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The hunter's perspective: 7th millennium BC rock carvings from eastern Jordan

A. V. G. Betts

Arabian rock art has attracted considerable scholarly interest. Rock engravings are common in the semi-arid areas of the Arabian peninsula and are often accompanied by inscriptions in a wide variety of scripts and languages (Anati 1968; Winnett & Reed 1970 among others). Where such inscriptions are absent, the relative age of carvings can only be ascertained through application of stylistic criteria. This in itself is an imprecise procedure which is further hampered by the fact that in many instances styles can be identified but no dated parallels exist with which they might be equated.

The problem is naturally even greater in relation to prehistoric art, since there is no possibility of linking an artistic style with dateable inscriptions; the only hope of placing it within a meaningful chronology is to find parallels stratified within an archaeological context. Overcutting of engravings can give a general outline of the order in which the styles should be placed but since the time range within which these could fall is very great, stylistic stratification is of limited use in dating. Ideally what is required are examples of such art clearly overlaid by dateable archaeological deposits, and so far such evidence has been rarely available.

Recently excavations at Dhuweila, a small hunting camp in eastern Jordan (Fig. 1), have revealed carvings on stones incorporated into Neolithic structures and sealed by layers of ash and sand containing large quantities of Neolithic occupation debris. The earliest stage at the site is dated in the late 7th millennium BC and belongs to a late stage of the Pre-Pottery Neolithic B period (C14 8,190 ± 60 bp (6,240 bc) BM -2349) (Betts 1985, in prep.). Dhuweila lies on a low boulder-strewn hilltop in the basalt hammada, an ancient lava belt which runs from southeast of Damascus across the 'panhandle' of eastern Jordan down into Saudi Arabia as far as al-Jauf on the fringes of the Nafudh desert. Unlike the fertile areas of the Near East in this period, with their settled village populations and agricultural economies, subsistence patterns in the steppe were still based primarily on the age-old system of hunting and gathering. By this stage there is evidence to suggest that the inhabitants of the steppe had developed some refined techniques to improve the efficiency of their hunting practices. Dhuweila is only one of a number of sites which can be associated with the use of the so-called 'desert kites' (Betts & Helms in Press), stone built hunting traps which are found in great numbers throughout the lava belt. These traps have long walls which would guide animals up and over a gentle rise into an enclosure concealed on the far side of the slope. The trapped
and frightened animals would then mill around in panic seeking a way to escape, providing easy targets for hunters hidden behind the enclosure walls.

Of the herd animals of the steppe in the 7th millennium BC, gazelle are among the most suitable for this form of hunting. They are shy, fleet-footed and difficult to hunt individually, but when frightened, the herd will tend to bunch together and run away from the source of danger. With the hunters divided into two groups, one to act as beaters and the others to spring the trap, this type of hunting would be very effective. This seems to be reflected in the faunal record for steppic sites of this period where gazelle form consistently high proportions of the animals hunted. At Dhuweila in the late 7th millennium gazelle account for perhaps as much as 90% of the animal remains recovered. Other species represented include equid and hare (Garrard 1985; pers. comm.).

The use of such traps seems to have continued on after the 7th millennium BC and they may well have been in use during the later Neolithic re-occupation at Dhuweila which is dated some time in the late 6th or early 5th millennia BC. The rock carvings themselves are only associated with the earliest stage of the site. Similar carvings have been found at several other sites in the vicinity of Dhuweila, all of them with scatters of Pre-Pottery Neolithic B artefacts, and three with the remains of structures incorporated into ‘kite’ walls. The carvings discussed in this report come from Dhuweila and from two other such sites, Abu Masiade el-Gharbiya and Abu Masiade esh-Sharqiya. The stratified examples come only from Dhuweila itself (Figs. 2 and 3).

The carvings fall into three categories. Only one example shows human figures (Fig. 2; pl. 1) and a small percentage can be classed as abstract (Figs. 4–7; pl. 2), but by far the
most common are depictions of animals (Figs. 3, 4, 7–12; pls. 3–9). Over one hundred carvings were recorded, many showing more than one animal. Eight of these were stratified and the rest were found on the surface. All are on the local basalt boulders which form the surrounding hammada. Some are on isolated cobbles and others are on slabs of exposed bedrock. Most are carved with fine semi-continuous scratched lines and
Plate 1 Dhuweila (PPN): 'dancing men' with spears and bow (?).

Plate 2 Dhuweila: incised lines.

Plate 3 Dhuweila: gazelles.

Plate 4 Dhuweila: gazelle.

Plate 5 Dhuweila: gazelles.
Plate 6 Dhuweila: gazelles.

Plate 7 Dhuweila: gazelles.

Plate 8 Dhuweila: gazelle (?) overcut to represent an equid (?)
in some cases the body of the animal has been emphasised by pecking. The weathered surface of the basalt is black but the unweathered rock exposed by such techniques is in the first instance whitish-grey and stands out in considerable contrast to the darker background. As the exposed surface weathers, it gradually darkens through yellow into reddish-orange until it returns to the colour of the surrounding rock. Most of the Neolithic carvings have reverted almost totally to weathered black and are only visible in oblique light.

Each carved rock was given a number. Its dimensions were recorded, together with a description of the carvings. Photographs in black and white and colour were taken where details would show up on film. Each carving was then carefully outlined in white water-soluble paint and photographed in black and white and colour. Stones which could be moved were brought back to the laboratory in the British School in Amman where accurate transcripts were made by tracing off the carvings onto sheets of polythene. The number of carvings found made it impossible to prepare transcripts from originals in the field by this method and so the rest of the carvings have been transcribed from photographs. This latter group represents about two-thirds of the total number of carved stones found.

The animals on the carvings are usually some kind of four-legged beast shown in profile with short, sometimes curving horns and a short tail. Most are standing or running, some are shown looking back over their shoulder (Fig. 4) and one or two appear to be grazing (Pl. 9). In two cases the animal seems to be a female suckling its young (Pl. 6). The animals are shown both singly and in groups, often facing to the right. It seems likely from the faunal remains that many of the animals are meant to be gazelle. There are some examples where the horns appear to be too long for gazelle and it could be argued that the artist was attempting to show an oryx. The Arabian oryx has very long straight horns but oryx remains are very rare on local prehistoric sites (Garrard pers. comm.), although oryx were almost certainly present in the steppe in the 7th millennium
Figure 4 Dhuweila: gazelles, ostrich (?) and wavy lines (stream or wadi?).

Figure 5 Dhuweila: gazelle overcut with geometric designs.

Figure 6 Dhuweila: geometric designs.

Figure 7 Dhuweila: gazelles and incised lines.
BC. It is of course perfectly possible that an artist might show an animal that he does not wish to kill, but it can be argued equally convincingly that in such cases the artist had strayed a little from realistic portrayal and made his gazelle's horns just a bit too long.

Several of the animals have scratches across their bodies, but in no case do these clearly represent weapons of any sort. In a few instances the animals seem to lack horns and sometimes they have what appears to be a short mane. One has a long hairy tail (Fig. 12, Pl. 8). The mane suggests that the animal might be intended to be an onager or wild ass. The long tail is peculiar as it is much more horse-like. Patination appears to be uniform on this carving and is generally consistent with that of carvings from the same location. Horse would not be found in this context and so the tail is hard to explain as no other animals native to the steppe in the 7th millennium BC would have a long tail of this
kind. In one or two instances the prehistoric carvings have been recut and incorporated into Pre-Islamic (Safaitic) carvings accompanied by inscriptions. Horse would not be out of place in this later context and it is possible that the carving has been altered at a later date. There is also another type of zoomorphic representation. A single figurine was found in the excavations, carved from limestone in the form of a resting animal of similar style to those shown on the carvings (Pl. 10).

*Plate 10 Dhuweila (LN): limestone figurine of crouching gazelle.*

Only one anthropomorphic design has been found, the ‘dancing men’, a scene pecked on a small rock, broken at one end and showing an incomplete set of figures, three and a half in all. They are facing forward and seem to be carrying sticks or weapons of some kind. There are also possible indications of clothing and head-dresses (Pl. 1, Fig. 2).

The abstract motifs fall into three general categories. The first of these, of which there are two examples, is a pair of parallel wavy lines, in both cases together with animals (Fig. 4, Pl. 9). It would be foolish to speculate as to the meaning of any of the abstract motifs but it is clear that in this case and with the other examples also, that the design is deliberate. The second group, of which there are also only two examples, involves ‘net’ patterns of some kind (Figs. 5 and 6). Both carvings are small and not apparently associated with depictions of animals. There are three examples of the third group, two without animals and one including animals. This group is interesting because in all three cases a special shape of rock has been selected (Fig. 7, Pl. 2). These rocks are quite large, fairly flat and roughly triangular in shape. Around some or all of the edge a series of short straight scratches have been cut. These cuts are fairly regularly spaced, with larger gaps at intervals. No specific pattern can be detected in their length or distribution.

During the excavations eight carved stones were found in context. All were loose rocks. Several of the carvings were on the undersides of the rocks or on surfaces covered by other stones. Some were upside down. Rock 90 (Fig. 3) formed part of a ring of stones around a firepit just above bedrock, sealed by Pre-Pottery Neolithic B occupation deposits. It was badly fractured and had four animals carved on it, two upside down on the face exposed to the fire and two on the side, covered by other rocks forming the rest of the hearth. Rock 91 was a small stone, with a single animal depicted, found in an ashy layer with Neolithic occupation debris in a test pit cut to check the extent of occupation beyond the main settlement. Rock 93 with the ‘dancing men’ described above (Fig. 2)
formed part of a stone pavement just outside the main Pre-Pottery Neolithic B structure and was laid at an angle with part of the design covered by another paving slab. Rock 92 from the same pavement shows the hindquarters of an animal in outline, the carving being found similarly partly covered. Rock 99 carries a pair of roughly parallel scratched lines, possibly the beginning of an animal outline. This formed part of a low curving wall of upright slabs in Pre-Pottery Neolithic levels just outside the main structure. The remaining three rocks came from the upper phases of the Late Neolithic stage and had clearly been robbed out from earlier levels.

All of these examples appear to have been re-used in structures without regard for the design. The engravings seem to have held no special significance for the site’s inhabitants after they had been carved. It could be argued on this basis that the carvings perhaps predate the Pre-Pottery Neolithic B occupation at the site as they appear, re-used, in the very lowest levels. There is, however, absolutely no trace of earlier occupation at the site or anywhere else in the immediate vicinity from where the carvings might have originated. Furthermore, there is evidence from other sites in the area where similar carvings have been found. All of these sites have scatters of Pre-Pottery Neolithic B flints but no trace of any earlier period of occupation. It seems likely therefore that these carvings were only significant at the time of their creation. This theory might also explain the large number of such carvings found.

A wide variety of rock art styles is known from the Arabian peninsula. Study of a number of these has been made by Anati (1968) who has divided the styles into four basic groups, ranked in assumed chronological order — Islamic, Literate, Herding and Hunting, and Early Hunters. His distinctions are based on stylistic grounds, overcutting, patination and the content of the art itself. Of these four groups, the only one relevant to the discussion here is that which he assumes to be earliest, his ‘Early Hunters’ style. The group encompasses at least three different styles, in two of which human figures are absent or very rare. Of these styles, one seems to parallel quite closely the carvings from Dhuweila: Anati’s ‘Outlined Animals’ Style I (cf. Anati 1968: 26, Fig. 10). These are horned animals carved in thin outline with patinas identical to that of the surrounding rock face. It is a relatively rare style in Central Arabia. Anati compares it to carvings from Kilwa (Rhotert 1938; Horsefield & Glueck 1933) in north-western Saudi Arabia and the central Negev (Anati 1955), although the Dhuweila style most closely resembles the Central Arabian examples.

Anati’s ‘Hunter-Herder’ group includes rows of human figures in pecked outline which might provide a general theme parallel for the ‘dancing men’ from Dhuweila (cf. Anati 1968: 87, Fig. 50), although these seem to be markedly later than his ‘Early Hunters’ group on the basis of differential patination at least. There are no specific parallels for the abstract motifs from Dhuweila.

Other examples of styles possibly similar to Anati’s ‘Early Hunters’ have been reported on more recent surveys in Arabia. Zarins et al. (1980) mention drawings of E. hemionus, caprids and other now unrecognisable subjects at al-Hafna in the region of Mahd adh-Dhabab. The equids, although pecked rather than outlined (1980: Pl. 13A) might provide a general parallel for the Dhuweila wild ass. The same scene also includes rows of pecked human figures, possibly forming part of a hunting scene (1980: Pl. 13B). Apparently early rock art has also been found in relative profusion in the Northern
Province of Saudi Arabia, particularly at Jubba (Parr et al. 1978). Here the presence of domestic dog in the earliest styles suggests a fairly late Prehistoric date. The so-called Jubba style includes bovids, often with body-markings, ‘stick’ style anthropomorphic figures and also more realistic human portrayals including details of dress and ornament. Some of the animals might be generally paralleled with those from Dhuweila (cf. Parr et al. 1978: Pl. 29c) although the Jubba examples usually have pecked rather than incised outlines.

In Jordan itself there are few parallels. The only area studied in detail is the region around Jawa, some 50 kilometres north-west of Dhuweila, but still within the basalt hammada. Hunt (1976) mentions ‘crudely scratched outlines’ and ‘animal carvings on their own’ although no specific parallels for the Dhuweila style have been recorded. A later survey (Macdonald 1982) also mentions carvings of ibex, oryx, gazelle, cervids and ostrich, although the results are as yet in preliminary form and there are no details as to relative age, method of carving or patination. Superficial survey by the author has failed so far to find parallels for the Dhuweila style in the Jawa area. Elsewhere in the basalt hammada only two examples of this style have been found outside the immediate vicinity of Dhuweila. One comes from a stone on a ‘kite’ wall in the heart of the hammada near Bir al-Ghusain, about fifty kilometres north-east of Dhuweila. The second and perhaps more tenuous parallel comes from trial excavations at the Pre-Pottery Neolithic site of Ibn el-Ghazzi (Betts 1985, 1986) where a stone with faint incised lines was found in a Neolithic context, forming part of a curving wall. Ibn el-Ghazzi is roughly contemporary with Dhuweila and lies at the edge of the hammada, some thirty kilometres to the south-east. The carving is not clear but the context suggests that it might be similar to the Dhuweila examples.

The Dhuweila carvings are important for their discovery proves conclusively that in the seventh millennium BC the Neolithic peoples of the steppe were producing rock art. If this was the case in the basalt hammada of eastern Jordan then it seems even more reasonable now to suppose that some of the Arabian rock carvings could also be as early. Unfortunately the distinctive Dhuweila styles cannot as yet be paralleled outside the hammada, and it is possible that they are a localised phenomenon.

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Abstract

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Rock art is common in the Arabian peninsula and the southern Syrian desert but where related inscriptions are absent, most carvings are difficult to date. Recent excavations at Dhuweila, a Neolithic site in eastern Jordan, have uncovered carved stones incorporated into structures in securely dated levels. The distinctive style of the carvings makes it possible to link them on stylistic grounds with many other rock carvings in the vicinity of the site. The carvings are mostly of animals, many of them probably gazelle. There are also some abstract and anthropomorphic motifs. Discovery of such securely dated rock art has important implications for the study of other engravings elsewhere in Arabia.