
Prehistoric geometric rock art at Gharb Aswan, Upper Egypt

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Riassunto

Recenti ricerche hanno evidenziato a Gharb Aswan (Alto Egitto) una presenza significativa di arte preistorica con disegni geometrici. Sono stati individuati due complessi situati nel deserto: il Gruppo del 'Cobble Ridge', caratterizzato da una grande varietà di motivi – da semplici cerchi a composizioni complesse spesso associate a cocodrilli – e il Gruppo di 'Wadi el-Faras', che rappresenta pochi motivi geometrici connessi a giraffe. Sulla base di comparazioni con imbarcazioni databili e dello sviluppo delle patine, si può proporre per entrambi i gruppi il *terminus ante quem* del 3000 a.C. ca. Tuttavia, considerando simili rappresentazioni nella regione, si ipotizza che parte del primo gruppo possa risalire a prima del V millennio BC, mentre il secondo potrebbe piuttosto risalire all'inizio (?) del IV millennio. Non vi sono ancora interpretazioni convincenti sull'origine e sul significato delle incisioni, ma per un approccio interpretativo va osservato che le rappresentazioni sono situate in un'area dove per 15 000 anni, dal Paleolitico recente all'epoca dei Romani, si è ricavata pietra per macine. La pratica della caccia, a cui spesso si fa riferimento per spiegare le motivazioni di questo tipo di arte, è attestata sul territorio, ma l'associazione temporale tra i due fenomeni rimane incerta.

Summary

Recent survey has shown that Gharb Aswan (Upper Egypt) is a significant location of Prehistoric geometric rock art. Situated in the desert hinterland, two assemblages have been identified: the "Cobble Ridge Group", which is characterised by a wide range of motifs, from circles to complex compositions, often associated with crocodiles, and the "Wadi el-Faras Group" that features few geometric patterns related to giraffes. On the basis of comparison with datable boats and varnish development it is only possible to propose c. 3,000 BC as a terminus ante quem for both groups. However, considering nearby parallels, it is hypothesised that part of the former group may predate the 5th millennium BC, whereas the latter should rather be placed in the (early?) 4th millennium. No convincing interpretations of origin and meaning is yet possible, but for interpretative approaches it is significant that the occurrences are situated in a landscape where grinding stone was procured for 15,000 years, from the Late Palaeolithic to Roman times. Hunting practices, often used in explanations of the motivation for creation of geometric rock art, are also attested in the archaeological record, but temporal associations between the two remain inconclusive.

Résumé

Des recherches récentes ont mis en évidence à Gharb Aswan (Haute Égypte) une présence importante d'art rupestre avec des dessins géométriques. À l'intérieur du désert, on a individué deux groupes différents: le 'Cobble Ridge', caractérisé par une grande variété de dessins, des plus simples aux plus complexes, souvent associés aux crocodiles, et 'Wadi el-Faras', où des figurations géométriques sont associées aux girafes. Sur la base du développement des patines et de comparaisons avec des bateaux datables, on propose pour les deux groupes une date *terminus ante quem* d'environ 3000 av. J.-C. Toutefois, en considérant des parallèles dans la région, on fait l'hypothèse qu'une partie du premier groupe puisse être antérieur au V^e millénaire av. J.-C., tandis que le deuxième groupe pourrait plutôt remonter au début (?) du IV^e millénaire. À ce jour, il n'y a pas d'interprétation convaincante sur l'origine et la signification des dessins géométriques, mais il faut noter qu'ils sont situés dans une zone exploitée pour la pierre à meules pendant 15 000 ans, du Paléolithique récent à l'époque romaine. La chasse, à laquelle on fait souvent référence à propos de cet art, est attestée sur le territoire, mais la relation temporelle entre les deux phénomènes n'est pas claire.

Introduction

The existence of rock art on the West Bank of the Nile at Aswan, or Gharb Aswan, has been known for almost a century. However, what Schweinfurth (1912: loc. VII.) and Winkler (1939: site no. 53) recorded was only the tip of the iceberg. Since 2004 about 200 additional panels with in excess of 1,500 figures have been documented in a 20 kilometre stretch from Gharb Sehel to Wadi Kubbania (Fig. 1, 2), including some

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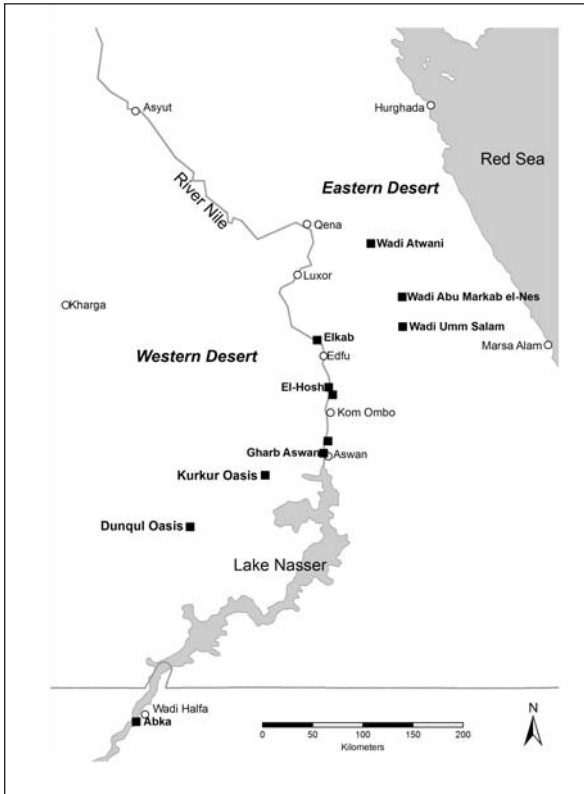


Fig. 1. Map showing places mentioned in the text.

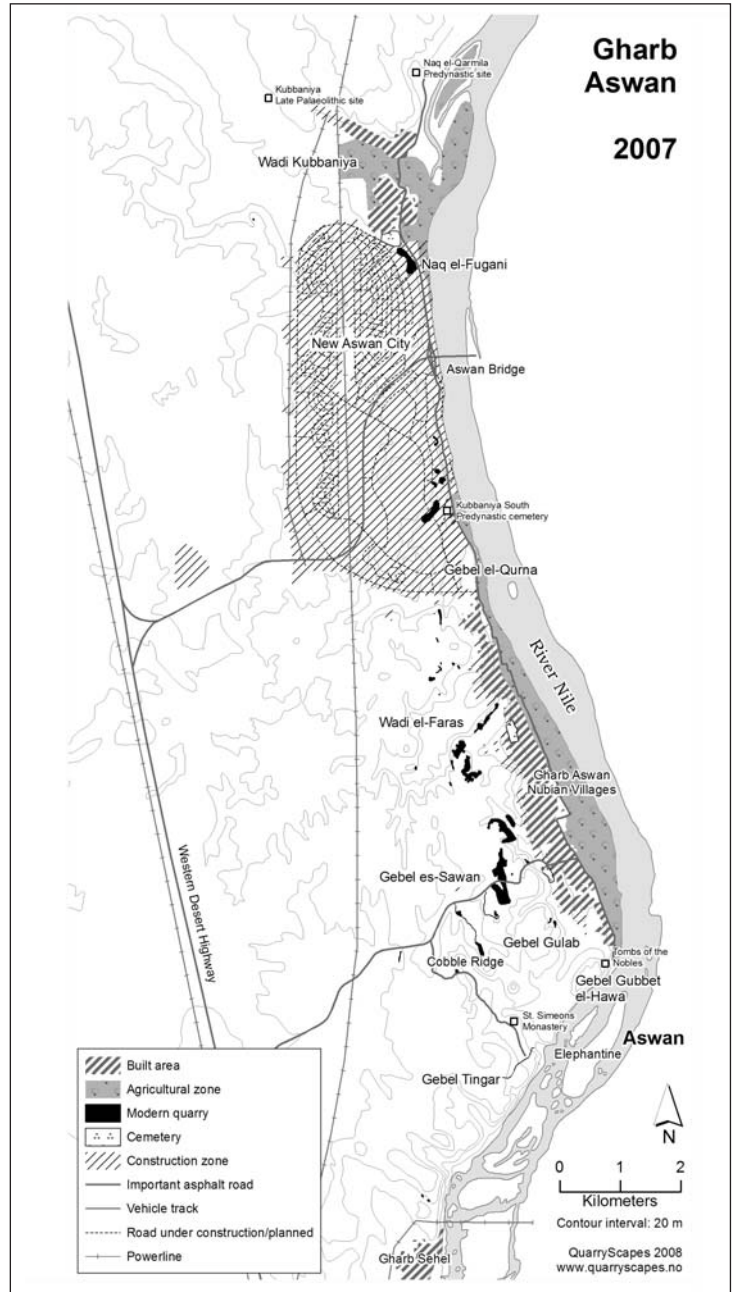


Fig. 2. Map of survey area showing modern infrastructure and places mentioned in the text.

Pharaonic and Graeco-Roman “graffiti”. A proportion is fairly typical of Predynastic (c. 4,000-3,000 BC) rock art, depicting giraffes and gazelles, hunting scenes, boats and footprints. Although the amount decreases after about 3,000 BC there are later occurrences of boats, cattle, other animals and human figures (Bloxam *et al.*, 2007: 163-226; see also Gatto & Giuliani, 2007).

Part of the rock art features geometric designs, which in fact account for about 30% of the whole corpus, not counting sandal and footprints (10%). Including motifs such as circles and meandering lines, but also unique, complex compositions, this makes the area special in an Egyptian and Lower Nubian context, with El-Hosh (Huyge *et al.*, 1998; Huyge, 2005) and Abka (Myers, 1958; Hellström, 1970) comprising the perhaps closest parallels. This paper will focus on a presentation and discussion of the geometric drawings that in part might date – as a working hypothesis – to the Epipalaeolithic of Upper Egypt (c. 7,000-5,000 BC).

Gharb Aswan is currently at high risk from modern development (Fig. 2) and the rock art survey has been carried out as part of “QuarryScapes”, an international project on conservation of ancient stone quarry landscapes (Heldal *et al.*, 2005; Bloxam & Storemyr, 2005; Bloxam *et al.*, 2007; Bloxam, 2007; Storemyr *et al.* 2007; Storemyr *et al.*, in



Fig. 3. The Gharb Aswan desert landscape from the First Cataract (photo: Elizabeth Bloxam).

press). This project has demonstrated that the area is a vast ancient quarry landscape with antecedents back to the Palaeolithic. An array of other sites has also been documented in this undulating desert at the crossroads between Egypt and Nubia (Fig. 3). Archaeological remains of Nubian cultures are now being explored by a British-Italian mission also working in the area (Gatto, 2005; Gatto & Giuliani, 2007). Gharb Aswan is currently distinctively Nubian and home to more than 30,000 people living along the Nile (Jennings, 1995).

Prehistoric context

Gharb Aswan is best known for the Old to Middle Kingdom “Tombs of the Nobles” and the Coptic St. Simeon’s Monastery, but it is also the location of the significant Late Palaeolithic seasonal settlements in Wadi Kubbaniya (Fig. 2). These were particularly in use between c. 19,000 and 17,000 BP, but limited occupation is attested until c. 12,000 BP (Wendorf & Schild, 1989). Recently, small, possibly Epipalaeolithic campsites have been found in the vicinity of Gebel el-Qurna and Wadi el-Faras (Maria Gatto, pers. comm., 2007). In the 4th millennium BC an Early Nubian A-Group cemetery was established by Gebel el-Qurna; later it shows Naqada affinities, demonstrating the borderland character of the area (Junker, 1919; Smith, 1991: 94-8). There is also a recently discovered 4th millennium settlement at Naq el-Qarmila, 2 km north of Kubbaniya (Gatto & Giuliani, 2007). Later burials and cemeteries are numerous, but settlements have not yet been found. The largest nearby settlement, at Elephantine, was established in the 4th millennium BC (Kaiser, 1998).

Sandstone of the Nubia group is the predominant rock at Gharb Aswan. A most significant feature is its silicified, hard patches (“quartzite”), which formed the basis for extremely long-lived stone quarrying traditions in the area (Bloxam *et al.*, 2007: 51-67). In addition to Middle Palaeolithic or earlier tool quarries and Pharaonic/Roman ornamental and building stone quarries (the latter especially at Gebel Gulab and Gebel Tingar), a most distinctive feature is the incredibly numerous grinding stone quarries (Fig. 15, 18). It is clear that grinding stone procurement went on for 15,000 years between the Late Palaeolithic and the Roman period, but it is hard to evaluate temporal distribution and continuity of the workings (Bloxam *et al.*, 2007: 69-140; see also Roubet, 1989). Another important feature is the abundant stone alignments or game drives (Fig. 20, 21), totalling some 20 km in length and probably mainly intended for trapping gazelle (Bloxam *et al.*, 2007: 170-3). These are similar to game drives found in the Dunqul and Kurkur oases, and on the west bank of the Nile between the first and second cataracts (Hester & Hobler, 1969: 63-8). Some appear to have been destroyed by New Kingdom quarries and quarry roads, thus giving a rough *terminus ante quem*, but it is at the moment impossible to infer how far back they may reach.

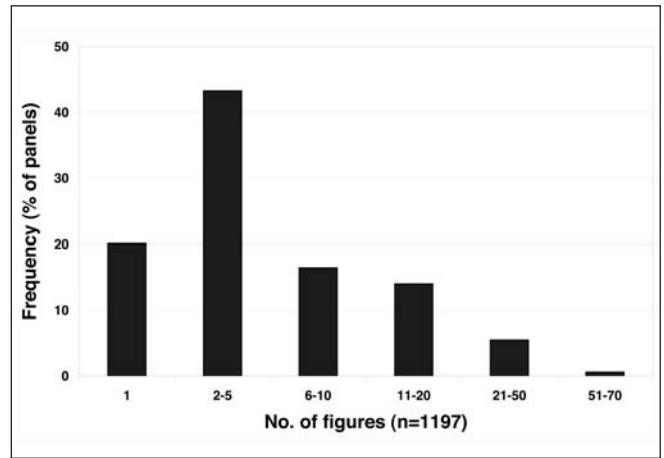
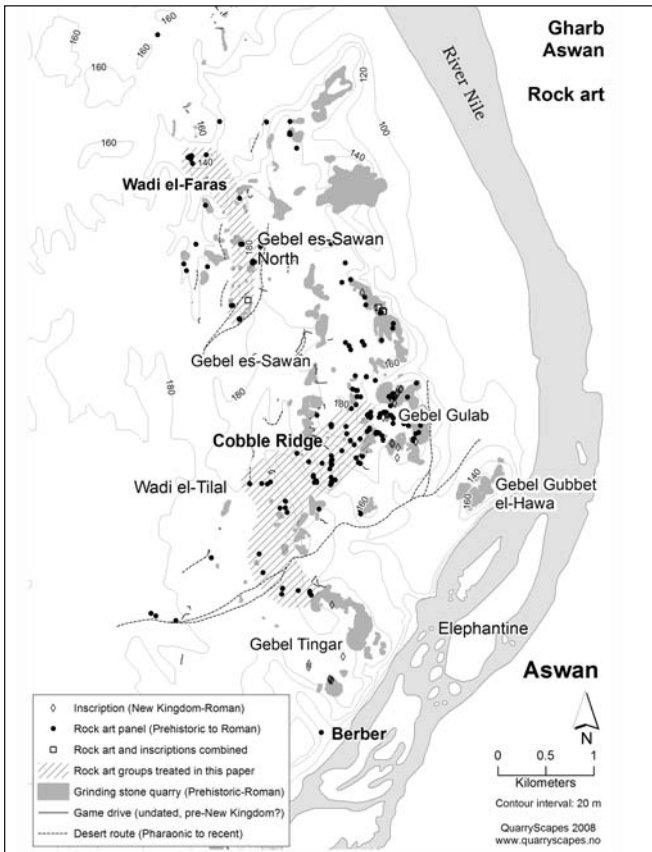


Fig. 5. Rock art panel size at Gharb Aswan (only areas treated in the text included).

Fig. 4. Rock art panels and other archaeological features in the area between Berber and Wadi el-Faras.

Gharb Aswan was of prime importance as an embarkation point for desert routes to Nubia and the Western Desert, linking with Darb el-Galaba, presumably since the Old Kingdom (Bloxam *et al.* 2007: 173-8; see also Weigall, 1909: 169ff; Jaritz, 1981). It is likely that their antecedents can be traced far back in time, given the proximity to the Kurkur oasis only 60 km to the west, which was a significant Prehistoric spot also as regards desert routes (Hester & Hobler, 1969; Darnell, 2005).

Various types of stone features are scattered across the area, ranging from shelters and stone circles to stone heaps, cairns and standing stones. Some shelters and standing stones are clearly connected with Pharaonic ornamental quarrying, many cairns and groups of standing stones follow desert routes and some stone circles would have functioned as look-outs associated with game drives (Fig. 20). Otherwise, a large proportion of these occurrences are impossible to interpret without excavation (Bloxam *et al.*, 2007: 163-226).

Following the hyperarid Late Pleistocene, the Holocene “wet phase”, in terms of rainfall and according to the latest reviews, would have lasted from c. 9,000 to c. 5,000 BC, though with dry intervals. The nature of the subsequent desiccation trend is difficult to assess, but it seems that hyperarid conditions were established before 3,000 BC (e.g. Nicoll, 2004; Bubenzer & Riemer, 2007). In the Late Pleistocene the Nile has been interpreted as a braided river with flood levels reaching about 105 m by 18,000 BP, as compared to 90 m in the modern era. Following the “Wild Nile” phase around 12-13,000 BP the Holocene history of the river at Aswan appears to have been one of downcutting through its own deposits (Wendorf & Schild, 1989) and by 3,000 BC the flood level was at 94-95 m at Elephantine (Seidlmayer, 2001: 81ff).

Since the rock art is mainly located in the hinterland, Nile flood levels may not be of great relevance for interpreting distribution patterns, except in Wadi Kubbaniya and Wadi el-Faras that might have been flooded quite far upstream in the Early-Middle Holocene. However, the downcutting of the Nile, wadi activity and – not least – the present heavy sand cover, imply that we may never understand the distribution of Late Pleistocene and Early-Middle Holocene sites. Pharaonic quarrying, which might have destroyed older rock art, needs also to be considered in this context.



Fig. 6. Cobble Ridge as seen towards Aswan and the Eastern Desert. Rock art is located along the sides of this ridge.

The geometric rock art sites

The rock art panels are scattered within distinct areas of the desert hinterland (Fig. 4), with the southern portion between the Pharaonic quarries at Gebel Gulab and Gebel Tingar comprising the largest cluster of geometric motifs. A small cluster is located on the plateau north of Gebel es-Sawan and in Wadi el-Faras. In the northern portion between Gebel el-Qurna and Wadi Kubbaniya there are a few widely scattered occurrences with small geometric designs; these will not be treated below.

Panels are small, which is typical of all periods represented in the corpus (Fig. 5). Characteristically, the most notable ones are located at prominent, elevated places, whereas scatters of presumably contemporary or later panels with very few figures can be found at less prominent places close by. Most Prehistoric panels can be found on (sub-)horizontal non-silicified sandstone surfaces; one reason may be that there are relatively few suitable cliffs and silicified patches of the sandstone may generally have been considered too hard for rock art creation. Incision occurs, but geometric and associated motifs are as a rule rather coarsely pecked (hammered). On the most notable panels compositions tend to be intimately coupled with the micro topography, such as cracks, edges, depressions and other features of the rock substrate, details of which will be shown below.

Cobble Ridge and environs

In the south, geometric rock art is concentrated from Wadi el-Tilal to Gebel Gulab and especially along the elevated “Cobble Ridge” (Fig. 6), a several hundred metres long Pliocene Nile riverbed deposit (Issawi & Hinnawi, 1978) close to the highest point in the area, Gebel es-Sawan, c. 200 m above sea level. A unique place in the local topography, it features cobbles of quartz and metamorphic and igneous rocks. Quartz cobbles were used as hammerstones for the nearby making of Palaeolithic stone tools from silicified sandstone, but it is not known whether they derived from the ridge and no later use has yet been attested (Bloxam *et al.*, 2007: 69-140). Except for Cobble Ridge itself, the environs comprise very extensive quarries. Although contemporary grinding stone quarries may be present close to many rock art panels, they can at the moment not be distinguished from Pharaonic and later quarries. There is also a complex system of game drives crisscrossing the whole area.

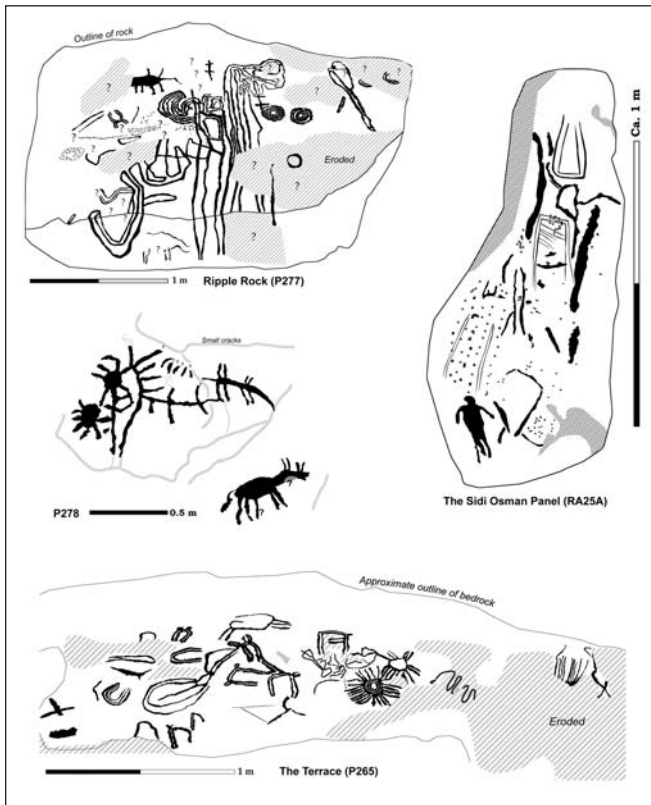


Fig. 7. Selection of geometric rock art in the Cobble Ridge environs. Drawings based on photos.

Fig. 8. “Ripple Rock” on Cobble Ridge has some of the most complex geometric designs in the survey area.

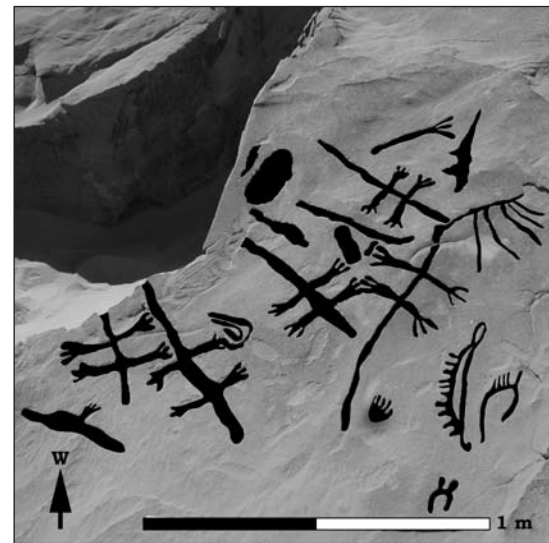
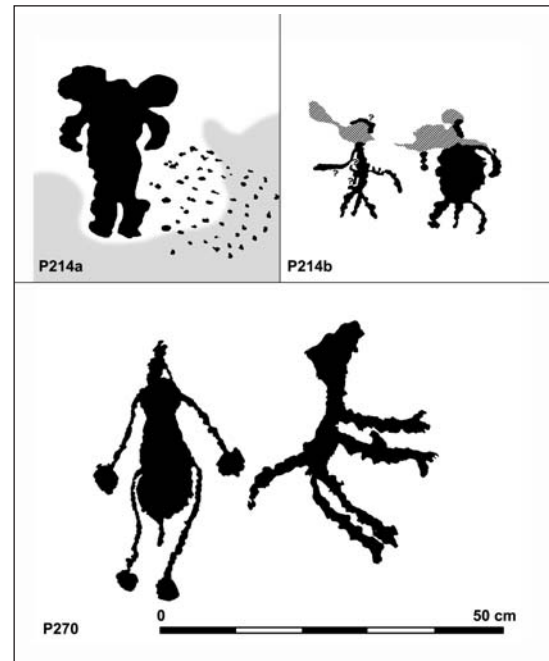
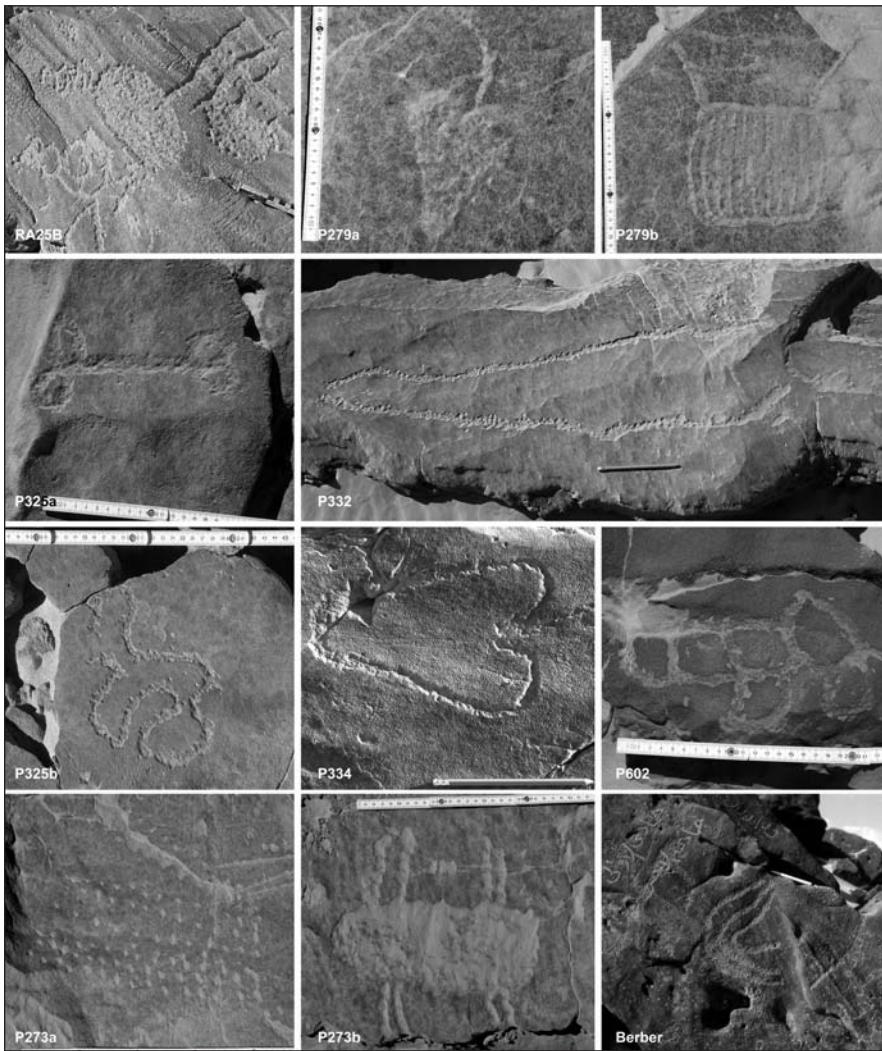
Fig. 9. A probable warthog on panel no. P278 by “Ripple Rock”.

Ripple Rock (panel no. P277, Fig. 7, 8) is a single, thin flat slab on the western side of Cobble Ridge owing its name from the naturally rippled surface forming parallel grooves, along which long lines have been pecked. These are connected with concentric curved lines and labyrinth-like patterns. Beside this main feature there are several concentric circles and other geometric figures. There are also two crocodiles and two unidentified animals. Although the slab is sandblasted, at protected places remains of dark varnish are present. There is also a concentric circle and a group of dotted lines that seem to have been added at a later date. On a group of boulders beside *Ripple Rock* is a composition with interconnected lines and a probable warthog (rather than a rhinoceros) and a crocodile (P278, Fig. 7, 9).

The Terrace (P265, Fig. 7) is located on a bedrock terrace at the southern end of Cobble Ridge with splendid vistas towards the First Cataract. The panel features concentric circles with protruding lines, concentric arcs and a complex motif with connected curved and straight lines. When not eroded, figures have dark varnish.

There are many small occurrences of geometric motifs, usually with black varnish, along and near Cobble Ridge (Fig. 10). Motifs include a single fish trap, meandering lines, sometimes forming half-open enclosures, straight, curved and interwoven lines, parallel dotted lines, leaf-forms, labrys-like forms, circles, arcs, entirely pecked footprints and ovals, figures looking like crocodiles with more than four legs and several other. There is also a curious small group of humans with exaggerated extremities (Fig. 11) and some unidentified animals with greatly varying varnish formation and erosion patterns.

Crocodile Beach (P223, Fig. 12) is located 200 m northeast of Cobble Ridge with views to the Nile along a small wadi. Here a group of badly eroded crocodiles are located in a small, natural depression beside a broad crack in the bedrock – as if they have emerged from the river, now



lying on the beach. One of the crocodiles appears to attack an unidentified animal, and there are several other figures (arcs, lines, pecked oval), numerous small footprints and a large crocodile (1.5 m long) drawn along the whole long axis of a nearby elevated outcrop. In the main panel is also a centipede-like figure *vaguely* resembling a boat.

Commander's Rock (P240, Fig. 13, 14), close to *Crocodile Beach*, derives its name from the impression one gets of "commanding" a natural amphitheatre from the site. It is an imposing, grey boulder, reminiscent of a big mammal, whose "back" has a large composition of circles, long straight and slightly curved lines, shorter, interwoven and interconnected lines, and some crocodiles. There are clear divisions in the composition, with the largest circles placed to the north, the lines along a ridge in the middle and the other figures to the south. All figures have dark greyish varnish, but a single ibex is evidently drawn at a later date. Notably, the boulder is placed along a small wadi leading to a complex system of game drives further west.

Around *Commander's Rock* and at nearby Gebel Gulab a few crocodiles and scattered geometric motifs (long lines, circles, circles with internal "cross", arcs etc.) are present, but boats, giraffes and various other animals, and footprints are more common.

The Sidi Osman Panel (RA25A, Fig. 7) is situated in a rather confined space one kilometre southwest of Cobble Ridge. Apart from a man, apparently with a long penis, the design is geometric, composed of thin and thick lines, two of which feature a round figure "suspended" in between. There is also a figure resembling a throwing stick, incised (superimposed?) figures and parallel dotted lines. In the vicinity are various interwoven lines, circles, fully pecked ovals and footprints, crocodiles and some rubbed depressions, all with deep black varnish.

Fig. 10. Selection of motifs in the Cobble Ridge environs and at Berber.

Fig. 11. Some human figures in the Cobble Ridge environs. Drawings based on photos.

Fig. 12. Part of the panel dubbed "Crocodile Beach" (P223). The panel is much eroded and the figures have been drawn for illustration purposes.



Berber, close to Gharb Sehel, is the only site close to the Nile with geometric motifs. Schweinfurth (1912: loc. VII.) recorded animals here, but did not mention a concentric arc and interconnected lines (Fig. 10).

Wadi el-Faras and environs

There are primarily two sites with geometric designs in Wadi el-Faras and environs:

Winkler 53 (P400A, Fig. 15-17), which was discovered by Winkler (1939: site 53), is located on a small, low plateau to the west of a striking hill in Wadi el-Faras. In addition to giraffes, the central panel comprises dibatag gazelles (rather than gerenuk; cf. Osborn & Osbornova, 1998: 174), an ibex, an ostrich, a crocodile and three unidentified animals. There are boats, sandal prints and throwing sticks, but most conspicuously the figures are surrounded by long and short, meandering lines, one of which forms an enclosure and two that are thicker in one end. Nearby are hunting or herding (?) scenes, featuring men, dogs, barbery sheep and giraffe, as well as later animal drawings (P400B). There is also a large group of rubbed depressions (P400C-G). Moreover, two circles with protruding lines and two crocodiles occur close by (P400H, not mentioned by Winkler). Importantly, the site is the location of a small grinding stone quarry (not mentioned by Winkler), in which pottery with a tentative date ranging from the Late Predynastic to the First Intermediate period (Ashraf el-Senussi, pers. comm. 2007) was found below worked stone.

Giraffe Hill (EB128A-D) is a hillock on the plateau south of Wadi el-Faras (Fig. 18). This plateau features extensive grinding stone quarries, some of which have been classified as Late Palaeolithic. Others may also predate the Pharaonic period and Predynastic pottery has been found in the area (Bloxam *et al.*, 2007: 69-140, 183-226). There are five panels on *Giraffe Hill*. Again, giraffe, dibatag gazelle (and ibex) are part of the earlier occurrences and in one instance (EB128C) a giraffe with internal patterning is associated with a complex, curvilinear design (Fig. 19). Nearby is a hunting scene including dibatag gazelles, tesem dogs and a man with bow and penis sheet (EB129B). Also a few arcs and circles are present in the area.

In summary: While the Cobble Ridge environs feature an impressive array of geometric designs, the variety of motifs is very limited in Wadi el-Faras and surroundings. And whereas the crocodile is the main animal around Cobble Ridge, giraffes and gazelles turn up as predominant quadrupeds in the latter area.

Comparisons

Geometric motifs

Červíček (1986: 77-80, map 2; 1992-93: 42-4) has given a useful overview of geometric rock art in adjacent regions, assigning most such designs to the so-called "A-Horizon", which he dates with c. 4,000 BC as the *terminus ante quem* (see also Huyge, 2003: 68-9; Davis, 1984, 1990; and Jesse, 2005 for the Sudan) Below, some of these and other relevant sites will be briefly introduced.

The currently most well interpreted occurrences that likely predate the Upper Egyptian Neolithic (c. 5,000-4,000 BC) are located at El-Hosh, where Huyge and collaborators have shown that mushroom-

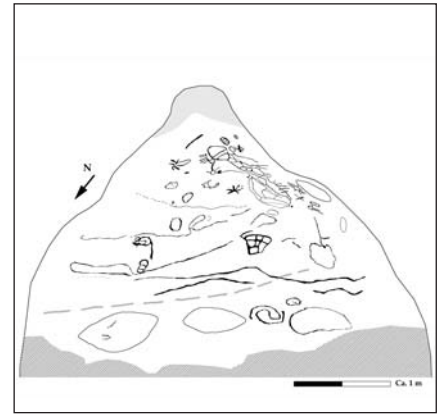


Fig. 13. Panorama towards Gebel Gulab (left) and Cobble Ridge (extreme right) with "Commander's Rock" in the foreground. The "back" of this rock features a complex geometric composition (see Fig. 14).

Fig. 14. The geometric composition on "Commander's Rock" (P240). Sketch based on photo mosaic. Hatched areas are weathered, the stippled line marks a small ridge, whereas the grey area in front is elevated. Compare with Fig. 13.



shaped geometric designs with black varnish may represent fish traps with a tentative *terminus ante quem* of 5,900 to 5,300 BC based on bulk AMS radiocarbon dating of organic components in the varnish, environmental analyses and assessment of superimposed figures, especially giraffes with much less varnish (Huyge *et al.*, 1998, 2001; Huyge, 2005). Apart from a single occurrence, there are no similar images at Gharb Aswan. However, the fish traps at El-Hosh are associated with circles, ladder-shaped drawings, human figures, footprints and crocodiles (Huyge *et al.*, 1998: 99). Thus, a range of very old motifs similar to many of those in the Cobble Ridge environs is present.

One or two fish trap-like motifs are also found among the large rock art corpus on the magmatic rocks of the Second Cataract, now submerged in Lake Nasser (Myers, 1958; Hellström, 1970: corpus X). The oldest images, at Abka, consist of a wide range of geometric forms, some of which resemble the Gharb Aswan rock art, especially concentric arcs, circles and ovals, as well as interwoven, interconnected and meandering lines. Although hard to extract from the documentation, it seems that some of these are associated with giraffes, crocodiles, antelopes, handprints and human figures. It has been suggested that the earliest images were made in the 8-9th millennium BC, but this is highly disputed and younger dates have also been proposed (Myers, 1958, 1960; Hellström, 1970: 29; 8-17; Davis, 1984; Cervicek, 1986: 77-80; Le Quellec, 1997; Huyge, 2003: 70).

Another place with geometric designs is Wadi Atwani in the Eastern Desert, where Winkler (1938) found two sites with a repertoire resembling rock art at Gharb Aswan. His site 14 comprises crocodiles, interwoven lines, footprints/handprints, arcs and fully pecked ovals (Fig. 20). Wadi Umm Salam, also in the Eastern Desert, features a different array of geometric designs, including concentric circles and meandering lines, but also a complex figure with concentric and protruding lines, fully patinated and superimposed by a Predynastic square boat with no varnish (by the "Jacuzzi-site", Morrow and Morrow, 2001: site SAL 12, 58-63; cf. Wilkinson, 2003: 53). This complex figure is definitely very old (Fig. 21). Winkler's sites 17 (Wadi Atwani) and 26 (Wadi Abu Markab el-Nes) include curvilinear motifs or meandering lines. Cherry (2000) speculates

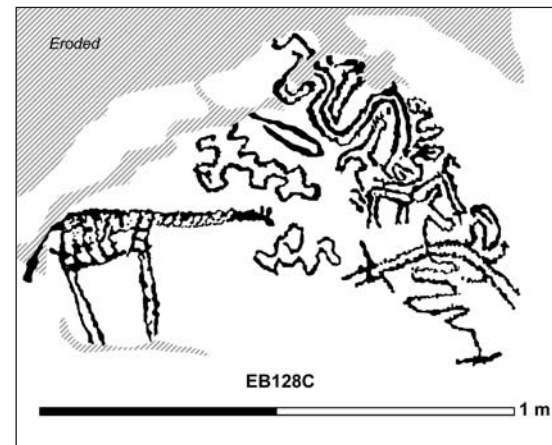


Fig. 15. The location of "Winkler 53" (Winkler, 1938: site no. 53) at the left (west) foot of a striking hill (inserted photo) in Wadi el-Faras. In the front is a small grinding stone quarry (small stones, including worked pieces and debitage).

Fig. 16. The main panel (P400A) at "Winkler 53". Photo perspectively altered for illustration purposes.

Fig. 17. Crocodiles (P400H) and a circle with protruding lines (P400C) at "Winkler 53".

Fig. 18. "Giraffe Hill" (EB128A-D, in the middle) as seen from an ancient quarry in front.

Fig. 19. Geometric design associated with a giraffe at "Giraffe Hill" (EB128C).



whether these and another, probably 4th millennium BC (based on boat associations and varnish) occurrence in Wadi Umm Salam could be topographical “maps” of local wadi systems. Such similarities between rock art designs and local topography have not been identified at Gharb Aswan, but in general terms the map hypothesis is not unattractive. Geometric figures elsewhere have been interpreted as “images of landscape”, including architecture, for example in Neolithic to Iron Age Alpine rock art (Arcà, 2004). Given the numerous game drives at Gharb Aswan (Fig. 22, 23), representations of desert kites in the Near East are of greater interest, for example those in Jordan (Betts & Helms, 1986) and at the Hemma Plateau in Syria (Van Berg *et al.*, 2004). As game trapping structures probably used from the Neolithic to relatively recent periods, the enclosure-like desert kites with guiding stone lines differ from the long alignments with numerous narrow openings or chutes at Gharb Aswan, though a few enclosure-like forms also exist here. Yet, a study of potential similarities between the real game drives (Fig. 24) and rock art designs remains inconclusive. Whereas meandering lines may have their rough parallels, the typical chutes are lacking. Chutes may have their analogies in depictions of various lines, e.g. on *Commander's Rock* and *Giraffe Hill*, but this is *highly* speculative.

In addition to the few analogies along the Nile Valley and in the adjacent deserts, at first glance it may seem that even closer parallels can be found in the Eastern and above all in the Central Sahara (e.g. concentric circles and arcs, circles with protruding lines, meandering lines, curvilinear patterns, interwoven and interconnected lines). On the basis of the similarity between this “archaic-looking” geometric rock art and especially the Second Cataract material, early cultural contacts have been proposed by e.g. Hallier (1997, references to earlier works therein). However, as Le Quellec (1997) points out in his critical remarks to Hallier, it is problematic to compare such globally common figures, also because dating and archaeological context remain very unclear.

Fauna and boats

Fauna and boats associated with geometric rock art are important because they may give clues to dating (and, of course, origin and meaning). Giraffe drawings comparable to those at Gharb Aswan are widely distributed across Upper Egypt, Lower Nubia and the adjacent deserts. At Elkab Huyge (2002) places them in the early 4th millennium (Naqada I); they presumably occur throughout the 4th millennium and possibly later (Cervicěk, 1974: 176-7). It is, on the other hand, unknown how far back giraffe pictures may reach (cf. Červicěk, 1986, 1992-93), and Bietak and Engelmayer's (1963: 41-42) discovery of a probable giraffe drawing in a stratigraphic position at Sayala only confirms that it was made in the period of the Nubian A-Group or before. Accounts related to the less frequent crocodile points in a similar

Fig. 20. Winkler's site 14 in Wadi Atwani (Eastern Desert).

Fig. 21. A complex geometric figure in Wadi Umm Salam (Eastern Desert), superimposed by a Predynastic boat and an ibex. This figure was first published by Morrow & Morrow (2002: 59).



direction (Červíček, 1974: 179). Gazelles are very widespread and occur from at least the 4th to the 2nd millennium BC (Červíček, 1974: 174-5).

The occurrence of a possible warthog (*Phacochoerus aethiopicus*) with black varnish by *Ripple Rock* (Fig. 9) is important because this animal is largely unknown in Predynastic and Pharaonic Egypt (Manlius & Schneider, 1997) and arguably it may thus be dated to an earlier period. In rock art it is reported only from a recently recorded petroglyph in Kharga, possibly dating to the Old Kingdom or before (Manlius, 2005). Otherwise, the animal is known to have existed until at least the Neolithic in e.g. Dakhla (e.g. Churcher *et al.*, 1999: 309).

Of the boat depictions at *Winkler 53* two are simple incurved(?) sickle(?) boats without decoration located very close to meandering lines. These are the only boats that may give a clue to dating of geometric motifs in the survey area. Winkler (1939: 18) himself ascribed these to the “Early Nile-valley Dwellers” (whereas the meandering lines and most giraffes were thought to have been made by the “Earliest Hunters”). It is very difficult to date these (papyrus? reed?) boats, but interpreting Vinson (1987) they would seem to occur throughout the Predynastic and into the Early Dynastic period.

Tentative dating

Following the overview above, some previously known occurrences of geometric rock art in Upper Egypt and Lower Nubia quite certainly predate the 5th millennium (El-Hosh fish traps) (Huyge, 2005), others can be placed in the 4th millennium (Wadi Umm Salam “wadi map”/meandering lines) (Cherry, 2000). Another clearly predates the 4th millennium (Wadi Umm Salam complex geometric figure, Fig. 21), but is probably much older (cf. Morrow & Morrow, 2002: 59). These are some of the very few occurrences with a relatively secure *terminus ante quem*. Importantly, in these cases there are very clear superimpositions or good associations with roughly datable motifs (boats); in addition El-Hosh has been subject of very detailed analyses (see above).

There are no superimpositions at Gharb Aswan and the only place where roughly datable motifs occur close to geometric designs is at *Winkler 53*, where the two incurved boats mentioned above have been drawn close to meandering lines (Fig. 25). Unfortunately, the panel is sandblasted, typically within the pecked motifs, but it can be observed that some of the lines have significantly more *preserved* varnish than the boats. This would give about 3,000 BC as a *terminus ante quem*. On the basis of presumed varnish differences, Červíček (1986: 78) proposes that the giraffes at *Winkler 53* are older than the meandering lines. This cannot be confirmed; these two groups of figures have generally the same amount of preserved varnish and there is no significant colour difference. Since in general terms giraffes can belong to the 4th millennium, and given 3,000 BC as *terminus ante quem*, we have to conclude that the meandering lines may have been made in the 4th millennium, but probably rather early. At Giraffe Hill (EB128C, Fig.

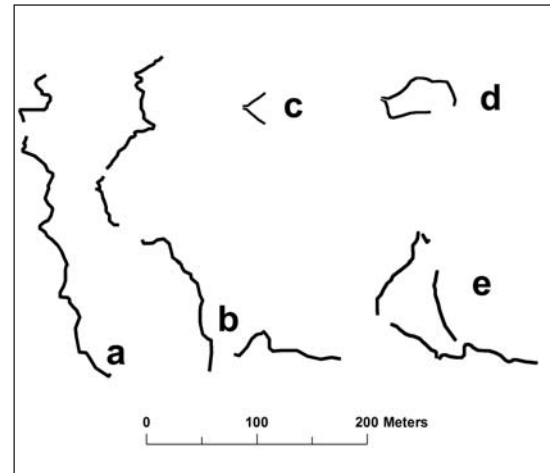


Fig. 22. A chute in a typical, long game drive at Gharb Aswan. In the front a stone circle, probably a lookout.

Fig. 23. Enclosure-like game drive. The chute is located by the arrow.

Fig. 24. Typical forms of Gharb Aswan game drives. Drawings after satellite images.



Fig. 25. Winkler's site 53 in Wadi el-Faras (P400A). Although the panel is sandblasted, especially in the drawings, the incurved boat (lower part) can be observed to have less preserved varnish than the meandering lines.

19) a similar situation occurs: The amount and colour of varnish in the partially sandblasted geometric design is similar to what is found in the associated giraffe, as well as on other giraffes nearby. Some of the giraffes are similar to those at *Winkler 53* and thus they would most probably date to the same period.

Dating the wide variety of geometric motifs in the Cobble Ridge environs is more difficult, especially because of sandblasting. Since the crocodiles (P400H) and circles with protruding lines (P400C) at *Winkler 53* (Fig. 17) have similarities to occurrences by Cobble Ridge, we may begin the analysis here. These figures have varnish that completely merges with the surrounding rock and they look much older than the meandering lines nearby. However, they are better protected from wind, have not been subject to sandblasting and thus their dark colour may give a misleading impression in this particular context: the meandering lines *may* have had similar varnish before they became sandblasted. Consequently, on the basis of varnish we cannot presently place the crocodiles and circles at *Winkler 53* chronologically before the meandering lines, however tempting it is to suggest this.

In the Cobble Ridge environs there are few figures with preserved, dark varnish visually looking like varnish in the crocodiles and circles at *Winkler 53*. Examples include geometric figures just beside *Ripple Rock* and the *Sidi Osman panel*, and at parts of *The Terrace*. At *Crocodile Beach* there are only spots of preserved, dark varnish. Presuming that these figures were made in roughly the same period as the crocodiles and circles at *Winkler 53*, we can at the moment likewise only state that they may have been created in the 4th millennium or earlier.

Looking at this problem from another perspective, we may note that, theoretically, figures with complete varnish would date prior to the end of the Holocene "wet phase" around 5,000 BC. This is because dark rock varnish is known to form in moderately wet periods in dry environments (Liu & Broecker, 2007; Dorn, 2007; Cremaschi, 1996). However, in our particular context it is unclear for how long significant dark varnish formation continued during the subsequent desiccation period. We simply have no point of reference, such as datable boats on rock that has not been subject to sandblasting. There are vague indications that very little varnish has developed on most Predynastic boats, but the only certain knowledge is that New Kingdom inscriptions have developed reddish patina only, a result of the hyperarid climate existing in the 2nd millennium and until today.

We may of course compare with other assemblages in the region. El-Hosh presents the best comparative material, also because superimposition very clearly shows that the fish trap assemblage (including other geometrics and crocodiles) were made well before giraffes (Huyge *et al.*, 1998). This is a valuable analogy to *Winkler 53*. More-

over, the complex, evidently very old geometric figure (Fig. 21) in Wadi Umm Salam (Morrow & Morrow, 2002: 59) is the only known motif that vaguely resembles *Ripple Rock*. Assuming that these occurrences indeed have a temporal relationship with parts of the Cobble Ridge assemblage, c. 5,000 BC may be proposed as *terminus ante quem*. However, only detailed motif classification and further field study can show which part of the assemblage this actually would include; the panels mentioned above are some of the candidates.

From the perspective of human presence in the area, a pre-5th millennium date for what we may call the “Cobble Ridge Group” is possible given recent finds of Epipalaeolithic campsites in the vicinity of Wadi el-Faras (Maria Gatto, pers. comm.). From the same perspective, a 4th millennium date is not unlikely for the meandering lines and associated giraffes in the “Wadi el-Faras Group”, given the obvious Nubian A-Group/Naqada presence in the area. Moreover, grinding stone procurement has quite possibly taken place in the near surroundings in this period (Bloxam *et al.*, 2007).

Critical evaluation of these hypotheses will require a range of investigations, but first of all attempts at direct dating. The most promising method in the Aswan context is probably varnish micro lamination, in combination with bulk AMS radiocarbon dating of organic components in the varnish (cf. Liu & Broecker, 2007; Dorn, 2007; Cremaschi, 1996).

Interpretative approaches and outlook

Winkler (1939: 32) regretted that “we do not understand” the geometric rock art. Yet, he inferred that several images were representations of nets, snares, traps and lassos, others perhaps of “animal entrails”, and suggested that they were connected with the “magic” of the “Earliest Hunters”. That a number of images may be representations of hunting devices have been repeated by other researchers (e.g. Davis, 1984), and in the Sudan and Central Sahara several other ideas have been put forward (overview in Jesse, 2005). However, as noted, it is only the El-Hosh studies by Huyge and collaborators (1998) that have, based on ethnographic analogies, convincingly interpreted some designs as fish traps, as already proposed by Winkler (1938: 31). Whether these motifs were created as part of opportunistic communal rituals “addressed to benevolent gods and powers” to secure a good drought (Huyge *et al.*, 1998: 110) is of course debatable, but plausible.

As desert kites images the fish traps are distinctive – like “maps” of physical structures. At the moment all other geometric figures in Upper Egypt remain obscure to us, although Červíček (1986: 87ff, 1992-93) maintains that globally common motifs, such as spirals and plain meandering lines, are representations of numinous powers and principles. Yet, as Bahn (1998: 180, 222-5) underlines, such simple geometric drawings can have a wide variety of meanings within and across cultures, both as representations of things and ideas (cf. discussion on the Sahara geometrics above). Complex forms, on the other hand, may be more culturally specific.

Where does this leave us in attempts at interpreting the Gharb Aswan assemblages? An obvious consequence is to pay due attention to the complex compositions at e.g. *Ripple Rock* and *Commander's Rock*, comparing with figures elsewhere that may have elements of the same forms, but also with structures in the landscape and relevant archaeological and ethnographic records that may contain hints to explanation. Moreover, since giraffes and boats may be related to geometric motifs in the Wadi el-Faras environs, they form an obvious target since Pharaonic analogies exist. On such a basis Huyge (2002) proposes that in the Predynastic period rock art was related to cosmological or solar symbolism, created in order to secure regeneration/rebirth. Whether the multifaceted crocodile can be seen in a similar perspective remains open.

In addition to looking at pictures, aiming at interpretation using relevant parallels, it may be worthwhile expanding the view to looking at pictures in place. Where exactly are the geometric designs located? There is a multitude of approaches using landscape archaeologies in the study of rock art (see overview in Arsenault, 2004), but given the limited amount of well-investigated sites in Egypt and Lower Nubia,

the best we can do at the moment, I think, is to point to some peculiarities in the distribution pattern, some of which may present a basis for building further hypotheses.

Not unlike the geometric occurrences by the Second Cataract (Abka), the Cobble Ridge group is located in the vicinity of the rapids of the First Cataract. Together with the El-Hosh rock art, in fact situated quite close to the Gebel el-Silsila “semi-cataract”, these early corpora are so far the largest that have been found in Egypt/Lower Nubia. It is intriguing that just these places were selected for early rock art creation – significant locations within the Egypt/Nubia borderland that have been of historical importance ever after. But they were also places with special resources: The El-Hosh fish traps are located at a spot that may have been attractive for communal fish hunting, which also ought to have been important within the Second Cataract (Hellström, 1972: 15-6), though this area was also favoured for habitation. Extrapolating the evidence for game hunting at Gharb Aswan, it may be speculated that these three geometric rock art occurrences were all related to hunting practices. However, Gharb Aswan may also have been an early desert route embarkation point and, above all, it was a stone quarry landscape. Thus, there is reason to think that grinding stone production may be crucial for understanding why early rock art was made here. Especially based on Australian Aboriginal analogies (Tacon, 1991; McBryde, 1997), interpretations of this issue have been attempted by Bloxam (2007) and Storemyr *et al.* (in press). Relationships between rock art creation and stone procurement are an important consideration that has not previously been paid much attention to in Egypt and Lower Nubia.

Contrary to El-Hosh and possibly also Abka, where panels are spatially rather concentrated, the small panels with geometric motifs at Gharb Aswan are widely scattered throughout the landscape. Moreover, the maximum number of individual episodes of rock art creation at one specific locality would have been in the order of 10-15, usually much less. This pattern makes it hard to interpret these locations as places where larger groups congregated for communal activities over long periods of time, like may have been the case at El-Hosh. The implications remain unclear, though an obvious proposal is that only small groups were involved in the rock art creation.

Importantly, the locations of notable panels at Gharb Aswan, *Ripple Rock*, *The Terrace*, *Crocodile Beach* and *Commander's Rock*, are located at elevated, open places in the landscape, the drawings being intimately coupled with the rock substrate. In addition, the three former are all located around the unique Cobble Ridge with its cobble deposit (Fig. 6). Whether or not these cobbles were collected for tools, we are left to speculate on the meaning of this “special” place. Notably, the complex geometric design (Fig. 21) in Wadi Umm Salam is also located by a “special” place – right in front of the “Jacuzzi site”, a deep natural whirlpool in a small gorge by the main wadi. Presumably, prehistoric people did not mark this place only as a good one for dipping their toes.

“Special” places had special functions or were given special meanings. Studying site characteristics may bring us a step forward in attempts at making sense of geometric rock art in Egypt.

Threats and conservation

There are no grand monuments at Gharb Aswan, but extensive archaeological remains with a tremendous time depth. The landscape is unique in Egypt – and from the perspective of stone procurement perhaps even globally (Bloxam, 2007; Storemyr *et al.*, in press). Regrettably, it may only be a matter of a decade or two before much of this is gone. A result of the extreme population and development pressure in Egypt, New Aswan City is now being built in the north, and though the southern part is still well preserved, road building, village expansion and modern stone quarrying take their increasing toll, which is augmented by looting and vandalism that have destroyed several rock art panels.

Work in the QuarryScapes project has been undertaken with a view to monitoring and risk analysis and, in cooperation with the Supreme Council of Antiquities, it has suggested concepts for conservation (Storemyr *et al.*, 2007). Within New Aswan City only “islets” of archaeo-

logical sites can now be preserved. This situation calls for a landscape conservation programme in the southern part since it is the setting and interconnectedness of the extensive archaeological remains that make this beautiful area so special.

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