

ARCHAEOLOGICAL INVESTIGATIONS AT TWO BURIAL CAIRNS IN THE HARRA REGION OF JORDAN

by

Vincent A. Clark with contributions from
Burton MacDonald and with a report on
the skeletal remains by Scott Laird
Rolston.

The two cairns, the excavation of which is reported here, were located by Vincent Clark during the course of a survey of Safaitic inscription sites in the ḥarra region of eastern Jordan during 1976. They are located approximately 40 km to the south-south-west of H4, by the track which leads from H4 to al-Wisad. This track crosses the gravel plain for approximately 40 km before meeting the edge of the ḥarra, a forbidding region of black basalt boulders stretching away to the west. Where the track reaches this basalt there is a low ridge on the top of which are two cairns. Here a total of 152 Safaitic inscriptions were found and recorded in 1976.¹ (See map, fig. 1).

Study of these inscriptions made it apparent that the occupant of one of the two cairns could be indentified with some certainty as a woman by the name of HRJ bint GT of the tribe of TM. The unusual circumstance of the discovery of a cairn burial apparently belonging to a woman made excavation at this site an attractive prospect and, as a consequence, excavation was undertaken at both cairns between March 8 to 11, 1980 by the writers and with the assistance of Khalid Abū al-Ghanima, of the Department of Antiquities of Jordan, and

Laura Hess, a volunteer.

The objective of the expedition was to attempt to provide a link between Safaitic epigraphy and archaeology and between the cairns and the many pre-Islamic Safaitic inscriptions on rocks both on and around these cairns. Thus it was hoped, firstly, to dispel the controversy of recent years as to the nature and purpose of these cairns (this will be discussed further below). Secondly, if the cairns were discovered to be ancient burials, it was hoped that archaeological evidence from the burials and associated objects would enable closer dating of both the cairns and the inscriptions.

The two cairns are located prominently upon the same ridge of basalt rocks and about 50 m apart. The more northerly was designated No 1 and the other, that of HRJ, No 2. (Pl. LXVIII, 1 - LXVIII, 2).

The Excavation of Cairn No 1. (Fig. 2a).

This cairn appeared to consist of a roughly circular heap of basalt rocks, measuring 7m north-south and 6.5m east-west, and standing

1. These inscriptions have formed part of a Ph.D. dissertation - Vincent A. Clark, *A Study of New Safaitic Inscriptions from Jordan*, University of

Melbourne, 1979, (abbreviated CNSIJ). This is site H of this study, text nos. 554-706.

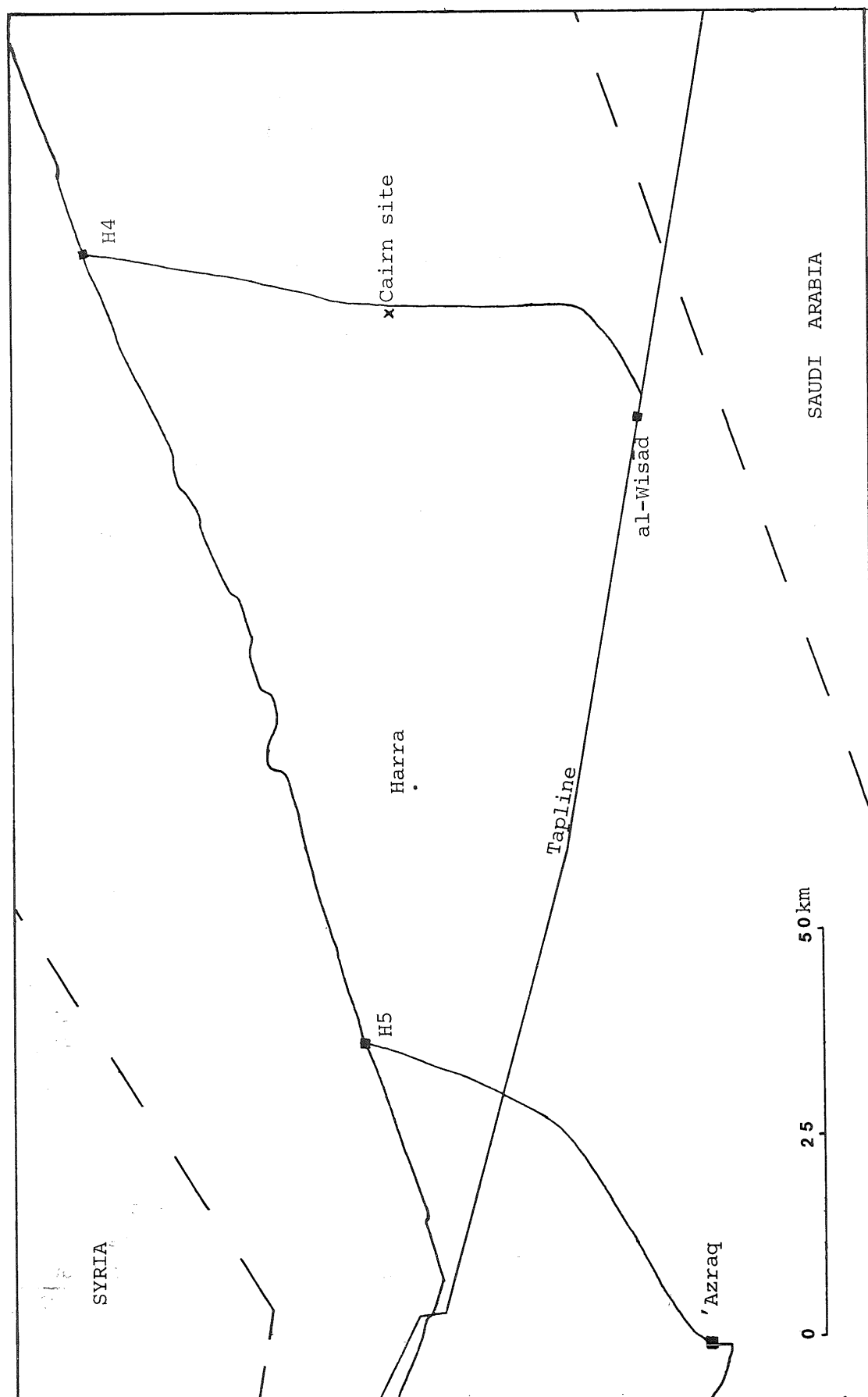


Figure 1. Map showing location of excavation site. (Reference: Jordan 1:50,000, 3654 III, 163598).

1.05m above the surrounding ground level. No definite structure was apparent but it was presumed that there would be a ring of stones forming an inner burial chamber.² Accordingly an attempt was made to remove the many stones covering the centre of the cairn in order to uncover this ring. The assumption was that there was a burial, or burials, in the centre of the cairn and that this had been placed in a pit or cist.³ If such was the case then removal of the innermost stones of the cairn would reveal this burial chamber and cist.

The stones covering the cairn and filling its interior averaged 20-40cm in size but were generally irregular in both size and shape. Much larger rocks were positioned on top of one another in such a way as to provide the structure of the cairn. Some of these, resting on or in the original soil surface, were probably naturally occurring boulders built into the cairn. The stones piled together to comprise the cairn were probably taken from the basalt field surrounding it, as clear patches to the west of the ridge indicated. This is in contrast to the supposed practice at the Cairn of Hani' excavated by Harding. There it was suggested that the stones of the cairn had not been gathered on the spot but carried some distance to the site.⁴

Before locating a cist or burial pit in the centre of the structure bones were encountered. Rather than being in a specially prepared cist

these were merely lying among the stones of the cairn and had been covered by wind-blown sand and soil after they had been deposited. Thus there was no evidence here for any hole having been dug in the ground. It appears that the two bodies found had simply been laid on the ground and stones piled on top of them. Sand would naturally blow in among the piled stones as time passed.

Burial No 1 was the earlier of the two, while Burial No 2 appears to have been secondary and to have partially displaced No 1.⁵ Burial No 1. (Male, 30-45 years). This was found lying among stones and covered over by stones and wind-blown sand. The pelvis, lower vertebrae and the head of the right femur were in articulation, as was the right tibia and fibula, and the body seems to have been interred in a supine position, oriented N-S, with the head to the north. The remainder of the bones were disarticulated. The skull faced south and was lying on its right side. It had been crushed. The appearance indicates that this was a disturbed burial. The partial articulation suggests that cartilage still remained when the bones were disturbed. Thus it would appear that the disturbance took place only a few years after the original interment.

The long bones of this individual were then uncovered stacked neatly along the south side of the cairn chamber. At first it was thought that these long bones all belonged to

2. Such a structure was found by G.L. Harding at the cairn of Sa'd, which appeared to be similar to those considered here. See G. Lankester Harding, "The Cairn of Sa'd" in *Archaeology in the Levant, Essays for Kathleen Kenyon*, eds. P.R.S. Moorey & P.J. Parr, (Warminster, 1978).

3. As was the case at the cairn of Sa'd and at that of Hani' (see G.L. Harding, "The Cairn of Hani'", in *ADAJ*, Vol. II, 1953, p. 8-56).

4. See G.L. Harding, "The Cairn of Hani'", p.8.

5. See appendix on the human remains by Scott L. Rolston.

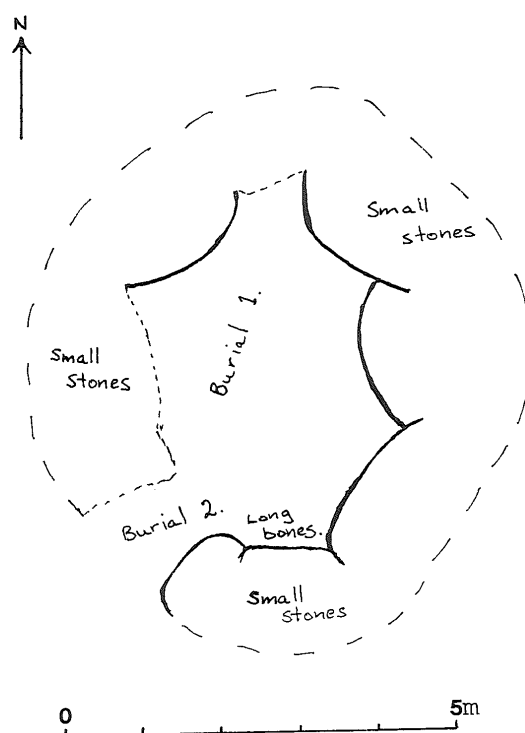


Figure 2a. Sketch plan of cairn #1 after excavation.

burial No 1. However, it was soon learned upon further investigation that there were too many long bones for only one individual. Removal of a part of the west side of the cairn then revealed that there was a second burial, No 2, under the west wall of the structure, and the bones neatly placed along the south side of the cairn chamber were those of two persons. Burial No 2. (Male, 40-55 years). This burial was positioned for the most part under the west wall of the cairn or under the west side of the cairn. The skull, chest cavity, and the pelvis were all found at this location. The long bones of burial No 2 extended into the south side of the inner ring of the cairn. These long bones were mingled with the long bones which belonged to the first burial.

The skull of this second skeleton was resting on the chest, face down. The lower jaw was found to the northwest of the main segment of the skull at a distance of approximately 15-20cm. This body was articulated and lying in a supine position.

Completion of Cairn No 1 Excavation.

After the removal of the two skeletons associated with the cairn excavation continued to a lower level in the attempt to learn if there was a grave dug in the sand under the stones of the cairn and if there were more bones in the cairn. This excavation continued for a depth of 1.30 metres from the point where the first stone had been removed from the highest point of the cairn. No more bones were found at this lower level. Furthermore, there was no evidence that there was a cist or a grave dug in the sand over which the stones had been piled to form a cairn. All the evidence indicated that

the bodies had been laid on the sand among basalt stones and then more stones were piled upon them to protect them from animals.

Besides the human bones a large number of animal, mostly rodent, bones were found in the excavation. A few objects and pieces of metal were also discovered. However, there were no objects excavated that would help date the burials in the cairn.

The Excavation of Cairn No 2, the cairn of HRJ bint GT. (Fig. 2b).

This cairn consists of a large pile of undressed basalt rocks ranging from small stones of only a few centimetres in size up to boulders of 75 cm in diameter. The average stone size is about 20-40cm, as at cairn No 1. These were probably collected from the immediate vicinity and piled together to form a heap roughly circular in shape and measuring 9m diameter on the north-south axis and 8.5m on the east-west. This heap stood approximately 1.60m above the surrounding ground level. No plan of construction could be immediately discerned and it was only after considerable clearance of rocks from the top of the cairn that location of the inner burial chamber could be defined. This burial chamber seemed to have been formed by arranging a number of large boulders (averaging 50 by 70 by 50cm) into a ring on the ground. This ring had an internal diameter of approximately 1.9m. Other rocks were then piled up around the outside of this and, after the burials had been placed within, the centre was filled also with small to medium stones.

Excavation began with the clearance of

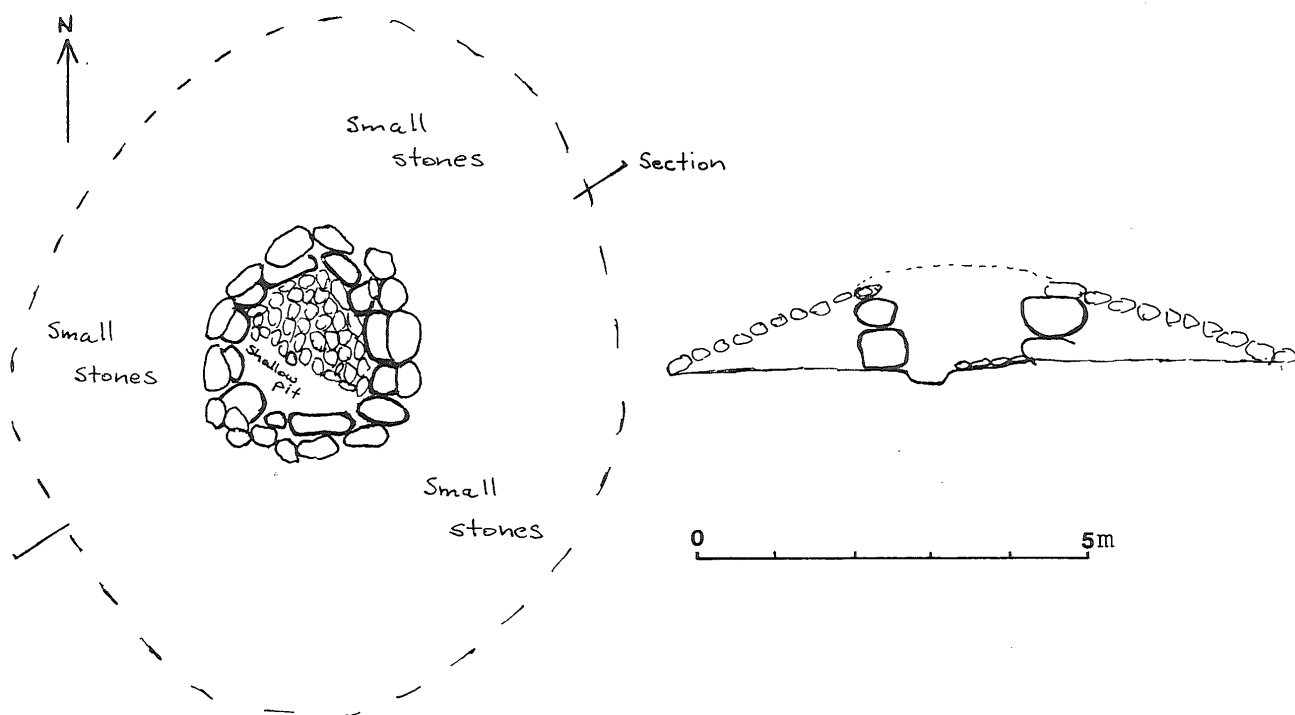


Figure 2b. Sketch plan and section of cairn #2 after excavation.

the loose rocks from the top of the cairn in an attempt to define the burial chamber. This was difficult and not immediately successful, probably because the upper part of the cairn had been disturbed when later burials were made in it. As excavation proceeded, however, the chamber was more clearly defined.

Immediately below the surface rocks was a layer of fine, powdery, wind-blown soil some 20-30cm in depth. This was filled with the skeletal remains of rodents, snakes and birds, rodents being the most common. After some 20cm fragments of human bone began to appear, apparently having been much disturbed, perhaps by the vast number of rodents which appear to have occupied the cairn over the centuries. These bones were mostly fragmentary and in a poor state of preservation, probably as a result of having been so close to the surface and of disturbance by animals. No complete skeleton was preserved. These burials were almost certainly intrusive.

At a depth of about 50cm below the original cairn top the nature of the soil altered dramatically. The loose, wind-blown sand was replaced by a very hard, compacted soil, in which were many rocks, as previously, together with more snake and rodent bones. Also encountered now were scores of ovoid nests, apparently those of beetle pupae. These consisted of hollows in the ground surrounded by a very hard outer shell, presumably formed by secretions from the beetles. Often these were found to be amongst the bones, cemented to them or to the surrounding soil. This often made the excavation of the already fragile bones very difficult. Presumably these beetles were carrion feeders which had entered the cairn in search of food.

In this hard, dry soil were found the badly preserved skeletal remains of four individuals, together with a number of objects. The immediate impression formed was that of the disorder of the bones. It was quite impossible in most instances to discern any articulation or order in them, mingled as they were with rocks, animal bones and beetle nests, all concreted into the soil. The extreme hardness of the soil, which increased as digging proceeded, made the recovery of the bones intact almost impossible. The problem was compounded by the fact that many of the bones appeared to have been partially crushed by the weight of soil and rocks above them. What was readily apparent, however, was that the remains had either been disturbed in antiquity or else interred in a state of partial disarticulation. The activities of rodents may have added to this disturbance. Despite this there was evidence that sufficient cartilage had remained to maintain the articulation of at least some of the bones when they were either disturbed or interred in partial articulation. For example, at a depth of 60cm was found the pelvis of a young female (17-20 years) still in articulation with the left and right femura and the lower vertebra. Alongside these were the left radius, ulna and hand bones of the same individual. However, none of the other bones of this skeleton were found in articulation. The position of these bones indicated that the body had been placed face down with the left arm alongside the body. Just to the west of these bones (which were oriented north-south) and at the same level were four articulated vertebrae of the same individual, oriented east-west. A fragment of the skull was found beneath the vertebra and was to the west. In contrast to these articulated bones a jumble of bones was found at the same level

but slightly to the south of them. Here were a part of a skull of a second person, the left half of a mandible, an assortment of fragmentary long bones and a few other fragments together in a heap. Together with these jumbled bones were a few pieces of copper wire and small pieces of sheet copper. These may have been elements of personal adornment. Also found were two stone beads, a shell pendant and part of a broken iron loop, perhaps a bracelet.

These two burials had been placed on an irregular pavement of stones which sloped down slightly towards the west and south-west. Rocks had apparently been piled on and around these two bodies. A few fragmentary bones of an infant were also found here.

In the western part of this chamber, to the west of the stone pavement and probably cutting it, was a shallow pit extending some 20-25cm below the pavement level. In this was a third individual, a female, of middle age, placed directly on virgin soil and oriented northwest - southeast. Bones of this skeleton were in a very friable state and were not found fully articulated. These were found between 80cm to 1.10m below surface. The skull was possibly to the northwest, although the evidence is unclear. The body was so oriented that the skull should have been to the southeast but the only evidence for it here were some fragments found at a depth of between 60 to 70cm. On the other hand, in the northwest part of the chamber, at the level of the rest of the remains of this individual, were found a few skull fragments and a number of teeth. These, however, would have been by the feet.

6. Ibid.

Oriented to the southeast were the bones of the pelvis, torso and arms. The skull fragments by the feet may have belonged to one of the upper burials which had found their way into the pit when this was dug.

Associated with the torso of this individual were a bronze eye make-up applicator, a twisted bronze bracelet, several small fragments of bronze, an iron buckle, two small beads, one of glass and the other of shell, and possibly a scarab, although the exact context of this latter item is uncertain.

The burials represented in this cairn were as follows:⁶

a) Intrusive, later burials:

1. One female of 23-27 years.
2. One child of 5-8 years.
3. One male, age uncertain.

b) Earlier burials:

1. Male of 40-55 years (on stone pavement).
2. Female of middle age (in pit).
3. Female of 17-20 years (on stone pavement).
4. Infant (on stone pavement).

The positioning of burial b 2. and the evidence of the objects found with the skeletal remains, suggests that this was the principal burial. This we tentatively identify as the remains of HRJ bnt GT. The male found on the stone pavement may have been an individual named as NSR in the inscriptions (see below, Nos. 626, 627, 636), and perhaps the brother

grieved for by the author of No. 618. The young woman may perhaps be the FDWT of No. 638. Identification of course cannot be certain but the association of burials, objects and inscriptions relating to the cairn and to burials allows at least a tentative identification to be made. HRJ bnt GT appears to have been a middle aged woman, evidently of some standing in

the tribe of TM. The identification of NŠR is made on the grounds that the remains of individual b) 1. are the only ones of a male available in the earlier burials. FDWT, if the identification is correct, was a young woman who died just after childbirth. The relationship between these individuals is in no way indicated by the inscriptions.

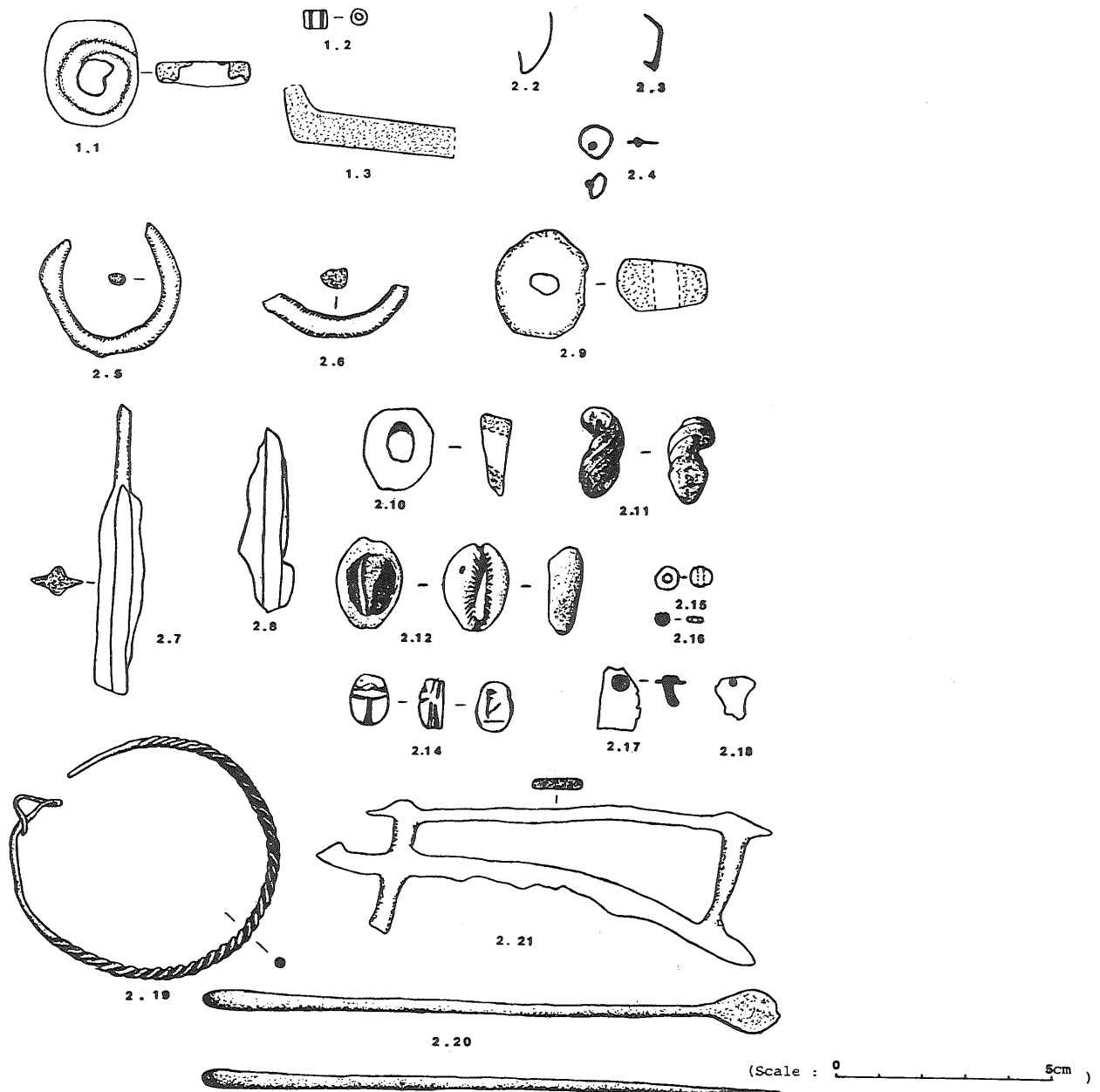


Figure 3. Stratigraphic profile of trench at Site J2. Vertically barred zones represent carbonate lenses.

The Objects.

The number of objects found was not large. Most came from the cairn of HRJ. They are itemized here. (Fig. 3 and Pls. LXIX, 1 - LXIX, 2).

Excavation No.	Item	Description	Provenance
1.1	Shell bead		Cairn No 1.
1.2	Faience bead	Cylindrical, with two Cylindrical, with two external grooves. Length 5.5mm, Diam. 4mm, Interior diam. 2.2mm.	Cairn No 1.
1.3	Fragment of stone bowl.	Grey schist. Diagonal tooling marks on exterior.	Cairn No 1.
1.4	Two worked flints.		Cairn No 1, in soil fill.
2.1	Two fragments of thin bronze sheet.		Cairn No 2, east side, depth 50cm.
2.2	Bronze wire.	Bent fragment, perhaps part of per- sonal ornament.	Cairn No 2, east, depth 55cm.
2.3	Bronze wire.	Bent fragment, becomes broad and flat at one end. Perhaps part of personal adornment.	Cairn No 2, east, depth 55cm.
2.4	Two bronze discs with cen- tral iron stud, one broken.	Roughly circular, Diam. 7.5mm, sec- tion 0.5mm; iron stud diam. 2mm, length 2mm.	Cairn No 2, east, depth 60cm.
2.5	Curved iron object.	Two pieces, broken, forming part of loop, irregular. Diam. 3.2cm. Diam. of section 3mm.	Cairn No 2, cen- tre, depth 60cm.
2.6	Curved iron fragment.	Part of loop, similar to previous but slightly larger; diam. 4.6cm. Diam. of section 4.5mm.	Cairn No 2, south, depth 80cm.

Excavation No.	Item	Description	Provenance
2.7	Iron arrow or javelin head.	Blade broken.	Cairn No 2, centre, depth 80cm.
2.8	Iron arrow or javelin head.	Broken.	Ditto.
2.9	Bead.	Yellow glass, polished, pitted surface, asymmetrical; 2.4 by 2.1cm by 1cm (av.) thick.	Cairn No 2, centre, 60cm.
2.10	Bead (?).	Irregular shaped black stone with hole in centre. Not worked but probably used as bead. Basalt with oxidized surface.	Cairn No 2, centre, 60cm.
2.11	Shell pendant.	Central spiral of marine mollusc shell, pierced at one end.	Cairn No 2, centre, 60cm.
2.12	Cowry shell.	Back removed, probably bead.	Cairn No 2, south, 75cm.
2.13	Two worked flints.		Cairn No 2, east, 50cm, probably intrusive.
2.14	Scarab.	Faience, pierced, weathered.	Cairn No 2, north-west, level uncertain (60-80cm).
2.15	Bead.	White glass, damaged, collared barrel. Length 5mm, diam. 5.5mm, diam. of hole 1.75mm.	Cairn No 2, south, 1.05m.
2.16	Bead.	Shell. Length 1.25mm, diam. 3mm, diam. of hole 1.25mm.	Cairn No 2, south, 1.05m.
2.17	Bronze piece.	Fragment of copper sheet with iron stud at one end.	Cairn No 2, south, 1.00m.
2.18	Bronze piece.	Ditto.	Ditto.
2.19	Bronze bracelet.	Four strands twisted around central iron core. Looped at one end.	Cairn No 2, south-west, 1.10m.

Excavation No.	Item	Description	Provenance
2.20	Bronze epatula.	One end flattened, the other thickened. Length 13.4cm.	Cairn No 2, south, 60cm, in chamber wall.
2.21	Iron clamp.	Broken. Two parallel strips joined by two rivets.	Cairn No 2, west, 1.10m.
2.22	Flints (Two).		Cairn No 2, west, 60cm, probably intrusive.

These objects present little, if any, firm evidence for the dating of the burials. Even the evidence of the scarab and the copper objects is equivocal.

The scarab may be evidence of contact between the Safaites and Egypt, either direct or through some intermediary. Unfortunately, however, its dating value is minimal. It may have become the property of the deceased as an heirloom, as booty, or through trade. The date of manufacture may have long preceded that of its interment with the burial. The design it bears appears to be that of a seated figure, probably a goddess, perhaps Ma'at. Exact dating

of its manufacture is impossible, but this is certainly much earlier than the probable Late Roman - Early Byzantine date suggested for the cairn. Perhaps a date of seventh-fifth centuries B.C. would be appropriate.⁷ The material is mould made faience, pale green in colour.

The bronze bracelet (No. 2.19) consists of a core of unidentified metal (iron?) with four strands of bronze twisted around it. It is twisted into a loop at one end to form the fastening. Many parallels to this can be pointed out in the area of the Levant from Roman - Byzantine times. This example is similar to ones found at Amman⁸ and at Dhibon.⁹

7. Thanks are expressed to Miss Olga Tufnell and to Prof. William A. Ward for their helpful comments regarding this scarab. Ward (private communication) would suggest a possible date of 7th-5th centuries B.C. and states that the scarab is of a type common in the Mediterranean world in the middle of the first millennium B.C.. Remarks printed here represent the opinion of Vincent A. Clark.

8. G. Lankester Harding, "A Roman Family Vault on Jebel Jofeh", in *QDAP*, 14, 1950, p. 81-94

and Pls. XXIV-XXXI. See reg. nos. 245, 255, 257, 272, 285 etc.. These are not exact parallels. They are probably 2nd century A.D.

9. A.D. Tushingham, *The Excavations at Dhibon (Dhibān) in Moab. The Third Campaign 1952-53.* AASOR, Vol. XI, 1972. Pl. XXXV. 12, 15, 35, 36 and Fig. 28, 5, 13, 16, all from tombs in Area K, described by the excavator as "though not specifically Christian, are probably no earlier than the late fourth century," (p. 115).

The spatula (No. 2.20), with a shaft thickened at one end and flattened into an oval disc at the other, can likewise be paralleled in the Roman - Byzantine periods. For example at Amman,¹⁰ Pella,¹¹ and at Samaria.¹² Unfortunately it is impossible to be more precise with the dating of these objects than probably Late Roman - Early Byzantine.

The cowry shell (No. 2.12) with back removed is likewise a common find in Levantine tombs of the Roman - Byzantine period but are known from at least as early as the early Iron Age.¹³ The glass beads (Nos. 2.9 and 2.15) are typically Roman, especially the collared barrel bead, No. 2.19.

The flints (Nos. 2.13 and 2.22) appear to be intrusive. They are very similar to the many flints which are to be found all over the surface outside the cairns, and indeed all along the eastern edge of the harra. They are probably Upper Paleolithic - Epipaleolithic in date suggest that the area was populous and more hospitable in prehistoric times. A small group of these surface flints, from around Cairn No 1, are shown on Fig. 4.

The Inscriptions: (Figs. 5 & 6).

A total of 56 texts were found on the rocks

- 10 G.L. Harding, *op.cit.*, Reg. no. 253.
11. R.H. Smith, *Pella of the Decapolis*, Vol. 1.
The College of Wooster, 1973, Pl. 66. 1052, 1053.
These examples are Late Byzantine, 6th-7th centuries A.D.
12. J.W. Crowfoot, G.M. Crowfoot, K.M. Kenyon, *Samaria - Sebaste III - The Objects from Samaria*, London 1957, Fig. 100. 25.
13. G.L. Harding, *op.cit.*, No. 430; A.D. Tushingham,

around cairn No 1 but none of these relate specifically to either the cairn or its occupants.¹⁴

From the second cairn (No 2), that of HRJ, a total of 95 texts were recorded in 1976¹⁵ and of these 12 may relate either to the cairn or its occupants. These are given here. In addition to these a further 6 inscriptions, which were not recorded in 1976, were discovered during the course of this expedition and have been presented here as a supplement to CNSIJ. None of these appear to relate to the burials but were found either in or near the cairn.

Those texts which relate to HRJ, especially CNSIJ 620 - 622, make it clear that the cairn should be interpreted as a burial monument to this individual, who was evidently an important woman of the well known Safaitic tribe of TM. In addition, CNSIJ 626 and 627 tell of the authors' grief for a certain NŞR, while at the same time they "build for" (*bny*) HRJ. As already noted, perhaps this NŞR was the second of the earlier burials in this cairn, possibly the middle aged male. The reference in CNSIJ 638 to a certain FDWT may identify the third of the earlier burials, possibly the young woman.

a. Inscriptions from CNSIJ relating to the cairn or the burials.¹⁶

- op.cit.*, Pl. XXXVI. 15.
- P.B. Bagatti & J.J. Milik, *Gli Scavi Del "Dominus Flevit"*, Parte I, La Necropoli del Periodo Romano, Jerusalem 1958, Fot. 127. 31.
14. CNSIJ 554-610.
15. CNSIJ 611-706.
16. Only those inscriptions which appear to relate directly to the cairn or the burials have been reproduced here. Where other texts were on the same rock these have been omitted.

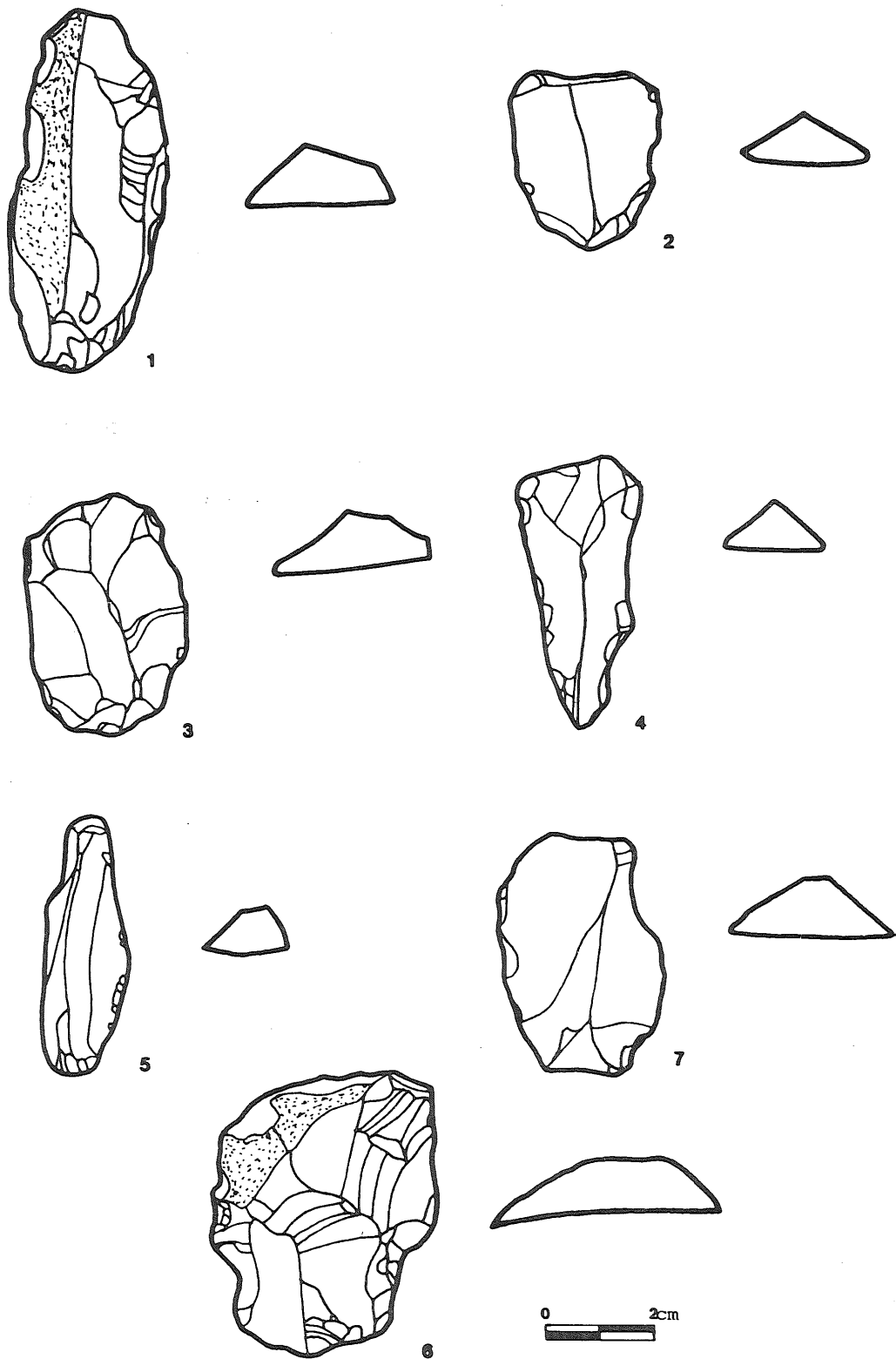


Figure 4. Topographic map of Site J8 showing cave and locations of test units. Note contours appear as below datum "0" readings.

CNSIJ 618 *l wqs whwb 'l 'hh* (Pl. LXX, 1)
By WQS, and he grieved for his brother.

For the expression *hwb 'l* with the meaning "to grieve for" see WH 73. The identity of the brother here is not known but it may be that it is NSR, mentioned in CNSIJ 627 and 628.

The inscriptions 620, 621 and 622 are almost identical texts. Nos. 620 and 621 are on the same stone and No. 622 is on an adjacent one. All three were inscribed by different hands "for HRJ", an individual who was clearly a woman. The content of these texts, and of others from the cairn, make it clear that this was a cairn erected for HRJ, the only one as yet discovered which belonged to a woman.

620. *l hrj bnt ḡt d' l tm whrjm* (Pl. LXX, 2).
For HRJ daughter of ḠT, she of the tribe of TM, and this is the (her) cairn.

HRJ is a name attested in Saf. and Lih. but it is nowhere found as the name of a woman. The 3rd person feminine demonstrative pronoun *d't* occurs here for the first time in Saf.; it is equivalent to the Ar. *dāt*; the expression *d't 'l* replaces the commonly found masculine form *d'l*. The same pronoun recurs in the two following texts. The expression *whrjm* has the sense "and this is her cairn", the *h* having demonstrative force. An alternate interpretation would be that *hrjm* represents a 4th form verb with the sense "a cairn was erected". It should be noted that the two following texts merely read *wrjm*. The occurrence of a 4th form verb

prefixed by *h* is not attested, nor is the use of *rjm* as a verb. In all three of these texts the authors remain unknown.

621. *l hrj bnt ḡt d't 'l tm wrjm* (Pl. LXXI, 1).
For HRJ daughter of ḠT, she of the tribe of TM, and a cairn (was built).

The letter *ḡ* of the name ḠT here resembles the letter *ṣ* but there can be no doubt as to the reading. The scribe began to inscribe the *ḡ* of this name immediately following the *bn* of *bnt* but, realising his mistake, wrote *t* instead, without bothering to erase the beginnings of the incorrect letter. As a result traces of this can be seen on the stone and the letter *t* is not aligned to the rest of the text.

Nos. 622 - 624 are on the same stone. (Pl. LXXI, 2).

622. *l hrj bnt ḡt d't 'l tm wrjm*
For HRJ daughter of ḠT, she of the tribe of TM, and a cairn (was built).

623. *l bn 'tm bn 'dr wwjm wbný 'l hrj*
By BN'TM son of 'DR, and he grieved and he built for HRJ.

624. *l ht bn bn'tm bn dr wbný 'l hrj*
By BN'TM son of 'DR, and he grieved and he built for HRJ.

The name HT is attested only in the Had. text J. 892/7 (HIn 608); see the Ar. *hatta*, "to lie, mix", or perhaps *hāta*, "to be excited, confused". This text would appear to be by the son of the author of the previous one. However, here the name of the grandfather is given as

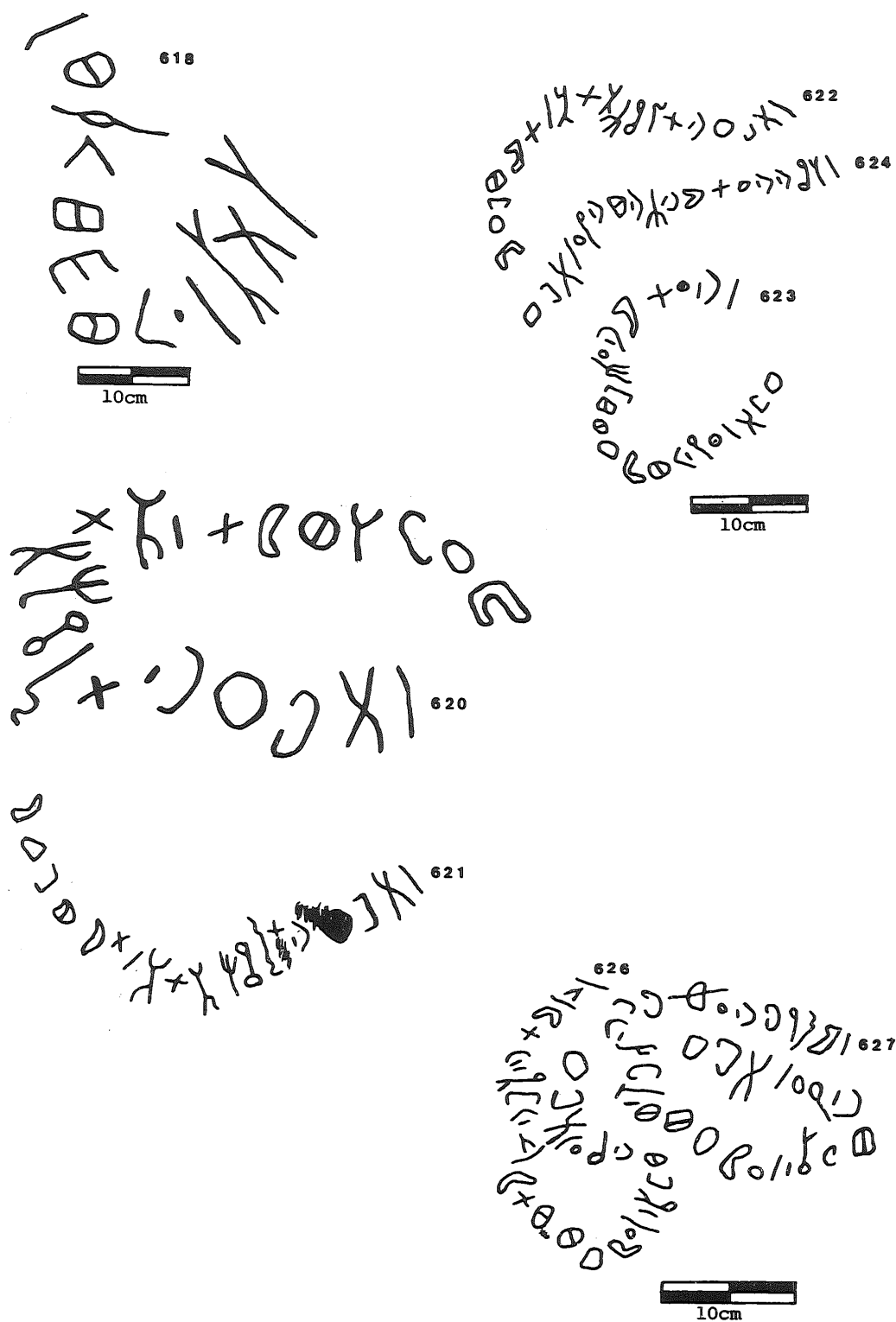


Figure 5. Stratigraphic profile of selected test units at Site J8.

DR, while in the previous text it is 'DR. Both readings are perfectly clear. One may assume that one of the texts contains an error, probably the present one.

Nos. 626 & 627 are on the same stone. (Pl. LXXII, 1).

626. *l slmt bn nṣr bn slmt wwjm 'l nṣr
wbny 'l hrj*
By SLMT son of NṢR son of SLMT,
and he grieved for NṢR and built
for HRJ.

It is suggested here that NṢR was also buried in this cairn, along with HRJ.

627. *l mgyr bn 'qrb bn krzn wwjm 'l nṣr
wbny 'l hrj*
By MGYR son of 'QRB son of KRZN,
and he grieved for NṢR and he built
for HRJ.

Nos. 631 & 632 are on the same stone. (Pl. LXXII, 2).

631. *l qymt bn msk bn w'l. wbny 'l hrj*
By QYMT son of MSK son of W'L,
and he built for HRJ.

632. *lmḥrb bn 'ḍr wbny 'l hrj*
By MḤRB son of 'ḌR, and he built
for HRJ.

636. *l slmt bn nṣr wbny 'l hrj* (Pl. LXXIII, 1)
By SLMT son of NṢR and he built
for HRJ.

This appears to be by the author of No. 626, in which the author also "built for HRJ".

638. *l ḡlb bn ḥrd wwjm 'l fdwt*
(Pl. LXXIII, 2).

By ḠLB son of HRD, and he grieved
for FDWT.

The name HRD is known only from WH 2833a, while FDWT is new; see the Ar. *faḍā*, "to be broad, empty".

- b. Inscriptions recorded in 1980, not included in CNSIJ.

1. *l 'lh bn hmsk* (Pl. LXXIV, 1).
By 'LH son of HMSK.

Nos. 2 & 3 are on the same stone. (Pl. LXXIV, 2).

2. *l 'ḥsn bn 's bn bddh wwlv 'l 'bh 'sr*
By 'ḤSN son of 'S son of BDDH, and
he was dejected with grief for his
father (who was) taken captive.

This text is by a brother of the author of the following one. ISB 115, 116, WH 2530 and SIJ 1009 may also be by his brothers, while WH 2507 and 3841 may be by his father.

For the word 'sr see C 2292 and WH 1675.

This may be either a noun or a passive of the verb 'asara, "to take captive".

3. *l ṣkr bn 's bn bddh wns l mdbr*
By ṢKR son of 'S son of BDDH, and
he fled to the desert (?).

This appears to be by the same author as ISB 116. The translation of the expression *ns l mdbr* is uncertain. In WH 580 the expression *ns l mdbr* is found and is translated "he hastened to the desert". If we were to assume assimilation of the final radical of *ns l* with the preposition *l*

we could translate the present text in a similar fashion. It may be, however, (as read here), that we should read this as a verb, *ns* followed by a preposition, *l*. This would equate with the Hebrew verb *nws* "to flee" (M. Jastrow, Dictionary of the Targumim, the Talmud Babli and Yerushalmi and the Midrashic Literature (New York, 1950) p. 888). In C 1362 and 4325 is the expression *ns l šn'*, which the editor has rendered as "et surripuit se (ab) hoste", understanding *ns l* to be the 7th verbal form of the verb *salla*. This seems unlikely, firstly as the 7th form is not well attested in Safaitic and, secondly, as one would expect this verb to be followed by a preposition. Perhaps both C 1362 and 4325 should be read *ns l šn'* "he fled to an enemy" (reading *ns l* as in the present text) or "he moved back and forth to an enemy" (cf. the Arabic *nāsa*, "to move to and fro").

Nos. 4 & 5 are on the same stone.

(Pl. LXXV, 1).

4. *l 'd bn ' 'sd*
By 'D son of ' 'SD.

5. *l kšdyt bn j 'tm*
By KŠDYT son of J 'TM.

KŠDYT is a new name, comprising the elements K + ŠDYT, the latter of which is likewise new, although both KŠDY and ŠDY are attested.

6. *l mlkt bn 'wḏ* (Pl. LXXV; 2).
By MLKT son of 'Wḏ.

This inscription was found on a stone which had been built into the cairn structure on the east side.

Discussion.

For some time now the nature of the so-called "Safaitic cairns" has been a cause for debate, both archaeological and linguistic. The archaeological debate has been centred upon the question of whether or not the cairn structures are Safaitic burial monuments, or indeed burial monuments at all. This question is linked to the linguistic problem - what exactly do the two words most commonly associated with the cairns, *wjm* and *bny*, really mean and can they be linked in any way to the cairns?

A very large number of the known Safaitic inscriptions have come from, on, or around cairns similar to those excavated. As cairns in the Arabian and Syrian deserts usually were constructed over burials it was naturally assumed that those cairns surrounded by Safaitic inscriptions were Safaitic burial monuments. This assumption seems reasonable enough to anyone who has worked with the inscriptions of the region, as in many cases inscriptions are to be found only near cairns.

G. Lankester Harding was the first to attempt to link the inscriptions at such a cairn to archaeology by carrying out the excavation of the "Cairn of Hani", in 1951.¹⁷ Inscriptions from this site, 15km to the east of H5, make it appear fairly certain that this cairn was indeed the burial place of this Hani'. In 1959 Harding excavated two more cairns, to the northwest of H4, near Burqu'. Inscriptions here suggested that a certain S'D bn ŠBH was buried in one of these. Indeed one cairn did contain human remains but the other was empty.¹⁸

17. G.L. Harding, "The Cairn of Hani' ", op.cit..

18. G.L. Harding, "The Cairn of Sa'd", op.cit..

Inscriptions at the cairn of Hani' containing expressions such as *bn̄y 'l hn' hr̄jm* (HCH 26), *l hn' hr̄jm* (HCH 1,2), and the commonly occurring *bn̄y 'l hn'* and *wjm 'l hn'* make it quite clear that the cairn is the burial site of Hani'. Similar expressions at the cairn of S'D bn ṢBH likewise confirm that identification. See especially WH 410 and 421, which contain the expression *w bn̄y 'l s'd hr̄jm*. At cairn No 2, described above, the inscriptions make it clear that the cairn was erected over the remains of *HRJ bnt ḠT*. See especially CNSIJ 620-622. The references to NSR and to FDWT do not necessarily imply that these two were buried here but the discovery of two other individuals in the cairn does suggest that they may have been interred here also. These two were probably buried before *HRJ* and may have been related to her. The relationship of the later, intrusive burials to these earlier ones and to the inscriptions is obscure. It is possible that they postdate the Safaitic tribes.

In the case of many of the Safaitic inscriptions sites, despite the presence of the texts near a cairn, the absence of any references in these which might relate to a burial at the site would suggest that not all of the cairns do cover burials,¹⁹ or that not all of the cairns are to be attributed to the Safaitic peoples. Of course it should be remembered that the practice of erecting cairns over the dead was not unique to these people nor to any one period of time. Thus some of the cairns may be earlier and some later than the Safaites, or they may have reused earlier cairns or had their own reused in turn.

A. Jamme has suggested that as yet there is no proof that any cairn in this region was a Safaitic burial structure. He claims that.

"No text found so far alludes, directly or indirectly, to a tomb. The expression *wgm 'l*, 'he has mourned over', could hardly refer to a tomb; it is the simple account of a human being grieved by the death of some of his relatives or friends. Even the expression *bn̄y 'l*, 'he has built upon', does not allude to a tomb either. in my opinion, this expression merely describes the writer as 'building' a cairn to the memory of some deceased persons. However, the actual size of such a cairn remains unknown, and we have no proof that these Safaitic commemorative cairns are still standing."²⁰

Jamme's comments about these two expressions are valid. *wjm 'l* indeed makes no reference to a tomb, while *bn̄y 'l* may relate to the building of almost anything. But when the two are found in conjunction then it seems clear that the author's building activity was in some way linked to his grief. When such texts are found around a cairn and the grief and building activities are all directed towards one person, then it seems that we must accept that the cairn was constructed in commemoration of the individual named. This is further clinched by the references to the cairn itself, that is *hr̄jm*, being that of the individual named.²¹ For Jamme to assert that "the actual size of such a cairn remains unknown" and that "we have no proof that these.... are still standing" is simply turning a blind eye to the existing

19. As for instance, Cairn A at the Cairn of Sa'd.

20. A. Jamme, "Safaitic Inscriptions from the Country of 'Ar'ar and Ra's al- 'Anāniyah",

in F. Altheim and R. Stiehl, *Christentum am Roten Meer*, I, (Berlin, 1971), p.42.

21. See G.L. Harding, *op.cit.*, p.246.

evidence. Finally, we need not always expect to find a burial cairn at sites where these expressions occur, because, as Jamme himself notes, they do not necessarily refer to a tomb.

Jamme also denies that there is any archaeological evidence that the cairns are Safaitic burials. With regard to the cairn of Hani' he claims that the preservation in this of perishable materials, such as hair, wood and copper, is evidence that the cairn cannot be pre-Islamic in date.²² Harding has already noted that there is nothing unusual in their preservation,²³ such matters being determined not simply by length of time in the ground but the physical circumstances in each case. Furthermore, it may be noted that, in the case of the cairn of Hani', it could be considered as more than a little unusual to find a burial cairn of the Islamic era located at precisely the same spot as a Safaitic inscription site, as this cairn is the only landmark in an expansive, empty basalt plain. Jamme himself claims to have investigated a cairn in the region of 'Ar'ar,²⁴ where he found no human remains or artifacts. His description of this is brief:

"The most orderly cairn I have seen is the first site visited by the expedition, and located at the edge of the cliff west of the pipeline mark 616.02. The almost circular wall is about 1m. high and approximately 4m. in diameter, and the stones are rather well set together. The inside is a disorderly pile of stones. In the lower half of the height of this pile, there

is an accumulation of sand that has sifted down between the rocks and has hardened by the rain. All soundings ended on the rocky ground."²⁵

This description gives no indication as to the presence or otherwise of inscriptions at the site and does not specify the nature of the "soundings" which he claims to have undertaken. The complete absence of human remains may be explained by the nature of the cairn itself, located on the ridge top. If, as the writer suggests, the cairn was originally no more than a "disorderly pile of stones", into which sand later drifted, then it may well be that any human remains were thoroughly dispersed and destroyed within a short time by the actions of environment and of animals and insects. Thus this sounding alone cannot be taken as proof that the cairns were not burial monuments.

With regard to the objects found in the cairns excavated to date, there is little that would suggest a firm date for them. In the case of that of both Hani' and S'D bn ŠBH, no datable objects were found at all. However, with the cairn of HRJ we are on slightly more certain ground, although precision is impossible. The style of the twisted bracelet and of the spatula suggests a Late Roman to Byzantine date, which would agree with the time during which it is assumed the Safaites inhabited the region.

Jamme states his further belief that the cairns were "landmarks or rally signs"²⁶ or

22. A. Jamme, "L'article de A. van den Branden sur l'expression safaitique 'tm 'l hr", in *Al-Machriq*, Vol. 64, 1970, p. 324.

23. G.L. Harding, *op.cit.*, p. 246.

24. A. Jamme, "Safaitic inscriptions from the country of 'Ar'ar...", p.42.

25. *Ibid.*

26. *Ibid.*

were groups of stones piled up in a heap when the ground was cleared to form some ancient encampment. He asserts

“L’emplacement même de la plupart des cairns définit leur fonction: ils sont des points de repère pour les bedouins. Les autres sont des restes d’un campement des nomades,”²⁷

W.G. Oxtoby has made a similar observation, comparing the cairns which occur along the eastern edge of the harra to “lighthouses”, providing landmarks to caravans.²⁸ If indeed these did serve such a purpose it is most unlikely that they were initially intended to be such. Rather, having been constructed as burial monuments, their prominence in the landscape has inevitably made them landmarks. As noted

by Harding, the bedouin of the region do not require such guides, or rally points, to aid them in their travels.²⁹

To conclude, it seems certain that the Safaitic bedouin did indeed practice cairn burial in the deserts of Jordan, and many of these sites are distinguished by large numbers of Safaitic inscriptions. A good example of such a burial has been provided by the cairn of HRJ bnt GT. Like the inscriptions themselves, the cairns when taken individually have provided us with only very limited data. Thus it is hoped that in future days more of these cairns can be investigated so that a firmer link may be established between the inscriptions and the archaeological remains of these people, and between the nomads and the settled people of the day.

27. A. Jamme, “L’article de A. van den Branden sur l’expression safaitique ’tm ‘l hr”, in *Al-Machriq*, Vol. 64, 1970, p. 323.

28. W.G. Oxtoby, *Some inscriptions of the Safaitic Bedouin*, American Oriental Series, Vol. 50, (American Oriental Society, New Haven,

1968), p. 33-34.

29. G.L. Harding, “The Cairn of Sa’d”, *op.cit.*, p. 246. See also V.A. Clark, “New Epigraphical Material from the Harra Region of Jordan”, in *ADAJ*, Vol. XXI, 1976, p.114.

ABBREVIATIONS.

AASOR	Annual of the American Schools of Oriental Research.	ISB	G. G. Oxtoby, Some Inscriptions of the Safaitic Bedouin, New Haven 1968, (American Oriental Series No. 50).
ADAJ	Annual of the Department of Antiquities, Jordan.		
C	Corpus inscriptionum Semiticarum, Pars V, Inscriptiones saracenicae continens, Paris 1950.	J	South Arabian inscriptions published by A. Jamme (see HIn, p.xix for a listing).
CNSIJ	See footnote 1.	Lih	Liḥyanite.
Ḥad	Ḥadrami.	QDAP	Quarterly of the Department of Antiquities, Palestine.
		Saf.	Safaitic.
HIn	G. Lankester Harding, An Index and Concordance of Pre-Islamic Arabian Names and Inscriptions, Toronto 1971.	SIJ	F.V. Winnett, Safaitic Inscriptions from Jordan, Toronto 1957.
		WH	F.V. Winnett and G. Lankester Harding, Inscriptions from Fifty Safaitic Cairns, Toronto 1978.

APPENDIX

Comments on the Human Remains from Two Pre-Islamic Cairns

by

Scott Laird Rolston

The bone sample recovered by Dr. Clark and Dr. MacDonald is small and fragmentary. The material is in very fragile condition as well and required that certain observations be made in situ.

After the excavation, the plotted bone bags were laid out on a table top in order to approximate the relationship their contents had in the ground. Every possible metric and non-metric observation was made.

All metric measurements and indices, except overall stature estimates, are in millimeters.

Cairn No 1 (Dr. MacDonald)

The remains of two individuals were found in this cairn, one original burial (Burial No 1) and another (Burial No 2), apparently intrusive, which had disturbed the original burial. The bones of No 2 are in better condition than No 1, in addition to being articulated. No 1 had been moved to one side during the inhumation of No 2.

On the whole the bone materials from both burials in this cairn are better preserved than are those from cairn No. 2, perhaps reflecting the better drainage situation.

Burial No 1 (The original occupant)

Sex: Male

Criteria: Pelvic fragments and general post-cranial robusticity.

Age: 30-45?

Criteria: Degree of vertebral arthritic lipping (very slight, on one centrum only),* tooth wear (present but not severe), and alveolar resorption due to periodontal disease (also present but not severe). Only three teeth were preserved but they showed no decay and very little tartar.

Stature: 163.05 + 5.31 cm

Criteria: Right humerus stature increment 2-3 (Steele, 1970)**

* In the bedouin bones I have seen to date, arthritis seems to set in males somewhat earlier than is usual in populations for which statistics concerning this point are in print, (e.g. Stewart, 1958). Tooth wear can also be considerable in desert dwellers. These two considerations prompted a lower age estimate than I might otherwise have given.

** the figures from Steele (1970) used here are those for white males, as the body proportions are more likely to be in proportion with them than with blacks. No studies of stature estimation for Near Eastern populations exist as yet, so the \pm qualification should be taken seriously.

Pathology: A) Some parietal bossing of undetermined cause.***

B) Strong arthritic lipping of a single left first metatarsal, apparently due to traumatic injury.

Metric and non-metric observations

Cranial: Parietal thickness, 6mm

Mandibular: No caries, some (+) wear, some alveolar resorption (+), little tartar, wear plane flat.

Post-cranial: Right humerus
Stature increment 2-3, 240mm
Midshaft maximum diameter 24mm
Midshaft minimum diameter 19.5mm
Least circumference 69mm
Robusticity (+)
Supra-condyloid foramen (+)

Sacrum
Breadth 115.5mm
Height 107mm

Sacral index 145.32 ± 5
(see: Wilder, 1920)
Sacral hiatus (+)

Left Femur
Maximum head diameter 44 mm*
Vertical neck thickness 34 mm
Neck A-P 22 mm

Left Tibia
Nutrient A-P 34.5 mm
Platycnemic index 66.66 (Mesocnemic)
Nutrient M-L 23mm

Right Talus
Height 31mm

Right calcaneus
Maximum length 85mm
Maximum height 48.5mm

In summary, the remains from burial No 1, cairn No 1 represent an adult male of average robusticity and an estimated stature about that of modern bedouin and somewhat less than that of early 20th century Palestinians (see: Henry Field, 1958, p. 237).

Burial No 2 (The intrusive occupant)

*** Henry Field (1956) notes parietal bossing in a number of ancient populations in the Near East, both urban and village dwellers, though no nomadic remains have survived in any quantity. It seems likely that this is a nutrition-related phenomenon. Those interested in malnutrition and its effects upon bone are referred to Manocha (1972) and Steinbock (1976).

* Stewart (1979, p. 120) would not consider this to be within the male range, but sex = ?. He cautions, however, against the use of indices prepared for European or American populations elsewhere. Research I am currently engaged in concerning the metric sexing of Neolithic populations suggests that a considerable downward shift in the range is in order for primitive societies and I therefore feel safe in placing a 44 mm measurement in the male category.

Sex: Male

Criteria: Fragments of the pubis, cranial robusticity, especially the external occipital protuberance, superior aspect of the mandible, head diameter of the femur and humerus

Age: 40-55

Criteria: Cranial suture closure, tooth wear, arthritic degenerative change on several vertebral fragments, a small fragment of pubic symphysis

Stature: A) 162.9 ± 4.41 cm

Criteria: Left femoral stature increment 2-3 and 3-4 (Steele 1970*).

B) 164.6 ± 4.41 cm

Criteria: Right femoral increments 2-3 and 3-4.

Pathology: The stature discrepancy between the left and right femora may represent the results of partial disuse atrophy of the left leg. The head of the left femur shows eburnation striations in conjunction with a raised, flat eburnated surface (approx. 11 mm diameter) on the superior aspect. The anterior surface of the head is pitted and the wear striations are oriented medio-

laterally over the head as though the person was forced to step side-ways in order to avoid the friction and pain that a normal tandem step would produce. These are degenerative changes common in osteoarthritis, though the condition of the left femur is further affected by an apparently independent infection of the upper diaphysis and metaphysis where periostitis is in evidence both anteriorly and posteriorly. The osteoarthritic degeneration of the right femur is much less, but the condition is nevertheless bilateral. The right proximal femur also shows signs of increased mechanical stress, expressed in several millimeters of diameter increase, as is to be expected when one leg must compensate for another.

The vertebral column is also affected by varying degrees of vertebral osteophytosis, slight in the cervical region and moderate in the thoracic and lumbar.

The right radius is affected by arthritis, though the left bones have not survived and it is therefore impossible to determine whether the condition was bilateral in the arms as well. The right ulna is slightly affected.

* Increment 2-3 of the left humerus yielded a stature

estimate of 161.3 ± 5.31 , using the same tables.

The 5th (?) right rib shows signs of a healed fracture distally. Only a few rib fragments were recovered and we were unable to ascertain whether such fractures were a commonplace occurrence for this person.

The oral pathology is considerable, with +++* alveolar resorption visible on the mandible. Unfortunately none of the face was recovered and the mandibular fragments that were recovered were in very poor condition. Nevertheless it is plain that this person suffered from a degree of carious destruction and periodontal disease unusual in modern bedouin. Of the mandibular teeth, six were too broken to examine, the anterior teeth were lost post-mortem, at least two teeth (left M¹ and left PM¹), were lost antemortem and the four visible molars (right M¹, M² and M³ and left M²) were so severely carious as to preclude determination of the cusp pattern.

The tibiae showed posterior bilateral lesions possibly symp-

tomatic of non-malignant osteochondroma near the proximal epiphyseal line. The bilaterality is not perfect, however, as the exostosis of the right is more developed and "spur-like". Nevertheless, such bilaterality as exists is an argument against osteochondroma and in favor of an equally benign diaphyseal aclasis, (i.e. hereditary multiple exostoses). Osteochondroma is normally not associated with twin exostoses (Steinbock, 1976).**

Metric and non-metric observations

Cranial: Parietal thickness, 6 mm
Mastoid height, 23.5 mm
Robusticity (+)

Mandibular: Bicondylar breadth, 118.5mm
Symphysis height, 36.5mm
Least ramus A-P, 35.5mm
Bi-mental breadth, 45mm
Bigonial breadth, 94.5mm
Mandibular body height, 38.5mm
Mandibular body thickness, 14.5mm

Tooth dimensions: M1: height, 7.5 mm;
length, 10.5 mm;
breadth, 10mm

* Discussions of degrees of presence or absence as represented by + or - signs show only that methods have not been standardized. Following Angel's (1971) lead I take one + to denote presence; +++ very prominent or very severe.

** The two tumors are described by Steinbock as being different phenomena. A largely congruent but some-

what altered and taxonomically more complete view is offered by Dahlin (1978) who uses the term "osteochondroma" to describe the multiple lesions elsewhere referred to as diaphyseal aclasis. Dahlin further informs us that osteochondroma is not always benign. He estimates the incidence of development of secondary chondrosarcoma as being in excess of 10%.

M2: height, 6mm length,
10 mm; breadth,
10 mm

Clavicle, right: Maximum length, 154 mm
Robusticity (++)
Curvature (++)

Right Ulna: Maximum length, 261 mm
Least circumference, 45 mm
Robusticity (++)
Interosseous crest, (++)

Right Radius: Maximum length, 243 mm
Interosseous crest (++)

Right Femur: Subtrochanteric A-P, 30.5 mm
Subtrochanteric M-L, 29.5mm
Platymeric index, 103.38mm
(stenomeric)*

Left Tibia: Maximum length, 359? mm
Nutrient A-P, 39.5 mm
Nutrient M-L, 27.5 mm
Platycnemic index, 69.62
(Mesocnemic, upper range)

Right Tibia: Nutrient A-P, 37.5 mm
Nutrient M-L, 26.5 mm
Proximal Epiphysis breadth,
80 mm
Platycnemic index, 70.66
(Eurycnemic, lower range)

The shift from mesocnemic to eurycnemic in one individual is not significant as the relationship of breadth and depth is similar in both bones and the component measurements are

* Bass' (1971) statement to the effect that a stenomeric index is usually the result of a pathological condition

not far apart. What is perhaps interesting is the proximity of this person to modern, well fed populations. If platycnemia (i. e. flattening) is related to malnutrition, (bedouin populations as a whole are not particularly well nourished), then this individual and several of his contemporaries do not seem to have suffered appreciably. Of course, a few individuals do not make a sample. The political and economic relationship between desert dwellers and the urban areas of the Decapolis could be somewhat better illuminated by large amounts of such nutritional information. It is therefore to be hoped that more pre-Islamic bones will come to light.

Cairn No 2 (Dr. Clark)

This cairn contained the remains of seven persons, of whom four were stratigraphically lower and probably represent the earlier, original burials. The three higher and later intrusive burials were actually less complete, having been badly disturbed by animals. Only a few bones remained of these individuals, although those found were in much better condition than the remains of the four below.

The intrusive elements consisted of:

- A) One female, age $23-27 \pm 2$ (criteria: suture closure, epiphyseal union and tooth wear), represented by fragments of a temporal, occipital, parietal, mandible, left scapula, left innominate and humerus.

The following measurements were possible:

is borne out in this case, as the degeneration of the left femur forced the subtrochanteric thickening of the right.

Mandibular symphysis height,
32mm

Humeral bi-epicondylar
breadth, 51 mm.

- B) One child, age 5-8 (criteria. half-formed
mandibular incisor), represented by one
vertebral, one tibial and one scapular
fragment.

Tibia Nutrient A-P. 17mm

Nutrient M-L. 15 mm

Platycnemic index: 88.23

- C) One male: represented only by a single,
very large right talus (damaged)

fragments (average parietal
thickness, 8.5 mm)

Burial No 2

Sex: Female

Criteria: Fragment of pubis, gene-
ral post-cranial size and
robusticity, mandibular
fragments

Age: middle aged +

Criteria: Rarification of head of the
femur as well as some cor-
tex thinning, tooth wear
and loss, cranial suture
closure

The Earlier Burials

Burial No 1*

Sex: Male

Criteria: General robusticity of
long bone and mandibular
fragments

Age: 40-55?

Criteria: Beginning arthritic lip-
ping on several thoracic
centra, also on ulnar
notch. Tooth wear is not
excessive.

Pathology: A) Some arthritic lipping on ver-
tebral bodies

B) Rather strong lateral bowing
apparent on one left ulnar
fragment

C) Mild diploic thickening with
corresponding thinning of the
outer table on two parietal

Pathology: Some arthritic lipping is to be seen
on thoracic (?) centra fragments as
well as osteoarthritis apparent on
proximal metacarpals.

The wear plane of the surviving
teeth is strongly lingual to buccal
and suggests malocclusion.

There was no sign of caries, only
a little tartar and moderate alveolar
resorption, despite her apparently
advanced age. She exhibited a Y5
cusp pattern on M1 and M2 (left
mandibular).

Burial No 3

Sex: Female (with associated unsexed in-
fant's skeleton)

* The numbers given here do not necessarily correspond
to the numbers given the burials elsewhere in publica-

tion. They represent only the chronological order in
which they were examined.

Criteria: Pelvic fragments, lack of robusticity and femoral head diameter.

Age: Mother: 17-20 \pm 1

Criteria: Cranial sutures open and seven recovered thoracic and lumbar vertebrae had fully formed epiphyseal plates, though no union.

Age: Infant: 1-3 months

Criteria: Femoral length (see Stewart, 1979, p. 130-137)

Pathology: The area of the pre-auricular sulcus shows considerable traumatic damage due, no doubt, to her having given birth shortly before her death (Angel, 1971; Stewart, 1957).

The infant's skull was not sufficiently preserved to answer the question of infanticide. This sort of burial of infants and mothers together is not uncommon, but authoritative discussion must await larger and better preserved samples.

Metric and non-metric observations

Cranial: Parietal thickness, 5mm.

Post-Cranial: Sacro-iliac articular surface height, 35mm,
breadth 28.5mm.

Femur Head diameter 43mm.

Neck A-P, 29mm.

It is difficult to say whether more than one person was originally intended to be interred in

any single cairn, though Dr. Clark is attempting to ascertain that through the study of epigraphic and stratigraphic evidence. It is not thought to be customary among bedouin today except in the case of an infant being buried with its mother if the mother dies before her offspring can be supported by the family without her. Substitute wet nursing is practiced, of course, and holds special place in bedouin oral tradition, but the availability of potential substitute nurses is rather limited in the desert. Infanticide should not be ruled out.

Exceptions to the single burial rule are not unheard of among bedouin, but the evidence is difficult to gather and interpret because bedouin quite frequently insert burials into earlier graves. The soil is softest there and since prominent ruins or terrain features are favored sites, one finds that such places are frequently crowded with skeletons. Just who was buried with whom is a matter of some conjecture. It seems safest to assume that multiple burials were the exception rather than the rule. The fact is that little is known of the long term shifts and trends of nomadic societies and it is merely assumed that economic necessity keeps the customs of a group rather static. If there is merit in that opinion then one might tentatively conclude that pre-Islamic tribes behaved similarly. Islam places little value upon a marked grave. Even though a family might wish to bury its dead in the same cairn, and might occasionally do so, the far-flung grazing habits of nomads and the necessity for rapid interment would be a stronger centrifugal force.

My thanks are due to Dr. Clark for allowing me to examine this material.

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