional proliferation and quality of rock art in the Sahara have led experts to describe the region as one of the greatest galleries of pre-Historic art in the world (Castiglioni and Negro 1986; Le Quellec 1993a; Mori 1998; Muzzolini 1997). Localised concentrations of rock art are found in rockshelters and on exposed boulders and rocky outcrops across the entire Sahara region, from the western Sahara and the western Maghreb to the Nile valley and Red Sea Hills where arid conditions have ensured excellent preservation of paintings and petroglyphs alike.

Some of the finest concentrations of Saharan rock art are found in Libya. The Fezzan region of south-west Libya contains two outstandingly rich areas—the Tadrart Acacus on the Algerian border in south Fezzan (Mori 1998) and the Messak Settafet/Messak Mellet in the south-west of the region (Lutz and Lutz 1995; van Albada and van Albada 2000). The Messak Settafet alone contains hundreds of major rock art complexes, encompassing tens of thousands of petroglyphs in total, while the paintings from the Tadrart Acacus comprise many internationally renowned images. Important collections of rock art have also been recorded further to the north in the Wadi al-Ajal (Barnett 2001, 2002), el Moor (Muzzolini et al. 2002), the Wadi ash-Shatti (Graziosi 1942; Le Quellec 1987a), and the southern fringes of the Hamada al-Hamra (Le Quellec 1985, 1998a, 1993b), while further sites have been recorded at Jebel Uweinat on Libya's eastern border (Van Noten 1978; Le Quellec 1998b). This corpus of rock art represents one of Libya's most valuable archaeological resources and forms a critical part of the cultural heritage of the Sahara.

Some specialists have argued that the oldest rock art images date to around 10 000 BP (Lutz and Lutz 1995), or

even pre-date the start of the Holocene (Mori 1968, 1998). However, dating is notoriously problematic, particularly for petroglyphs (e.g. Watchman 2000; Whitley and Simon 2002; Bednarik 2002), and the more widely accepted view favours a short chronology in which the rock art spans the last 7000 years of human occupation in the Sahara (Muzzolini 1995), and continues up until the recent past in certain areas. In general terms, common themes persist in the rock art across the whole Sahara, although there are distinct regional variations. The images capture an altered Sahara; a landscape rich in wild fauna, with herds of domesticated animals, and with an abundance of human culture that is untenable in the desert of today. The rock art tradition has persisted through a spectrum of cultural transitions, which may span the development of pastoralism, the introduction and spread of camels, the emergence of settled agriculture and proto-urbanism in wadis and around oases and, finally, recent industrialisation. Alterations in style and content of the rock art document these shifts and reflect also human adaptations to fluctuating climatic and environmental conditions. Saharan rock art therefore represents both a critical narrative of cultural change and continuity, and a valuable resource through which these aspects of the past may be explored. It records intangible aspects of human behaviour and interaction that have left negligible archaeological trace in the desert and, in the absence of an assured culture history, the rock art has unrivalled potential for improving our access to the later pre-History and proto-History of the Sahara.

However, the images are much more than a tool with which to study the past. While the importance of the rock art as a research resource is immeasurable, it also has a broader cultural heritage value, both in contributing to the longevity and cultural identity of the Saharan people and as a key resource for tourism. As global tourism increases and interest in desert and adventure travelling grows, the Sahara, and Libya in particular, are rapidly becoming much sought-after destinations. Rock art forms part of the main axis of visitor attractions, along with the desert landscape, the culture and archaeological remains. However, the effects of a burgeoning tourist industry on the rock art and the archaeological and natural landscapes can be devastating and permanent.

The rock art of the Wadi al-Ajal

Recent survey work in the Wadi al-Ajal in the Fezzan region of south-west Libya illustrates the potential for identification of new rock art sites in Libya. It demonstrates the threats imposed by tourism and human interference on a concentration of rock art that is not currently a specific focus for visitors, and it alludes to the potential for increased impact on the sites.

The study has identified a rich body of petroglyphs comprising several hundred images, only a proportion of which had been documented previously (Barnett 2001, 2002; Barnett and Roberts 2003; Jelínek 1994; Mattingly et al. 2003; Le Quellec 1985, 1987b, 1993b; Pâques and Breuil 1958; Pauphilet 1953; Pesce 1968; Sattin 1959, 1965; Ziegert 1969; Zoli 1926). The fieldwork thus far has only surveyed

a small proportion of the wadi, but random sampling in other areas indicates that further unrecorded rock art sites exist in this region. Equally, it is probable that additional rock art concentrations exist in other regions of Libya that have not yet benefited from detailed investigation.

Present problems, future threats

Due to its extensive pre-Historic landscape, its excavated archaeological remains, and the proximity of the Ubari sand sea with its dramatic oases—a popular destination for people desiring a ‘desert’ experience—the Wadi al-Ajal is currently one of Libya’s most important centres for desert tourism. The rock art is poorly marketed, and the majority of tourists instead visit the famous petroglyphs and paintings of the Messak or the Acacus, both a significant distance away. However, a small number of tourists do visit rock art sites in the wadi. These will generally be the larger, more impressive sites, those that are most easily accessible, or those that are mentioned in the literature or known by local guides. The sites are also visited by local inhabitants, and many have well-worn paths running to them. Although these individual visits are small-scale and generally very low impact, their accumulative effect is now becoming significant and there is considerable concern that this will grow as knowledge of the rock art spreads and attracts increasing proportions of the people who visit the wadi.

During the two years of fieldwork so far completed, an annual rate of human-induced damage has been identified at roughly five per cent of the total sites visited. The damage results from both deliberate and unintentional actions, and includes graffiti, enhancement and theft.

Graffiti include defacing petroglyphs with contemporary inscriptions of names, dates, comments and even pictures of the owner’s vehicle. While this may arguably represent some continuity in the relationship with the environment and the rock art, many of these graffiti are created by visitors who have no historical understanding of the landscape and have no claim to its heritage. Previous inscriptions, including numerous Libyco-Berber petroglyphs, may be construed as an earlier form of graffiti. However, not only were they created by people who depended on this landscape for their survival and therefore had a very different relationship with it than modern-day visitors, these inscriptions respected the space of original petroglyphs and, even when they occupy the same panel, are very rarely superimposed over earlier images. In contrast, modern graffiti are commonly scrawled right over pre-Historic images. In one location, an engraved panel over two metres tall and six metres long has been defaced by a large Arabic inscription scrawled across it in chalk (Fig. 1). The site is of considerable interest and importance, and its siting at one of the more dramatic locations in the Wadi al-Ajal makes it one of the more popular sites to which tourists are guided. While this graffiti is written in chalk and can be removed, albeit with difficulty, many other inscriptions are incised with sharp implements that cause more permanent damage. A tragic example of this is the damage



Figure 1. Engraved 'giraffe' panel showing the effect of deliberate vandalism.



Figure 2. Presumed petroglyph of now extinct giant African buffalo, possibly one of the oldest carvings in the Wadi al-Ajal, which has been permanently defaced by incised graffiti.

to a petroglyph of a giant wild African buffalo located on a large boulder close to the main access route south from the wadi (Fig. 2) (Barnett 2002). Similar depictions of the giant buffalo are common across the Sahara and are believed to represent some of the earliest rock art of

the region. This is possibly the oldest petroglyph so far recorded in the wadi, and may provisionally be dated on stylistic grounds to at least 7000 BP. It is a key part of the cultural heritage of this area and it is crucial to our understanding of hunter-gatherer occupation here, and

of the relationship between hunter-gatherers and early pastoral groups. This petroglyph has been badly and irreversibly damaged by several recent inscriptions over the top of the pre-Historic image.

At a number of sites, the original petroglyphs had been in-filled with chalk or paint, and in a few instances, the patina had been removed to expose the underlying rock colour and enhance the visibility of the petroglyphs. These actions, which are often done by tourists or guides to improve the photographic potential of the images, destroy the visual and historic integrity of the rock art and can easily lead to misrepresentation of the original image, particularly where the lines are faint or ambiguous and are interpreted subjectively. Enhancement also destroys vital chemical evidence that could be used for scientific analyses and dating. Although painting and chalking of petroglyphs was often used by researchers and conservators in the 1960s and 1970s in an attempt to prevent unintentional damage by drawing attention to sites that might otherwise go unnoticed and be destroyed, making the images more visible can also attract unwelcome attention, and possibly deliberate vandalism, to panels that might otherwise be ignored and be preserved by their obscurity. At one important site in the Wadi al-Ajal a number of petroglyphs were painted by an academic researching the site in the 1960s (Ziegert 1969). The site is the one most frequently visited by tourists and local inhabitants, and in recent years further images have been chalked in and covered in chalked inscriptions. There has been a considerable increase in deliberate interference with the site in the past two years, suggesting an upward trend in this form of vandalism in the wadi, possibly correlating with increasing visitor numbers. The effects of enhancing the images are virtually impossible to reverse without damaging the petroglyphs further (cf. Bahn et al. 1995), and the unsightly rock art has become a permanent fixture in the landscape.

Removal of chunks of art from rock panels was noticed at several sites in the Wadi al-Ajal. The process of removal has damaged the remaining petroglyphs which, in certain instances, have also subsequently been vandalised by graffiti. In one case, the site is located on a promontory close to a series of palaeo-springs with superb views over the wadi, which would have made an ideal location from which visitors could appreciate the archaeology, the rock art, the geology and the landscape.

Theft of entire rock art pieces is more difficult to quantify in areas where there has been no previous documentation work, and its extent can only be established through a program of systematic site recording and monitoring. However, even at the comparatively coarse level of recording of this fieldwork, it was possible to identify the theft of at least one whole engraved panel, and hence raise concerns that the practice may be more widespread in the wadi.

Looking forward

For a country like Libya that is beginning to embrace the concept of tourism, a coherent strategy for managing critical cultural heritage resources such as rock art is now

both timely and imperative. There is considerable attention on the destruction of rock art and other cultural heritage sites in many parts of the Sahara that have exceptional concentrations of rock art and archaeology, such as the Acacus, the Messak and southern Morocco. However, in areas like the Wadi al-Ajal where the rock art is considered inferior, damage and destruction are also occurring consistently at a significant rate. The rock art of these areas comprises an important part of the cultural heritage of the local population and of the Sahara as a whole, and although it does not currently assume recognised national or international status, it is equally as vulnerable and warrants a comparable level of management and protection as 'superior' concentrations.

The potential for sustainable cultural tourism in the Wadi al-Ajal

At present, the majority of damage to the rock art in the Wadi al-Ajal stems from small-scale human interference by visitors and the indigenous community. Much of this could be mitigated or even avoided through appropriate education, training and raising awareness of visitors and the local community at a variety of different levels.

In contrast to the Messak, the Acacus and many rock art-rich areas of the Sahara, the Wadi al-Ajal is relatively densely populated, with many of its inhabitants involved in small-scale agricultural production and subsistence farming. The wadi is also very accessible, with a metalled road running east-west for its entire length and two further roads providing easy access south from the wadi. These factors facilitate continuous, small-scale exposure of the rock art to human agents and therefore represent fundamental threats to its preservation. Proximity to the road is a particularly significant factor, with the majority of damage occurring at the most obvious and easily accessible sites. This concurs with studies in North America showing that sites close to roads are at least three times more likely to be damaged than those that are harder to reach (Bednarik 1990).

While these factors of accessibility and population represent a threat to the survival of the rock art, they also represent a real opportunity for developing a program for sustainable cultural tourism that integrates rock art, archaeology and landscape within a framework of local stewardship/guardianship. With the widespread public recognition of rock art as an important part of cultural heritage, and with cultural heritage tourism becoming a developing industry, the need for appropriate measures that protect, manage and present rock art in the Wadi al-Ajal and similar areas is imperative.

Suggestions for first steps towards sustainable management

Active site management plans that strictly regulate and control visitor access to rock art sites should be considered for the medium-term future. While there is a need to evaluate visitor access to certain archaeological sites in the wadi, cultural heritage tourism to rock art sites here has not yet developed sufficiently to warrant stringent control. Most appropriate at present is a 'grass roots' policy that starts at the bottom with improving education, awareness and community involvement and builds on these foundations.

Rock art site development measures from all over the world place great emphasis on public education, and it is at this level that management plans should aim in the Wadi al-Ajal. The importance of education in cultural heritage protection and management is widely acknowledged as a means for engendering awareness of and identification with rock art (e.g. Hygen 2000, 2003; RAPP 2000). It is recognised that understanding and engagement with the concept of rock art underpins the motivation for taking responsibility for its protection and preservation. Sound conservation principles should underpin all education programs, and on-going research and tourist monitoring are critical to ensure that there is proper understanding of the rock art and its relationship to the landscape and other archaeological sites, and of how these are used by visitors. A coherent education program must also be supported by tangible protective measures and co-ordinated management plans that are flexible enough to respond to the different threats to which the rock art and its landscape are likely to be exposed.

The Wadi al-Ajal has potential for establishing an integrated education program that could target the majority of locals and visiting people. There are a number of existing education outlets in the wadi that could be mobilised and, because they are already operative, it would not require great effort to use them effectively to inform and involve local people and visitors in the rock art, archaeology and landscape of the Wadi al-Ajal, and the importance of sustaining this cultural heritage for the future.

- Local schools and community groups comprise an excellent opportunity for developing and applying specific teaching programs in consultation with the needs and expertise of the community. Selective training of teachers and relevant individuals provides the potential and mechanism for extensively amplifying the dissemination of specific cultural heritage information. Children will learn from their teachers and parents will learn through their children; a large section of the population can be targeted through this form of active education policy.
- Studies in other parts of the world have stressed the importance of having a museum close to rock art sites as a focus for providing information (Gwasira 2003; Olsson 2003). The Germa archaeological museum in the Wadi al-Ajal represents an excellent resource that could be used for educating locals and visitors, not only through provision of exciting, permanent exhibitions, but also by developing it as a focus for a range of related activities including travelling exhibitions, providing training programs for local guides, setting up heritage tours, publishing information leaflets, setting out codes of conduct, and co-ordinating heritage-related events for the local community. Rock art and archaeology education programs could be dovetailed into existing museum staff activities and also used to develop new initiatives. The museum also provides a focus for pooling local and foreign resources and expertises through research and presentation projects. These outlets could enthuse and engage a wide spectrum of both the local population and visitors to the wadi.

- The wadi also has an existing tourist infrastructure that provides a good opportunity for educating and informing visitors. Tourist outlets (including hotels, campsites, tourist companies, local guides, restaurants) could be used to inform those people visiting the Wadi al-Ajal and surrounding desert, as well as those passing through on their way to the Acacus, Tassili and Messak. By providing and distributing information about rock art and codes of conduct at sites through these channels, it may be possible to pre-educate visitors to larger-scale sites before they arrived.
- The accessibility of the wadi, and the large numbers of tourists that already visit it for other reasons have considerable potential for increasing visitor numbers to rock art sites in this area, and for managing and monitoring these visitors. By developing sustainable cultural heritage tourism in the wadi, a significant proportion of tourists could be diverted away from sensitive and more remote areas such as the Messak and Acacus, where management strategies are more difficult to implement. This would have the effect of reducing the impact of human interference on these sites and their surroundings, while at the same time ensuring that visitors to rock art sites in the wadi are appropriately informed and guided.
- The accessibility and archaeological interest of the wadi attracts a number of foreign academics. The varied expertise of some of these is fed back into the community, but there is considerable potential for greater involvement of foreign researchers in cultural heritage education initiatives.

Conclusion

Few, if any, coherent community-orientated initiatives exist in Libya for cultural heritage education and management. This absence of precedent presents a daunting but exciting challenge, and one in which Libya would benefit significantly from building on the achievements of rock art tourism in other parts of the world where the concept is more developed. This article is concerned with drawing attention to the threats to rock art and its context in all areas of Libya. It attempts to address the imbalance in the emphasis on rock art in certain areas of Libya to the possible detriment of other, 'smaller-scale' areas such as the Wadi al-Ajal, and it suggests that all regions should be considered on their own merits as important, integral parts of the cultural heritage. Attention is also drawn to the existing infrastructure and available resources of the Wadi al-Ajal, and broad suggestions are put forward for how these could be employed in a cultural heritage education program. This type of locally targeted, 'bottom-up' model should work alongside larger-scale, 'top-down' conservation and management projects in other regions of the Sahara, such as the development of National Parks and World Heritage sites.

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