

## Rock Art in Somaliland: Discovery of two new rock painting sites

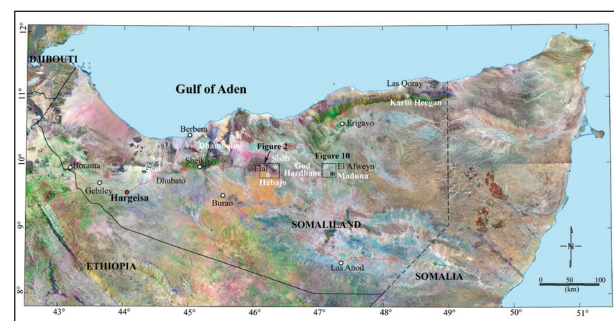
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**Abstract:** Archaeological field work conducted in Somaliland for the past three decades suggest that the country is rich in rock art. Two new rock art sites, Sisib and Habajo rock shelters were discovered during this survey. In addition, a reported rock engraving site, God-Hardhane, was revisited for further studies. The rock paintings and engravings of these sites were compared to other known archaeological sites in Somaliland. The Sisib rock shelter contains over 9 visible individual paintings, the overwhelming majority being long-horned humpless bovines drawn in profile depicting a pastoral community. At least three human figures with arms outstretched are visible. The pictorial depiction of the bovines and human figures of Sisib are identical in style to those of Las Geel and Karin Heegan rock paintings. These paintings have a similar graphical style as the Sourre-Hanakiya of the Arabian-Ethiopian style. The Habajo rock shelters display mainly giraffes and what possibly appear to be camels. Geometric signs and other symbols, possibly tribal, are also illustrated. No human figures appear in the paintings. The style of the paintings suggests that the Habajo rock art probably belongs to the later period of the second stage of Dahthami proper of the Arabian-Ethiopian style. The God-Hardhane cave contains over 200 engravings with the majority displaying more recent images of camels.

### 1- Introduction

Somaliland is situated on the northeastern side of the Horn of Africa with the Gulf of Aden to the north, Ethiopia to the south and west, and Djibouti to the northwest (Figure 1). Geomorphologically, Somaliland is divided into three main physiographic regions: (1) the lower-lying coastal plains along the Gulf of Aden (generally known as the Guban), lying between the plateau escarpment and the coast. (2) The uplifted plateau escarpment (known as Golis) running east-west parallel to the coast of Gulf of Aden in an almost continuous line across the country. Long and narrow ephemeral streams dissect the plateau and the Guban, resulting in complex drainage systems. (3) The plateau interior, which is south of the plateau

escarpment, characterised by extensive tracts of plains. Further inland and to the south lies the largest part of the plateau interior, which consists of alluvial plains (known as Hawd) of red soil that extend southward into Ethiopia.



**Fig. 1.** Satellite image of Somaliland showing distribution of painted and engraved sites. White stars show locations of rock art paintings discussed in this paper. Red stars show approximate locations of other reported rock art paintings and engravings. Red lines represent main roads.

The country has a wealth of prehistoric artefacts including rock paintings and engravings of various styles and ages as well as many stone cairns, tumuli and other prehistoric structures (e.g., Clark, 1954, Lewis, 1961). Almost all of the reported rock art are found on the plateau escarpment (Figure 1). However, little is known about the rock art of Somaliland. In this paper field mapping and available archaeological data have been used to review and document archaeological occurrences, particularly rock paintings and engravings as well as related archaeological sites in Somaliland. Two field seasons (July 2009 and July to November 2010) of archaeological surveys were conducted in Somaliland. The objective of the surveys was to search, visit and investigate as many of the reported archaeological sites as possible, in particular rock shelters and caves containing paintings and engravings. Attention was primarily directed to possible archaeological sites on the plateau escarpment, with the hope of finding new rock art shelters. As a result, two new rock shelters (Sisib and Habajo) with remarkable mono and polychromatic paintings were discovered. The rock paintings of these sites were compared with those reported from other rock shelters such as Las Geel and Dhambalin. Furthermore, features associated with these rock paintings were carefully noted. In addition to that, other sites (e.g., God-Hardhane) that were briefly reported in earlier literature were studied in more detail. These observations provide the basis for future archaeological investigation in Somaliland.

## 2- Previous studies

Neolithic rock art has been known to exist in Somaliland since the late 1940s. Burkitt &

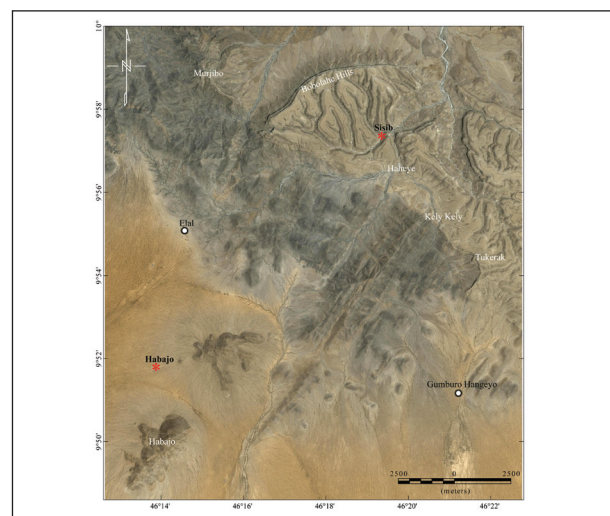
Glover (1946) first reported the discovery of paintings and engravings in small shelters along the edge of the Somaliland plateau in the Gan Libah region between Hargeisa and Sheikh. Most of these paintings and engravings are schematic and depict cattle, stylised human figures and wild animals such as elephants, giraffe, lion, wild ass, kudu and oryx. In 1947 an officer for the British Somaliland Government discovered the painted rock shelter of Karin Heegan, which is located southeast of Las Qoray (Clark, 1954). A further site with engravings has been reported from a cave of Anhydrite Series at God-Hardhane in the eastern Somaliland plateau, 10 km to the west of El-Afweyn town (Lewis, 1958). In addition, Clark (1954) mentioned that cave paintings were reported between El-Afweyn and Las Dureh, but no details of the paintings were given.

A few studies have been undertaken since the 1950s to systematically record the rock art of Somaliland. These studies have only recorded the rock art paintings of three sites. (1) The Karin Heegan rock shelter (coordinates: 48°38'E; 11°03'N), which is located 25 km southeast of Las Qoray in a basement complex of granitic composition. The rock shelter has been investigated by a number of researchers (Jönsson, 1983, Brandt and Brook, 1984, Brandt and Carder, 1987, Brandt et al., 1984). The shelter displays over one hundred well preserved polychromatic paintings of a pastoral community (Brandt and Carder, 1987). The vast majority depict long-horned, humpless bovines. Paintings also include short-horned cows, goats, human figures, and what possibly could represent a bow and arrow, a dog and sheep (Brandt and Carder, 1987). There are chronological

problems that prevent dating of the various paintings in the shelter, although the style of the paintings is known as Arabian–Ethiopian style (Brandt and Carder, 1987). Excavation in the floor of the shelter revealed evidence of human occupation such as Later Stone Age (LSA) chert and quartz microlithic artefacts and pottery sherd. In addition, the radiocarbon dates of two charcoal samples taken from the middle levels revealed ages between c. 1,600 and 2,100 BP (Brandt et al., 1984). It is, however, possible that these dates might not correspond to the earliest human occupation of the shelter which crafted the paintings (Gutherz et al., 2003). (2) The Las Geel site is a Precambrian granite hill (coordinates: 44°26.611'E 9°46.881'N), 5 km northwest of Dhubato village consisting of about fifteen shelters decorated with polychromic paintings. These are an extraordinary collection of paintings numbering over three hundred and remain in excellent condition. They display humpless bovines with large arched-shaped horns and decorated necks, human like figures with pointed legs and raised arms as well as antelopes and a giraffe (Gutherz et al., 2003). The paintings include superposition of several Arabian-Ethiopian styles. (3) The Dhambalin site is a Late Cretaceous Nubian sandstone rock shelter located 47 km southeast of Berbera (coordinates: 45°26.039'E; 10°21.913'N). The shelter displays over 70 well-preserved mono and bichromatic paintings in a multitude of styles and techniques. The paintings include humpless bovines with short horns, dogs, sheep, goats, human figures holding bows and arrows, antelopes and giraffes (Mire, 2008). The shelter exhibits superposition of paintings of Arabian-Ethiopian styles and younger.

Mire (2008) reported occurrences of rock art in Haadh and Jilin Rihin in the northeastern region of Somaliland. However, precise locations and full details of the paintings were not given. Other minor paintings, mainly tribal symbols have also been reported in the Somaliland plateau (Gutherz et al., 2003). Additionally, two other sites (Dhagah Marodi and Dhagah Khuure) containing rock paintings and engravings are reported northwest of Gebilay. At the Dhagah Marodi site engravings of bovines and a human figure are portrayed on the face of a rock outcrop. The Dhagah Khurre rock shelters consist of mainly mono and polychromatic paintings of humpless bovines and human representations.

Rock art investigations conducted in Somaliland have uncovered in invaluable information on the pastoral communities that have settled near or within the rock shelters. However, few of these sites have been excavated to date. In addition, much of the Somaliland plateau remains archaeologically unexplored, although Late Holocene environmental conditions indicate that pastoral communities



**Fig. 2. Satellite image of Sisib and Habajo areas. Red stars show locations of Sisib and Habajo rock shelters.**

settled in the plateau areas of Somaliland and Ethiopia (Brandt and Carder, 1987). Therefore, Neolithic rock paintings are expected to be situated along these escarpments.

### 3- Sisib rock shelter

**Location: 46°19.312'E; 9°57.355'N**

Sisib is located in the north-central part of the Somaliland plateau. It lies about 10 km northeast of Elal village and 12 km northwest of Gumburo Hangeyo village (Figure 2). There are no established roads leading to Sisib, therefore, it can take several hours to reach the site on foot from Elal or Gumburo Hangeyo. The Sisib rock shelter is located approximately 1 km upstream in the Sisib gorge from its junction with another minor ravine. To the south of the gorge is an extensive plain fringing the escarpment, and to the north is a tangle of ridges and valleys, part of the Somaliland plateau. The shelter is sited on the bottom of the steep eastern side of a boulder-strewn gorge with an altitude of 996 m above the sea-level, along a natural pass from a hot coastal plain to a cooler escarpment. The shelter is small, 15 m wide, 5 m deep and

1.5 m high. It is in Eocene Auradu limestone and is about 2 m above a seasonal stream with permanent pools (Figure 3). Feces of goats on the floor of the shelter indicate the current use of the shelter as an enclosure for pastoralists' livestock. The archaeology of the immediate area around Sisib is virtually unknown. The nearest recorded prehistoric site is found in Dhambalin, some 108 km to the northwest.

The present state and conservation of these paintings is rather poor, although no human damage is visible. However, the combined effects of dissolution, thermoclasty and wind erosion have significantly eroded the shelter. Some zones have been completely or partially weathered, only showing a few blobs of pigments. The paintings are only preserved on the ceiling of the shelter. In some places, the paintings are partially covered by stalactites, which may suggest the shelter was subjected to successions of relatively wetter and drier periods. In addition, the painted surface of the lower part of the shelter is fully weathered and has largely flaked away. It is possible that seasonal flooding of the nearby stream has destroyed many paintings. In some cases dust and precipitates obscure a few figures in the northern part of the shelter. The scattered traces of pigment prove that the number of paintings was once more significant and that the entire available surface of the shelter may have been covered.

The preserved paintings in the shelter are impressive illustrating only domestic cattle and human figures. Most of the paintings are bichromatically drawn in a white and reddish to dark brown pigments. Small proportions are polychromatic paintings with white, red-brown



**Fig. 3. General view of the Sisib rock shelter. (a) The Sisib rock shelter is located on the eastern side of Sisib gorge. The shelter is part of Eocene Auradu limestone and is about 2 m above a seasonal stream with permanent pools. (b) The shelter is small (15 m wide, 5 m deep and 1.5 m high) and is sited on the bottom of the gorge. Photographer: Mohammed Ali.**





**Fig. 4. Roof of the Sisib shelter showing depiction of long and short-horned humpless bovines. (a) – (c) Bovines are painted in profile showing clearly the udders and four teats. The necks are thick, elongated and in each case are decorated in different colours compared to the rest of the body. The horns are all painted in white pigment. The bovines have an average length of around 60 to 80 cm and height of 25 to 30 cm. Photographer: Mohammed Ali.**

and yellow pigments. However, it is reasonable to assume that majority of the paintings were originally polychromatic but have since faded away. The paintings are drawn in profile and vary in length from 20 cm to 1.30 m and no superposition can be recognised. The shelter has a rocky floor with no visible artefacts.

### 3.1- Bovine style

Displayed within the shelter are at least 9 well preserved and beautiful ensembles of bovine paintings and many more faded paintings (Figures 4 and 5). All of the paintings are a depiction of domesticated animals represented by humpless bovines. The vast majority of these humpless bovines are shown with large spreading asymmetric and wavy pairs of horns directed outwards at the base. The paintings also include short-horned cattle with horns forming a widely open arc of a circle. The horns are placed in front of the head as seen from above. Bovines are painted in profile showing only

one front and one rear leg and short tail. Some have the whole body coloured with red-brown or white pigments, while in others the body is filled in with bichromatic pigments. The horns are all painted in white pigment. The udders and four teats of these cows are often depicted indicating the importance of the milking trait (Clark and Williams, 1978). One of the paintings is interpreted to represent a bull due to the lack of udders (Figure 5c).

The necks of bovines are thick and long, in each case they have been deliberately painted in different colours (white, red-brown or yellow pigments) compared to the rest of the body. In particular, a large female bovine painted in a red-brown pigment, whose preservation is remarkable, illustrates spectacular thick yellow-orange decoration on its neck (Figure 5b). Others have vertical stripes with worn

**Fig. 5. Roof of the Sisib shelter depicting humpless bovines. (a) Depiction of bichromatic humpless bovines with short horns forming a widely open arc of a circle. The whole body is coloured with red-brown variegated pigments. The neck has vertical stripes with worn away pigments. (b) Polychromatic humpless bovine in which the body is painted in dark red, the neck in yellow and the horns in white pigments. This is the largest bovine Fig. in the shelter and measures 1.30 m in length and 35 cm in height. (c) Depiction of humpless bovine painted in white pigment except the neck. This depiction is interpreted to represent a bull due to the lack of udders. Photographer: Mohammed Ali.**





**Fig. 6. Human representation with their arms outstretched.** (a) The human figure is wearing what looks like shirts. The whole body is painted in red-brown pigment, except the shirt which is drawn in a white pigment with vertical red-brown stripes. The size of the human figure is 20 cm high and the open arm span is 7 cm. (b) A schematic human representation which measures 10 cm high and arm span is 4 cm. **Photographer: Mohammed Ali.**

away pigments and variegated colouring on the whole of their body (Figure 5a). This may represent plastrons or ceremonial robes. The bovines have an average length of around 60 to 80 cm and height of 25 to 30 cm. Some of the bovines are bigger and measure 130 cm long and 35 cm wide (Figure 5b).

### 3.2- Human figures

Three human figures with arms outstretched and drawn in profile are visible in the shelter. Two of the figures are naturalistic wearing what looks like shirts (Figures 6a) and are characterised by legs separated by vertical space and small rounded head. The whole body is painted in red-brown pigment, except the shirts which are drawn in a white pigment with vertical red-brown stripes. These figures are 20 cm in length and the open arms measure about 7 cm. The other figure, (Figure 6b) is a schematic human representation and possibly painted in a later stage. The size is smaller and

measures 10 cm high and arm span is 4 cm. The most striking feature is that the human figures are clearly associated with the bovines. The figures are placed directly below the decorated necks of the cows. This depiction may represent worshippers in front of cows in some sort of ceremonial fabric, leather or robes.

### 3.3- Comparison with the Las Geel and Karin Heegan rock shelters

The Sisib rock shelter shares many similarities with other Neolithic decorated sites in the Horn of Africa, particularly in Somaliland, in which the main activity portrayed is a pastoral community with domesticated cattle. The most striking aspect of these is that the graphical style is very similar with those found in the well known painted sites of Las Geel and Karin Heegan. The manner in which bovines and human figures are represented, as well as the colours of pigments used in the paintings are completely identical to that of the mono and polychromatic paintings



**Fig. 7. (a) – (c) Rock art paintings of the Las Geel rock shelters showing great similarity with those found in the Sisib rock shelter. Photographer: Mohammed Ali.**



of Las Geel, even though the two sites are 207 km apart. For example, in Las Geel humpless long horned (as well as short-horned) bovines have large necks decorated with plastron as well as udders and four teats exactly like the bovines in Sisib (Figure 7). Similarly the human figures with their arms stretched out on the sides and wearing vertically painted stripes are placed below bovines as shown in Sisib and Karin Heegan rock shelters (Brandt and Carder, 1987, Gutherz et al., 2003). However, the main difference between the sites is that the paintings in Sisib rock shelter are not as well preserved as those found in Las Geel or Karin Heegan. As a result, hundreds of paintings of humpless bovines as well as other animals including dogs, goats, sheep, giraffe and camels are depicted in Las Geel and Karin Heegan rock shelters, with many superpositions, which are not observed at the Sisib site. Furthermore, there are no representation of herds in Sisib as observed in the decorated rock shelter of Karin Heegan, 255 km northeast of Sisib (Brandt and Carder, 1987).

### 3.4- Comparison with the Dhambalin rock shelter

The paintings of the Dhambalin rock shelter have some similarities and great differences with the paintings in the Sisib rock shelter (Figure 8). In Dhambalin, humpless bovines with both short and long horns are depicted in profile. However, the bovines are drawn in a schematic style and lack some of the characteristics observed in the Sisib paintings such as the long neck decorated with plastron. All the bovines in the Dhambalin rock shelter depict a series of mono and bichromatic paintings in red to dark red pigment, sometimes with the long horns

completely painted in white. The size of the paintings are also much smaller (not more than 30 cm in length) than those in Sisib. Most of the bovines have small heads and necks with long tails. No human figures with outstretched hands were observed in the Dhambalin rock shelter. Rather, human figures are mostly illustrated as cattle herders and hunters in action holding a sword-like object in one hand and a round shield in the other hand surrounded by dogs with curved tails.

The Dhambalin rock shelter shows successive layers with clear superposition. Most of the paintings are in the usual red to dark-red monochrome but a small proportion of the images are red and white bichromes. No polychromatic paintings are observed and only a very small number of red and white paintings were found. At least two styles of paintings are present. The earlier style (bovines, dogs, and giraffe) are painted on red to dark-red pigment and the later style (goats and sheep) are painted in white pigment. It is interesting to note that the breed of sheep depicted appears to differ from the normal black headed sheep (the Berbera blackhead) as found in the area today, although both have distinctive fat-tails. In addition, contrary to the suggestion made by Mire (2008, 2011) that Dhambalin is the only known rock shelter in Somali territory which includes sheep paintings, the Karin Heegan rock shelter depict also sheep (Brandt and Carder, 1987).

### 3.5- Approximate age of the paintings

Determining the precise age of the paintings in the Sisib rock shelter is extremely difficult. This is because archaeological investigation of the site is incomplete and radiometric dates are not available. Therefore, the only available



**Fig. 8. (a) – (d) Rock art paintings of the Dhambalin rock shelter showing schematic style of humpless bovines, sheep, goats and giraffe as well as a human figure with bow and arrow. The paintings of Dhambalin have different style compare with those found in Sisib and Las Geel. Photographer: Mohammed Ali.**

method for dating the images is to compare the styles of painting observed in the rock shelter to other established rock art sites both within the country and further afield in the Horn of Africa that have established chronology.

The chronological sequence of rock art styles in the Horn of Africa and Arabian Peninsula are based on the style of the most common figures particularly those of the bovines. The style is called the Arabian-Ethiopian style and is distinguished by two main stages in its development (Cervicek, 1979, Joussaume, 1981). The first is the Sourre-Hanakiya style, which is characterised by naturalistic paintings and engravings of a pastoral theme. This style has been estimated to date between the end of the third millennium and the course of the second millennium BC based on data gained from excavation of many sites in the Horn of Africa. These sites include Laga Oda rock shelter in the eastern extension of the Ethiopian highlands (Clark and Prince, 1978, Clark, 1988), Lake Besaka in main Ethiopian rift (Clark and

Williams, 1978, Clark, 1988, Brandt, 1984), Asa Koma in Djibouti (Gutherz et al., 1996) and Gogoshiis Qabe rock shelter at Buur Heybe in southern Somalia (Brandt, 1986, Brandt and Carder, 1987, Brandt, 1988). The age of this style of rock art is in agreement with a recent excavation that has been carried out in the Las Geel rock shelters which revealed radiometric dates of wood charcoal on a lower level of a test pit of 4810-4760 BP (Gutherz et al., 2010). This period coincides with the Mid to Late Holocene period of aridity in which the migration of pastoral communities took place from North African Saharan desert to the Horn of Africa (Brandt, 1986, Brandt and Carder, 1987). This is also the pivotal period in the Horn of Africa due to the shift from hunting and gathering to the food production, by means of cattle breeding (Joussaume, 1981, Barnett, 1999).

The second phase, Dahthani style proper, shows more schematic paintings and engravings and is predominate in the highlands bordering the Red Sea and Gulf of Aden (Anati, 1972). The early phase of the Dahthami style proper has a greater stylistic variability, and sometimes the head and neck of the zebu that replaced humpless cattle are absent (Graziosi, 1964a, Graziosi, 1964b, Cervicek, 1971, Clark, 1954, Bouvier, 1981, Brandt et al., 1984, Jönsson, 1983). In the most recent phase of Dahthani style proper the bovines are replaced with camel and schematic or abstract patterns of the recent past (Cervicek and Braukamper, 1975). Many of these patterns consist of a variety of geometric and tribal symbols (Clark, 1954). This later stage of Dahthami style proper is highly distributed across Horn of Africa including many sites in Somalia (Clark, 1954,



Jönsson, 1983). A late Holocene date (c. 2000 BP) age has been suggested for the Dahthami style proper (Cervicek, 1979, Brandt and Carder, 1987).

At the Sisib rock shelter the humpless bovines are painted in profile, one foreleg and hind leg are depicted, and the head and horns appear as they were painted from above. Such stylistic characters together with lack of camels in the paintings fit well in the first phase, Sourre-Hanakiya style, of the Arabian-Ethiopian style. In addition, the stylistic similarities between the paintings of Sisib, Las Geel and Karin Heegan as well as other rock shelters in the highland of Ethiopian strongly suggest that the paintings are of pastoral age. The schematized human figure in Sisib rock shelter (Figure 6b) may belong to the later stage of Dahthami style proper. Further, these rock paintings are similar in style to those found in the shelters of northern and eastern Ethiopia (e.g., Clark, 1954, Graziosi, 1964a, Graziosi, 1964b, Le Quellec and Abegaz, 2001, Clark and Williams, 1978).

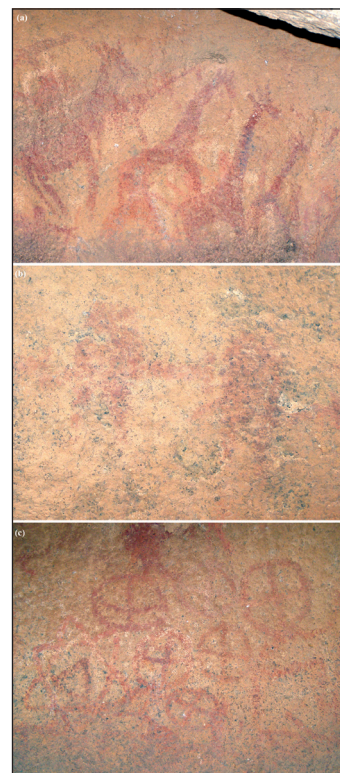
The paintings of the Dhambalin rock shelter are possibly younger than those found in the Sisib rock shelter. This is reasoned because the stylistic human figures, domesticated humpless bovines and fat-tailed sheep are found superimposed over older naturalistic depictions, similar to those found in Laga Oda in the Ethiopian highlands (Clark and Williams, 1978). In addition, it has been suggested that the fat-tailed sheep were domesticated in central Arabia, at the earliest, 1500 BC (Anati, 1968). Furthermore, in Early Dynastic Egyptian tomb paintings of fat-tailed sheep are depicted during the Middle Kingdom 1991-633 BC (Gifford-Gonzalez and Hanotte, 2011). This is much

younger than the proposed age for the Sourre-Hanakiya style paintings when taking into account the age in which sheep had reached the Horn of Africa.

#### 4- Habajo rock art

**Location: 46°13.922' E; 9°51.744'N**

Habajo is located 6 km southwest of the Elal village and 15 km southwest of the Sisib rock shelter at an altitude of 1099 m above sea level on the edge of Somaliland plateau interior (Figure 2). Geologically Habajo is a residual tor composed of large spheroidal red granite boulders interstices that formed numerous rock shelters. The rock shelters are round and small, reaching approximately 5 m in length from the entrance with a width of approximately 2 m and height of 1 m. Many of the painted images are extremely faded, despite the fact that granite is comparatively resistant to weathering and that annual rainfall is relatively low. No human



**Fig. 9. Rock paintings of the Habajo rock shelter showing (a) giraffes, (b) possible camels and (c) geometric signs. Photographer: Mohammed Ali.**

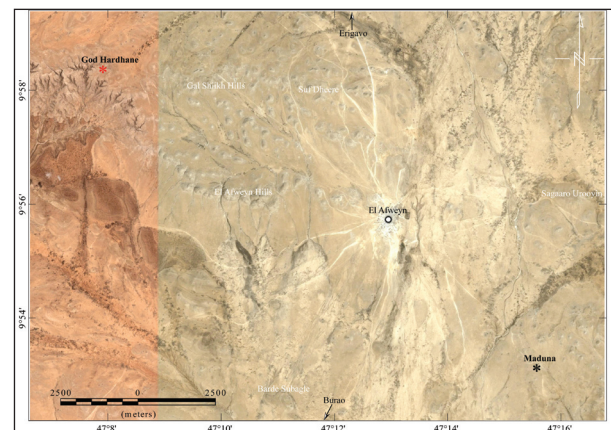
figures appear in these paintings although there may originally have been some once. Test pits are planned in the next season to find dateable elements such as charcoal and bones, which may place the occupation levels of the shelters' floor in chronological relation to the paintings shown on the rock faces.

#### 4.1- Animal representations

Wild animal representations and stylized figures dominate the themes of the Habajo paintings but do not match with the characters observed from the Sisib rock shelter. These representations are largely worn away but were originally drawn in red monochromatic pigment on the walls of the shelters. The painted panels are distributed amongst two shelters. The most prominent panel presents a beautiful ensemble of at least 6 schematic prancing giraffes drawn in profile (Figure 9a). The giraffes have an average length of around 12 to 14 cm and height of 25 to 30 cm. The paintings may suggest that the environment in which the people who painted these giraffes lived in was of open grassland or grass savannah. In a separate rock shelter there are what appear to be camel figures with large humps, but are fainter in appearance (Figure 9b). It looks as if there has been an attempt to scrub off the paint. Other animal depictions are present but are not clearly identifiable. However, it seems that the motifs do not include any obvious bovines.

#### 4.2- Signs

The Habajo rock shelters contain red painted geometrical signs and other figurations that are not easily interpretable. These include some kind of circles with crosses in the middle and a sign that has a hexagram shape consisting



**Fig. 10. Satellite image of El-Afweyn area showing locations of the God-Hardhane cave and Maduna.**

two equilateral triangles which looks like the Star of David (Figure 9c). The symbols vary in size from 10 cm to 20 cm in diameter. The signs occur near the above described paintings of giraffes. There are also a number of crude crosses and bisected geometric circles which may be finger paintings.

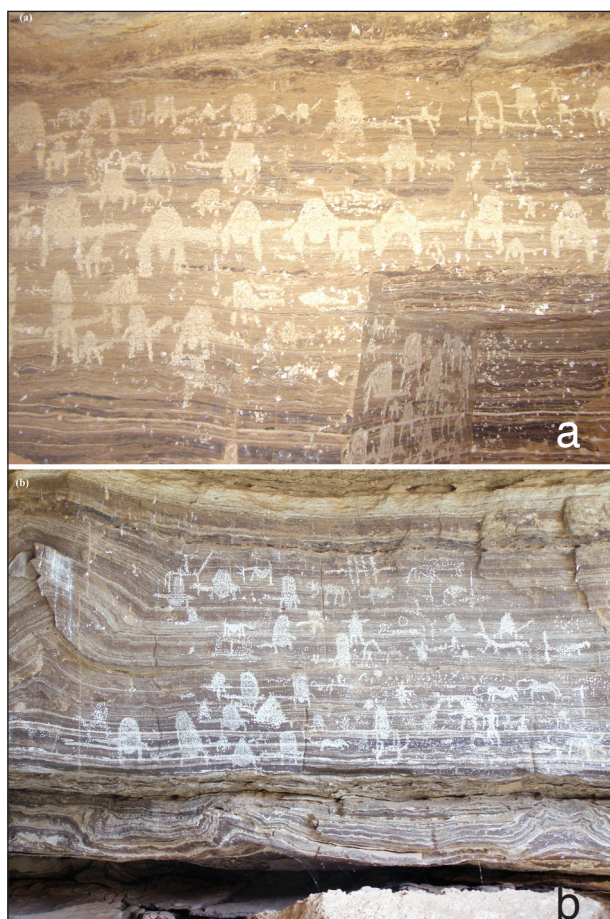
#### 4.3- Approximate age of the paintings

The style of the paintings and representations of camels suggest that they belong to the later period of the second stage of Dahthami proper of the Arabian-Ethiopian style. The emergence of camel-based pastoralism in the Horn of Africa is recent (Gifford-Gonzalez and Hanotte, 2011, Clark and Prince, 1978). Therefore, representations of camels could indicate that the paintings may have been crafted after 2000 BP (Lesur-Gebremariam, 2009). Furthermore, geometrical and stylised symbols could be tribal signs and are probably of a recent age. Similar signs of comparable age have been reported across the Horn of Africa including Somaliland (Clark, 1954).

#### 5- God-Hardhane rock art

**Location: 47°07.917' E; 9°58.377'N**





**Fig. 11 a, b.** Rock engravings in the God-Hardhane cave which are dominated by camels with very large humps. Also depicted are stylised human figures riding horses as well as wild animals including cheetah or leopards, hyena, rhino and lizard-like creatures. The dimensions of the engravings are between about 20 and 30 cm. Photographer: Mohammed Ali.

The God-Hardhane cave (the engraved cave) is located 10 km northwest of El-Afweyn town, at an altitude of 1246 m in the eastern edge of the Somaliland plateau (Figure 10). The cave lies along a major fracture zone within the Middle Eocene Taleh Formation (Anhydrite Series), which is composed mainly of gypsum and anhydrite. The cave is reported to extend for many kilometres to the north but at present is blocked by high water table. The cave contains many engravings all of which are depicted on the walls of the southern entrance. This is

an irregularly shaped cavity about 5 m wide 20 m long and 4 m in height at its maximum dimension on a flat-lying mass of gypsum above a dry-river bed. Boulders cover the majority of the cave floor with no obvious traces of any industry, bones or other remnants.

The cave contains over 200 engravings with the overwhelming majority displaying images of domesticated animals. These engravings were initially recorded by Lewis (1958). All of the engravings with varying subjects and skills have been carved out with sharp instruments. Since the gypsum has a hardness of 2 in the Mohs scale, the local chert or even a dolomite could have been used as implements to mark the stone. It is also possible that the engravings were made using sharp metallic objects. The outlines of the engravings are on an average half a centimetre wide and about a quarter of centimetre deep, showing white on grey gypsum. The engravings are made about 1.5 m above the rock-floor and extend about 10 m both sides of the entrance. The engravings are concentrated mainly at the entrance. Further past the entrance there are no visible engravings.

### 5.1- Animal representations

The engravings are schematic and measure on average approximately 20 to 30 cm in length. The vast majority of the engravings depict camels with large humps. Camel engravings predominate the western side of the cave, whereas wild animals together with humans and domesticated animals dominate the engravings on the eastern side of the cave (Figure 11). Displayed across almost the entire length of the western wall is an impressive herd of more than sixty camels (Figure 11a). The camels are depicted in 5 separate rows



of various sizes. Lewis (1958) interpreted the nature of the very large humps of the camels depicted as a representation of the load burden or an exaggeration of the humps due to the peak grazing on fertile pasture land. We believe that the large humps are due to the schematic nature of the engravings as well the emphasis of the hump, which is probably one of the most important features of the camels. In addition, the large number of camels with large humps depicted on the western wall of the cave may be an indication of caravans possibly indicating the existence of specialised economic activities in the region. The engravings also depict lions, cheetah or leopards, hyena, rhino, and horses. In addition, lizard-like creatures are depicted (Figure 11b).

### 5.2- Human representations

Human figures are found singly and with animals. They are schematic and are not very skilfully depicted. Most of the human figures are males some with enlarged genitals. In addition, it seems that the human figures are associated with camels or other domesticated animals such as horses (Figure 11b).

### 5.3- Approximate age of the engravings and correlation with Maduna

Maduna (coordinates: 47°15.574'E; 9°53.109'N) is an old relatively extensive Islamic town located 7 km southeast of El-Afweyn town and 17 km southeast of the God-Hardhane cave. The ruins of hundred of buildings in the town are relatively well preserved. Buildings are mostly small consisting of one or two rooms. All of the buildings stand close together with curved walls constructed from drystone. The mosque is the largest (approximately 30 m in length and

20 m in width) and best preserved building with a rectangular shape and no columns. The walls of the mosque are still solid and intact. The drystone walls may have originally been coated with lime plaster. Maduna is assumed to be one of the towns of the Adal Sultanate, part of the State of Ifat, which dominated the northern part of the Horn of Africa during the fifteenth and sixteenth centuries AD (Chittick, 1976).

Lewis (1958) suggested that the engravings of God-Hardhane cave may be considerably older than the introduction of Islam to the area in the ninth or tenth century AD. However, the timing of the entry of camels into the Horn of Africa is poorly understood (Brandt, 1984). Domesticated camels appear only after 1000 BC in the Negev desert (Anati, 1999). In Laga Oga in the Ethiopian highlands archaeological records suggest evidence of camel bones that date to 1,300-1,600 AD (Clark and Prince, 1978). In addition, paintings of camels found in the Horn of Africa and radiocarbon dates suggest that camel-based pastoralism is relatively recent (Gifford-Gonzalez and Hanotte, 2011, Clark, 1976). Therefore, it is reasonable to assume that the engravings of God-Hardhane cave may have been crafted during the Adal Sultanate by the people who settled in Maduna. Further archaeological investigations, particularly excavation, is planned at the Maduna site and the God-Hardhane cave to better constrain the date of settlements and engravings.

### 6- Discussion

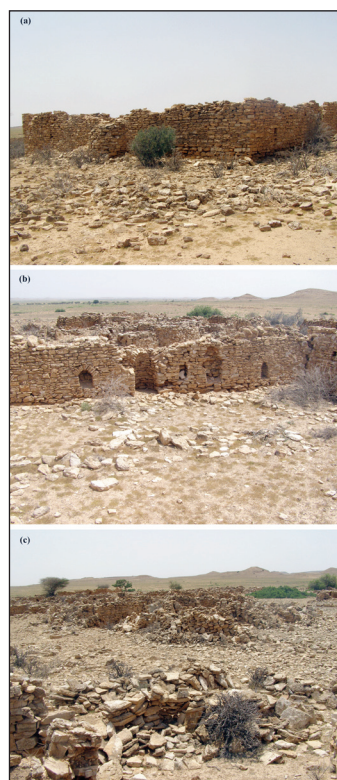
Eastern Sahara underwent an increasing aridification process during the Late Holocene due to the north-south shifts of the Intertropical Convergence Zone controlling the evaporation and precipitation balance (Hoelzmann et al.,

1998, Nicoll, 2004, Baioumy et al., 2010, Jung et al., 2004, Brooks, 2006, Gasse, 2002). In Sudan and Egypt, the increased aridity contributed to the collapse of the civilization of the Old Kingdom in the Nile valley (Hassan, 1997, Nicoll, 2004, Gasse, 2002). Furthermore, it has been suggested that the widespread aridity of Late Holocene has forced the pastoralists to migrate south, out of Saharan desert in search of new pastures with water sources (Williams, 1984, Smith, 1984). By the fifth millennium BP pastoralists had entered east-central Sudan and then to Afar and Ethiopian and Somaliland plateaus (Clark, 1976, Clark, 1980, Mawson and Williams, 1984, Clark and Williams, 1978). However, recent research suggests that pastoralists spread across the Sahara and Sahel during the eighth millennium (Marshall and Hildebrand, 2002, Honegger, 2005, Gifford-Gonzalez, 2005) and reached in the Horn of Africa by the fourth-third millennium BC (Lesur-Gebremariam, 2009, Marshall and Negash, 2002, Guerin and Faure, 1996). These pastoralists introduced humpless cattle and a pastoral way of life to the indigenous hunting and gathering populations of the Horn of Africa (Clark, 1976, Clark, 1980).

Both rock paintings and engravings of various styles and ages have been discovered on the walls of shelters and caves in Somaliland. It seems that these drawings are distributed on the mountain range forming the escarpment of the Somaliland plateau, offering not only shelter from the weather with rock walls for painting, but also abundant water and grazing for the pastoral community. Domesticated animals, especially humpless cattle with their udders clearly delineated and camels are the main

subject of the paintings and engravings. The paintings at the Sisib rock shelter are among the oldest rock paintings in Somaliland and reflect the concerns of pastoralist community. The main subject of the paintings is domestic bovines which may give an indication as to the role in which these animals held in the ideology of the native populations. The paintings correspond to the first stage of the Arabian-Ethiopian style, the Sourre-Hanakiya style. Such style may be dated to Mid to Late-Holocene, c. 3000-5,000 BP (Cervicek, 1979, Jousaume, 1981).

The observations from Sisib rock shelter shows an absence of paintings linked to hunter communities. In addition, the age of the paintings is consistent with the period in which pastoralists had migrated to the Horn of Africa. Therefore, the rock paintings in Sisib indicate the presence of a food producing economy and pastoralist community in the area since Mid to Late Holocene times. As a result, these rock



**Fig. 12. Ruins of Maduna (a) – (b) The mosque is the largest and most preserved building and has a rectangular shape with no columns. The dimension of the mosque is approximately 30 m in length and 20 m in width. (c) Ruins of many buildings in the town which are relatively well preserved. Photographer: Mohammed Ali.**

paintings may help us to establish a framework for describing and interpreting the emergence of food production in the Horn of Africa. In contrast, rock paintings and engravings in Habajo and God-Hardhane were crafted in more recent times and reveal the introduction of new domestic animals, mainly camels, which could adapt to the more arid conditions that prevailed in the region for the previous two centuries. However, a great deal more work is necessary before anything more than tentative results can be obtained. Therefore, excavation in the floors of some of the shelters are planned to determine the chronological framework of habitation in the shelters.

It is very interesting to note the occurrence of cairn graves found close to the majority of the rock shelters documented in this study. The cairns, which are known as Galla graves, are tumuli and mounds of stones which vary considerably in height and in diameter. In some sites stone circles which have been aligned in patterns were observed. These, presumably, burial grounds are distributed all over Somaliland and might well be associated with the existence of the rock shelters. However, Lewis (1961) excavated two similar tumuli in Gan Libah close to the rock art shelters recorded by Burkitt & Glover (1946) and concluded that they were of fairly recent (less than 250 years old) construction and contain Somali remains.

The discovery of new rock art sites and the potential to discover considerably more sites in Somaliland make the region an exciting place for further archaeological investigation. However, much of the rock art found in these sites was in poor condition and are disappearing at an alarming rate either by natural factors such

as weathering or due to interference by humans or animals which rub against the surfaces of the fragile engravings and paintings. In some locations, graffiti has been drawn over some of the rock paintings. Hence it was assessed that without a focused conservation effort a significant amount of the rock art could be irretrievably lost in Somaliland in relatively short period of time. The authors urge that these sites be protected jointly by the Somaliland government, local communities as well as international conservation societies to prevent such acts of vandalism.

## 7. Conclusions

This study has documented rock paintings and engravings of various styles and ages found in Somaliland, and has provided useful information needed to better understand rock arts in the region and the rest of the Horn of Africa. In summary this study has found that:

- The Sisib paintings are dominated by well-executed, long and short-horned humpless bovines that are drawn in profile with one leg in the front and one in the rear with elongated neck filled with different patterns and colours. Human figures with their arms outstretched are also visible in the shelter. The Sisib rock shelter shares many similarities with the paints of Las Geel and Karin Heegan rock shelters. The graphic style of the bovines and human figures are almost identical in all of these sites. The Sisib rock shelter contains paintings, which may belong to Sourre-Hanakiya style, of the Arabian-Ethiopian genre.
- The Habajo rock shelters depict wild



animal figures, mainly giraffes and possibly camels. Geometric signs and other symbols that are not easily interpretable are also illustrated. The style of the paintings suggests that the Habajo rock art belongs probably to the later period of the second stage of Dahthami proper of the Arabian-Ethiopian style.

- The God-Hardhane cave depicts engravings of domesticated animals, wild animals and human figures. Over 200 engravings with the majority displaying images of camels are depicted. Other animals illustrated include lions, cheetah or leopards, hyena, rhino, horses and lizard-like creatures. It is speculated that God-Hardhane engravings were crafted during Adal Sultanate in fifteen and

sixteen centuries AD, which constructed nearby city of Maduna.

- Available archaeological data of the rock art in Somaliland are inadequate to accurately estimate the ages of the paintings and engravings found to date. Yet there are probably many more undiscovered sites of rock engravings and polychromatic paintings still to be found on the Somaliland plateau. Therefore, further investigation, including excavation of some of the survey sites, is required to better understand the rock arts found thus far in Somaliland and hence reveal more details concerning the way of life of the people who crafted them, and to obtain a more comprehensive picture of the prehistory of the area.

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**ملخص:** تشير حملات المسح الأثرية خلال العقود الثلاثة الماضية إلى أن أرض الصومال غنية بالرسوم الصخرية، وقد تم اكتشاف موقعين جديدين لمثل هذه الرسومات، هما: سيسيب (Sisib)، وهاباجو (Habajo): كما تمت مجددا دراسة موقع «قاد-هارمين» الكهف المدفون، الذي أُشير إلى احتوائه رسومات صخرية. وتمت مقابلة رسومات ونقوش هذه المواقع مع ما تم اكتشافه سابقا من المواقع الأثرية في الصومال. ويحتوي موقع سيسيب أكثر من تسع رسومات واضحة، غالبيتها لأبقار ذات قرون لكن لا سنام لها، مرسومة جانبيا للدلالة على مجتمع رعوي. ومن هذه المجموعة - يمكن على الأقل - تمييز ثلاث صور بشرية أذرعهم ممدودة. والرسومات جميعا (البشرية والبقرية) تشابه تماما الأسلوب المكتشف في «لاس جيل» و«كارن هيجان»، وأسلوبها التصويري يشبه أسلوب «سورا-هاناكيا» العربي الأثيوبي. أما موقع هاباجو فيصور غالبا الزرافات وما تبدو أنها أشكال للجمل، كما يحتوي علامات هندسية ورموزاً أخرى لعلها تخص قبائل، لكن لا وجود لأشكال بشرية. وأسلوب الرسومات يشير إلى أنها تنتمي إلى حقبة متأخرة من الفترة الثانية للأسلوب العربي الأثيوبي، المعروف بـ«دهثامي». أما كهف «قاد-هاردهين» فيضم أكثر من ٢٠٠ شكل أغلبها تعرض صوراً حديثة للبعير.

## Notes

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