

Thoughts on the rock art of the Tadrart Acacus Mts., SW Libya

Background

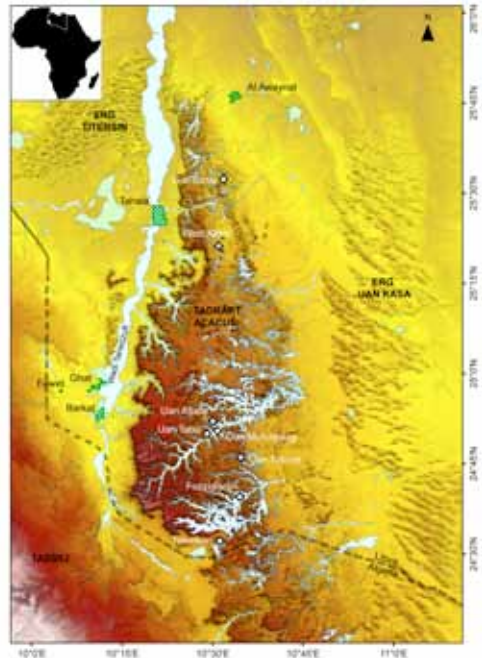
Inserted in the UNESCO World Heritage List nearly thirty years ago (1985), the rock art sites of the Tadrart Acacus Mountains are part of a more complex cultural landscape, intensively studied for decades by the Libyan-Italian Archaeological Mission in the Sahara (www.acacus.it). Erratically visited since the end of 19th century and at the beginning of the 20th century, the region became the subject of systematic investigation by Fabrizio Mori, who also published the first scientific papers on its rock art (1961), including a beautiful monograph (1965). Since then, the research has expanded to include a systematic survey of the area and stratigraphic excavations of archaeological deposits (e.g., Barich 1987; Cremaschi and di Lernia 1998; di Lernia 1999; Garcea 2001; di Lernia and Zampetti 2008).

The combination between a rich iconographic *repertoire* and a well-preserved archaeological record makes the Acacus mountains a very fortunate case study. Not by chance, the first chronological indications for the Saharan rock art came from the Acacus mountains (Mori 1965), as well as the possibility to archaeologically investigate at least some of the aspects depicted in the painted and engraved scenes, such as milking (Dunne et al. 2012). In a sense, one could say that this is the only area in the Sahara (and probably in North Africa) where archaeological investigations and rock art study developed together and where, in many cases, elements and subjects painted or engraved on the rock walls have been found or identified in the archaeological record. However, the link between the

two records requires a solid chronological basis and a sound theoretical framework, both unfortunately yet to be entirely attained.

The majestic beauty of these rock art sites and the richness of the archaeological record are today dramatically endangered. The developments of the Arab Spring and the war in Libya have determined in the last months a paramount change in the Libyan

Figure 1 – Tadrart Acacus Mountains and surrounding areas with indication of principal archaeological sites.



society, with the fall of Gaddafi's regime and the building of a New Libya. The increasing tensions between different regions and rising inter-ethnic clashes could however have a destabilizing effect even on the integrity of the country.

In this perspective, together with desert erosion, infrastructure development, oil exploitation and many other threats to the Tadrart Acacus and surroundings (di Lernia 2005; di Lernia et al. 2010), we should also consider a possible abandon and isolation given its remote location and distance from the political Libyan core, traditionally placed on the Mediterranean coast.

Environment and people

The Tadrart Acacus mountains are located in south-west Libya, between latitudes 26° and 24° N, stretching over an area of ca. 5,000 km² with a maximum elevation of approximately 1,400 m asl (Fig. 1). Seen from the satellite, the fossil drainage network shows a trending pattern mostly west-east oriented controlled by its tectonic structure (Cremaschi 1998).

On the western part of the massif, an abrupt scarp crossed by a few passageways (Biagetti et al. 2012) marks the limits with the wadi Tanezzuf valley; to the east, the Tadrart Acacus gradually lowers towards the sands of the erg Uan Kasa. At its north-

ern end, the Tadrart is surrounded by the oasis of Al Awaynat and the first dunes of the Edeyen of Ubari. The southern limit represents today the international border with Algeria: as a matter of fact, the limit is only political, being the Algerian Tadrart the natural prosecution of the Tadrart Acacus, separated by the large wadi Takarkori.

The present climate of the SW Fezzan is hyper-arid; the average annual temperature is between 25 and 30° C and the average annual rainfall is between 0 and 20 mm (Fantoli 1937, Walther and Lieth 1960). Precipitation is more frequent in spring and summer, and the regional average annual relative humidity is 17 per cent; strong wind activity is common and especially effective in spring; occasional rainstorms are also recorded in the winter season (Fantoli 1937). There are no springs in the region, except for a small one on the western side of the massif: the only available water comes from natural water pools filled by rains (called *guelta*, in arabic, or *agelma* in Tamashq, the Tuareg language) and a few wells (di Lernia et al. 2012). The vegetation today is sparse and mostly limited to *Acacia-Panicum* communities (Mercuri 2008). Acacia wood has suffered a marked decline in the last 15 years due to the overexploitation related to tourism mostly in the northern and central wadis, where fresh wood was also used – and not (just) dry, as the Tuareg tradition-

Figure 2 – Tuareg girls with their flock, wadi Tibestwen (photo Gallino).





Figure 3 – The landscape of northern Tadrart Acacus, near wadi Awiss (photo Gallino).

ally used (di Lernia 2005). The only 'large' mammals present are a few Barbary sheep (*Ammotragus lervia*) and Dorcas gazelle (*Gazella dorcas*). Unfortunately, Tuareg intensively hunt them with their traditional (but very effective) traps: furthermore, poaching, even if theoretically persecuted by law, is largely practiced (and mostly by policemen, militaries and other 'authorities').

Today, the area is inhabited by a small lineage of Tuareg, the kel Tadrart (Biagetti

and Chalcraft 2012). Until a few decades ago, they lived off goat herding and occasional cultivation (di Lernia et al. 2012). More recently, and until the beginning of the war, many of them were an active part of the tourism industry working as guides or drivers or employed by tourist police. As a matter of fact, they are the real custodians of the area and represent the best resource to protect, safeguard and valorise the property (Fig. 2).

Figure 4 – View of wadi Rahrmellen, central Tadrart Acacus (photo Gallino).



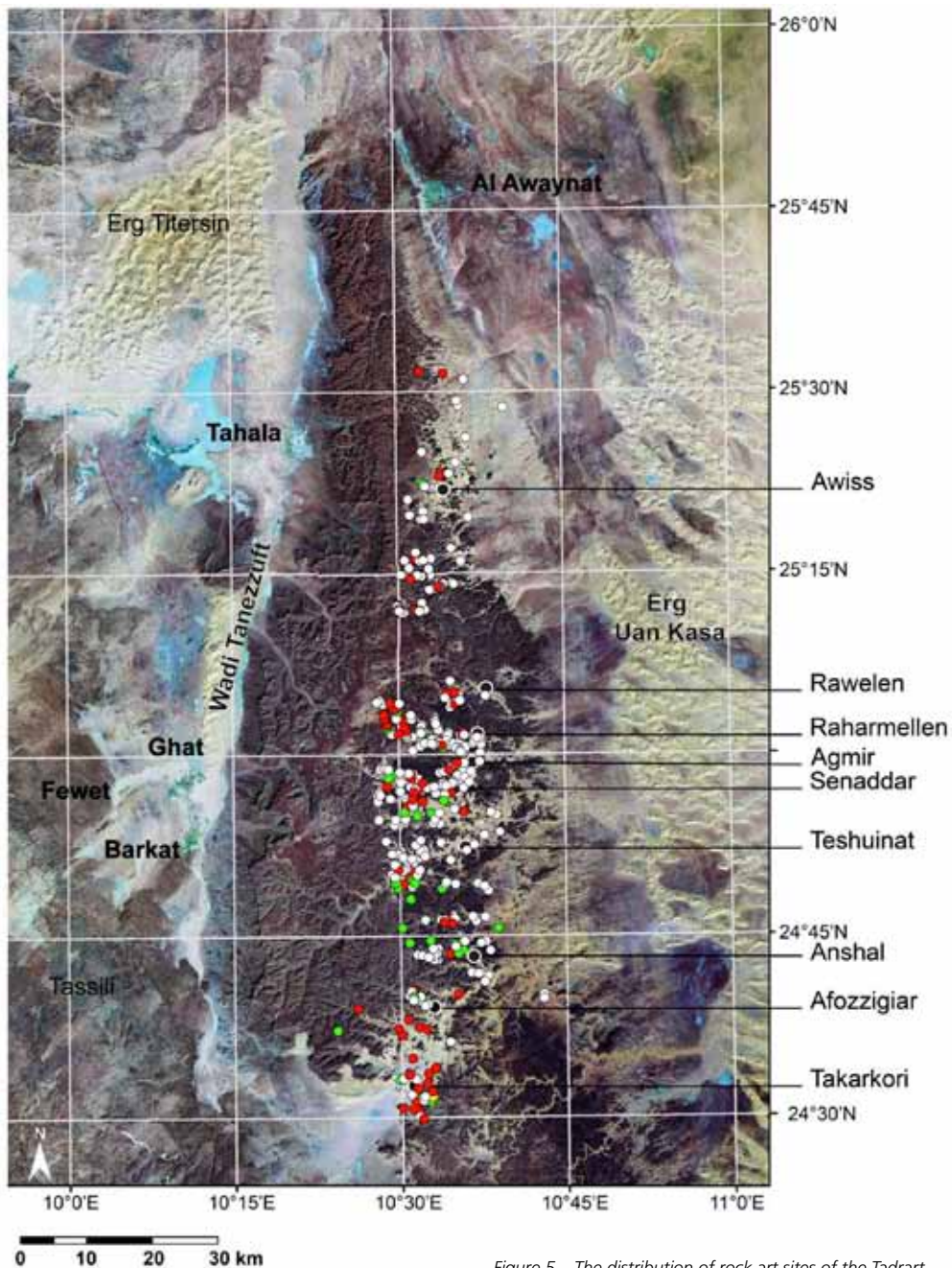


Figure 5 – The distribution of rock art sites of the Tadrart Acacus, by physiography (after di Lernia and Gallinaro 2011). Key: white (wadi floor); red (intermediate); green (1st terrace); yellow (2nd terrace).



Figure 6 (1)



Figure 6 (2)



Figure 6 (3)

Figure 6 – Examples of rock art ‘sites’. (1) a multi-style painted wall; (2) multi-style engraved wall; (3) engraved boulder; (4) an isolated rock marking.

Engravings, paintings and other rock signs: some cautionary tales

The landscape of the Tadrart Acacus is of outstanding diversity: large sand valleys punctuated by rock pinnacles characterize the northern area, around wadi Awiss (Fig. 3). In this area, caves and rock shelters are less present, with a few significant exceptions. In the central-southern Acacus, the nowadays dried wadi valleys are imposing and their banks host hundreds of rock shelters and a few caves (Fig. 4): many are decorated and host the remains of human occupation in the form of archaeological deposits and other features, such as stone structures and tombs.

It is virtually impossible to summarize in a few lines the impressive archaeological record present and recorded over several years of research. The same applies for the rock art contexts: based on the most recent findings (di Lernia and Gallinaro 2011), we have inserted around 500 contexts within a GIS platform, unevenly distributed in the different physiographic areas (Fig. 5).



Figure 6 (4)



Figure 7 – The reproductions of Teshuinat IV and V compared with their true location plotted on a schematic map of the rock shelter (after di Lernia and Galilino 2009).

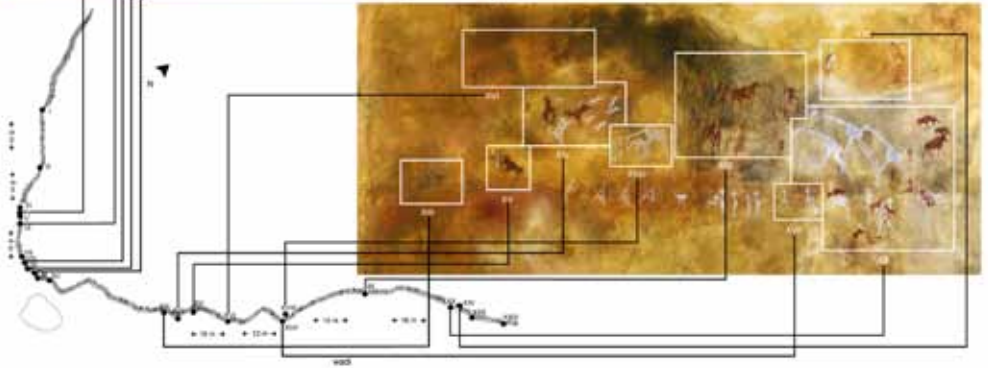


Figure 8 – Using a mini-crane to digitally record the engraved rock of Sughd.



For each rock art context, information on artistic styles, state of preservation and potential risks are registered, providing an adequate dataset to hopefully be used by the Libyan authorities for any kind of interventions in the area.

Before going into major details on the main artistic styles of the area, it is necessary to give some cautionary tales.

The definition of site

Defining a rock art site is as complex as rock art research itself (e.g., Chippindale 2004). In a sense, at least in the Tadrart Acacus and other Saharan regions – such as the neighbouring Tassili to the west and the Messak to the east – rock markings are virtually everywhere and the same landscape is a complex, articulated, multidimensional outcome of a historical cultural network. The separation between land, environment, dwellings, artworks, funerary areas, ceremonial

contexts, water, resources, paths, gathering places is something inexistent in many (if not all) ‘traditional’ societies alien to the industrial world: our western necessity to discretize something otherwise inextricable creates deep wounds when facing the locals’ vision of their landscape and seriously hampers our ultimate (ethic) understanding of complex cultural aspects.

This dramatically applies to artworks. Without even approaching the theoretical aspects implicated in the same conceptual definition of art, the innumerable signs left by ancient communities – be they polychromatic painted scenes or isolated enigmatic geometric marks – are a serious challenge for art historians, archaeologists, managers of cultural property and stakeholders (Fig. 6).

Hence, defining and mapping rock art sites is not an easy task: in our study area, we have adopted a conservative strategy where “a rock art site is here conventionally

Figure 9 (1) *Ti-n-Ashig, central Acacus: themes, superimpositions and different degree of rock varnish of the engraved subjects led F. Mori to consider this wall as representative for the earliest rock art styles.*





Figure 9 (2) organic matter sampled from the famous 'round heads' scene at Uan Tamauat has been radiocarbon dated to 8590 ± 390 BP (AMS GX-30307): waiting for more results to get a statistic sound basis, it is so far the earliest date on a painted wall from our area of research.

(3) engraving of pastoral styles from wadi Rahmellen.





Figure 9 (4) a palimpsest of different and later styles from a painted rock shelter in wadi Teshuinat (all photos except 1 courtesy of Filippo Gallino).

defined as any type of engraved or painted figure or cluster of figures (zoomorphic, anthropomorphic, plant, or abstract) occurring within a 'physically defined' space. (...) the art is mostly located in correspondence with discrete geographic entities, as well as in rock shelters, caves, or isolated boulders. When rock art panels occur along the cliffs, vertical rock walls rise at the edges of the wadis and higher terraces, the site's boundaries are arbitrarily defined." (di Lernia and Gallinaro 2011: 164).

Despite the efforts, problems remain. The presence in a shared location of rock marks, whose styles are not clearly defined, might lead to under/over representation. And how must two sites be considered as two separate entities opposed to just one? And so on. Keeping in mind this premise, it is clear that we are continuously approximating our assessments, in a never-ending progressive process of field registration.

Recording a site

The first pioneering research done by Mori in the 1950s totally fall in the mid-20th century fashion, where a mixture of (post) colonialism, patronising attitude towards the local people (in our case the Tuareg kel Tadrart) and lack of formal methodological background formed much of the basis of Saharan studies of rock art (see also Keenan 2007). In a few years, Mori and colleagues recorded several sites, mostly in the central and southern Acacus, using traditional methods, in particular reproducing the paintings and engravings at actual size (Fig. 7). The process was long and laborious, and we owe to these young artists – Piero Guccione, Lorenzo Tornabuoni, Giovanni Checchi – the existence of a set of reproductions now stored in the Museo Pigvorini in Rome which represent, in many cases, the only testimony of faded paintings or even paintings which have disappeared. Problems, mistakes and merits have been



Figure 10 – Traces of colour on Late Acacus grinding stones from Takarkori, dated between 8600 and 7800 BP.

recently analysed and discussed (di Lernia and Gallinaro 2009).

After decades, however, the recording of a rock art site still poses problems and a lot must be done in order to actively record and protect these contexts. Poor state of preservation, uneven support, degraded

rock surfaces and accessibility make this very first step complex even to professional teams (Fig. 8). Again, these difficulties might hamper the possibility to create an adequate data bank and thus the capacity to monitor the property through time. The increasingly affordable cost of high-tech techniques and devices (ETS, laser scanner, etc.) will probably improve the situation, even if remote location and harsh environmental conditions of most sites could hinder or limit their full applicability.

Styles and age

Rock art is part of the archaeological record and should be studied accordingly. Unfortunately, many subjective approaches have characterized (and still do) the stylistic and chronological analyses of Sahara artworks: the Tadrart Acacus is not an exception. From the first indications by Abbè

Figure 11 – The distribution of artworks in a wadi Imha site define separate spaces for 'round heads' and 'pastoral' artworks: (1) pastoral engravings; (2) hand prints and painted cattle in pastoral style; (3) painted anthropomorphic figures in 'round heads' style (photo Ceccacci).



Breuil and Leo Frobenius (1931), up to the works of Lhote (1958), Mori (1965), and Muzzolini (1991, 2001) – to name a few – there is a kind of ‘consensus’ on the definition of the principal styles of Saharan rock art.

Virtually all authors identify a ‘wild fauna’ or ‘bubaline’ style (mostly engraved), then (where *then* implies a chronological sequence for most but not all authors...) “round head” paintings, “pastoral” or ‘bovidian’ style, followed by “horse” and “camel” styles (Fig. 9). The introduction of eponymous names or definitions based on specific contexts (Ti-n-Lalan, kel Essuf, etc.) does not radically change the scenario.

Of course, the major problem is linked to chronology and therefore with the iden-

tification of cultural contexts to be associated with artworks. Largely based on an intuitive approach, rock art chronology is conventionally based on the combination of stylistic features, superimposition, type of represented subjects, degree of varnish if present, and so on. Unfortunately, in the Sahara, and in the Tadrart Acacus as well, the results are not homogenous and a general agreement is far to be found: the different positions can be synthesizable with the “long” vs the “short chronology”. In the former, the ‘wild fauna’ style would go back up to the very early Holocene (and even earlier according to some scholars) and the following styles succeeding each other with possible but unknown overlaps. The short chronology, first supported by Muzzolini, places all the rock art after the

Figure 11 (1) pastoral engravings





Figure 11 (2) hand prints and painted cattle in pastoral style.

Figure 11 (3) painted anthropomorphic figures in 'round heads' style (photo Ceccacci).



middle Holocene aridity, approximately after 6500 BP¹.

Archaeologically, we have two possibilities to link rock art to the cultural sequence. *Directly* (in italic, because "direct" dates simply do not exist), by dating either the artworks themselves (organic matter in the paintings, organic particles trapped in the varnish of the engravings, etc.) or the firmly associated archaeological contexts, thus providing *terminus ante or post quem* for the artworks (painted/engraved slabs in the stratigraphy, etc.). Indirectly, connecting or identifying specific archaeological themes in the painted and engraved iconography: a

particular tool, a specific animal, or an unambiguous life style.

Unfortunately, both cases are fragile and problematical and Saharan rock art chronology is still ambiguous and weak (Mori 1961; Mori et al. 2006; Mercier et al. 2012), but for very few cases (Mori 1965; di Lernia and Gallinaro 2010; Huyge et al. 2011).

Archaeological hints for a refined rock art chronology

Unlike the rock art chronology, the Holocene cultural sequence of the Tadrart Acacus is firmly established and sup-

Figure 12 – The wall of Afa, southern Tadrart Acacus (photo Gallino).

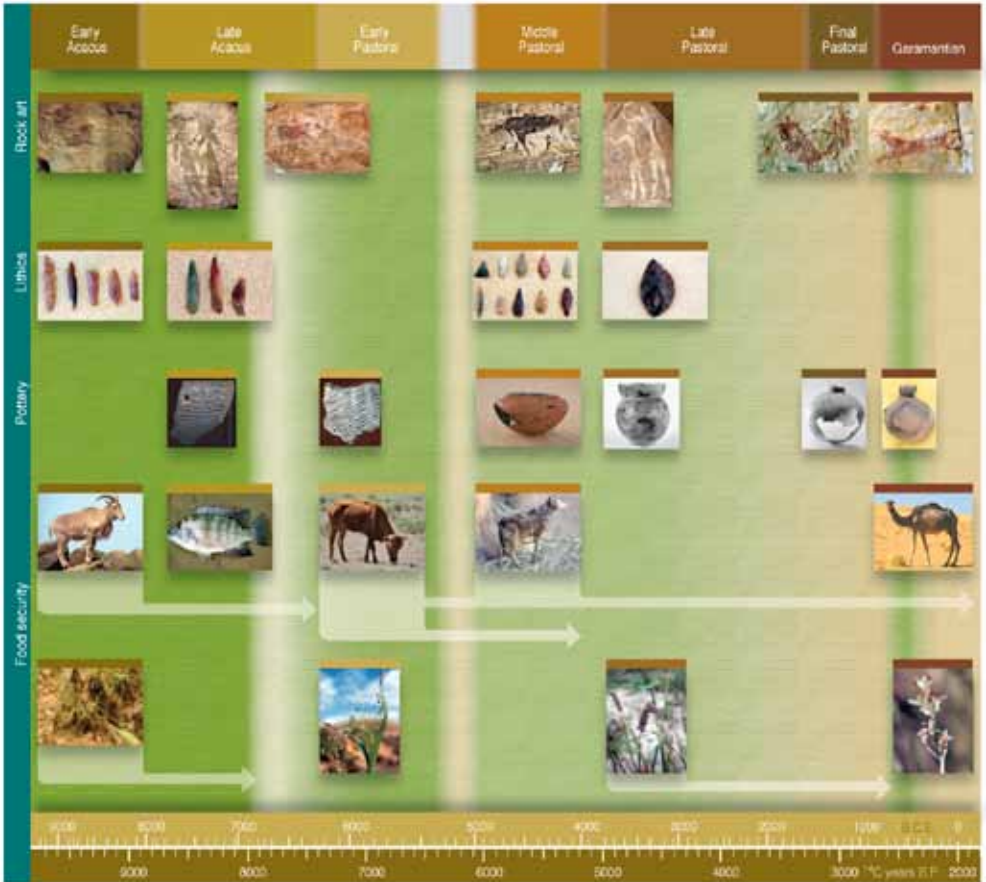


ported by hundreds of radiocarbon dates. Can we infer something from this? For example, there is no large evidence of a late Pleistocene occupation in the region (Cremaschi and di Lernia 1999) and the first Early Holocene occupation is characterized by small groups of specialized hunter-gatherers dated to approximately 9800-8900 BP, a culture locally called "Early Acacus". These feature a specialized tool-kit, scarce grinding equipment, and no pottery. This simple evidence would easily abolish the idea of a Pleistocene art in our study region.

Around 8900 BP we record a major change in the Tadrart Acacus archaeological

record: sites are much larger, featuring bigger and more formalized stone structures, heavy grinding tools and large pots. All these elements were considered part of a 'new' culture, called "Late Acacus". Their food security is still based on hunting and gathering, but there are many signals of a delayed use of resources through the corraling of Barbary sheep and storage of wild cereals (di Lernia 2001). In several Late Acacus sites we have grinding equipment – querns and hand stones – with traces of colour (Mori 1965; di Lernia 1999; Garcea 2001), but the most impressive evidence comes from the Takarkori rock shelter: a

Figure 13 – The cultural sequence of the Tadrart Acacus and surroundings (elaboration by S. Navarrini). The position of the earliest rock art styles should be seen as tentative.

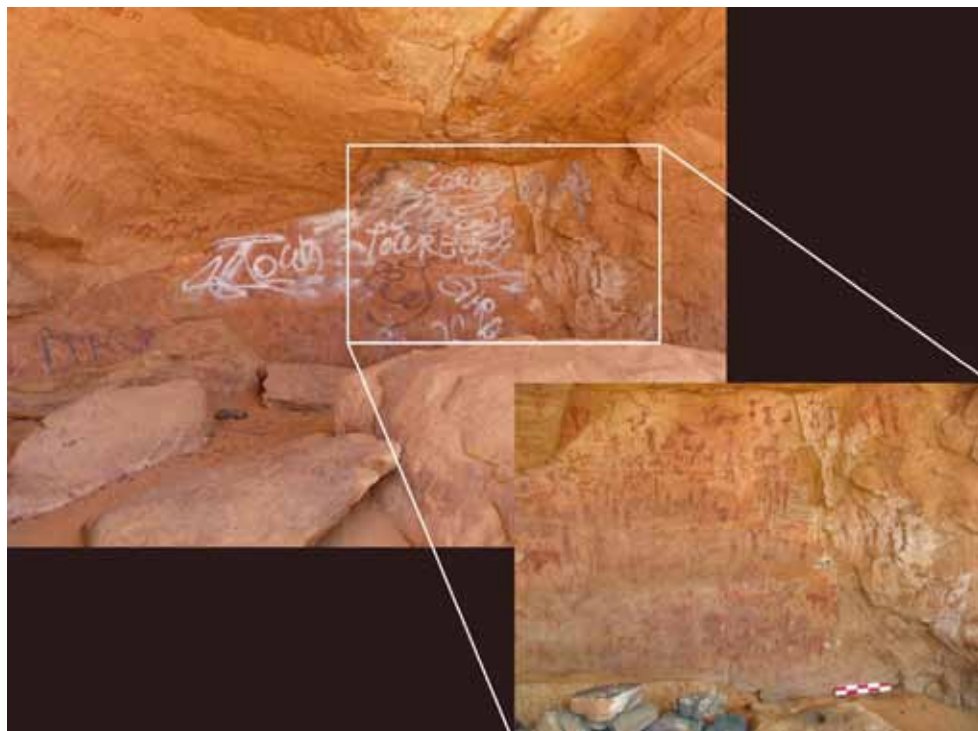


seventyish fragments with colour were found and around 25 come from Late Acacus layers dated between 8800 and 7400 BP (Fig. 10). Might these querns be palettes to prepare the colour for the parietal art? Or were they used for body paintings and tattoos? Should these stones with traces of colour be connected to any specific art styles? In this sense, Round Head style seems to appear the most plausible candidate: usually, scenes painted in this style depict antelopes and Barbary sheep and very rarely domesticates (if any). Stratigraphically and spatially, Round Heads are often but not always under the subjects painted in pastoral style and generally occupy different parts of the shelter walls (Fig. 11).

The Pastoral style gathers a wide and varied galaxy of different schools and traditions lasting for millennia and all sharing a strong emphasis on domestic cattle. The

introduction of domestic livestock in the region is archaeologically placed at the end of the 8th millennium BP (di Lernia in press). A full exploitation of cattle, including dairying, is much later, i.e., from around 6100 BP (Dunne et al. 2012). The development of pastoral systems in the region is complex and lasted for millennia, up to the emergence of Garamantian society in the 1st millennium BP. It is therefore very difficult to track the changes in rock art tradition *within* the Pastoral Style, trying to connect them to the development of the archaeological record. However, it would be interesting to analyse rock art panels within a different perspective, trying for example to identify in the rock art record specific aspects known and dated on the bases of archaeological data. Some considerations are easy to imagine: the painting of large herds must be connected to a full pastoral society

Figure 14 – The small cave of Ti-n-Anneouin was vandalized, together with other 11 contexts, in April 2009. The spray paint deeply affected the artworks, probably lost forever.



and their presence in the mountains related to transhumance shifts, whose archaeological evidence points to Middle Pastoral cultures, dated between 6100 and 5000 BP. Others are much more challenging: could complex, quasi-ritual depictions – such as the wall from Afa (Fig. 12) – be the evidence of the first arrival of herders? Could the apparent overlap between an archaic style (recalling the Round Head) and the pastoral subject be considered the material representation of contacts and negotiations between foragers and herders?

The beginning of the Horse/Bitriangular style is routinely dated on the bases of the introduction of horse in Northern Africa, based on historical sources (Mori 1965; Muzzolini 2001) and the same applies to the Camel style. However, there has been less attention to these styles, probably because the study of the emergence of rock art in the area was considered more attractive rather than later aspects.

Technological innovations and increasing resolution of dating methods will probably provide new insights on rock art chronology, as recently demonstrated by several studies (Huyge et al. 2011), but some considerations on the 'long' vs 'short' chronology could be probably done. It is true that the equation between cultures defined in the archaeological record (specialized hunter-gatherers, foragers, early herders, nomadic pastoralists, chiefdom) and the sequence of distinct art styles (wild fauna, round heads, pastoral, horse, camel) is likely inadequate to explain the complexity of the process and the different mechanisms of social and ideological traditions. However, if we abandon the idea of the linear and progressive evolution of rock art in the area, but we keep its historical depth – that is the whole Holocene – then we probably get closer to truth. As an example, it is likely that "round heads" artworks should be considered the outcome of complex semi-sedentary foragers, but why should we limit it to this time frame only? Why couldn't these iconic figures be a long lasting tradition, to also be incorporated by early herders?

We have an increasing body of evidence, also genetic (Pereira et al. 2010), of large and rapid movements at the end of Pleistocene in North Africa and archaeological materials clearly define interregional contacts: why shouldn't late Pleistocene Qurtá engravings be considered a possible antecedent of other 'wild fauna' styles in the Sahara? The northern shift of the monsoons and the increase in the rainfall from the Mediterranean area, allowed in the early Holocene a drastic reduction of the Sahara when compared to the Last Glacial Maximum. Timing and mechanisms of recolonization of unfamiliar regions are yet to be fully understood: but it is certain that human groups took generations to make their path, through failures and reiterated attempts. The marking of the landscape could be easily seen as a social response to better cope with the vagaries of climate and environment and to define the relations with other groups from the very beginning of the Holocene.

The 'short' chronology has several merits indeed. Overall, their supporters made clear many errors and oversimplifications which *frequently* characterised the *often* simplistic reconstructions of 'long chronology' followers. Archaeologically, however, I have some serious problems in understanding the time limits as well as the social and cultural mechanisms at the base of this reconstruction. The idea of a sudden emergence of rock art in a vast region after the middle Holocene arid phase (which can be roughly dated to the second half of the 7th millennium BP) clashes with the total lack of archaeological data, which rather supports the existence of a strong regionalization and the persistence of local traditions (e.g., di Lernia 2002; Kuper and Kropelin 2006). In the Tadrart Acacus, for example, the introduction of domesticates from east is firmly dated at the end of the 8th millennium BP: in the 'short chronology' perspective, one should admit more than one millennium of pastoral life without any rock art and then, more or less around 6500 BP, the introduction/emergence of art. This seems in contrast with a ponderous set of information which points – despite the strong climatic

and environmental variations – to elements of continuity: both decoration and technology of Middle Pastoral pottery, for example, maintains some traits of the former phase.

Some archaeological evidence, I believe, should support the rather contemporaneous and ‘sudden’ emergence of rock art in the Sahara at approximately 6500 BP. Given the magnitude of the phenomenon, it should be something relevant and thus archaeologically visible and recognizable, but I struggle to detect it.

Both ‘long’ and ‘short’ chronologies are intuitive and often based on circular arguments, but I still believe that a chronology expanding on the whole Holocene better explains the complexity and the inextricable net of cultural processes which characterized the history and the art of these ancient Saharans (Fig. 13).

An endangered archive

The recent civil war in Libya has enormously increased the concern about the future of this UNESCO property. Before February 2011, the rock art sites of Tadrart Acacus were seriously threatened by natural and human factors, recently synthesised (Liverani et al. 2000; di Lernia 2005; di Lernia et al. 2010; di Lernia and Gallinaro 2011). In April 2009, the vandalism on some important contexts with spray paint attracted international attention (Fig. 14): since then, despite a prompt field assessment and formal communication to UNESCO by the Sapienza Mission (di Lernia et al. 2010), because of the State party’s delay, it took nearly 2 years to have a formal assessment on the spot (<http://whc.unesco.org/archive/2011/whc11-35com-7B.Adde.pdf>): both recommendations, however, were never implemented.

Now, the social and political situation in Libya is rapidly changing. It is difficult to foresee any possible development: however, something already appears clear. After the ‘end’ of the war – at least in our western perspective, ended with the UN resolution on the lift of the no-fly zone – the southern regions of Libya, from the Tadrart Acacus

to the west up to Kufra and Jebel Oweinat in the east, suffer from a continuous and progressively deteriorating isolation. Tourism has been cancelled. Contraband, drug trafficking, illegal trade, trafficking in migrants and Al Qaida training centres, are just some of the activities that threaten the very core of central Sahara. The relations with the political centre (be it Tripoli or Bengasi) are scarce. But for the reprise of oil industry, the south appears remote and abandoned. To date (September 2012), no formal assessment about the situation of the cultural heritage in the south has been done – neither by Libyan authorities nor by foreign/independent institutions. The clashes between ethnic groups – Tuareg, Tebu and Arab – are a further obstacle to a full normalization of the situation.

Only a few years ago (di Lernia 2008), in a completely different situation, I called for a redefinition of the Tadrart Acacus property in the UNESCO list as an *organically evolved landscape* (WHC 2008), being the historical outcome of deeply interconnected climatic, environmental and cultural changes.

Now, international efforts are mandatory to at least save the area, because its future appears tragically dramatic. The very geographical location of the Tadrart Acacus, just at the corner between Libya, Algeria and Niger, makes this region heavily endangered. The situation in northern Mali and moreover, the general growing destabilization in the Sahara, might have tragic effects on populations, having as a side effect the final isolation of these regions, including their cultural heritage.

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Errors are solely mine.

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Note

¹ Throughout the text, the quotation 'BP' refers to uncalibrated years before present, according to Libby's half-life. If calibrated, we used OxCal online version 4.1 (Bronk Ramsey 2009).

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