

THE ROCK ENGRAVINGS OF DAHTHAMI WELLS IN CENTRAL ARABIA

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*Introduction **

The present article illustrates a relatively small area of rock engravings, located near Dahthami wells, on the path between Mecca and Najran, some 50 Km. north of Bisha, by the Philby-Ryckmans-Lippens Expedition. Defined as *Section B*, this group contains 371 figures engraved on twelve rocks. A study of the superimposition of styles, in particular on at least three rocks, has provided new evidence for establishing the relative chronology of Arabian rock art. Since colleagues are constantly seeking details of recent developments of this project, it was considered that a full report of a limited area would provide an indication of the present stage of research.

Since the publication of the two volumes on *Rock Art in Central Arabia* (E. Anati, 1968-b, 1968-c), work has been continuing on the analysis of the entire series of rock engravings recorded by the Philby-Ryckmans-Lippens Expedition (cf. Ph. Lippens, 1956; G. Ryckmans, 1952, 1954,

* The present work deals with material recorded by the Philby-Ryckmans-Lippens Expedition to Arabia which I have been asked to study. I am deeply indebted to the late Mgn. G. Ryckmans and to Prof. J. Ryckmans for making the material available. The epigraphic material is being studied by Prof. J. Ryckmans and others. Inscriptions which appear on the discussed photographs are not therefore considered in the present article.

1957-a). Systematic description and analysis is being undertaken in order to decipher some two hundred engraved rocks. The material for this research is composed of a collection of photographic negatives. These are being projected in the laboratory to a size larger than the original and studied with the controlled-light-filtration method. This helps to differentiate phases and superimpositions with great precision, bringing to light details which are generally impossible to detect with the naked eye. By means of this technique it has been possible to establish the succession of styles. The *Corpus* of all this material is still far from being achieved, it will require several more years of work and will eventually result in a number of volumes.

The chronological setting

As discussed already in the two volumes on *Rock Art in Central Arabia*, the entire series of Arabian rock art is subdivided into four ages, or major periods, which, from the latest to the earliest, are: *Islamic, Literate, Hunting and Pastoral* and *Early Hunters*. They represent the four main ages of Arabian history.

The *Islamic* age includes all the phases and styles which can be dated after the Hijra (662 C.E.). The *Literate* age includes all the phases currently associated with Southern Semitic inscriptions. These are the artistic expression of peoples who first appeared in the Arabian Peninsula shortly before the beginning of local South Semitic writing. They represent an age in which literacy was widespread among the inhabitants of the area and in which most of the artists who made rock engravings were able to write. They covered the rock surfaces with thousands of inscriptions. Most of these figures are contained between the 6th century B.C. and the 6th century C.E. As a stylistic period it seems to have started earlier, probably in the late second millennium B.C.

The rock engravings of the *Hunting and Pastoral* age are the work of non-literate peoples whose economy relied mainly upon hunting and herding. This age is further divided into five periods; Late, Middle I, Middle II, Mid-

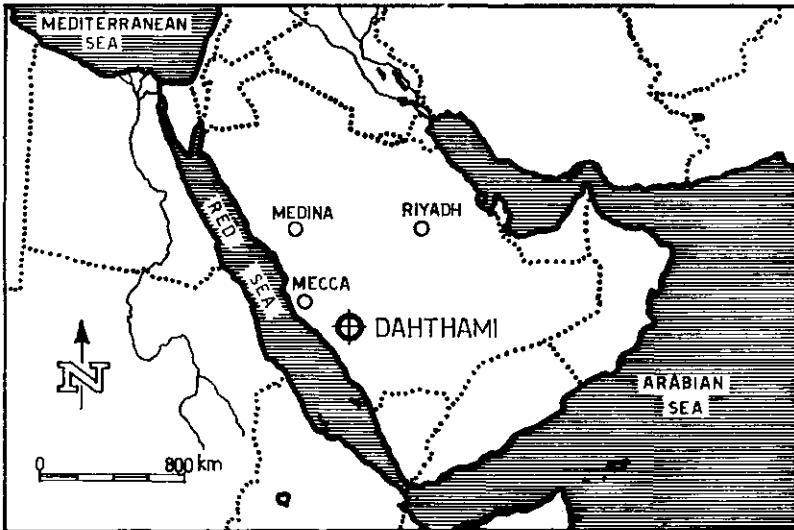


Fig. 60 Map of Arabia with location of Dahthami wells.

dle III, and Early Hunting and Pastoral. Over twenty styles have been detected so far in the *Hunting and Pastoral* age; some fourteen of them are represented in the Dahthami sector described in this paper. The *Hunting and Pastoral* ends, for some human groups, in the first half of the first millennium B.C., while the pattern of the Literate age is expanding already among other tribes. This age started with the first attempts at domestication in the area, apparently before the 5th millennium B.C., although it is not possible to give a more positive date.

The *Early Hunter* age is the earliest of the four. From the rock pictures it appears that the artists did not depict domestic animals, their main interest was focussed upon wild fauna. This age includes at least three different styles, all represented in the presently described sector. It is possible that some of the *Early Hunter* human groups may have persisted in the area, while the *Hunting and Pastoral* pattern was in a state of diffusion and thus the possibility of partial overlapping of *Early Hunting and Pastoral* and the later phases of the *Early Hunters* must

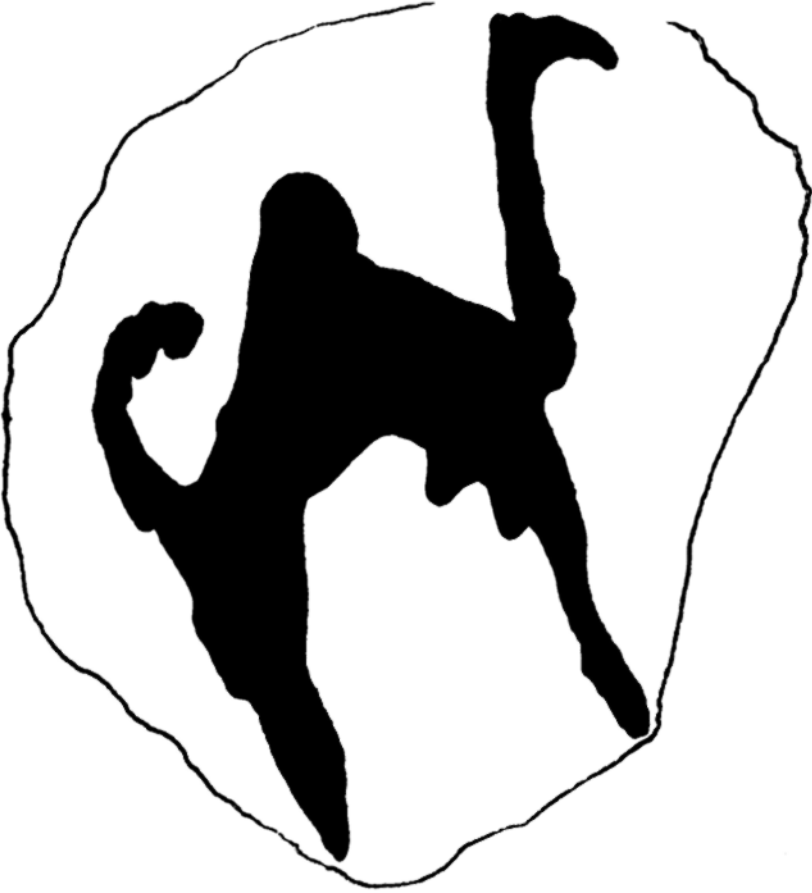


Fig. 61 *The camel of rock B-8 - R. 15. 06.*

be considered. Most of the depictions of the *Early Hunters* must be anterior to the *Hunting and Pastoral* ones; indeed several of them are likely to be considerably anterior, going back to an age in which the climatic conditions of Central Arabia were markedly different from those of today.

Description of the rocks

The engraved rocks of Sector B have received, in the *corpus*, the sequence numbers 7 to 19 which follow the order given to the photographic negatives in the expedition records.

B-7 - R.15.05: On top of the wadi. Two phases of engravings:

- I *Literate*: 4 riders on horse-back, 1 ostrich, 2 unidentifiable marks. They appear to form a hunting scene as the four riders on galloping horses surround the ostrich. This rather schematic style is quite frequent and is likely to belong to the Late Literate period.
- II *Miniature, filiform incisions*: On the right side of the photograph are at least 2 animals and another fragmentary figure.

B-8 - R.15.06: Near previously described rock. Only one phase was detected upon this rock:

- I *Literate*: 1 inscription, 1 camel figure.

B-9 - R.15.07, also *B-10 - 17.L.10*: near previously described rock. Two main phases were detected upon this rock; they include five assemblages:

- I A *Literate?*: 1 male, 1 female figures and 16 abstract marks (inscriptions?). On the upper right corner of this small rock there is a human couple: a phallic male holding an object in his hand and a female with upraised arms. It seems to represent an erotic scene. These figures are schematic and are depicted in a style with some resemblance to the *Al-Ain style* (cf. E. Anati, 1968-b, p. 19, fig. 6b).



Fig. 62 Rock B-9 - R. 15. 07. The white mark on top is modern. Two types of engravings can be recognized: the later pecked the earlier incised.

- I B *Literate*: A few scattered peckings, including 2 undefined animals and 6 marks which may belong approximately to the same period.
- II A-C *Miniature filiform figures*: 3 series of very small linear figures are likely to have been made by



Fig. 63 Tracing of the same rock. Height of the engraved surface ca. 40 cm.

different hands, at different times. Upon other rocks «Miniature figures» are found in *Early*



Fig. 64 Detail of the central figures of the same rock. Phase II C.

Hunters complexes but they may also appear in other periods, mainly in late pre-literate styles. At least seven animal shapes can be detected primarily, by the presence of four legs below horizontal bodies, but they are difficult to define with precision. On the upper left corner there are 2 horned animals, one apparently with a collar. On the upper-central part of the rock there are two figures appearing, very vaguely, as heavy and large animals. At first sight they look like elephants, but this identification is far from certain. They may be among the earliest figures on this rock (II C) as they show a patina identical to that of the rock surface. On the lower part of the rock there are three more animals. Other signs are of schematic character. There are 17 groups of such marks. The nearest comparison to them comes from incised stone tablets from Karain and Öküzin in Anatolia (cf.

E. Anati, 1968-a), but this does not necessarily have a chronological meaning. Such filiform figures may appear in almost every period and although they do not show a well defined style, they are considered as earlier than the assemblages found stratigraphically on top of them.

B-11 - 17.L.8: Near previously described rock. Only 1 phase was detected upon this rock:

- I *Islamic:* 1 hand print, 1 cross-like mark (wassm),
1 undefined animal (cf. H. Field 1952, 1958 b).

B-12 - 17.L.9: Near the previously described rock. Three phases:

- I *Literate:* At least one and probably more inscriptions.

- II *Literate:* At least 4 animals, 3 of which are caprines, the other is undefined. They are made in a schematic style, with exaggerated horns, resembling *Negev style IV* (cf. E. Anati, 1958, 1963). This same style is widely spread over the Near East, from northern Arabia (J. A. Jaussen & F. A. Savignac, 1909), to Anatolia (M. Uyanik, 1968, 1970-a, 1970-b), and further north (G. V. Shatskiy, 1966).

- III *Miniature filiform incisions:* at least 1 animal and several fragmentary lines.

B-13 - 17.L.11: near the previously described rock. It was not possible to trace this rock systematically as the photograph is out of focus. Five phases were detected, but there may be more:

- I *Islamic:* 1 human figure, 1 schematic undefined animal, 12 undefined marks (wassum?).

- II *Literate:* 1 camel, 1 undefined animal.

- III *Literate:* 1 small camel in the lower left corner of the rock.

- IV *Khaniq Style:* 2 relatively large size ruminants. This style was first detected upon rock J-41 -

R.23.02 in Wadi Khanig, from which it takes its name. It consists of relatively large animals, mainly oxen, with surface pecking and sometimes patterned areas left unpecked or otherwise emphasized within the area of the body. The figures are rather static and the legs are disproportionate and ugly. Some of the fat-tailed sheep of the classical style bear strong stylistic resemblance to this style (cf. E. Anati, 1968-c). In various instances this style shows a striking resemblance to some of the figures classified at Djebel Uwenat as «Cattle Breeders» style (cf. H. Winkler, 1937, 1939 Vol. II, pls. XXXVI-XXXVIII) and appearing also in Sudan (cf. P. Hellstrom, 1967). Both on this rock and upon rock J-41 - R.23.02 this style appears as rather late in the *Hunting and Pastoral* sequence.



Fig. 65 Tracing of phase IV (Khanig style). Rock B-13-17. L. 11. Two relatively large size ruminants.

V A-C Style undefined (*Middle Hunting and Pastoral II?*): at least 4 caprines and 3 undefined animal figures, all depicted with surface pecking but apparently belonging to 3 different assemblages.

B-14 - 17.L.12: summit of hill near Wadi Dahthami. Two rocks can be seen upon this photograph. The one on the back has an *Islamic* camel and a least 4 schematic hu-

man figures and 1 inscription from the *Literate* period. The one in front has a short vertical inscription and a schematic human figure from the *Literate* period below which there is an old, superficially pecked figure, likely to represent an ibex or some other caprine from the *Taif Style*. Three phases:

- I *Islamic*: 1 camel.
- II *Literate*: 2 inscriptions, 5 human figures.
- III *Taif Style*: 1 caprine? This style was first detected in Sector A, rock A-1 - R.07.05, at Ri' a-Zalala, in the region of Ta'it, thus taking the name of Taif style. It is an animal style executed with superficial surface pecking and with rather sinuous and elegant shapes. In various sectors it appears in a stratigraphic context which locates it rather late in the *Hunting and Pastoral* sequence, probably in the *Middle Hunting and Pastoral, I*, and in the same general chronological frame as the *Khaniq* style mentioned in the previously described rock.



Fig. 66 Front section of rock B-14-17. L. 12. Human figure and inscription of phase II on top of caprine of Taif style, phase III.

B-15 - R.15.09: Dathami, summit of hill east of the wells. Most of the figures are concentrated upon the central rock. At its sides there are two smaller rocks upon which only late figures can be seen. Upon one of these smaller rocks



Fig. 67 The central rock of *B-15 - R. 15. 09* which is shown traced in the following figure.

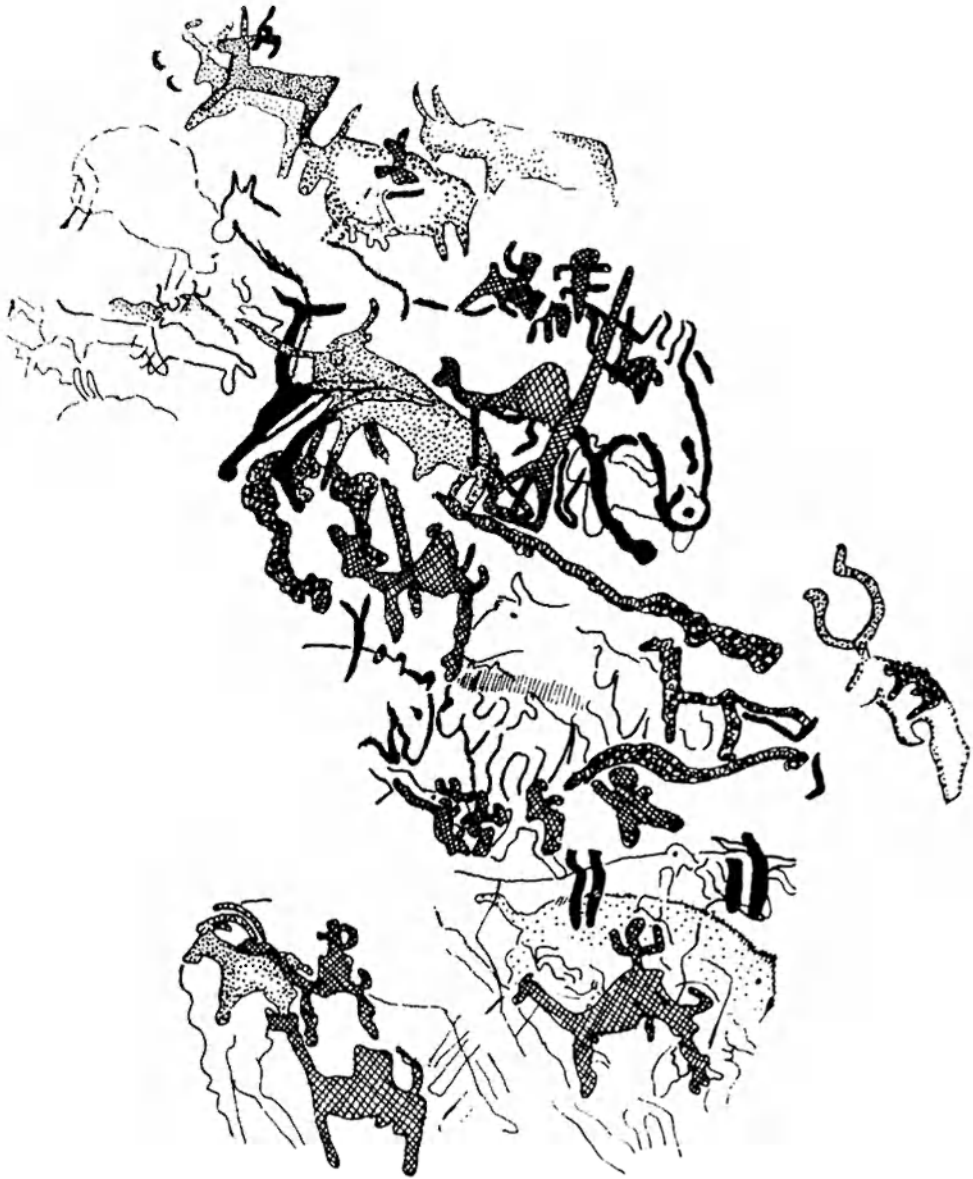


Fig. 68 General tracing of the central section of the same rock showing different phases and superpositions.

there is a rider on horse-back and a mark having the shape of a double cross. Both are likely to be Islamic. Upon the other, there are 3 camels and an undefined animal with a darker patina and they are likely to belong to the Literate age. The three rocks are counted together, as a single entity. 5 main phases were detected, they include 12 assemblages:

- I *Islamic*: 5 schematic human figures, 1 rider on horse-back, 3 riders on camel-back, 1 rider on an undefined animal, 3 camels, 4 marks.

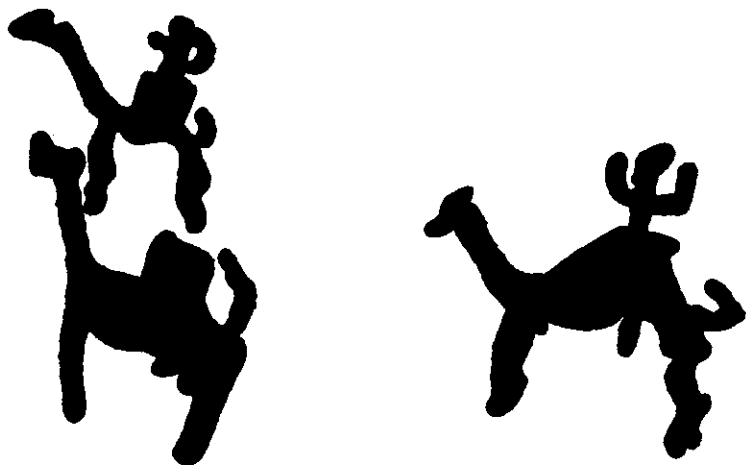


Fig. 69 *Camels and camel riders of the Islamic period from rock B-15 - R. 15. 09.*

- II *Literate*: (mainly on the right-side rock): 3 camels, 2 undefined animals, 2 marks.
- III A-E At least 5 different sub-phases of engravings, all having a dark patina. The relative order proposed for these sub-phases relies upon superpositions and minor differences in patination, but it is tentative and may prove to require modifications.

- III A Style undefined (Middle Hunting and Pastoral): an outlined animal figure, probably an equine (ass?) on the upper part of the rock. The front leg of the animal overlaps the horn of an ox from sub-phase C. The patina of this figure seems to be the lightest among the various subphases of phase III, but this could also be caused by the use of the incision technique which penetrates the rock deeper than the pecking technique.
- III B *Negev style II?*: 3 relatively small animal figures, one on the upper-left side of the rock, overlapping almost entirely an animal of phase C. One of the horns of the animal is covered by a figure, possibly a small camel, of phase II. On the right side of the rock a small animal overlaps the hybrid figure of sub-phase C. On the lower left side of the rock, an ibex of this sub-phase



Fig. 70 Three relatively small animal figures probably from *Negev style II*, phase III B.

is overlapped by two camels of phase I and overlaps a figure of an earlier phase. These animal figures have a strong resemblance to *Negev Style II* which in the Negev and Jordan appears to belong to the late fourth or the third millennium B.C. (E. Anati, 1955, 1956, 1959, 1963).

Similar figures appear also in northern Hijaz (B. Howe, 1950).

- III C *Mahash Style*: Four larger animal figures (2 oxen

and 2 caprines) and 1 hybrid figure. Three of the animal figures are on the upper part of the rock. One of them is overlapped by an animal of sub-phase B while another covers part of a small animal from sub-phase D. Below these three figures another animal figure is found, a long

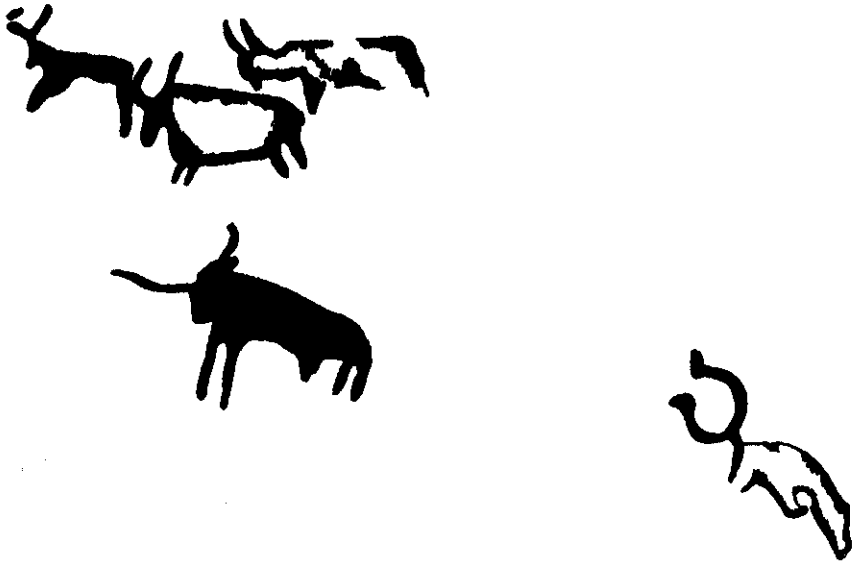


Fig. 71 *Mahash style. Four large animals and one hybrid figure.*

horned ox which is overlapped by the figure of sub-phase A and overlaps a figure of sub-phase D and figures of earlier phases. On the right side of the rock a peculiar hybrid figure has a vaguely anthropomorphic body with animal head and ox-horns. These relatively large figures, with pecking sometimes fading out in certain areas, have been defined *Mahash style*, taking their name from the Mahash wells, 7 km. east of Muraighan (Sector H), where this style is widely represented. When this style was first noticed, on rock H-40 - 22.L.6.

(cf. E. Anati, 1968-b pp. 9-13) it was considered as similar to *Negev style II*. In the analysis of subsequent rocks it was decided to differentiate between the *Mahash style* and *Negev Style II* although there is some similarity between the two and they are probably contemporary. Indeed the two styles are found several times upon the same rocks. In such cases their differences are quite clear, although one should not exclude that, ultimately, they might prove to be two phases or groups belonging to the same general style.

- III D *Dahthami Style*: 3 oxen, 1 caprine, all concentrated on the upper side of the rock. This style was first detected upon rock B-17 - R.15.11 and is discussed with that rock.



Fig. 72 *Rock B-15 - R. 15. 09. Dahthami style. Phase III D.*

- III E *Shaib Style?*: 1 large feline, on the lower right side of the rock. The outline of this figure is partly marked while a natural stretch of the rock has been utilized for the remainder. The body is superficially pecked, thus creating a peculiar texture usually found in the figures of the *Shaib style*. The tracing of the outline however is not exactly typical of the *Shaib style*. This style,

which seems to be the earliest known in the *Hunting and Pastoral* sequence is more common with Quara range. It was first detected west of the mouth of Shaib Sahi, from whence it takes its name. It is characterized by animal figures of large size, sometimes over natural size, with frequently unfinished, or just sketched bodies, while the horns, the heads and the line of the back, are marked with particular care. This style is better illustrated on rock B-17 - R.15.11.

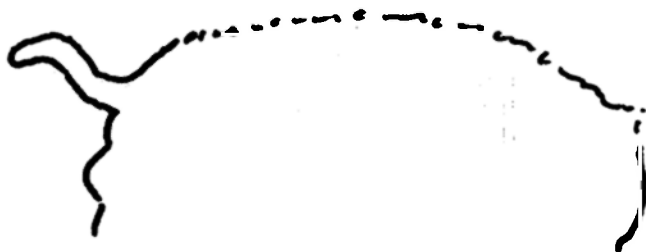


Fig. 73 One large feline probably of Shaib style. Phase III E. R. 15 - R. 15. 09.

IV *Early Hunters?*: a series of very early, deep and rough engravings on the central part of the rock are overlapped by a camel of phase I and by the legs of an ox of phase III C, and overlapping figures of phase V. The whole complex of lines may represent parts of a large, badly drawn animal. The patina is darker than that of the bare surface and this phase may belong to the *Early Hunter period*. It shows some resemblance to phase II of rock A-5-6 and to other figures which may be classified as «Unconventional Early Hunters».

V A-D *Early Hunters*: at least 4 sub-phases of outlined figures:

- V A 2 deeply engraved animal figures. The upper one is well preserved and it shows an elongated muzzle, ears, a small tail, two back legs and one front leg in a peculiar «frozen motion». Of the second animal only the four legs, part of the neck with one ear and the front of the muzzle are visible.
- V B 2 animals, probably bears, smaller in size, in the central part of the rock.



Fig. 74 Phases V A-D of the same rock: Early Hunter period.

V C-D Finely engraved figures of different sizes. Three larger figures are likely to belong together. They apparently represent an ox, a gazelle or some other kind of wild caprine and what seems to be a horse head. Another group includes at least 14 smaller animals and possibly one fragmentary human figure on the lower right part of the rock. Three of the animals seem to represent oxen, three possibly, wild caprines, the others are too fragmentary to be identified.

B-16 - R. 15.10: near previously described rock. Possibly 2 phases:

- I *Pre-Literate:* 1 ostrich? of large size with elongated and elegant neck. It could belong to the «Oval-heads» style, although this cannot be established with certainty (cf. E. Anati, 1968-b).
- II *Dahthami style:* At least 4 long-horned oxen.

B-17 - R. 15.11: Near previously described rock. Four main phases have been detected upon this rock, comprising 9 assemblages:

- I *Pre-literate, Negev Style III?:* 3 ibexes, 2 mountain goats, 2 antelopes, 3 dogs, 1 ox. This phase can be compared with style III from the Negev desert, tentatively dated to the second or third millennium B.C. (cf. E. Anati, 1959 and 1963 pp. 206-7).
- II A-D At least 4 different sub-phases of small and medium size animal figures which show different styles but have an almost identical patina shade are included in this phase. Sub-phases A and B are two stylistic groups having an identical patina and it is not possible to establish the older of the two. However, they are undoubtedly made by different hands. In one group all the animals face to the right, in the other, to the left. The average size of the animals is different in each

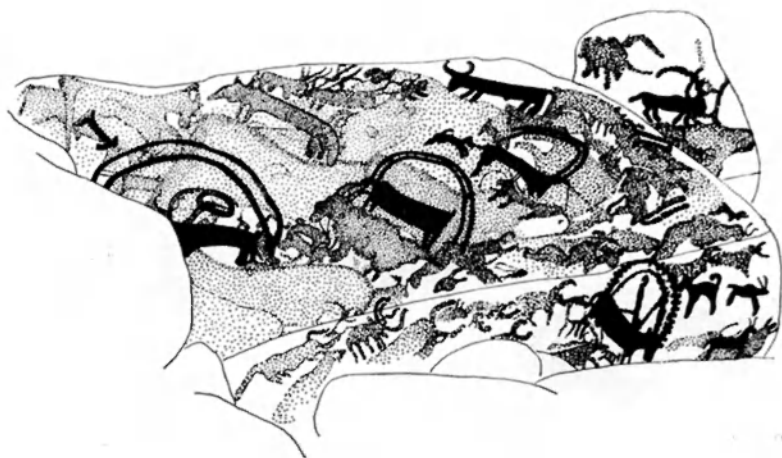


Fig. 75-76 Tracing and photograph of rock B-17 - R. 15. 11.



Fig. 77 Rock B-17 - R. 15. 11. Negev style III? Phase I of the same rock.



Fig. 78 Rock B-17 - R. 15. 11. Figures from phase II A: Negev style II.

group and there are stylistic characteristics of *Negev Style II* in the group of animals facing to the right while the animals facing to the left are of *Mahash style*. As has been noted on several rocks and in various areas, these two styles are quite similar. They must be contemporary or

nearly so and may have been made by related human groups (cf. rock B-15, phase III C).

- II A *Negev Style II*: A series of small figures showing similarity to style II from the Negev desert which is tentatively dated there to the late fourth or the third millennium B.C. (cf. B-15, phase III B). 8 ibexes, 1 feline?, 4 undefined animals.
- II B *Mahash Style*: 3 caprines, 1 large feline or canine (fox?) and 1 ovine? of medium size, they are on the oblique area of the rock.



Fig. 79 Rock B-17 - R. 15. 11. Mahash style: fox and caprine.

- II C Style undefined (*Middle Hunting and Pastoral II?*): 1 ibex and 2 undefined animals.
- II D *Samma style*: 3 ibexes. This style is more common further south. In various places it is stratigraphically quite early and may be located, together with various other groups of similar character, into the *Middle Hunting and Pastoral III* period.
- III *Dalthami Style*: 5 anthropomorphic hybrid beings at least three of which have ox horns, 24 oxen, 4 undefined animals, 2 bucrania. This phase is found mainly on the vertical part of the

rock and near the edge of the oblique part. Two figures are found on the upper rock and sporadic ones on the oblique area. This style, which was first detected upon this rock, is characterized by stylized small-size animals, a high percentage of which are oxen. These have disproportionately large horns, the shape of the body being rather neglected and pecked mainly in the front part. Some of the oxen appear as bulls, most of the animals are in a motion posture. They give the impression of large herds. Anthropomorphic figures sometimes are hybrid and have ox horns, a fact which may indicate the pre-



Fig. 80 Rock B-17 - R. 15. 11. Samma style, phase II D.

sence of a particular consideration for this animal. The anthropomorphic figures seem to represent females and two of them appear to be pregnant. This style is sometimes quite difficult to be isolated, because of the small size of its figures and the tiny pecking which, on occasions, may be quite superficial. It is known today upon numerous rocks and is represented by hundreds

of figures, being one of the most richly depicted styles of the early periods. It must be quite early in the *Hunting and Pastoral* sequence and in several cases it is located, like upon this rock, as later than *Shaib style*, though within the range of the *Early Hunting and Pastoral* period.

IV A-C

Shaib Style: 11 large animals, at least 4 of which are oxen, the others are undefined. They overlap each other and at least three subphases of the same style seem to be present. As mentioned already, *Shaib Style* is characterized by large animal figures with frequently unfinished bodies while the horns, the head and the line of the back are marked with particular care. The pec-



Fig. 81 Rock B-17 - R. 15. 11. *Dahthami style. Phase III.*

king in this style is loose and superficial and creates a special texture of the surface which appears quite evident when studying the rock with the controlled-light-filtration method. Some of the figures may be over 2 meters long. This is the earliest style of the *Hunting and Pastoral* sequence to be detected.

This rock is of particular importance for its stratigraphy. It presents a series of 9 phases and sub-phases of the

hunting and Pastoral age. Phase I and II A show a chronological succession similar to that of parallel styles from the Negev desert (cf. E. Anati, 1955, 1956, 1958, 1959, 1963). Phase II D locates the *Samma Style* as earlier than *Negev Style II* and later than *Dahthami Style*. Phase III illustrates the *Dahthami Style* and its stratigraphic location hint to an early date in the sequence. The earliest style represented is the *Shaib Style* which appears as the earliest *Hunting and Pastoral style*.



Fig. 82 Outline of figures belonging to Shaib style. Phase IV A-C.

B-18 - 18.L.1: top of hill, west of Dahthami wells. Seven phases of engravings, comprising eight assemblages:

- I *Literate?*: 5 camels, 4 caprines, 1 dog, 1 undefined animal.
- II *Literate?*: 4 caprines, 1 rider on horse-back.
- III *Late Pre-literate?*: 4 deeply engraved outlined figures apparently representing schematic anthropomorphic faces.

IV

Style of open legged women: One undefined animal figure and four human figures out of which two appear to represent open-legged women, and two are undefined. This kind of depiction seems to have had long duration in Arabia. Open legged women in a slightly different style appear in the *Literate* age (cf. G. Ryckmans, 1957-b), while the same type of figures, in other stylistic form, may be very early.

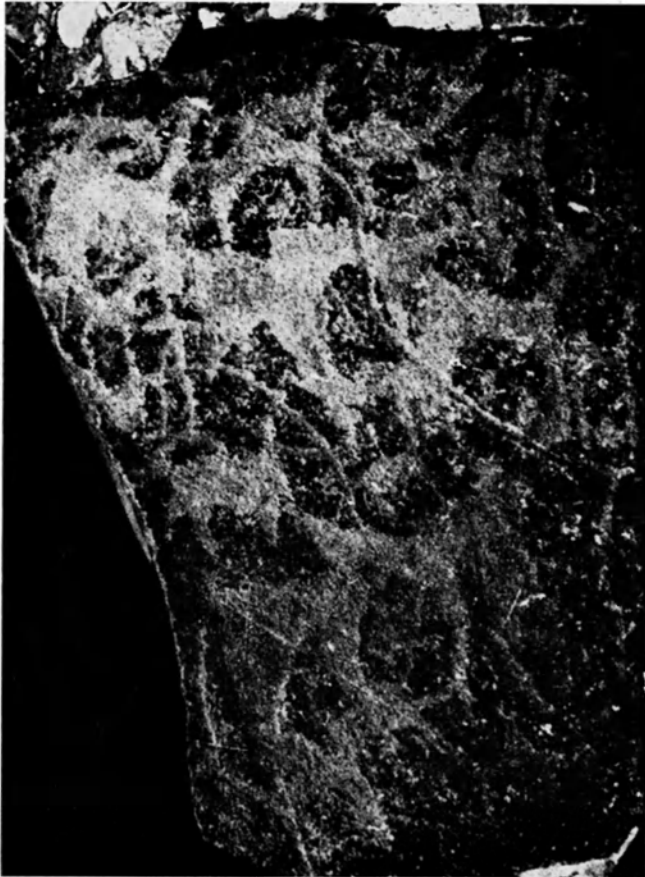


Fig. 83 *General view of rock B-18 - 18. L. 1.*



Fig. 84 Tracing of same rock showing superpositions.

Fig. 85 Four deeply engraved outlined figures apparently representing anthropomorphic faces. Phase III, possibly belonging to the late preliterate period.



- V A *Negev Style II?*: a series of 8 relatively large size animal figures in the lower part of the rock and in the upper left part. Two may be caprines, 1 seems to represent a camel, the others could not be identified.
- V B *Negev Style II*: Eight animal figures of rather schematic, rounded shapes. Four may be caprines, two possibly depict large felines, one may be a canine and one cannot be identified.



Fig. 86 Rock B-18 - 18. L. 1. Style of open legged women. Phase IV.

- VI *Dahthami Style?*: a series of at least 14 miniature-size figures, mostly from the upper part of the rock. Four are oxen, two are ibexes, one could be a dog, one is a bucranium, the others could not be identified. At least 2 of the oxen figures appear to belong to the *Dahthami Style*. We tend to believe that all this phase could be *Dahthami Style*, although most of the figures are badly preserved and therefore this cannot be established with certainty.
- VII Style undefined (*Early Hunting and Pastoral?*): at least 8 animal figures, 2 human figures and at least 3 undefined marks. All the figures are badly preserved and partly overlapped by later engravings. Most of the animals seem to be caprines.

It is quite astonishing to see how such a small rock was

engraved again and again, the numerous superpositions, which are quite disturbing today when attempting to recognize the earlier figures, do not seem to have bothered the ancient artists who, for some reason, were attracted by this surface in several periods.

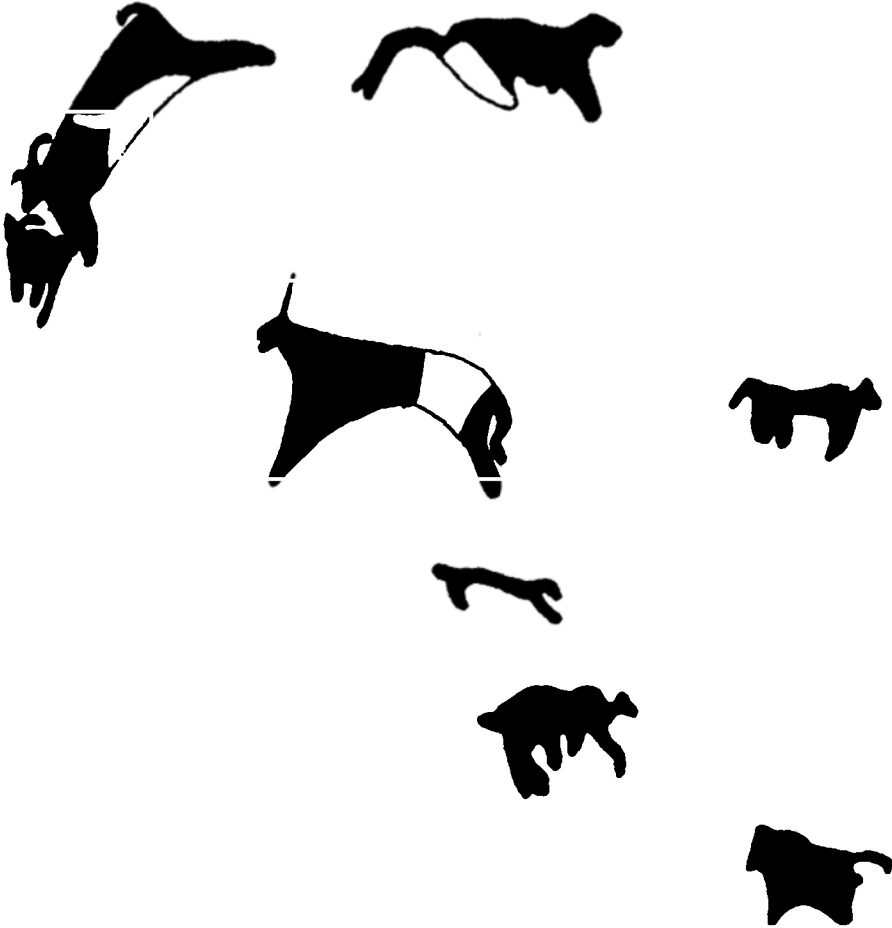


Fig. 87 Rock B-18 - 18. L. 1. Phase V B. Negev style II. The outlined parts are reconstructed.



Fig. 88 Rock B-18 - 18. L. 1. Phase VI. Dahthami style?

B-19 - 18.L.2: near the previously described rock. Seven phases which include 14 assemblages:

- I *Islamic*: at least 6 undefined marks.
- II *Literate?*: 3 ostriches, I rider on camel-back, 1 lion, I dog?
- III *Literate?*: 1 human figure, 3 undefined marks.
- IV A-D Four different styles with a similar shade of patination. The relative chronological order of these sub-phases is tentative:
- IV A *Wasit Style*: 2 long-horned animals. This style was first detected upon rocks K-64 - R.23.12 (E. Anati, 1968-c, p. 7, fig. 1) and R. II-157 - R. 40.05 (Id., p. 52, fig. 2). It is characterized by animals mostly depicted in outline, with very long straight horns, sometimes slightly curved on top. Upon rock R. II-157, this style appears as earlier than



Fig. 89 *General tracing of rock B-19 - 18. L. 2. showing superpositions.*

the middle of the 3rd millennium B.C., while upon rock K-64 it would appear to be later, within the range of the Middle *Hunting and Pasto-*





ral period. The chronology of this style will be discussed when dealing with the sector in which it is abundantly represented. Until then we shall consider that several phases of it must exist in Arabia, all belonging to various phases of the *Middle Hunting and Pastoral* period.



Fig. 91 Rock B-19 - 18. L. 2. Phase IV A. Wasit style.

IV B Style undefined (*Middle Hunting and Pastoral, I?*): an outlined camel is in the center of the rock. Possibly another outlined camel is on the left side of the rock.



Fig. 92 Rock B-19 - 18. L. 2. Phase V A. Kaukab style.

- IV C *Style undefined (Middle Hunting and Pastoral, II?):* a large, vaguely V-shaped figure, in the upper central part of the rock. It could represent an ox-face in a front-view, or an ox-mask. The style is rather schematic and the figure may have a symbolic meaning.
- V A *Kaukab Style?:* Three human figures, two of them on the lower right side of the rock, the third on the upper right side. At least two of these three figures seem to belong to the *Kaukab*



Fig. 93
Rock B-19 - 18. L. 2.
Phase IV C. V-shaped figure. Possibly an ox-mask.

Style. This style was first detected upon the rocks R. III-193 - R. 41.02 (cf. E. Anati, 1968-b, p. 72 and figs. 45-46), and R. VI-233 - 50.L.9 (id.,

p. 141 and fig. 95). In both cases it appears to be early 3rd millennium or earlier. This style, in various instances, appears to belong to the same general period as the *Samma Style* and the *Najd Harir Style*, and can be localized safely in the *Middle Hunting and Pastoral, III* period.

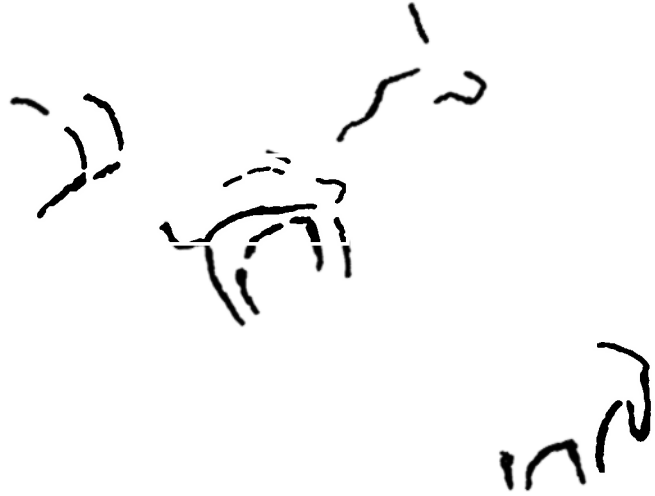


Fig. 94 Rock B-19 - 18. L. 2. Phase V B. Najd Harir style. Four outlined schematic animal figures.

V B *Najd Harid Style*: 4 outlined schematic animals, probably ibexes. This style was first recognized upon rock R. II-165 - 43.L.9 (cf. E. Anati, 1968-c, p. 14, fig. 5). It is characterized by small, outlined animals of elegant and generalized shapes, usually appearing in groups. It is likely to be more or less contemporary to the *Kaukab Style* and the *Samma Style*. These three styles repeatedly appear as later than the *Dakthami style* and earlier than *Negev Style II*.

V C Style undefined (*Middle Hunting and Pastoral, III?*): Some four entirely dotted areas, in the central part of the rock. Only one horned animal, probably a caprine, can be identified.

VI

Shaib Style?: 1 large ox on the upper central part of the rock. Only the head and part of the back is visible. It probably belongs to the *Shaib Style*.



Fig. 95 Rock B-19 - 18. L. 2. Phase VI. *Shaib style?* Outline of an ox figure.



Fig. 96 Rock B-19 - 18. L. 2. Phase VII C. *Early Hunters*, roughly engraved style. Possibly the figure represents an elephant.

- VII A-D These four sub-phases have a patination darker than that of the rock surface, a fact detected rarely, and almost exclusively with *Early Hunters* figures. No relative succession of the four sub-phases could be established and the following order is tentative.
- VII A Style undefined: on the left side of the rock, below the outlined camel of phase V B, a deer-like figure of which only the head and the antlers can be seen.
- VII B Style undefined: the back and horns of an ibex on the upper-right corner of the rock.
- VII C *Early Hunters* (roughly engraved style): a series of deep and rough engravings appear to outline the shapes of at least two very large animals. One has been suggested to represent an elephant, but this interpretation is not fully convincing. The other could be a large quadruped but all its front part is missing and no interpretation can be suggested.
- VII D *Early Hunters* (finely incised style): In the lower central part of the rock, 2 finely incised fragmentary figures. One of them may represent an ibex, the other cannot be identified.

The Stratigraphy

Sector B includes 12 rocks with the following stratigraphy:

- Rock B-7: I - Literate
 II - Miniature, filiform incisions
- Rock B-8: I - Literate
- Rock B-9-10: I A-B - Literate?
 II A-C - Miniature, filiform incisions

- Rock B-11: I - Islamic?
- Rock B-12: I - Literate
 II - Literate?
 III - Miniature, filiform incisions
- Rock B-13: I - Islamic
 II-III - Literate?
 IV - Khaniq Style?
 V A-C - Style undefined (Middle Hunting and Pastoral, II?)
- Rock B-14: I - Islamic
 II - Literate
 III - Taif Style
- Rock B-15: I - Islamic
 II - Literate
 III A - Style undefined
 III B - Negev Style II?
 III C - Mahash Style
 III D - Dahthami Style
 III E - Shaib Style?
 IV - Early Hunters? (Schematic rough Style)
 V A - Early Hunters (Deeply engraved, large, elegant figures)
 V B - Early Hunters (Medium size animal figures)
 V C-D - Early Hunters (Finely engraved figures of various sizes)
- Rock B-16: I - «Oval Heads» Style?
 II - Dahthami Style

- Rock B-17:
- I - Negev Style III?
 - II A-B - Negev Style II and Mahash Style
 - II C - Style undefined (Middle Hunting and Pastoral, II?)
 - II D - Samma Style
 - III - Dahthami Style
 - IV A-C - Shaib Style
- Rock B-18:
- I-III - Literate?
 - IV - Style of «open legged women»
 - V A - Negev Style II?
 - V B - Negev Style II?
 - VI - Dahthami Style?
 - VII - Style undefined (Early Hunting and Pastoral?)
- Rock B-19:
- I - Islamic
 - II-III - Literate?
 - IV A - Wasit Style
 - IV B - Style undefined (Middle Hunting and Pastoral, I?)
 - IV C - Schematic-symbolic Style? (Middle Hunting and pastoral, II?)
 - V A - Kaukab Style?
 - V B - Najd Harir Style
 - V C - Style undefined (Middle Hunting and Pastoral, III?)
 - VI - Shaib Style?
 - VII A-B - Style undefined (Either Hunting and Pastoral or Early Hunters Style)
 - VII C - Early Hunters (Deeply engraved Style)
 - VII D - Early Hunters (Finely incised Style)

There are 5 assemblages which belong to the *Islamic* age. Five assemblages belong to the *Literate* age, while 10 assemblages are likely to be chronologically located on the edge between *Literate* and *Pre-literate* and have been labeled «*Literate?*» (with question mark). These are tentatively considered as part of the *Literate* age. Only one style in this sector may be related to the *Late Hunting and Pastoral* period: the *Miniature, filiform Style*, which as we know already from other sectors, occurs also in earlier periods, but here it seems to be quite late. In all, there are in Sector B 5 stylistic assemblages belonging to the *Late Hunting and Pastoral* period. Also, from previous studies, we know already that the latest figures of the *Oval Heads Style* and the late figures of fat-tailed sheep, must fall within the frame of the *Late Hunting and Pastoral* period. From the stratigraphy of the Sector it is impossible to establish the relative succession of these groups and styles.

As mentioned already, two clearly defined styles appear very early in the *Hunting and Pastoral* age. They are the *Dahthami* and the *Shaib* styles. These styles, and whatever is contemporary to them, is considered as *Early Hunting and Pastoral*. Whatever is found to be later than the *Dahthami Style* and earlier than the Late pre-literate styles, is considered as *Middle Hunting and Pastoral*. This preliminary subdivision gives a general idea of the succession of styles in the area.

The *Middle Hunting and Pastoral* period in Sector B has provided a total of 23 stylistic assemblages subdivided into sub-periods I, II and III. (Sub-period I, being the latest).

Group I includes the styles: *Khaniq*, *Taif*, *Wasit*, the *Open-legged women Style* and *Negev Style III*. From Sector A we may add the *Radaf Style* which is tentatively lo-

cated into group I, and is chronologically earlier than *Taij Style*. Group II includes *Negev Style II* and *Mahash Style* which appear to be contemporary or closely related to each other. Group III, the earliest, includes *Kaukab Style*, *Najd Harir Style*, and *Samma Style*, which, again, appear as contemporary or closely related. From the stratigraphy of the described rocks it was not possible to establish with full certainty the relative succession of styles within each one of the three groups, although there is sufficient evidence to enable a tentative succession to be proposed which will serve as a working hypothesis.

The *Early Hunting and Pastoral* period includes the *Dahthami* and the *Shaib* styles, the *Shaib Style* being the earliest *Hunting and Pastoral Style* detected. The *Early Hunting and Pastoral* period in Sector B has provided a total of 12 assemblages. The *Early Hunters* period has been detected in Sector B upon 2 rocks, and has provided a total of 7 assemblages. In all, 67 stylistic assemblages have been recorded in this sector and they are chronologically subdivided as follows:

5	Islamic
15	Literate and Literate?
5	Late Hunting and Pastoral
23	Middle Hunting and Pastoral
8	M H P, I
11	M H P, II
4	M H P, III
12	Early Hunting and Pastoral
7	Early Hunters

Total: 67

The following chart shows their relative order.

In order to give an idea of the change in density of rock engravings in these various periods a graph is pre-

TIVE CHART OF LOCAL PHASES AND STYLE SEQUENCE

Sequence Number → B-7 B-8 B-9-10 B-11 B-12 B-13 B-14 B-15 B-16 B-17 B-18 B-19												Assemblages Counting	Period Cumulative Counting	
Period	Style													
Islamic				I		I	I	I				I	5	5
Literate		I	I		I		II	II					5	
Literate?			I A-B		II	II-III					I-III	II-III	10	15
Late H.P.	Miniature Filiform	II	II A-C		III								5	5
Middle H.P. I	Khaniq					IV							1	
	Taif						III						1	
	Wasit											IV A	1	
	Open Legged women										IV		1	
	Negev III									I			1	
	Undefined							III A	I				IV B	3
Middle H.P. II	Negev II							III B		II A	V A-B		4	
	Mahash							III C		II B			2	
	Undefined					V A-C				II C		IV C	5	11
Middle H.P. III	Kaukab											V A	1	
	Najd Harir											V B	1	
	Samma									II D			1	
	Undefined											V C	1	4
Early H.P.	Dahthami							III D	II	III	VI		4	
	Shaib							III E		IV A-C		VI	5	
	Undefined										VII	VII A-B	3	12
Early Hunters	Schematic Rough							IV					1	
	Deeply Engraved							V A				VII C	2	
	Finely Engraved							V B-D				VII B	4	7
Total Assemblages												67	67	

sented showing the frequency of assemblages. It shows the variation of assemblage density, from the above mentioned periods, in the first five sectors of rock art encountered by the Expedition, including also *Sector B*, or the area of Dahthami wells, discussed in the present paper. This graph shows the presence of two major peaks of engraving activity in the area, one in the *Literate* age and the other in the *Early Hunting and Pastoral* period, with other variations in density, from period to period.

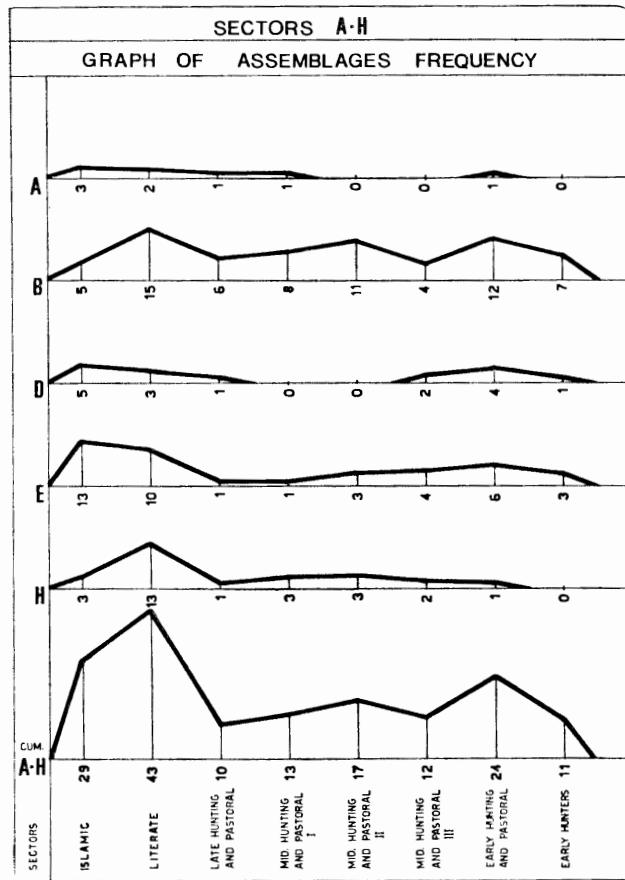


Figura 97 - This graph shows the frequency of engraving in various periods, in the discussed area. Future publications will show that frequency of engravings, according to periods, varies in Central Arabia from area to area, keeping a General pattern in certain constants.

The Subjects represented

The Cumulative counting of figures provides the following data:

CHART OF CUMULATIVE FIGURE-COUNTING

Rock n.	Phase	Human	Animal	Others	Undefined	Total Phase	Total Rock
B-7	I	4	5	—	2	11	
	II	—	2	1	—	3	14
B-8	I	—	1	1	—	2	2
B-9; B-10	I A	2	—	16	—	18	
	I B	—	2	6	—	8	
	II A-C	—	7	17	—	24	50
B-11	I	—	1	2	—	3	3
B-12	I	—	—	1	—	1	
	II	—	4	—	—	4	
	III	—	1	—	1	2	7
B-13	I	1	1	12	—	14	
	II	—	2	—	—	2	
	III	—	1	—	—	1	
	IV	—	2	—	—	2	
	V A-C	—	7	—	—	7	26
B-14	I	—	1	—	—	1	
	II	5	—	2	—	7	
	III	—	1	—	—	1	9

Rock n.	Phase	Human	Animal	Others	Undefined	Total Phase	Total Rock
B-15	I	10	8	4	—	22	64
	II	—	5	2	—	7	
	III A	—	1	—	—	1	
	III B	—	3	—	—	3	
	III C	—	4	—	—	4	
	III D	—	4	—	—	4	
	III E	—	1	—	—	1	
	IV	—	—	—	1	1	
	V A	—	2	—	—	2	
	V B	—	2	—	—	2	
V C-D	—	—	17	—	—	17	
B-16	I	—	1	—	—	1	5
	II	—	4	—	—	4	
B-17	I	—	11	—	—	11	81
	II A	—	13	—	—	13	
	II B	—	5	—	—	5	
	II C	—	3	—	—	3	
	II D	—	3	—	—	3	
	III	5	28	2	—	35	
IV A-C	—	11	—	—	11		
B-18	I	—	11	—	—	11	69
	II	1	5	—	—	6	
	III	4	—	—	—	4	
	IV	4	1	—	—	5	
	V A	—	8	—	—	8	
	V B	—	8	—	—	8	
	VI	—	13	1	—	14	
VII	2	8	—	3	13		
B-19	I	—	—	—	6	6	41
	II	1	6	—	—	7	
	III	1	—	—	3	4	
	IV A	—	2	—	—	2	
	IV B	—	2	—	—	2	
	IV C	—	—	1	—	1	
	V A	3	—	—	—	3	
	V B	—	4	—	—	4	
	V C	—	1	—	4	5	
	VI	—	1	—	—	1	
	VII A	—	1	—	—	1	
	VII B	—	1	—	—	1	
	VII C	—	2	—	—	2	
VII D	—	2	—	—	2		
Total Sector B:		43	240	68	20	371	371

The purpose of cumulative charts is to provide a clear and very general idea of the distribution of subjects. The figures are subdivided into four columns which differentiate: *Human*, *Animal*, *Other* and *Undefined* figures. In cumulative charts problematic figures are considered as follows:

- Each *group of cup-marks* is considered as one figure, in the «Other» column.
- Each *group of lines* or *group of other marks* which cannot be interpreted as a defined figure is considered as one figure in the «Undefined» column.
- *Hand-prints, foot-prints* and other *parts of human body* are considered under the «Other» column.
- *Anthropomorphic Hybrid* figures are considered in the «Human» column.
- *Zoomorphic hybrid* figures are counted under the «Animal» column.
- *Idoliform, spirit-like, and animistic* anthropomorphic figures are counted under the «Human» column.
- *Riders* on animal-back are counted as two figures, one under the «Human» column and one under the «Animal» column.

The most common subject in Sector B is the animal representation; this seems to be an overall general characteristic of rock art in Arabia, when each area is considered cumulatively. If each style and phase is taken separately the resulting picture may be quite different (E. Anati, 1968-b, 1968-c). Both the *Oval Heads* Style and the *Realistic Dynamic* Style have more human than animal depictions. The same may be the case for other styles. In some of the *Literate* styles, almost 90% of the depictions may be inscriptions, leaving only 10% for animal, human representations and other figures. In some other styles, abstract symbols could represent a surprisingly high percentage. This happens also for some *Islamic* phases where the pre-

dominant figure is the *Wassm* (cf. H. Field, 1952, 1958-b). On the other hand, in styles such as the *Dahthami* or the *Shaiib*, the almost totality of figures is represented by a single type of animal, the ox.

In this way one can recognize striking differences in content and interest, from style to style, thus, presumably, from human group to human group. Also the group counting of phase and periods provide data on interesting changes in subject matter which have a chronological value. Obviously such chronological figure counting becomes fully significant when results from several sectors are compared and constant patterns recognized, but also from the counting of a single sector, some interesting data can be collected, as can be seen from the following chart.

The percentual combination of the four columns differs in each period. Other subjects, besides Human and Animal, occur in higher percentage in the later periods.

CHART OF CHRONOLOGICAL FIGURE-COUNTING

Period	Rock	Phase	Human	Animal	Other	Undefined	Total
ISLAMIC	B-11	I	—	1	2	—	3
	B-13	I	1	1	12	—	14
	B-14	I	—	1	—	—	1
	B-15	I	10	8	4	—	22
	B-19	I	—	—	—	6	6
Totals:	5	5	11	11	18	6	46

	Period	Rock	Phase	Human	Animal	Other	Undefined	Total
	LITERATE	B-7	I	4	5	—	2	11
		B-8	I	—	1	1	—	2
		B-12	I	—	—	1	—	1
		B-14	II	5	—	2	—	7
		B-15	II	—	5	2	—	7
Totals:		5	5	9	11	6	2	28
	LITERATE?	B-9; B-10	I A	2	—	16	—	18
			I B	—	2	6	—	8
		B-12	II	—	4	—	—	4
		B-13	II	—	2	—	—	2
			III	—	1	—	—	1
		B-18	I	—	11	—	—	11
			II	1	5	—	—	6
			III	4	—	—	—	4
		B-19	II	1	6	—	—	7
	III		1	—	—	3	4	
Totals:		5	10	9	31	22	3	65
	LATE H.P.	B-7	II	—	2	1	—	3
		B-9; B-10	II A-C	—	7	17	—	24
		B-12	III	—	1	—	1	2
Totals:		3	5	—	10	18	1	29
	MIDDLE H.P. I	B-13	IV	—	2	—	—	2
		B-14	III	—	1	—	—	1
		B-15	III A	—	1	—	—	1
		B-16	I	—	1	—	—	1
		B-17	I	—	11	—	—	11
		B-18	IV	4	1	—	—	5
		B-19	IV A	—	2	—	—	2
	IV B		—	2	—	—	2	
Totals:		7	8	4	21	—	—	25
	MIDDLE H.P. II	B-13	V A-C	—	7	—	—	7
		B-15	III B	—	3	—	—	3
			III C	—	4	—	—	4
			II A	—	13	—	—	13
		B-17	II B	—	5	—	—	5
			II C	—	3	—	—	3
			V A-B	—	16	—	—	16
		B-19	IV C	—	—	1	—	1
Totals:		5	11	—	51	1	—	52

	Period	Rock	Phase	Human	Animal	Other	Undefined	Total
	MIDDLE H.P. III	B-17	II D	—	3	—	—	3
		B-19	V A	3	—	—	—	3
			V B	—	4	—	—	4
			V C	—	1	—	4	5
Totals:		2	4	3	8	—	4	15
	EARLY H.P.	B-15	III D	—	4	—	—	4
			III E	—	1	—	—	1
		B-16	II	—	4	—	—	4
		B-17	III	5	28	2	—	35
			IV A-C	—	11	—	—	11
		B-18	VI	—	13	1	—	14
			VII	2	8	—	3	13
		B-19	VI	—	1	—	—	1
	VII A-B		—	2	—	—	2	
Totals:		5	12	7	72	3	3	85
	EARLY HUNTERS	B-15	IV	—	—	—	1	1
			V A	—	2	—	—	2
			V B-D	—	19	—	—	19
		B-19	VII C	—	2	—	—	2
			VII D	—	2	—	—	2
Totals:		2	5	—	25	—	1	26

The animal is, in this sector, the predominant element of all the preliterate periods. The Human depictions vary from style to style and their relative quantity does not seem to have a chronological value.

One of the most interesting kinds of figures is the hybrid representation, which is primarily depicted in the *Dahthami style*. Upon rock B-17 (III), five such depictions were recorded. One figure of this kind is found in the *Mahash Style* (B-15, III-C), all the hybrid figures are anthropomorphic with ox horns. In the *Dahthami Style* these appear as female, some of them probably being pregnant. Also the bucranium occurs occasionally in the *Dahthami style*.

Among the animals, caprines are the most common species. Ostriches and camels are common also. The animal figures, are being studied separately and a discussion on them will be prepared. For several animals it is impossible to present an identification without such discussion first taking place. Mounted horses and camels appear exclusively in the Islamic and Literate ages and are represented abundantly.

Conclusions

As mentioned already, several elements put together may help in presenting a preliminary and very general frame for the absolute chronology.

The transition between the *Literate* and the *Islamic* period may be placed around the year 622 C.E. The spread of the *Literate* styles must have taken place in the first half of the first millennium B.C. (cf. A. Jamme, 1955; W.F. Albright, 1955). The earliest figures of Literate type could go back to the late 2nd millennium B.C., while the full development of the styles with numerous inscriptions is likely to have taken place in the second half of the 1st millennium B.C.

The *Late Hunting and Pastoral* styles are thought to be generally contemporary to the earliest rise of the first styles of «Literate» type, that is to say, the late 2nd millennium and the first half of the 1st millennium B.C.

Negev Style III is likely to belong to the 2nd millennium or the late 3rd, while *Negev Style II* probably goes back to the 3rd millennium B.C. In the Negev it may even extend to the late 4th millennium B.C. The various styles of *Middle Hunting and Pastoral, I*, which include small groups of oxen, goats and other domestic animals, characterized by relatively large figures depicted in static posture, are likely to belong to the 2nd millennium B.C. It is highly probable that during this millennium the connections of pastoral and trading groups, between Arabia and Palestine, were quite constant and regular (cf. W. F. Albright, 1948, 1950, 1953, 1954).

Mahash Style must be roughly contemporary to *Negev Style II* and both are likely to belong in Arabia to the 3rd millennium B.C. (cf. E. Anati, 1968-b, 1968-c).

Kaukab Style, Najd Harir and *Samma Style* approximate one another and seem to belong to the 4th millennium B.C. Additional indications, in this same direction, are provided by other sectors where the *Middle Hunting and Pastoral, II*, period shows several interesting points of connection with Palestinian Chalcolithic cultures. As discussed already, there seem to be some connections between Arabia and Southern Palestine, in the Late Chalcolithic period (cf. E. Anati, 1968; P. Bar-Adon, 1962, A. Mallon & R. Koppel, 1934-40).

The *Early Hunting and Pastoral* period is earlier than these three styles and must be also earlier than the Palestinian Chalcolithic. It may be considered generally contemporary to the Neolithic period of the Fertile Crescent, also taking into account that it represents the earliest period in which there is evidence of domestication. This period in Arabia is dominated by two styles, the *Dahthami Style* and the *Shaib Style*, both include, almost exclusively, figures of oxen. While the *Dahthami Style* represents numerous groups of very small oxen with particular emphasis in the horns which are disproportionately exaggerated

in relation to the body, the *Shaib Style*, shows oxen, depicted in very large dimensions, and more naturalistically. This appears to be the earliest *Hunting and Pastoral* style detected. The enormous quantity of oxen figures recorded in Arabia in this period is a phenomenon difficult to explain as it would seem to be in contrast with what is known about domestication from the major excavations of contemporary sites in surrounding countries. (Cf. E. Anati, 1963, pp 233-241). In Anatolia, on the other hand, the excavations at Çatal Hüyük indicate the existence of a tradition of ox representation in the Neolithic iconography (J. Mellaart, 1967).

If, as it seems, the «Neolithic» economy of the makers of these two styles in Central Arabia was based upon extensive ox herding, another very serious problem arises in connection with the change in ecological conditions, as, in the present environment of the discussed areas, extensive ox herding would be hardly conceivable.

The *Early Hunter* age is represented by at least three different styles. They are all made of outlined incised figures, and the technique of pecked surfaces is apparently absent in this period. No domestic animals are known in the rock pictures, hunting appears to be the main subject. Some of the species depicted are extinct, such as the wild long-horned ox and the elephant. This period is likely to cover the Early Holocene and may have gone further back, in the Late Pleistocene.

Two of the styles represented, the *Schematic Rough Style* and the *Deeply Engraved Style* find several parallels in the Near East, mainly at Kilwa, in the Jordanian Plateau (G. Horsfield & N. Glueck, 1933; H. Rhotert, 1938), and at Palanly cave in Anatolia (E. Anati, 1968-a). They also have parallels in the Nile Valley and elsewhere in Northern Africa (M. Mori, 1965, 1970; K. Kromer, 1970; P. Graziosi, 1970; A. Simoneau, 1970).

The *Finely Engraved Style*, on the other hand, is much less known and therefore is also rather problematic. It seems to be the earliest style recognized so far in Arabia. The only convincing parallels come from a series of female figurines from Kom-Ombo in the Nile Valley (P.E.L. Smith,

1969) and from some objects excavated in upper Palaeolithic levels in the caves of Karain and Öküsini in Anatolia (E. Anati, 1968-a).

When the *corpus*, now being prepared, of all the rock engravings collected by the Philby-Ryckmans-Lippens expedition to Arabia, is complete, an enormous and uniquely wealthy material will be available for research, interpretation and discussion. In the present article only 12 out of over two hundred engraved rocks have been considered, and only a few of the major problems involved have been mentioned. It is hoped, however, that this preliminary account has given an idea of the work which is being carried on and has aroused some interest.

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