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Cremation Burials in 'Ammān, Jordan

Introduction

The incineration of human remains has been practiced as a funerary rite in the Old (Hermann 1989; Ribot *et al*. 2002; Meacham 2004) and the New World (Reinhard *et al*. 2002) since at least the Neolithic and probably earlier (Scarre 2002; Bowler *et al*. 2003), with wide variations in customs and rate. Cremation was a major and distinctive characteristic of some cultures, such as the Urn-field culture in central Europe (Müller-Karpe 1959), and widespread in others, for example during the Hellenistic period (Morris 1987). Nevertheless, on the whole cremated interments represent a small fraction of burials as a whole.

During the first Century BC and first Century AD cremation was the preferred form of burial in Rome and its provinces, from the British Isles to beyond the River Danube. The custom was regulated in the Twelve Tables code of Roman law that allowed for variations in the details. The ceremony was carried out outside urban areas. The pyre or *rogus* was erected on a ca. 2 x 1.5m platform, using wood that had not been cut with an axe. The deceased would then be laid out on the *rogus*, which would burn for 3 to 4 hours. The fire was extinguished with diluted wine or milk and the incinerated remains of the deceased were collected. These were sprinkled with oils and perfumes. Two basic types of cremation can be distinguished: *bustum* and *ustrinum*. In the first, the pyre was erected over the burial pit. In the second, the incinerated remains were collected from the pyre and buried elsewhere (Toynbee 1971). Bechert (1980) has put forward a detailed classification based on how the cremated remains were buried. Many types of container were used as urns or *ossaria*. Ceramic vessels were the most common. Though cooking pots were often used, in some Roman provinces special ceramic urns were produced for this purpose (Williams 2004). Urns were also made of stone, glass, copper, lead, leather and even cloth. Burials took place in a shallow pit (80 to 100cm deep) or in underground tombs or *colombaria*. These could be built or carved into bedrock. Glass perfume flasks and lamps were the most common offerings. Roman cemeteries were typically located between 150 and 300m outside town limits (Sommer 1988), especially alongside main highways, e.g. the *Via Appia* in Rome. In the countryside, small family necropoli would often be placed near residences or main roads (Toynbee 1971; Altjohann 2001).

In the Eastern Mediterranean region, the earliest cremations are thought to be those from Tall Sabi Abyad in Syria, which date to 1250-1200BC (Akermans 2006). Excavations at many Iron Age sites have exposed cemeteries with incinerations, particularly along the Levantine coast, from al-Mina and Tall 'Arqa (Wooley 1938) in northern Syria, through Tyre in Lebanon (Seeden 1991) and down to Gaza in Palestine (Culican 1973). Other sites are situated inland, for example Ḥama in Syria (Riis 1979) and the Old 'Ammān Airport temple in Jordan (Hennessy 1985). The latter is the only Iron Age cremation site so far found in Jordan. All the above sites date to between the 12th and 6th Centuries BC. After this time, incineration seems to have disappeared from Levantine funeral rites, although it was maintained in the west 'Phoenician' settlements along the coasts of south Europe and north Africa (Gras *et al*. 1991). It was not until the first Century AD that cremation returned in the Levant, albeit infrequently. So far, no authentic cases have been reported from Syria or Lebanon, and the two examples known from Palestine have been attributed to Roman soldiers (Hershkovitz 1989). In Jordan, Roman cremations have been reported in

burials at Tall al-'Umayrī (Boling 1989) and Ḥisbān (Mitchel 1992).

Owing to a relative abundance of water and other environmental factors, the area known today as greater 'Ammān has been settled since at least the Neolithic period. Excavations have yielded evidence for the presence of agricultural communities in many periods, e.g. at Neolithic 'Ayn Ghazāl (Rollefson and Kafafi) and Iron Age to Mamluke Khilda (ASGA: Abu Dayeh *et al*. 1991; Najjar and Said 1994; Abu Shmais 2000 and 2003). Some cultural features were consistently maintained over many different periods. The geology of the area is dominated by soft limestone and rock-cut tombs were common from the Bronze Age onwards (e.g. Abu Shmais and Nabulsi 2004). Builders targeted this easily-worked stone and prepared architectural elements appropriate to their needs.

Many cave burials were excavated between 1948 and 2006, most of them on the hills of western 'Ammān (TABLE 1). During the Roman-Byzantine period, cave tombs consisted of a semi-square ritual chamber (2.5-3.5m) with radiating *loculi* or burial chambers. A small rectangular entance, sealed by a flat stone slab fixed by means of small clinkstones, typically gives access to rock-cut steps leading downwards. The height of the chamber is usually around 1.7m, but headroom is sometimes increased by means of a central standing pit surrounded by benches. Arched burial *loculi* (about 55 x 65 x 200cm) are carved into the walls above the benches. Small triangular niches can be cut into the upper walls, where lamps have regularly been found *in situ*. These were placed at the time of burial and may have been left burning. The *loculi* typically contain a single burial, although multiple, consecutive interments have also been observed, suggesting that family members may have been buried together over a number of generations[1].

This study describes two cave tombs, located on the western plateau of greater 'Ammān at the sites of Umm as-Summāq al-Janūbī and Ḥijra (FIG. 1). These sites were the subject of rescue excavations carried out by the Department of Antiquities of Jordan. Both are rock-cut tombs containing inhumations and cremation urn burials. The archaeological analysis, concentrating on a comparative study of candlesticks, and osteological observations are presented here. The results are discussed in relation to the dating and archaeological significance of these two sites.

The Rescue Excavations

1- Umm as-Summāq al-Janūbī (2002 to 2003)

The cemetery of this site is located east of a Roman agricultural village (Palestine Grid 231411 144033, elevation 978m. a.s.l.), ca. 14km from 'Ammān city centre and presently within an NRA housing project. This area has previously been described as a Roman-Byzantine village constructed on a large plain on the limestone plateau (Rashdan 1984, ASGA 1991), across which Roman-Byzantine rock-cut tombs are widely scattered.

The tomb was discovered during excavations carried out by the local Water Authority along a main road. The tomb ceiling had collapsed but the carefully cut shaft leading into it remained intact (FIG. 2). The fieldwork was aimed at cleaning out the ritual hall, which measured 3.85-4.10m. A low wall was found along the east side of the burial chamber, confirming its reuse during the Early Byzantine period. Eighteen burial *loculi* were identified. Artefacts were found in front of *loculi* 4 and 7. These included two badly damaged lead containers that had apparently served as urns. Charred bones were found scattered around them. One of the urn handles was present, as well as a knob base. In addition, two candlesticks and two oil lamps were found in the triangular niche above the *loculus*. Fragments of a basalt incense burner and two pottery bowls were also found (FIG. 3). The chamber contained one stone sarcophagus with a broken lid and a quantity of ashy bone. The presence of metal nails in one *loculus* may represent the remains of wooden coffins.

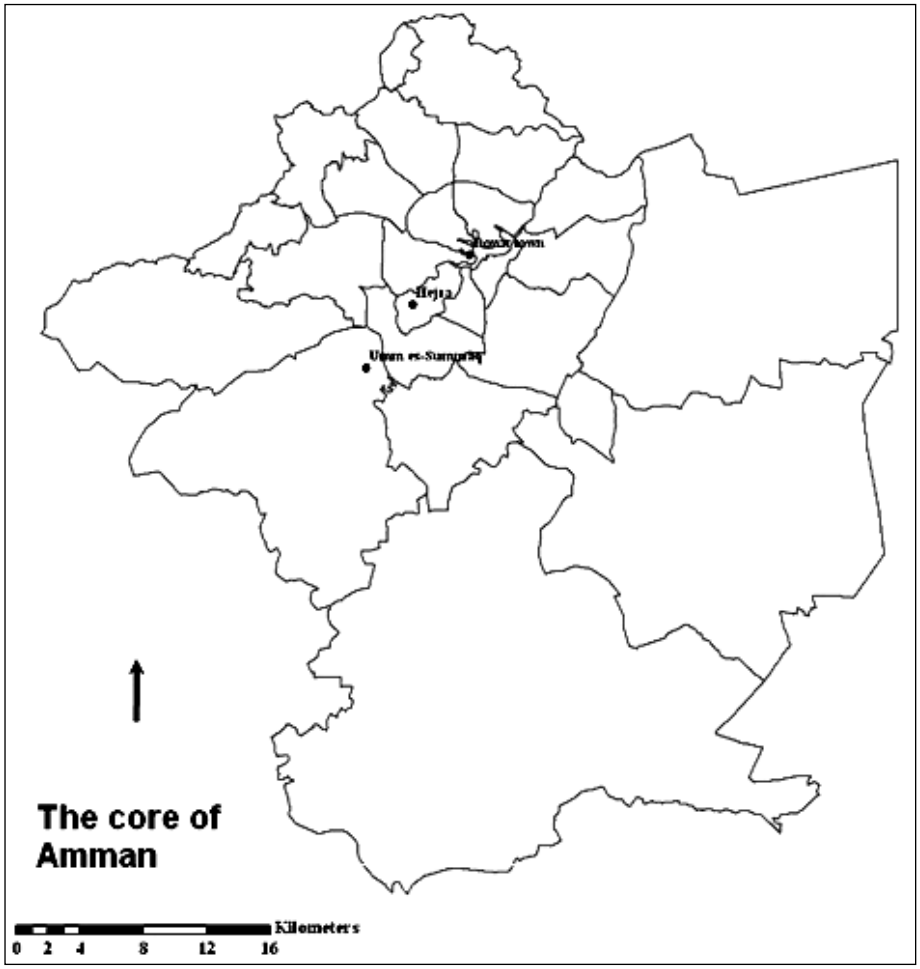
Candlesticks are typically earthenware, consisting of many parts joined together before the clay had dried. These parts include:

1- A wheel-made fuel saucer, with circular lines on the external face.
2- A socket, made of a rolled piece of clay attached to the centre of the fuel saucer and pressed smooth around the join. The rim of the socket appears to be pierced.
3- A base made on a slow wheel, with a simple rounded rim similar to the neck of a jar.
4- A ridged loop handle attached to the base, irregularly finished and ear-shaped in profile.

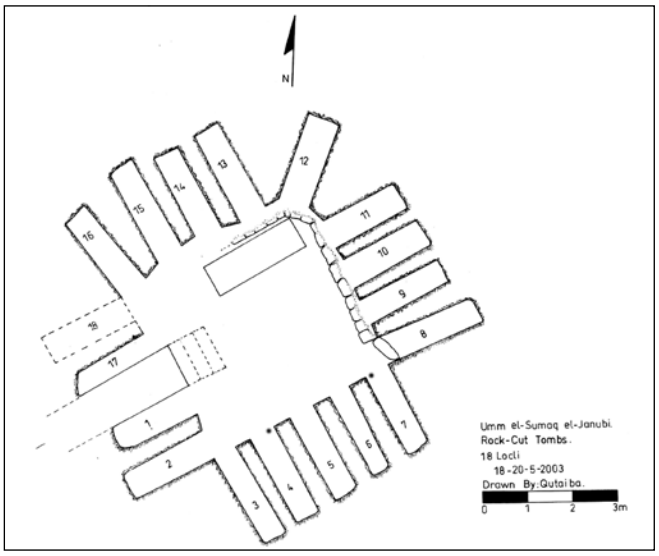
[1] Data collected from archaeological reports available at the DAJ registration office in 'Ammān.

TABLE 1. Rescue excavations during the years 1948-2006 at ‘Ammān area.

No	Excavations	Date of Excavation	Historical Period	Place of Artifacts	Bibiography
1	Jabal Amman Tomb	1943	Nabataean, Ist century BC. – Ist centary AD.	Museum store	L. Harding, “Nabataean Tomb At Amman, QDAP XII(1946) P.52-62
2	Jabal Amman Tomb		Roman	Museum store	L.Harding, ‘Two Iron Age Tombs from Amman ,” ADAJ 1 (1951), P 37.
3	Roman Tomb at Jebal Amman – 6th circle/ Swafiyeh	4/8-5/8/1982	Early Roman first cent. AD		Registration Center Wael Rashdan (Excavation of the Roman tomb in Amman (Jebal Amman ,6th circle), ADAJ XXVIII (1984) P. 23-24(Arabic Section)
4	Jabal Jofeh Tomb		Early Roman Ist.cent. BC.		L. Harding , ‘QDAP, XII (1946) P. 105-106
5	Jabal Jofeh Tomb	1962	Late Roman 2nd-3ed . cent. BC		ADAJ .VI - VII (1962) , P III.
6	Jabal Jofeh el-Shargi Tomb	May 1972	Late Roman		G. Bisheh “A Cave burial Tomb from Jabel J.Sh in Amman ” ADAJ,XVII(1972), P.81-83.
7	Jabal Jofeh Tomb	14/2/1978	L.Roman/Byzantine		Registration Center
8	Jabal Jofeh Tomb	12/2-31/3/1979	Roman		ADAJ,XXIII(1979 –Arabic Section) P.18.
9	Jabal Jofeh Tomb Roman Theatre area	3/12/81	Byzantine		ADAJ, XXVI (1982- Arabic Section) P.10-12.
10	Wadi el-Haddadeh Tomb North of Amman Citadel	26/7/1980	Late Roman 2nd- 3ed Cent.AD.		A. Hadidi “A Roman Family Tomb At Amman citadel Hill” ADAJ,XXVI(1982) P.287-288.
11	Jabal Husein Tomb	1971	Late Roman/Byzantine		ADAJ, XVI (1971), P.5-7 (Arabic Section)
12	Jabal Husein Tomb front of Jabal Husein police station.	10/4-18/4/1980	Early Roman second half of Ist cent. AD.		ADAJ,XXV (1981) P. 341.
13	Jabel Qusur Tombs	1/10/1975	Late Byzantine		ADAJ,XX(1975-Arabic Section) P.15.
14	Jabal Luweibdeh Tomb	9/7/1970	Roman		S. Da’na. “Luweibdeh Roman Tomb” ADAJ,XV (1970), P.37-38.
15	Shmesani Tombs	1982	Early Roman		ADAJ.XXVI(1982 Arabic Section).
16	Jabal el-Akhder Tombs	3/6-5/6/1975	Roman		ADAJ,XX(1975-Arabic Section), P.15.
17	Jabal Nazzal Tombs	1978			Registration Centre .
18	Jabal Nazzal Tombs	10/9/1974	Late Roman		Registration Centre .
19	Yadudeh Tombs	3/10/1979	Late Roman/Byzantine		Registration Centre .
20	Um el-Hanafesh Tombs /on Amman Madaba Road	1949	Byzantine		ADAJ,IV-V(1960- Arabic Section), P.29
21	Khirbet Yajuz Tomb	1972	Roman		H.Thompson , “A tomb at kh. Yajnz ,” ADJA,XVII (1972), P.37-41.
22	Tell Siran Tombs	April 1980	Iron Age /Roman / Islamic .	Amman Museum	Registration Centre.
23	Tab Kra’a Tomb	22/3-30/3/1980	Roman		Registration Centre.
24	Abu Nuseir Tomb	1982	Byzantine /5th cent.AD.		Registration Centre.
25	Queen Alia Airbort Tomb	1979	Late Roman. 2nd –3 ed cent. A.D		ADAJ,XXIII(1974 Arabic Section). P 20.
26	Qweismeh Lower church	1989	Late Roman /By2/ Umayyad		Amman Antiquities office ACOR, Emsaytif and Robert check.
27	Nwayjees Excavtion 1984	24-10/31-10/1984	Roman	Antiquities store	Registration Centre. Excavation Emsayhf Suleiman.
28	Derbiat Tombs /wadi Seir	1/1-13/1/1984	Roman/Byzantine	Amman Museum	Emsaytif Suleiman, “Hy Derbiat Tombs/Wadi es –Seir ” ADAJ, XXVIII (1984) P.17-21 (ArAbic Section)
29	Jabal EL-jofeh um teeneh el-Janubi Amman	1983	Late Byzantine Tomb	2 candlestisk museum store	Registration Center
30	Khlida el-Garbi	4-8/6 2003	L.R. Rock cut Tomb	5 Candlestick one oil lamp Antiquities store	ADAJ,Vol.47 p87-92.Adeib abu Shmais
31	Rujum el Kharasheh/ umm qatana	10/6/2004	E.R Rock cut tomb	Nothing	Information center
32	Umm es-Summaq el-Janubi	10/52003	E.R Phase II	4 candlesticks 2 bowls 2 oil lamps	Ancient lamps of the Bilad esh-Sham 2005 (IFPO)
33	Yajouz/ Tal’et Nimer	7/3/2005	L. R Rock Cut Tomb	Pottery sherds	Nothing documented
34	Zaboud Hisban	15/1/2006	EB. Cave,Roman reused	Pottery sherds	Nothing documented
35	Hejrah al-Yasamen area	12/3/2006	E.R Phase II Rock cut tomb	2 Leaden box/Urn 2 candlesticks 2 tearing pottles	Un published yet



1. ʻAmmān region showing the sites.

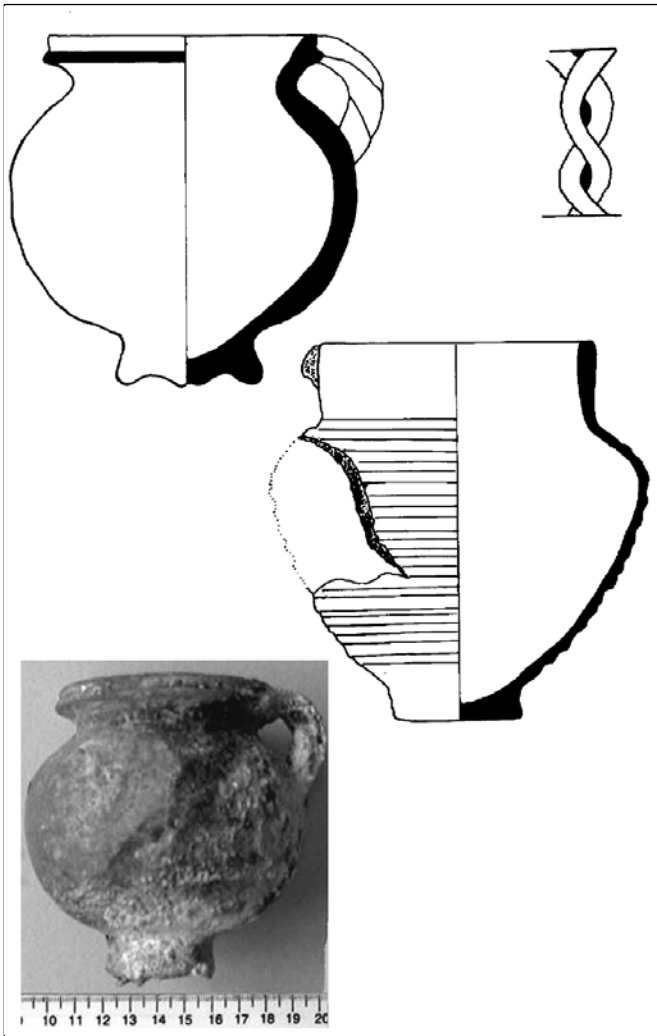


2. Top Plan of Umm as-Summāq family tomb.

The fuel saucer was attached to the upper part of the base by pressing the undried parts together and smoothing off the join. As a result of this method of assembly, these components are warped and irregularly shaped. It should also be noted that the diameter of the base is half that of the fuel saucer.

Candlesticks are a type of lamp often used in funeral rites. This tradition is thought to have started during the Chalcolithic and continued through the Middle Bronze and Iron Ages and into the Hellenistic, Roman and Islamic periods. They display different forms and shapes that make them useful indicators of cultural relationships and archaeological dating.

At Umm as-Summāq two types of candlestick were found, one short (125mm) and the other elongated (200-245mm). The short type (represented by Reg. No. II, FIG. 4), which has an upright stand, lightly ribbed saucer, stump base and no handle, is reddish-yellow in colour (Munsell 7.5 YR 7/6) with red slip. Warping is restricted to the fuel saucer. The elongated type (represented by Reg. No. I, FIG. 4) has a warped stand; the ware is an evenly fired well-levigated clay with fine inclusions and a



3. Late Roman pottery bowls.

red slip.

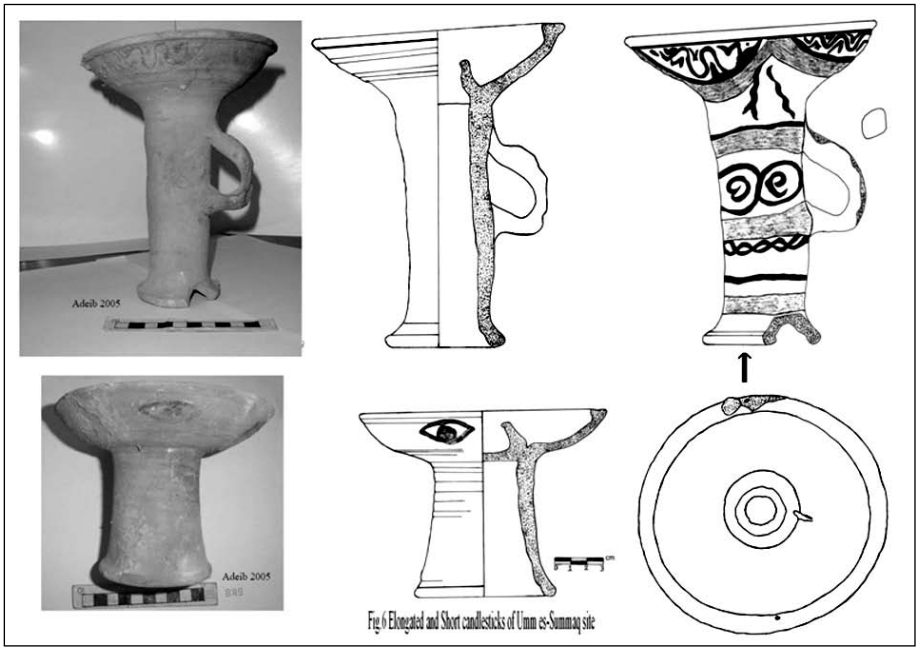
These candlesticks retained traces of decorative red paint on the outside of the fuel saucer. There were also spiral decorations in black paint, including one of a serpent (Reg. No. I, FIG. 4). The other painted motif was eye-like drawing on one of the short candlesticks (Reg. No. II, FIG. 4).

2 -Ḥijra site (2006)

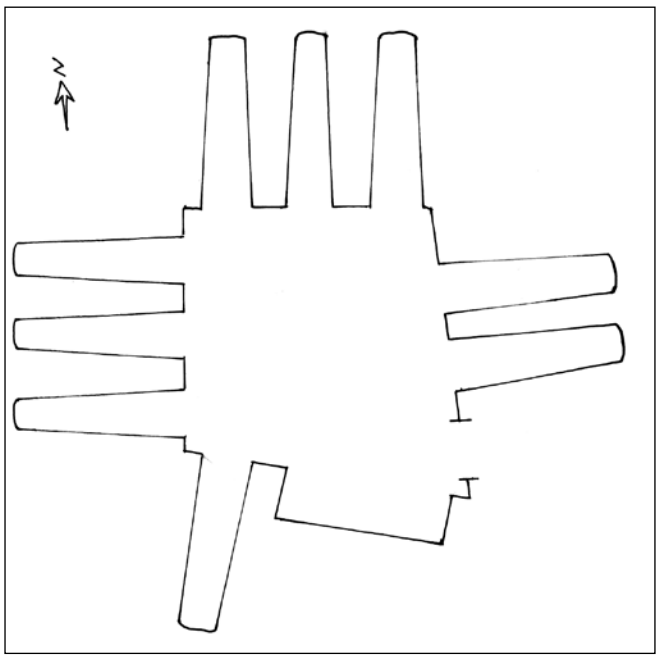
This site is located south-east of Khirbat Ḥijra, on the western plateau of greater ‘Ammān (Palestine Grid 234332 148040, elevation 916m. a.s.l.). The tomb was unearthed during road works. West of the entrance was a small niche (180-10 x 5cm) with a flat shelf large enough for a body to be laid upon. This was probably a badly damaged burial place (*loculus* 1) (FIG. 5). An intact spherical lead urn filled with burned human bones was found in front of *loculus* 8. A further intact lead box was also found to contain incinerated human remains. A Herodian-style oil lamp and two candlesticks stood in front of the *loculi*.

Candlestick Reg. No. I, FIG. 6: diameter of fuel saucer 18.5cm, height 24cm, diameter of wick socket 3cm. This candlestick had painted zones that were separated by black bands. One zone was decorated with zigzag and another with intersecting black-painted lines, both on a red background.

Candlestick Reg. No. II, FIG. 6: diameter of fuel saucer 15cm, height 19.7cm, diameter of wick socket 2cm. The outside of the fuel saucer was



4. Umm as-Summāq candlesticks.



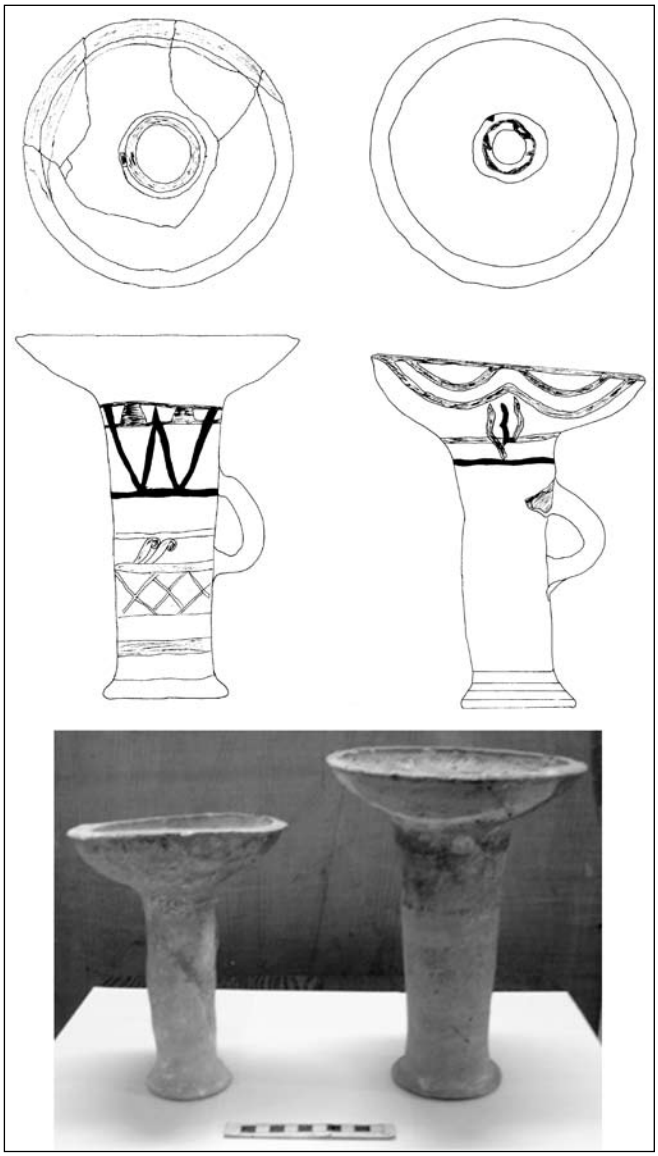
5. Top Plan of Ḥijra family tomb.

decorated with wavy black-painted lines on a red background. The stand has three vertical painted lines. Similar examples were found in the Umm as-Summāq tomb.

Parallels for the Umm as-Summāq and Ḥijra candlesticks include: Umm al-Ḥayrān Reg. Nos J13315 and J13314 [2], Late Roman examples from Khirbat Jil'ād, examples from the al-Rājib tombs that have been dated to the third Century AD (Bisheh 1972) and al-Karak Museum store Reg. No. 9/10.

Other pottery items include bowl Reg. No. III, FIG. 3 from the Umm as-Summāq al-Janūbī tomb: diameter 6.5cm, height 9.1cm. It has a flattened angular rim and thin ribbed body with a conical wall profile and short-footed string-cut 0.5cm base. A similar bowl, Reg. No. IV, FIG. 3, has a flattened angular rim, twisted loop handle and short-footed concave 1cm base. This style of bowl is dated to the end of the second Century AD. A Herodian-style lamp from Ḥijra with a circular ring base, Reg. No. III, FIG. 6, is believed to be an imitation of imported early Roman oil lamps.

In Jordan, previous examples of candlesticks have typically been found in non-religious locations. Parallels are rare, especially for those with handles.

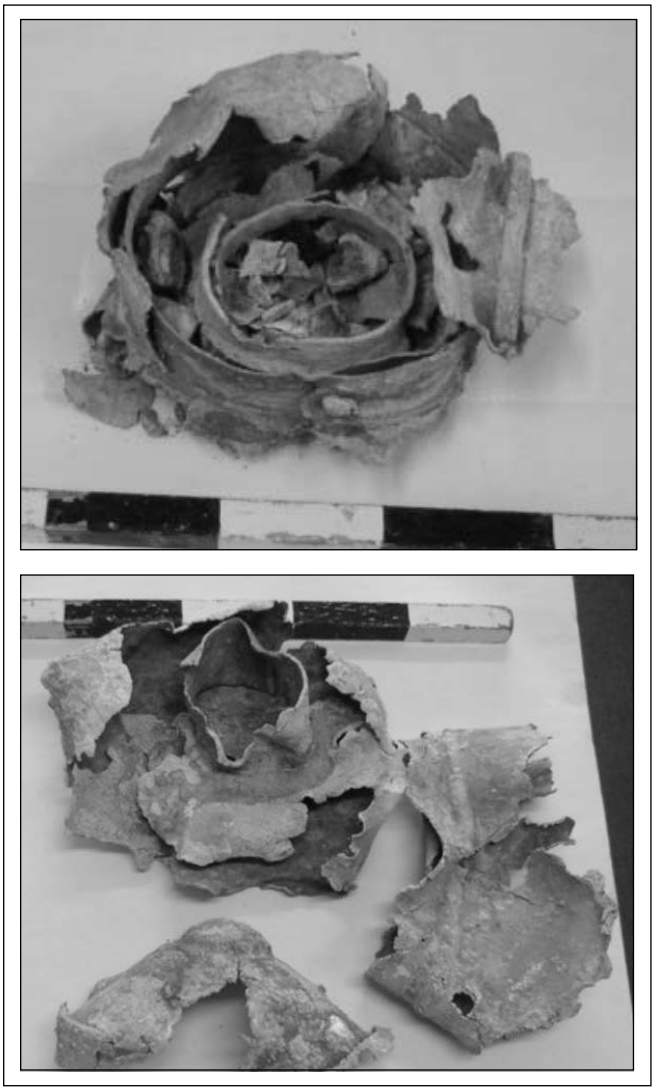


6. Ḥijra Candlesticks.

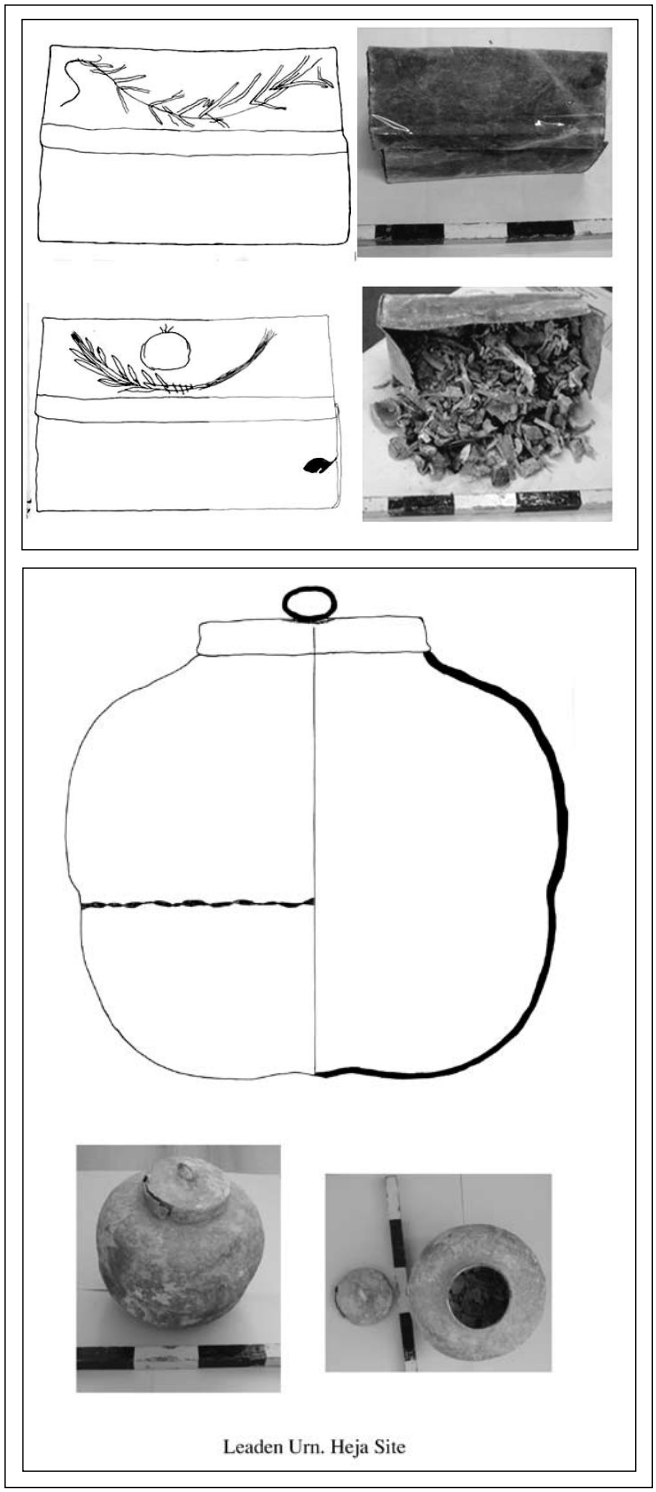
The Lead Urns

A total of four lead urns were retrieved: two broken examples from Umm as-Summāq al-Janūbī (Urn 1, Reg. No. V and Urn 2, Reg. No. VI, FIG. 7) and two intact examples from Ḥijra (Urn 3, Reg. No. IV and Urn 4, Reg. No. V, FIG. 8). Urn 3 has a rounded body approximately 25cm in diameter and 30cm high, with a 10.5cm diameter rim covered with an 11cm diameter lid. A ring handle is attached to the middle of the outer surface of the lid. This *olla*-shaped urn was made of two hemispherical parts connected by a pressed metal ring. The lower part is pushed slightly inwards, thereby providing firm

[2] 'Ammān archaeological museum. Roman tomb/Umm al-Ḥayrān with handle. Harding1969 Records of Jordanian Archaeological Museum.



7. Two fragmentary Leaden Urns, Umm as-Summāq Tomb.



8. Two intact leaden Urns, Ḥijra Tomb.

stand. Owing to the damage they have sustained, it has not been possible to reconstruct Urns 1 and 2 with any degree of certainty. However, the fragmentary evidence available, including one handle and a knob base, suggests that they were similar to Urn 3 in shape and manufacture (FIG. 8). The spherical shape of these examples is similar to the storage jars that were frequently used as urns from the Iron Age onwards (e.g. Seeden 1991), not only in the Near East but beyond (Williams 2004).

Urn 4 is a hand-made *ossarium* fabricated out of a single lead sheet measuring 39.5 x 57cm. The squared corners (12.3 x 15cm) were cut and bent to form a box of 32.5 x 15 x 12.3cm. The lid is gable-shaped with triangular sides and rectangular front and back faces (32.5 x 13.5cm) that were decorated with clumsily-engraved floral ornamentation. On one face, probably the front, a rounded motif, perhaps a pomegranate, is placed in the centre above a laurel or olive branch. The other face is almost entirely filled by a larger palm branch (FIG. 8). Four lines of inscription are engraved on one of the triangular lid sides. The translated inscription reads:

"Courage (C)Krispe(us) Nobody is eternal"
On the opposite side of the urn, on the box, are three more lines inscribed in Greek. Though unreadable, the text was probably written by another person, as indicated by the letters N and Θ (FIG. 9).

Lead cinerary urns are rare. They are more frequent in Roman Britain, where singular urns are often found in cemeteries (Jovanovic 1984), than elsewhere in the Provinces (Fischer 2001). These urns are usually cylindrical with a flat ceramic platter or stone used as a lid. The few rectangular lead *ossaria* (including gable-shaped examples) that have been found in Roman Europe typically have protruding floral ornamentation and often a Medusa head (Wheeler 1932). The ornamentation was typically shaped while casting the lead plates on a sand bed (Ward 1911).

The fabrication of Urn 4 did not differ from that used in the production of lead sarcophagi. The gable house urn form had been a well-known type of *ossarium* for some centuries, in a number of different cultures. These were made of stone, marble, gold, silver and more often terracotta (Toynbee 1971). In the case of Urns 1, 2 and 3, it appears that the hemispherical parts were made by hammering the lead sheet into a form and cutting it to shape. These parts were then attached to each other by hammering, as indicated by relevant marks and their uneven thickness. The lid was then hammered to fit the final shape.

Osteological Analysis
The analysed human remains included the cremated contents of the four lead urns from both sites and inhumation burials from the Ḥijra tomb. All material was fragmentary. The incinerated bones displayed typical characteristics with longitudinal fracturing, splitting and coiling along the axis of long bones, concentric fractures of flat bones and vertebral bodies, and numerous charred fragments and marginal surfaces. Dorsal elements displayed more severe heat-induced modification than others. Furthermore, the surface of many bone fragments displayed irregular light red to brown spots (FIG. 10). All four cases are characteristic of a typical Roman *ustrinum* cremation ceremony with minor differences in incineration. The deceased were evidently laid out on their backs on top of the pyre that was set alight. After cremation, the burnt remains were gathered up and placed in the urn. The type and condition of the bone material allowed limited macroscopic analysis using standard techniques[3].

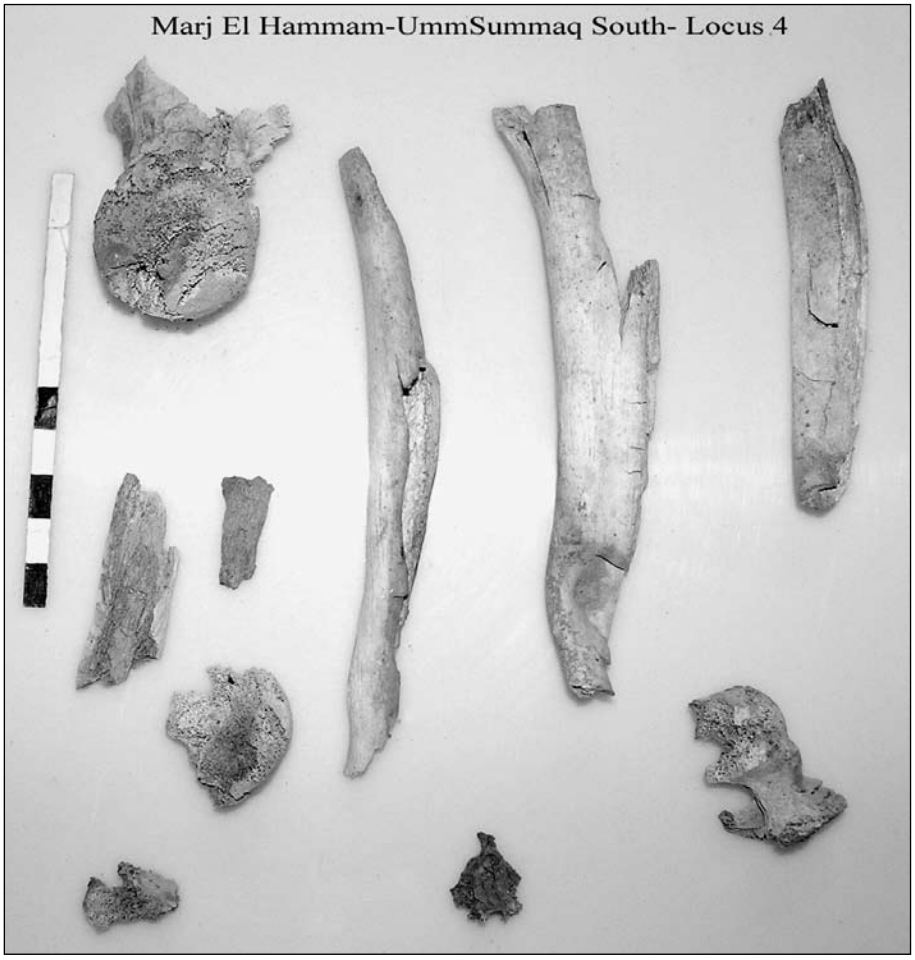
9. Greek inscription incised on the leaden Ossaria.

1- *The Umm as-Summāq al-Janūbī Tomb*
The bones from this tomb are derived from Urns 1 and 2, each of which contained the remains of a single individual, respectively USJ-001 and USJ-002. The material of both individuals was scanty, representing less than 20% of the total skeleton. Most fragments reveal a colour mix of grey, white and brown. These suggest a cremation temperature around 600°C, according to the scales proposed by Holck (1987) and Hermann (1988).

The USJ-001 fragments are mostly from long bones, with just a few from flat bones. Small vertebral and rib fragments as well as one canine tooth were also present. The material permits only limited analysis. The femoral head seem to be that of an adult, whilst a probable incomplete fusion of the distal radial epiphysis suggests an individual aged 15-21 years at death. Some evidence for robusticity hints that USJ-001 may have been male, but the evidence remains weak.

The bone material of USJ-002 was collected around the urn at the entrance of *loculus* 10 / 11. It includes few cranial and pelvic elements, with most fragments coming from the extremities. An occipital fragment displays strong expressed linea nuchae and a pelvic fragment has a narrow sciatic notch. These features suggest that USJ-002 was male. Available spongiosa and light pathological lipping on the vertebral margins suggest that age at

[3] Methods in articles in Knussmann,1988: Bräuer: 129-232, Sjūvold: 444-480, Schultz: 480-496, Szilvassy: 421-443.



10. Example of the cremated bones of HJ-001 from Urn-3.

death was around 45-55 years.

2- The Ḥijra Tomb

The remains of five individuals were retrieved from this tomb, including the cremated remains of two individuals from Urns 3 and 4 as well as three inhumations. All material smells perfumed. It is believed that the coloured spots on the cremated bone surfaces originated from an oily perfuming substance, the remains of which are represented by small clumps of a light brown, globular substance. Although the quantity of bone from the urns, estimated at 80-85% of the total skeleton, represents the amount normally salvaged after cremation (McKinley 2000), the remains of the three inhumations, with just 10-15% of total skeleton, are scanty. A thin white calcareous layer coated most of these bones, which were relatively well-preserved.

The contents of spherical lead Urn 3 in *loculus* 8, represent the cremated remains of a single individual, HJ-001. The urn contained a few charcoal fragments, 5-10mm in size. The material suggests a cremation temperature of 700-900°C. A relatively long mastoid process, a prominence on the glabella of a frontal bone fragment and a narrow sciatic notch all indicate that HJ-002 was an adult male. Sufficient cranial suture fusion, particularly in the bilateral C1 region, and the sacroiliac joint indicate an estimated age of 40-50 years. Medium degenerative changes were observed on the right clavicular articular surface and pelvic acetabulum, but no such pathological features were detected on the available articular surfaces of the long bones. Light osteophytic outgrowths were diagnosed on lumbar vertebrae L1, L2 and L3 as well as pitting and porosity on the articular surfaces of these vertebrae and on the sacroiliac joints.

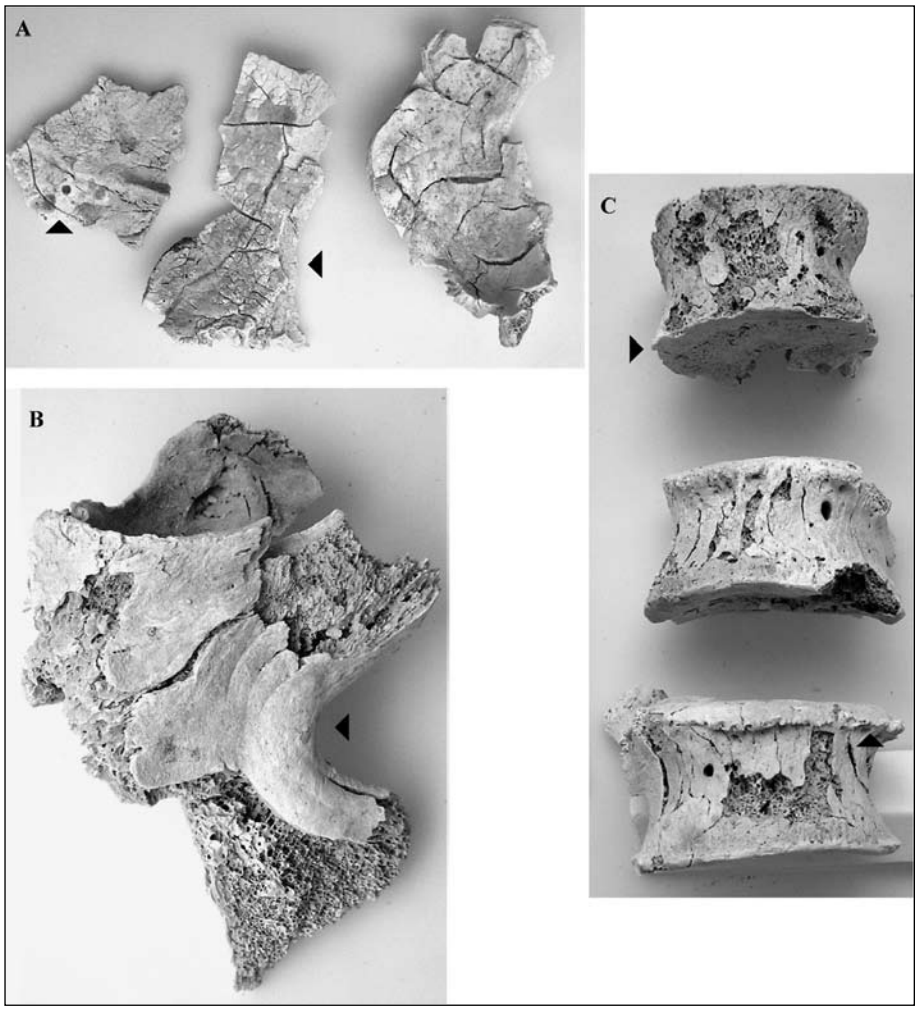
The cremated bone remains in Urn 4, *loculus* 7 belong to a single individual, HJ-002. As well as the human remains, the urn contained pieces of charcoal, pale red-coloured plaster fragments, small chalky stone pebbles and pieces of the light brown, globular substance referred to above. The grey-white bone material is heavily fragmented and

indicates a cremation temperature of up to 900°C. Cranial fragments display strongly expressed linea nuchae and temporal lines, as well as long mastoid processes. Together with the shapes of the ventral arc and sub-pubic cavity of the right pelvic bone, this is clearly indicative of an adult male. Pubic symphysis suggests an age at death of 40-60 years. Vertebral osteophytosis (grade 2-3) was diagnosed on many cervical, thoracic and lumbar vertebrae. Light to medium degenerative bone changes were also observed on some long bones epiphyses, with osteo-arthrose on the first distal phalanges of the right hand. These observations reduce the bracket of estimated age to 50-60 years.

Although bone condition in the three inhumations is relatively good, there is no explanation for the scarcity of the material. The lower extremities are over represented. The obvious robustness of the material indicates that all three individuals, HJ-003, HJ-004 and HJ-005 are males. This supported by relevant pelvic traits and some anthropometric values. The spongiosa of HJ-003 allow for an estimated age at death of 40-60 years. HJ-004, estimated at 21-35 years, has robust foot bones with a bilateral peronial tubercle (FIG. 11), a rare anatomical variation on the os calcaneus (Brossmann *et al*. 2001). Degenerative changes on the articular surfaces of the left tibia of HJ-005 suggest an age at death of 40-45 years. The tibia length of 385 mm. suggests an estimated stature of 170-176cm for this individual.

Discussion

The two Roman cave tombs dicussed above, Ḥijra and Umm as-Summāq al-Janūbī, can be dated to the second and third Centuries AD, possibly slightly later, on the basis of the associated ceramics. They are not substantially different in their architecture to others from the same region (Smaddi *et al*. 1992) and elsewhere (Empereur and Nenna 2001; Killgrove 2005) that have been dated to this period. According to excavation reports held by the



11. Bilateral peronial tubercle of the calcaneus bone.

Department of Antiquities of Jordan, many such tombs have previously been excavated, not only in the area of greater ʻAmmān but also beyond. Although they are common, they are rarely, if ever, published!

Both of the tombs under discussion combine two rare features that need to be highlighted. Both involve Roman cremation burials and in both lead urns were used. The presence of the same type of spherical urn in both tombs and the short distance between them suggest that the burials may be related. Ḥijra tomb is almost intact and provides more information than the heavily disturbed one at Umm as-Summāq al-Janūbī. The evidence presented here is based mainly on data obtained from the first tomb.

The two tombs under study include inhumation burials, which could pre-date or post-date the cremation burials. The latter can safely be dated to the second Century AD, when cremation was still common in the Roman Empire before it was replaced by inhumation during the third Century AD.

The generally low incidence of cremation among populations has stimulated interpretations that favour migration and cultural relationships. The practice of cremation by the Phoenicians, its westward expansion and later abandonment is a good example (Bienkowski 1982; Prausnitz 1982; Gras *et al*. 1991). Alexandrian urn burials, mainly in terracotta hydrias, dated from the fourth Century BC to the early Roman second Century AD have typically been associated with the immigrant Greek and Roman ruling class (Empereur and Nenna 2001; Venit 2002). A similar argument was put forward for Carthage's Roman cemeteries (Haeckl and Norman 1992). In Palestine, the two Roman cremation burials mentioned above have been associated with Roman legionaries of the first Century AD (Hershkovitz 1989). Consequently, which population, or part of population, do the burials in the tombs under consideration here represent?

The Roman cremation ceremony was a costly venture, requiring significant financial and natural resources (Toynbee 1971; Barber 1990). It is therefore probable that the cremations from the Umm as-Summāq al-Janūbī and Ḥijra tombs belong to individuals from a relatively affluent social class that would have been more "hellenized" than the commoners (Shahid 1984), particularly in the Decapolis (Miller 1994). The two tombs under discussion are located close to one of the Decapolis cities, Philadelphia (modern ʻAmmān).

This leads us to the inscription on Urn 4. It is a typical Roman funeral text that can be found on many Roman tombstones in Jordan (Canova 1954; Piccirello 1998). The name "*CRISPE(US)*" is a common Roman name meaning "curled hair". It occurs in both the Roman and Byzantine eras, e.g. Crispus Passienus, husband of Agripina in first Century AD and Crispus Flavius Julis, half-brother of Constantinus II, in the fourth Century AD (Shahid 1984). In the Babatha archives, a Julia Crispina (the female form of the name) of oriental origin with Roman citizenship is mentioned (Isaac 1998). The inscription, therefore, does not provide any definitive information as to the origin of the deceased, be they local or not. It is doubted that the second text, still unreadable, will shed any more light on this subject.

Osteological analysis of the human remains suggests that only male individuals were buried in the two tombs. This and the general robustness of two of the analysed individuals might lead one to consider the burial of soldiers. However, even if this was the case, the historical background has to be considered. After the annexation of Provincia Arabia in the second Century AD, Roman troops from neighbouring regions were brought to the region, but later on the local population was recruited (Bowersock 1983; Shahid 1984). The small sample size of the remains under consideration here makes it impossible to speculate about their ethnicity. Even the application of ancient DNA techniques were technically possible for cremations (von Wurmb-Schwark *et al*. 2005), they would probably only be useful in determining sex and establishing relatedness between the examined individuals because of the large genetic variability and overlap between Mediterranean populations (Richards *et al*. 2000; Bosch *et al*. 2001).

To conclude, the archaeological evidence and comparative data presented here suggest that the cremation burials from Umm as-Summāq al-Janūbī and Ḥijra are more likely to have been derived from the ancient local population than from migrant elements. The practice of Roman cremation was a type of cultural influence often observed amongst local upper-class groups and ruling elites.

Acknowledgment
Our thanks to the excavation team: M. Sarhan, Haya Sabbah, Ibrahim Zaben and draftsman Qutaybah Dasuqi.

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