

Late 2nd Millennium BC Feasting at an Ancient Ceremonial Centre in Jordan

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Mortuary remains at Tall al- 'Umayri and its hinterland, from the Early Bronze Age IB onwards, include ceremonial architecture and portable artefacts spanning the Bronze and Iron Ages. A large, dense collection of animal bone fragments associated with LB/Iron Age feasting provides evidence of a participatory, seasonal event involving a large group of people and animals. Assessment of the tell and hinterland together provides evidence of a sacred zone around a perennial water source at the base of 'Umayri, where people brought their herds periodically to engage in social and ceremonial events at temple/shrines under the protection of the ancestors.

Keywords: feast, Jordan, faunal remains, LB/Iron Age, Tall al- 'Umayri

Tall al- 'Umayri and hinterland as ceremonial space

Excavations and survey work by the Madaba Plains Project at and around Tall al- 'Umayri, located south-west of Amman (Fig. 1), have produced evidence of a long sequence of human activities. The archaeological periods represented span 5000 years and peaks of activity tend to alternate between 'Umayri and sites in its hinterland beginning with Neolithic flint scatters on the tell. An Early Bronze Age (EBA) I dolmen stands at the base of the mound (Herr and Clark 2009, 72). Early, Middle and Late Bronze Age, and Iron Age through Islamic era deposits vary in their intensity at the tell. Tomb deposits, megaliths and dolmens identified in the survey characterize the hinterland within a radius of 5 km of 'Umayri and generally date to time periods absent at the tell (Fig. 2).

The late 4th millennium BC dolmen remained undisturbed and barely perceptible on the surface prior to its excavation in 1996. This EBA IB stone-built construction at the south-eastern base of the mound was found with remains *in situ*, and held 20 secondary burials (Herr 2002a; Herr and Clark 2009, 71–72). Although partially visible for nearly 5000 years, it had remained untouched, in contrast to the frequently robbed tombs from many other dolmen fields in Jordan (Yassine 1985). Erosion material deriving from the tell had assured its

survival, and by the late 20th century AD it was almost completely covered (Dubis and Dabrowski 2002; Herr 2002a).

EBA II wall fragments and EBA III buildings, some with complete pots, rest immediately below the tell surface in Field D (Harrison 2000, 95; Herr and Clark 2009, 72–73). Settlement debris of possible late EBA III–IV or EBA IV date is sparse, but south of the tell are two large EBA IV and Middle Bronze Age IIA cemeteries with hundreds of tombs (Waheeb and Palumbo 1993). Middle Bronze Age (MBA) II sherds and a rampart have yet to connect with stratified deposits, but on the south-eastern slope not far from the EBA IB dolmen is an MBA IIC cave chamber tomb hewn into the rock (Górniak and Kapica 2002). On the evidence of the bronze and ceramic artefacts, this probably contained the remains of a family, with local responsibilities.

No Late Bronze Age (LBA) or early Iron Age cemetery remains are known in the hinterland, but ceremonial architecture characterizes the western and highest part of the mound. For example, a unique LBA shrine/temple has five standing stones in a plastered niche along with figurines, and portable cultic artefacts of stone and clay (Bramlett 2004; Herr and Clark 2009, 77–78). A *favissa* held unfired clay figurines (Herr and Clark 2005, 251). Nearby is a LB/Iron Age I standing stone and altar in Building A (Fig. 3), which held other ceremonial artefacts discussed below.

From deposits in Field H, two model shrines of Late Iron Age I date (Herr and Clark 2009, 90)

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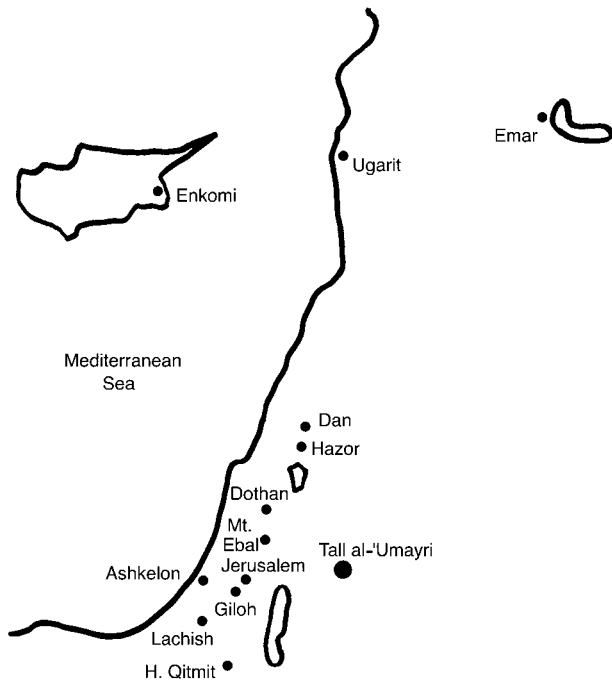


Figure 1 Map showing selected Late Bronze and Iron Age sites in the region

augment the ritual artefacts of early periods excavated at the western, steepest part of ‘Umayri. Late Iron Age material in Field F, which drops to a wide shelf on the opposite side of the site, includes an east-facing standing stone, found next to a cobble-lined pit supporting a reused *piθος* base, thought to function as a basin. A ceremonial purpose was inferred on the basis of comparison with similar finds at Megiddo and Tell el-Farah (N) (Low 1991, 187). In addition, a Late Iron I–Iron Age II paved courtyard sanctuary in Field H, was found in the south-western part of the tell (Herr and Clark 2005, 253). Most prominent in the 6th century BC Late Iron II/Persian era is the administrative complex with Ammonite inscribed seals and seal impressions, from in and around the structure (Herr and Clark 2009, 91). As a group, these finds signal centuries of ritual/ ceremonial activities at the tell. No tombs of LBA through Late Iron Age date are known in the immediate region. East of ‘Umayri is a Roman and Byzantine necropolis, with 51 tombs (Krug 1991), which coincides with the death of contemporaneous

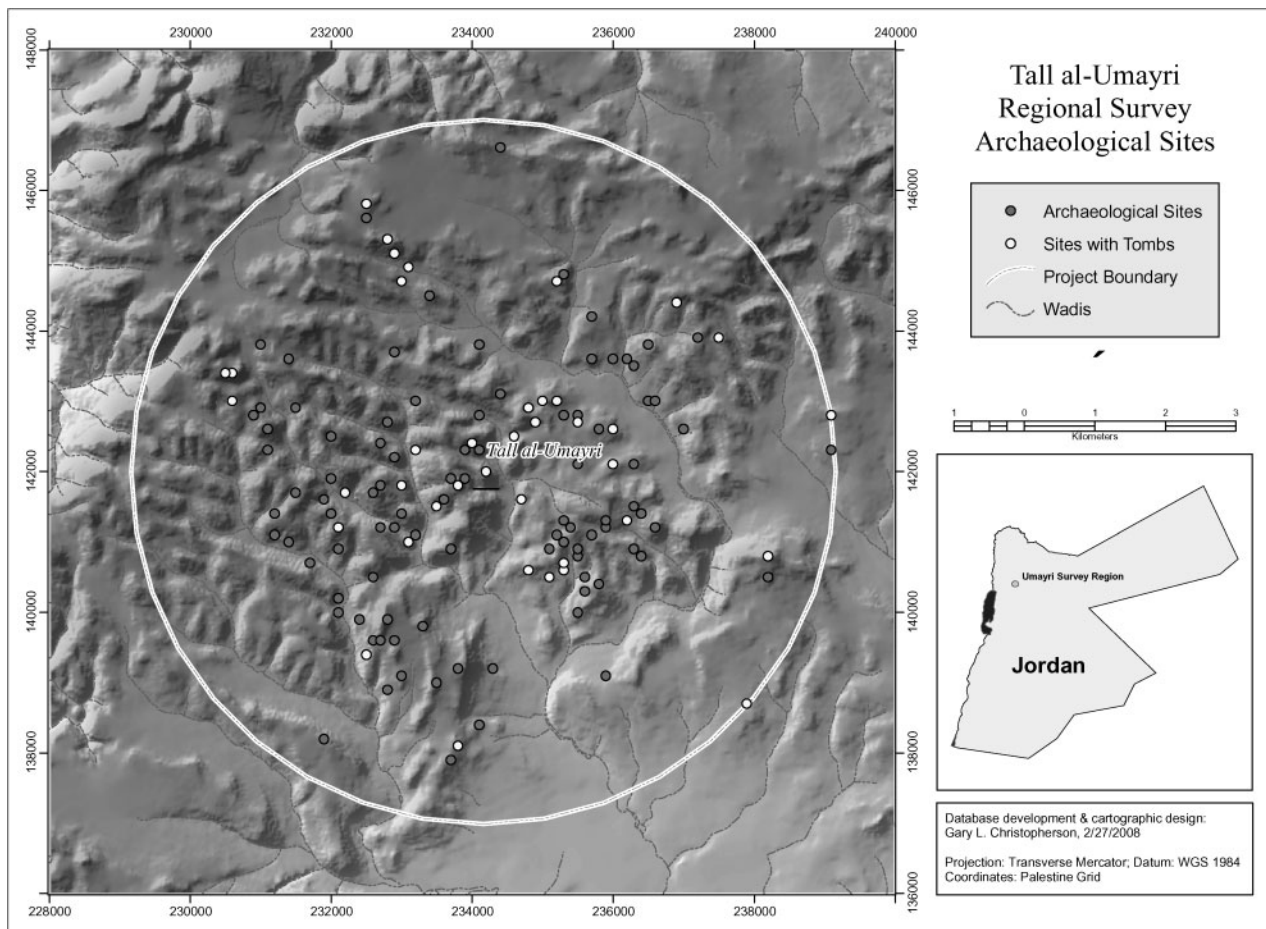


Figure 2 Tall al-‘Umayri and hinterland sites found by the MPP survey team (source: MPP Published Map Files, Tall al-‘Umayri Maps. Sites with Tombs. Gary Christopherson. [http://www.casa.arizona.edu/MPP/\(Christopherson 2008\)](http://www.casa.arizona.edu/MPP/(Christopherson 2008)))

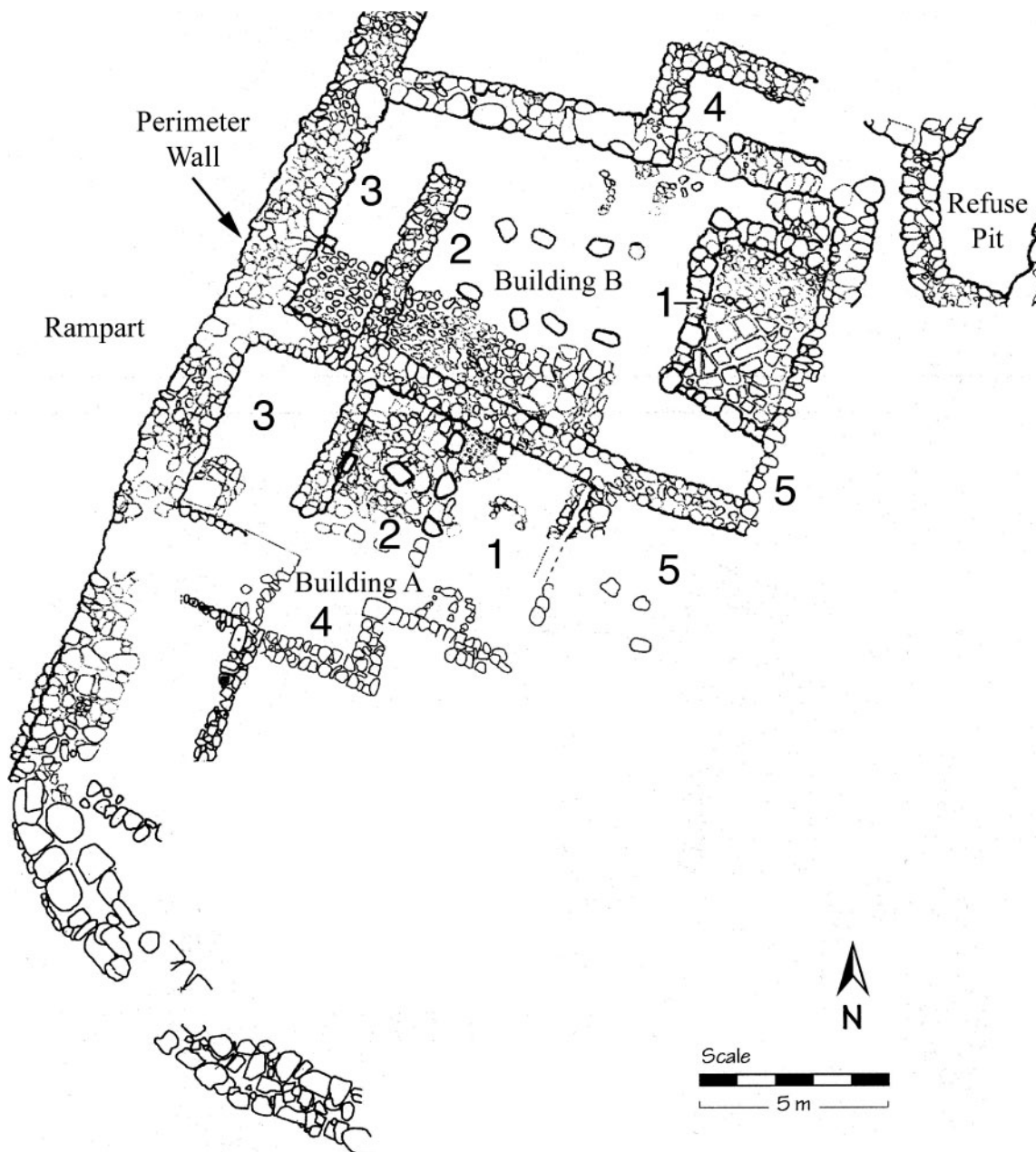


Figure 3 Buildings A and B at Tall al-‘Umayri. Building A1 beaten floor, hearth, bench, bins, basalt quern, Mycenaean sherds and small ceramic containers; A2 flagstone surface of possible cultic installation with an altar in front of a tall standing stone in the wall; A3 raised plastered platform and jars between inner and outer casemate wall; A4 beaten earth paved area with at least seven rectangular flat-lying stones similar to standing stone in A2. Building B1 paved area; B2 pillars; B3 inner and outer casemate walls create a partially paved room for c. 100 collar rim storage jars; B4 ante-chamber with possible building entrance and access to animal bone repository; B5 southern entrance

habitation at the site, in a pattern repeated for millennia.

The time periods during which ceremonial architecture and artefacts occur at ‘Umayri contrast with those during which mortuary remains are present in the hinterland. When considered as part of a single landscape, tell and tomb finds hint at use of the mound and its hinterland as sacred or ceremonial space. A scarcity of residential buildings at present

contrasts with ceremonial or administrative structures and efforts to protect the site with enclosure walls. Franken and Abu-Jaber ([1979] 1989) report that dolmens formerly covered the area. The same is recorded in an account of Charles Warren’s visit in 1867, when he observed a dense cover of ancient remains between the site and Um-Summaq village, 7 km west of ‘Umayri. The permanent spring at ‘Umayri, in regular use until c. 1935, served as a

neutral border between the Adwan and Beni Sakhar Bedouin tribes during the last two centuries (Merling 1989, 28). More recently, seasonal herders spent winters in nearby subterranean natural caves, which were found to have walls, fire pits and discarded objects (LaBianca 1991, 354).

Despite the water source and near-continuous use of the site, and/or its hinterland, 'Umayri does not occupy a location with wide vistas that might be considered well positioned strategically. The opposite more accurately describes visibility from the site. Herr (2000b, 167) has stressed that its current height results from the accumulation of archaeological remains, and that, despite this, in terms of its position above the Madaba Plain, the site is lower than the surrounding peaks and ridges, which restrict visibility to the south, west and north. Lower hills to the east offer a limited horizon of the rising sun, which today shines directly on the large circular stone exposed in the LBA shrine, whose walls display perfect cardinal alignment. The entrance of the EBA IB dolmen opens to the east, and the standing stones in Field B and Field F also face east. The intentional eastward orientation implies a repeated effort to align artefacts in accordance with the sun. Buildings, standing stones and mortuary constructions appear to have been planned with the entire landscape and celestial bodies in mind.

Taken together, the millennia of mortuary remains in the hinterland and ceremonial buildings on the tell might imply long-term use of the area as sacred geography. The meanings, use and understandings of the tombs may have changed over time, but remained sacred. MBA and LBA visitors to the EBA IB dolmen, visible to all who approach, could have had understandings of the structure which differed from those of the original builders, yet remained cognizant of its spiritual nature and left it uncharacteristically untouched. It memorialized those buried within, but over the centuries it, and those buried inside, became incorporated or adopted into the history of those who subsequently used the site. In the same sense, the EBA Megiddo sanctuary appears to have retained its significance as a gathering place for tribal groups, despite the cessation of EBA trade focused on the site (van der Steen 2005).

Neighbouring hills enclose and protect 'Umayri and its critical water source. Post-EBA shrines and ceremonial spaces are found at the highest part of the site, still at a lower elevation than its surroundings. Throughout antiquity, one could advance to the site and spring with a clear view from all directions. The gentle, rolling relief is only sporadically dissected by

deep erosion gullies of limited length (Schnurrenberger 1991, 372), which again affords an unrestricted approach and access to the tell and water supply.

Analysis of the 'Umayri 'viewshed', i.e. those parts of the landscape visible from the tell, involves 133 sites of various periods, located in a circular area with a radius of 5 km from the mound. The Madaba Plains Project survey team began recording the site's hinterland in 1987. Interestingly, the visibility analysis based on GIS found that a mere 8.5% of the sites were visible from 'Umayri. In contrast, other sites investigated by the Madaba Plains Project have a greater viewshed, such as 27% at Tall Hesban and 44% for Tall Jalul (Christopherson and Guertin 1996). 'Umayri, with one of the few local water sources between Amman and Madaba, stood exposed, in plain view from nearly all sides, encircled and protected by higher hills. Defensibility appears not to have been an issue.

Excavation at this small, strategically indefensible site, and survey of its broad, sprawling hinterland, reveal ceremonial/ritual and limited mortuary remains at the tell and hundreds of tombs dispersed over the immediate surrounding landscape. Despite the near absence of artefacts of some periods on the tell, when considered as two different parts of a single landscape, the archaeological remains of the tell and hinterland create a ceremonial landscape used to bury and memorialize family members and ancestors. Rituals performed at the tell and mortuary sites could simultaneously commemorate the deceased while socializing the next generation through ceremonies varying according to the age, sex and affiliations of participants, seasons of the year, lifestyle, etc.

In particular, the analysis of well-preserved late 2nd millennium BC remains of the LB/Iron Age transitional period informs on activities which probably involved large numbers of people who came from the surrounding countryside and beyond. If the 'Umayri ceremonial landscape includes ritualized operations related to sacred or cultic events, one can anticipate other types of sites, in different geographic settings, where the more mundane daily activities were carried out, such as permanent settlements and temporary workstations. Routine daily activities would have been on-going while at 'Umayri as well if there were animals to milk, shear, sacrifice, and eat, foods to cook, process and preserve, or children to teach. In such a scenario, men, women and children of all ages were present to perform age and gender appropriate rituals and chores.

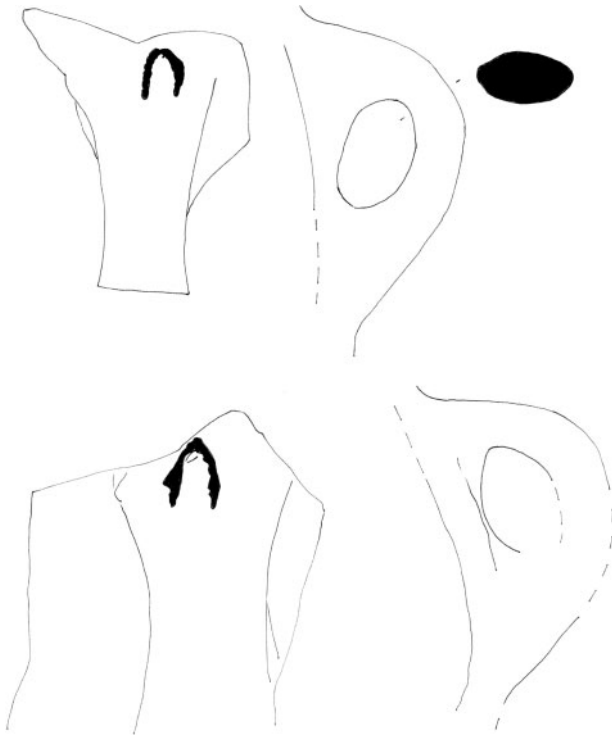


Figure 4 Pre-fire marks on collar rim storage jar handles from 'Umayri, Building C. Marks were made by a small, round-tipped object pulled through the clay at short intervals beginning at the lower left and moving up and then down the right side (drawing: Gloria London)

Ritual sites are typically positioned at a high point or a natural setting with a tree, cave or spring. They can be at places of some historical association, burial site or in special buildings which might create spaces of ritual cleanliness or degrees of holiness. These elements are among the behavioural correlates Zevit (2001, 81) recognizes as indicative of cultic sites, along with figurines or aniconic representations of a deity, benches, altars, hearths, basins and storage units such as bins or jars. In addition food, whole or broken ceremonially votives, repetition of symbols and possibly costly artefacts, are all indicators of cultic spaces. The LB/Iron I remains from the highest elevation at 'Umayri can be examined to assess their suitability as evidence of a sacred/ceremonial centre.

LB/Iron Age buildings and contents

Two adjacent buildings are dated by a vast reserve of 75–100 collar rim storage jars/*pithoi* and associated cooking pots found in the structures (Clark 2002, 61–92; Herr 2002b, 140–47). Building B is of the four-room or pillared style well known from the areas north and south of Jerusalem, but the 'Umayri example is noteworthy for its size, high degree of preservation, and contents (Fig. 3). During excavation in 2008, a

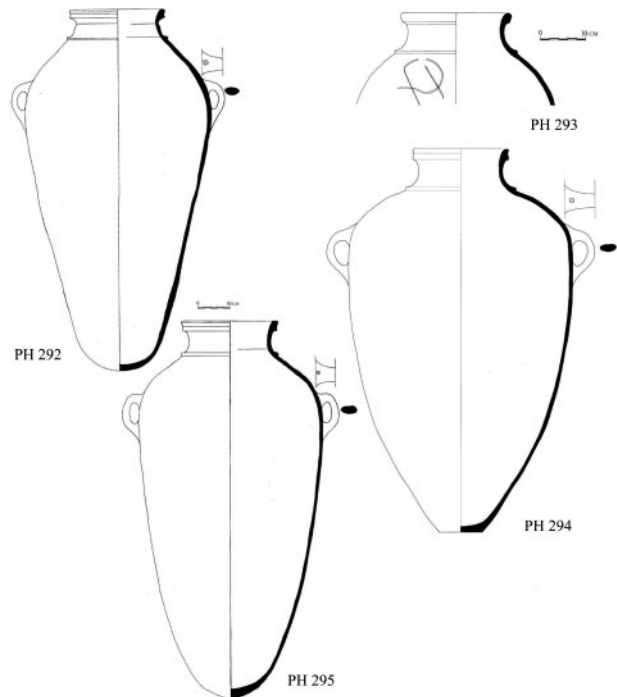


Figure 5 Collar rim jars/*pithoi* from Building B at Tall al-'Umayri (source: Madaba Plains Project- 'Umayri)

third building produced multiple collar rim jars, many with a pre-fire incised 'U' or 'V' on one or both handles (Fig. 4). Building A contains an assemblage atypical of domestic use. It exhibits portable and interior features characteristic of ceremonial activities. Examination of building contents and adjacent space informs on site use. In terms of location, the buildings may have had restricted entry, since they are tightly placed next to each other and adjacent to the outer perimeter wall.

With an unsurpassed storage capacity of as many as 100 reconstructible collar rim jars/*pithoi* (Fig. 5), the stone and mudbrick Building B stands preserved to over 2 m in height. Not all *pithoi* were necessarily in primary use simultaneously; broken bases might have remained in place with a complete jar standing inside them or were reused as basins (Clark and London 2000). Building B was an impressive central storage depot for the community and contained substantially more pots than Building A, but all belong to the same time period. In addition to the collar rim jars, Herr (2006) counted 10 cooking pots, 18 jugs, 14 bowls or kraters, a *pyxis*, two lamps, a flask, six jars and seven jar/jugs.

The *pithoi* and smaller jars create a sizeable storage reserve unlike that found contemporaneous buildings in the Judean hill country. The less well-preserved four-room structures in the vicinity of Jerusalem hold artefacts largely devoted to food processing and storing. For example, at Giloh, 80% of the ceramics



Figure 6 Collection of rectangular possible extra standing stones on the ground in Room A4 (source: Madaba Plains Project- 'Umayri)

belong to cooking pots, storage jars and *pithoi* (Mazar 1982, 169). Food processing, agricultural and construction work would have been carried out seasonally, at this and other small sites, although a limited number of people might have lived at such workstations year round for maintenance (London 2003).

Non-ceramic artefacts from Building B are hardly typical of other sites. Metal objects include the feet and mounting of a bronze figurine of a male deity and five bronze weapons (Dubis and Dabrowski 2002, 222–26). Seals cut from a variety of materials (Egglar *et al.* 2002) are in addition to four reshaped ceramic discs and rounded sherds with central perforations. Stone artefacts range from small to large: a loom weight, a pestle, two querns, three whetstones, four weights, a flint blade, roof roller, spindle whorl, two bowls, a cosmetic palette, alabaster jug and eight hand grinders or pounders. A ceramic bead, seal impressions, pre-fire marks on jar handles, animal bones and the burnt remains of four people were found inside Building B (Herr and Clark 2009, 88). Although the clay and stone artefacts indicate domestic use, as a group, they might have had specialized ceremonial purposes.

Building A shares an east–west long wall with Building B (Fig. 3). It is differentiated into areas,

some of which have features designated by the excavators as cultic. On the flagstone floor is a smoothed, oval slab of white limestone with a veneer of calcrete, positioned in front of a standing stone of the same calcrete-covered limestone. They differ from the usual stones for wall construction. The standing stone measures roughly one metre in height and stood leaning against the western wall. Cautiously described as a 'cultic corner' (Herr 2000a, 277), the paved floor was clean of artefacts, although a pile of carbonized barley was found immediately south of the standing stone. A collection of seven white limestone slabs (Fig. 6) lay behind a line of stones across the room from the leaning standing stone (Herr *et al.* 2001, 241). These might represent additional, multiple examples of cultic paraphernalia (Herr 2006, 63).

A dirt-paved area, at the opposite end of the building has a hearth, storage bin, bench, ground stone tools, collar rim storage jars and animal bones. Some bear butchering marks. Many animal bones were found *c.* 0.80 m above the courtyard floor where the remains of a partially articulated mammal with butchering marks, and other bones, lay (Clark 2000, 78).

Building A contained 118 diagnostic rim sherds, including four complete *pithoi* embedded in the

floor-surface. Vessels from above and below roof collapse (Herr 2006, figs. 7–21) are predominantly cooking pots: five each in Rooms A2 and 3 and another two in Rooms A1 and 5. With only 12% cookware, Herr (2006, 70–71) speculates that, regardless of the hearth, cooking or cooking pot storage might normally have taken place elsewhere. In contrast, Building B held fewer cooking pot rims, a mere 7.5% of the total (Table 1). However, the cookware, along with upper and lower grinding stones, indicate that some cooking was undertaken. Open serving dishes, in the form of bowls (11%) and kraters (8.5%), account for nearly 20% of the total assemblage. A nearby LB/Iron Age deposit described as a refuse ‘pit’ densely packed with 25,000 animal bone fragments also has a high percentage (18%) of open pots. Open forms in Building B total only 10%. Collar rim jars/pithoi and smaller jars, at 40% in Building A, are twice as numerous as in the pit, but do not reach the quantity found in Building B where they make-up over 60% of the assemblage.

In Building A rare pot types account for 12% of the diagnostic sherds: three lamps (2.5% of total), three chalices (2.5%), a flask, two juglets, two *pyxides*, two *amphorae*, a basket-handled jug with a sieved spout and a painted sherd. In comparison, non-standard shapes are sporadic (3%) in Building B, but more common in the adjacent ‘pit’ (10.5%). The jugs, *pyxides* and flask might have held special liquids used less for cooking than for ritual in Building A. There is one nearly complete spouted krater or ‘oil separator’. These unusual shapes, together with the assemblage as a group, imply that the structure functioned in a manner unlike Building B.

The diversity, nature and quantity of the artefacts indicate that the buildings may not have been ordinary domestic structures, although Clark regards House B as ‘thoroughly domestic in nature’ and House A as cultic (Herr and Clark 2009, 89). The excavators designate the structures as houses, with cultic activity concentrated in ‘House A’ and storage in ‘House B’ (Herr 2009). At over 60% of the

assemblage, jars/pithoi in Building B provide a vast storage facility atypical of domestic use, while pottery, standing stone(s), possible altar, benches and bins in Building A signal ceremonial events. Built into the perimeter wall, and sharing a common east–west long wall, the two structures might have been designed with limited entry. The size and stature of their construction as part of the enclosure wall, the vast storage facility of jars, presence of small closed containers for precious liquids, and the possible sacred space with standing stone(s) and altar argue for ceremonial usage. Artefacts in Building A are indicative of ceremonial activities and accord with a list of material correlates of cultic space (Zevit 2001, 81). These include standing stones, figurines, unusual pottery, metal artefacts indicative of wealth, multiple examples of a symbol, storage jars, hearths, basins and bins, and cooking pots for vegetal and animal foods. All were found in well-preserved and maintained structures adjacent to a deposit with an excessively large quantity of animal bones.

LB II/Iron transitional era animal bone deposit

Adjacent to the entrance of Building B is a space 5 m long by 2 m deep described as a ‘large garbage pit’ (Herr and Clark 2009, 89). Reused MBA II walls serve as the walls for a repository of over 25,000 animal bone fragments and other finds. According to the body part distribution, sex and age of animals, fragmentation, texture, etc., the palaeozoologists conclude that it represents a garbage dump/midden (Peters *et al.* 2002, 306). Their report provides an intriguing database for assessing the use of the adjacent structures and the site in general. Profuse quantities of organic debris led the excavators to categorize it as garbage (Herr 2000a, 279). In addition to the large number of animal bones and sherds are rare artefacts and prestige items, such as seals and discarded metals, mixed with LB/Iron Age I sherds. As an intentionally collected deposit of assorted artefacts, the ‘pit’ might better be termed as a repository created over time.

Table 1 Pottery shapes in Building A and the ‘pit’ according to count and percentage. The final count of collar rim jars could reach 100, i.e. 60% of the assemblage, but not all jars were necessarily used for storage simultaneously

Source	Quantity	cp	bowl	krater	jar	jug	jug/jar	pithoi	lamp	chalice	flask	juglet	other	Total
Bldg. A	count	14	13	10	22	3	0	26	3	3	1	2	6	118
	%	11.9	11	8.5	19	2	0	22	2.5	2.5	0.8	1.7	5	99.9
Bldg. B	count	10	14	w/bwl	6	18	7	75*	2	0	1	0	1	134
	%	7.5	10	0	4.5	13	5	56	1.5	0	0.8	0	0.8	99.6
Pit	count	158	66	19	52	37	39	40	37	2	3	2	5	458
	%	35	14	4.1	11	8	8.5	8.7	8	0.4	0.7	0.4	1.1	99.9

There is no direct stratigraphic link to Building B, but the pottery mixed with the bones is comparable in shape and date to vessels in Buildings A and B (Herr 2006, 72). That said, occasional EBA and MBA sherds are found, especially near the bottom of the pit. The large collection of bones comes from a self-contained deep space bordered by MB II walls on at least two sides. The stratigraphy of the deposit awaits publication. Cobbles and small boulders serve at times to level underlying earth layers of reddish brown, brown, grey and black soils. Tip lines of ashy deposits slant downwards from west to east, as if bones and sherds were dropped from the direction of Building B. There are ash patches, and black, burnt or disintegrated organic material. At one point, an ash layer, 4 cm in thickness, covers some cobbles. The bottom layer takes the form of a red and white beaten earth surface. Found throughout are LB/Iron Age I ceramic, stone and metal artefacts, with 25,000 animal bone fragments, deposited during a number of different episodes.

Analysis of all 458 diagnostic sherds mixed with the bones shows a predominance (35%) of cooking pots implying that these are the remains of meals for many people (Table 1). The ceramics mixed with the animal bones resemble the sherds and reconstructed vessels from Buildings A and B in shape and date, but not in the proportions of specific forms. There are more cooking pots mixed with the bone collection than from any other location at the site. Kraters are numerous, but normal bowls constitute the majority of open forms, along with a few platters, for a combined total of 18%. Closed shapes, transportable jars (11%), jugs (8%) and undeterminable jug/jars (8%) together total 26%. Collar rim storage jars/*pithoi* (8.7%) are relatively infrequent in contrast to vessels used for cooking (35%) or serving (18%) food, as well as unusual vessel forms (over 10%). The moderately numerous (8%) lamps are in addition to two chalices, three flasks, and two juglet rims making a total of 10.5%, similar to that in Building A where they constitute 12%, unlike Building B with only 3%. Building A, with partially articulated animal bones that may have fallen from the roof or upper level,

along with carbonized barley, and 20% open containers, may have been a place where animal carcasses were cut into sizes suitable for cooking pots. Large quantities of earth and mudbrick detritus led the excavators to assume that Building A had two floors rather than a roof where activities might take place (Herr and Clark 2009, 83).

Intentionally reshaped EBA–LBA sherds include large, thick, soft, round EBA III bases that can be easily reshaped. High-footed MBA and LBA bases were redesigned into mini-offering tables as found in the LBA shrine (Bramlett 2004) and in Building A, Room A5 (Herr 2006, 71, fig. 21:19).

In terms of vessel size, no LB/Iron Age pots are particularly suitable for cooking or serving large quantities of food. Shallow bowls were present, but the ceramic repertoire lacks the large platters or cookware of earlier and later archaeological periods. At Hazor, where LBA feasts have been discerned in debris at a temple, bowls predominate in an assemblage of kraters, cooking pots, baking trays and a few juglets, store jars and *pithoi*. Most bowls are of normal size in addition to ‘giant kraters found in an inner room of the temple’ (Zuckerman 2007, 193). Similarly at ‘Umayri, open forms represent about 20% in Building A as in the ‘pit’, which has a high concentration of cookware (35%) as well. Woven mats, wood or leather trays and sheets of bread could function as serving devices, but were not preserved intact. Perhaps these formed part of the abundant organic refuse excavated together with the bones and sherds. Had metal trays been used, they were most probably curated until melted down for reuse.

Faunal analysis

The highly fragmented faunal assemblage produced a range of species broadly similar to that found at many other sites: sheep/goat (82%) and cattle (14%) with smaller percentages of other domesticates (Peters *et al.* 2002, 312). Less than 1% of the bones belong to wild fauna (Table 2). Of the 5989 bones examined, 72% were identified to species and/or genus level to enable data collection on domestic

Table 2 Faunal remains from the LB/IronAge I pit in Field B and all EB III phases in Field D. Figures are based on absolute frequencies (NISP). From the Field B pit, 5989 fragments were analyzed.

Field	Arch. period	Total count	Identified percentage	Wild fauna	Domesticates			
					total	sh/goat	cattle	other
B	LB/Iron	25,000	72%	1%	99%	81%	14%	4%
D	EB III	10,969	85%	3%	97%	78%	16%	3%

and wild species, body part distribution, livestock mortality patterns, body size, pathology, animal husbandry, trade and palaeoenvironment. Most (85%) animals were slaughtered between the ages of 1 and 2 years, coinciding with their peak body weight and before herders would find it necessary to invest in their feeding (Peters *et al.* 2002, 317). Butchering marks are present. Evidence of roasting or burning is minimal, but would more likely have been present on the meat than the bones. Numerous cracked long bones imply marrow extraction for consumption.

The comparison of the faunal remains from the pit with those from contemporary deposits at 'Umayri is based on the unpublished assessments of the palaeozoologists, who found no major differences between this and other groups of LB/Iron Age I material at 'Umayri (pers. comm. N. Pöllath and A. von den Dreisch, 2008). One implication is that the 25,000 fragments are not unique to sacrificial deposits, but typify normal refuse.

A brief faunal report on the roughly contemporaneous site at Mt. Ebal (located near Shechem/Nablus), describes burnt remains and a high proportion of wild fallow deer (Horwitz 1986/87). Thus any comparison between the Mt. Ebal and 'Umayri deposits should be tempered by the large discrepancy in the number of animal bones at the two sites, and the largely charred nature and the high representation of wild animals in the former group. In contrast, at the large (85 ha) city of Hazor, nearly 17,000 bone fragments come from a spatially discontinuous deposit around a LBA altar located in a palace courtyard (Zuckerman 2007). Lev-Tov and McGeough (2007, 96) report a definite preference for domesticates (97%), with two-thirds sheep and goats and one-third cattle. Wild fauna are slightly higher (3%), while pigs are fewer (1%) than at 'Umayri. At Tel Dothan, from five layers in the LBA–Early Iron Age Tomb I, the 274 animal bones identified belong primarily (97%) to domesticated animals (Lev-Tov and Maher 2001, 94). In contrast to more northerly and larger urban sites such as Hazor, the bone deposits at rural 'Umayri produced proportionately less cattle and more caprines, a difference perhaps attributable to local environmental conditions.

The detailed analysis of 'Umayri EB III deposits in Field D, found the same species present as in the LB/Iron Age I deposits. Of the total EB III sample of 10,969 bones, 85% were identified to species and/or genus level. Bones of domestic animals constitute the clear majority of EB III (96.7%) and LB/Iron Age I (99%) assemblages. Sheep/goats comprise around

85% of both the EBA III Phase 4 and LB/Iron Age assemblages (Peters *et al.* 2002, 306, 324).

Differences between the EBA and LB/Iron Age faunal remains relate to identification rates, percentage of each animal, age distribution, and use of the animals. Bone fragments from the 'pit' are smaller than EBA bones, a factor leading to a slightly lower rate of identification. EBA examples display more advanced state of weathering caused by wind, water, temperature, or exposure. Late 3rd millennium BC deposits lay immediately below the present-day surface and could have suffered from exposure and trampling. The EBA deposit produced more wild mammals, birds and molluscs, older animals, and smaller sheep and cattle than the later pit. Cattle breeding and meat procurement were major objectives, but beef production might have been the primary concern in the LB/Iron Age (Fig. 7). Although the sample is small (n=15) and perhaps not characteristic, 65% of the cattle were slaughtered as juveniles (<2½ years) for soft, tender meat (Peters *et al.* 2002, 317). During the EBA, goats were kept for milk and meat with surplus males slaughtered when below three months of age, possibly to release more milk for human consumption. Sheep were raised for meat and wool. In contrast, bones in the LB/Iron Age 'pit' show a lower percentage of lambs and kids under six months and more sheep/goat over two years, more calves (under six months), juveniles (1½–2½ years) and fewer mature cattle when compared to EBA material (Fig. 8). Maintenance of adult sheep over two years old results in the highest quality and quantity of wool, a practice that increased from EBA to the LB/Iron Age (Peters *et al.* 2002, 311–19).

One implication of the age distribution and presence of animals under three months in the EBA is that they were born on-site, whereas their reduced number in the LB/Iron Age, along with more calves and juveniles, suggests that the animals were born elsewhere. Perhaps in the LB/Iron Age, winter births in the warm Jordan Valley or eastern deserts were followed by spring and summer pasturing near 'Umayri with its permanent water source.

Dog bones with 'traces of digestion, possibly implying their passage through the gastro-intestinal tract' (Peters *et al.* 2002, 311) may indicate the eating of dog by dogs. At Ashkelon, dog bones were found in a slightly later Iron Age I cooking pot and other dog bones from early Philistine deposits show butchering marks (Wapnish and Hesse 1999). At 'Umayri, 49 canine teeth represent minimally six dogs. Pig bones, 2.5% of the LB/Iron Age assemblage, were 10 times more frequent than in the EBA

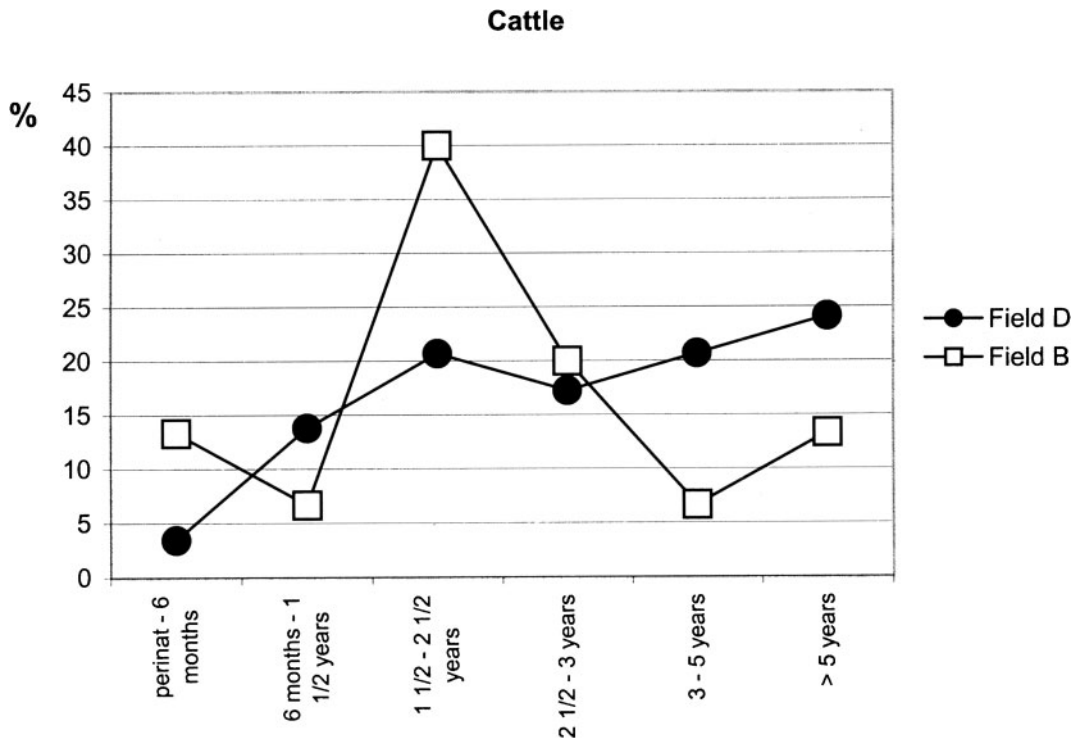


Figure 7 Cattle: Comparison between kill-off patterns in Field D and Field B (source: *Madaba Plains Project 5*, 318, fig. 14-9. Andrews University/Institute of Archaeology)

faunal remains. Their economic value apparently rose late in the 2nd millennium, but environmental constraints would not have encouraged a large population (Peters *et al.* 2002, 311).

Unusual, exotic bones include Nile Perch, and one or two bones of species difficult to obtain, such as auroch, and the proximal phalanx of a lion. Not all animals brought to the site were to be eaten. Rather,

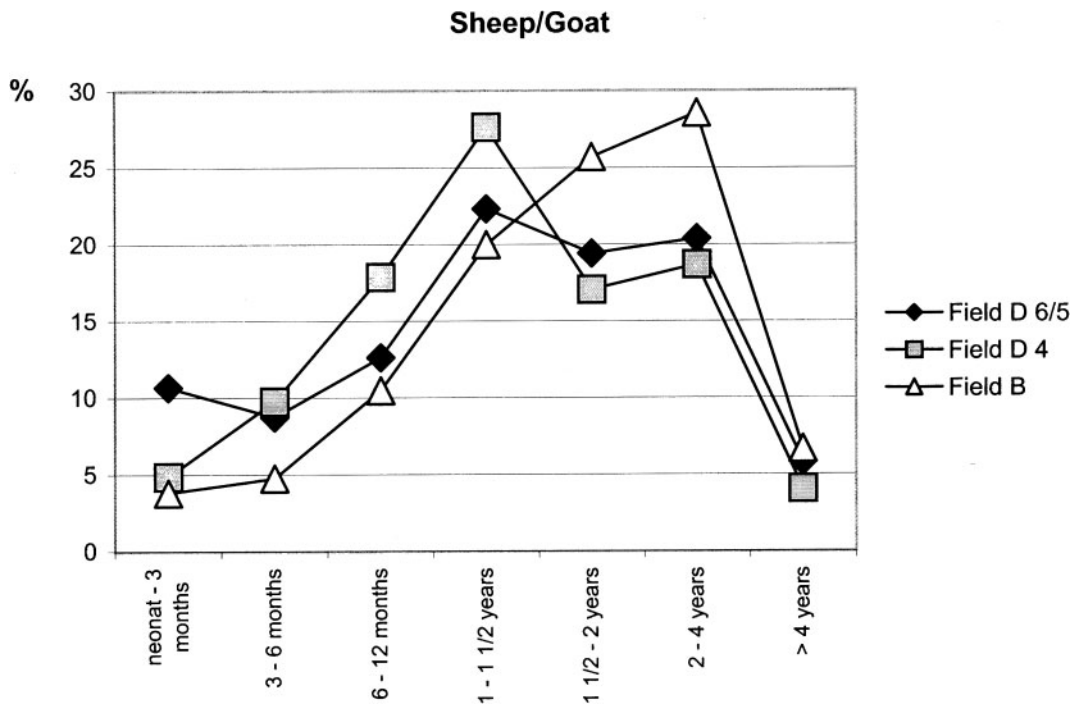


Figure 8 Sheep and goat: comparison between kill-off patterns in EBA Field D (Field Phases 6/5 and 4) and LB/Iron Age deposits in Field B (source: *Madaba Plains Project 5*, 318, fig. 14-10. Andrews University/Institute of Archaeology)

some remains ought to represent secondary products, perhaps appropriate gifts, such as pelts, feathers, hides, deer antler, claws, skins and ostrich eggshells (Peters *et al.* 2002, 312, 315).

For each of the domesticated animals, all skeletal parts are present, other than phalanges. Hooves could have been removed along with skins taken for tanning purposes, or chewing by carnivores might account for the low frequency (Peters *et al.* 2002, 316). Skins kept intact could have been prepared to carry liquids or make yogurt. According to ethnoarchaeological research, professional butchers in Druze villages discard the feet, yet households keep them for future use (Grantham 2000, 12). At 'Umayri, the absence of hooves argues against the use of the animals for sacrificial purposes, at least according to ancient texts. These indicate that priests were often obliged to observe the behaviour of the live animal prior to slaughter, to assure its appropriateness for sacrifice at the temple (Lev-Tov and McGeough 2007, 98). In other words, if the same rules applied at rural 'Umayri, had the animals been sacrificially slaughtered on the western summit, one would expect to find a complete skeletal inventory, including hooves. Support for this view comes from the presence of toe bones among the faunal remains from the Iron Age II altar complex at Tel Dan, which consists of butchering refuse (Wapnish and Hesse 1991).

Hind limbs are slightly more prevalent than fore limbs for sheep/goat and cattle in the 'Umayri EBA and LB/Iron Age I deposits. This is attributed to the proportionally longer, marrow-yielding, hind limb bones of ungulates breaking into more splinters when fractured than fore limbs. Cracking bones to extract marrow indicates preparation for consumption rather than for sacrifice alone (Peters *et al.* 2002, 316). The palaeozoologists further note that the presence of complete skeletal material implies that slaughter and eating took place mainly in close proximity to the site of deposition (Peters *et al.* 2002, 316). As a result, nothing was lost. Rather than dispose of the bones away from the built environment, or allow much scavenging by animals, the bones appear to have been carefully collected and saved in the 'pit' repository.

The palaeozoologists describe the LB/Iron Age deposit as the remains of butchering and cooking. The minimal exposure to the elements or scavenging of this assemblage, contrasts markedly with the state of preservation of EBA faunal remains (Peters *et al.* 2002, 315–16). Evidence of food waste is confirmed by: 1) blackened organic material interspersed with the bones and sherds; and 2) the presence of a greater

number of cooking pot rims than has been reported from any other context at 'Umayri, regardless of time period. Cooking ware constitutes 35% of rims found with the bones, in contrast to 12% in Building A and 7.5% in Building B. Domesticated animals from the LB/Iron Age deposit, however, are of the same species as those found in the EBA faunal assemblage from 'Umayri, and at other sites within the region. These are the animals slaughtered and/or sacrificed to commemorate an event and/or honour a deity according to both archaeological deposits elsewhere, and textual evidence of late EBA (Hilgert 2003, 52, 64, 77), LBA (Lev-Tov and McGeough 2007, 99; Pardee 2002) and Iron Age date (Pardee 2009, 54). The substantial quantity of meat represented by the bone fragments at 'Umayri indicates its consumption by a large group of people, given that local daily temperatures require the quick use and disposal of raw meat.

The deposit seems to have been created over a relatively short period of time and protected from predators for a longer period. Local climatic conditions would have created an odiferous deposit attracting scavenging animals, insects and pests not beneficial to humans, had the LB/Iron Age I deposit been open. The closure of the pit is suggested by the absence from the deposits of the bones of scavenging animals such as the striped hyena, weasel, wolf, badger or ratel, buzzard, wild cat, birds, and rodents identified in the EBA faunal remains (Peters *et al.* 2002, 307–8, 313, 315), and the lack of evidence for weathering.

Rare materials and artefacts found with the large animal bone deposit

Imported pottery, clay, bone, stone and metal artefacts excavated with the bones present a rich and diverse array of finds for the LB/Iron Age transitional period. The few small Mycenaean (with a laminated fracture pattern), Cypriot and Chocolate-on-White sherds were brought to the site as whole pots or perhaps as sherds. Their smooth and decorated surfaces constitute desirable, curated, heirloom artefacts worthy of deposition with other high value materials. Reshaped rounded sherds (n=26) are in addition to 11 ceramic discs with an intentional hole and designated as 'spindle whorls'.

Bone artefacts comprise a spindle whorl, awl, pendant (?) and a reworked astragulus that was counted with the faunal material. Stone objects include a basalt polisher, mortar, millstone, limestone roller, flint pounder, marble base, basalt bowl fragment reshaped into a disc, and seals. The bronze

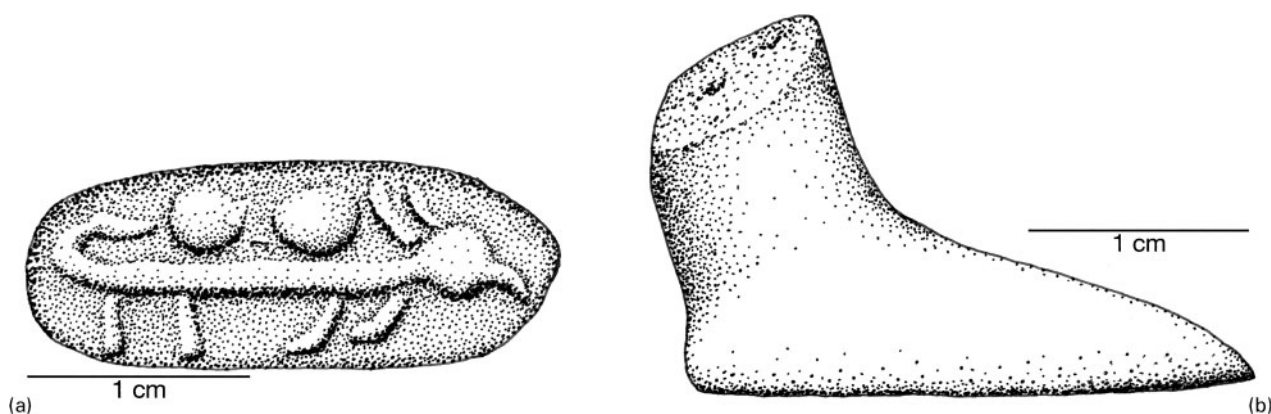


Figure 9 Foot-seal shows a horned quadruped with a long linear body and snout (Reg. no. 6200) (artist Rhonda Root. *Madaba Plains Project 5*, 284–85, fig. 69. Andrews University/Institute of Archaeology)

arrowhead, bronze pin and geometric metal shapes identified preliminarily as copper and ‘lead’ ingots await final analysis.

Amulets, figurines, and seals include the legs of an anthropomorphic figure made from volcanic tuff and a zoomorphic clay figure. The former is a fragmentary left foot with a linear engraving on the sole (Fig. 9). Foot amulets of this type are associated primarily with Minoan and Anatolian traditions, but are also known from sites in the Mediterranean, Levant and Mesopotamia (Eggler *et al.* 2002, 284).

Limestone, frit or volcanic ash tuff were used for seals. A limestone scarab, frit scaraboid, two cylinder seals, plus one square and one conical seal were found distributed throughout the faunal material. Seals carved from consolidated volcanic ash tuff appear in square, conical and cylindrical forms. From within the ‘pit’, and especially from the area immediately outside, came unfinished seals made of tuff, some lacking a perforation. A broken cylinder seal (Fig. 10) with a linear tree and twig pattern is known from Hazor and Enkomi (Eggler *et al.* 2002, 284–85).

Many more seals of LB/Iron Age I come from outside, but close to the large repository of bones. Some are unfinished, abandoned once the drilling of the hole failed. The irregular linear ‘grid patterns’, some with lines and dots, are comparable to examples from Tell Beit Mirsim and Mt. Ebal. (Eggler *et al.* 2002, 246). Some could be maps of land use or territorial ownership, for example, Reg. nos. 271, 739, 929, 1075, 1677 and 1798. Discarded seals could represent defunct agreements or have been associated with former leaders. A seal impression of Tutmosis III on a jar handle found in a trench-pit above Buildings A and B (Fig. 11), bears a configuration that persisted in seals made during the time of Ramesses IV (Redford 1991, 379–80). The handle is dated by its form and ware, which are similar to LB/Iron Age I *pithoi* handles.

The array of artefacts intermixed with the broken bones leads to the conclusion that the ‘pit’ contents represent important events, possibly involving people with access to items obtained as gifts or through long-distance exchange, and which point to social, political and economic connections with the outside world.

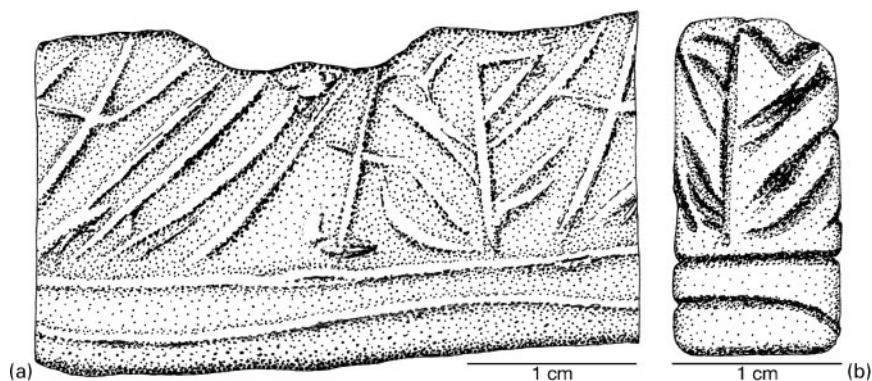


Figure 10 Broken cylinder seal made of tuff (Reg. no. 6184) preserves a linear tree and twig pattern above two horizontal bands (artist Rhonda Root. *Madaba Plains Project 5*, 284–85, fig. 68. Andrews University/Institute of Archaeology)

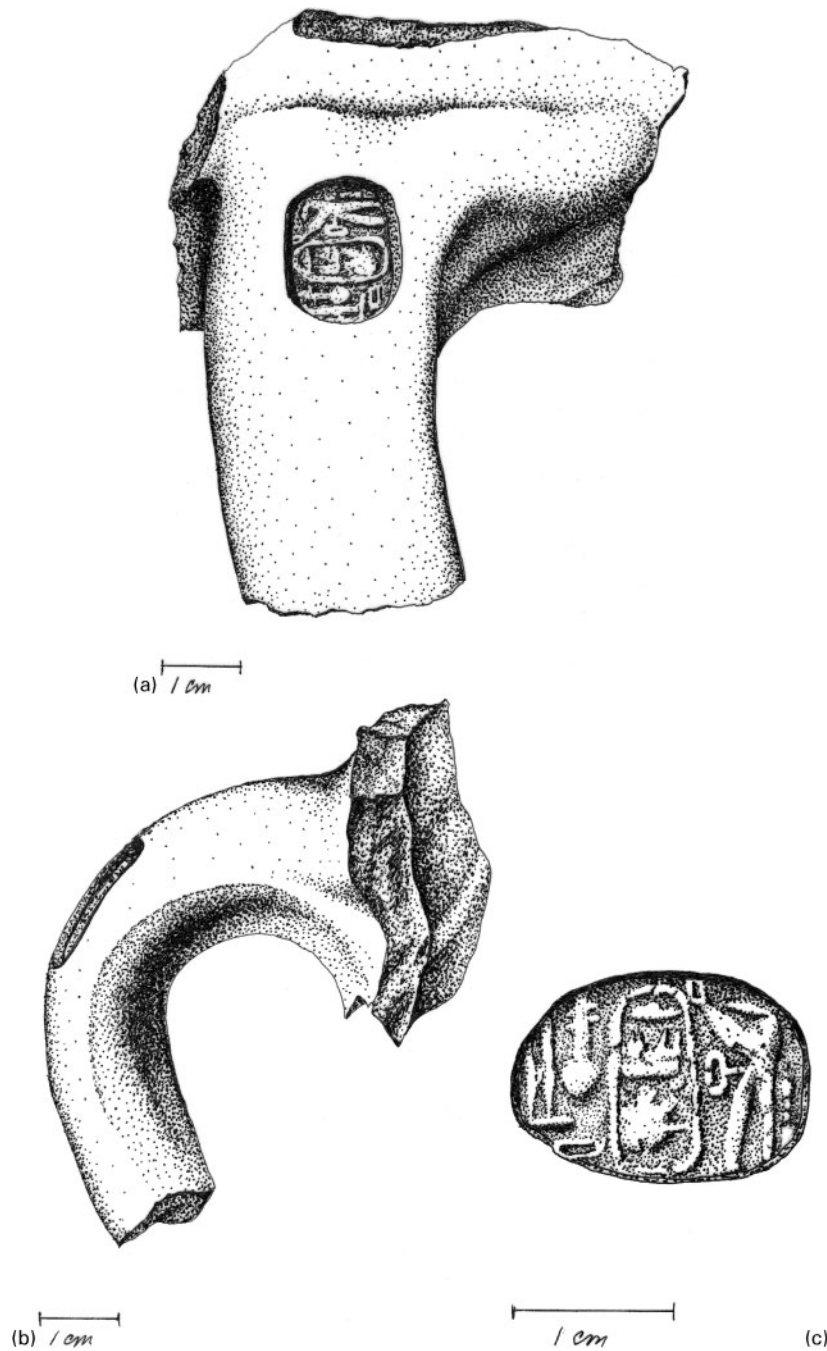


Figure 11 Seal impression of Tutmosis III on a jar handle (Reg. no. 843) (artist Rhonda Root. *Madaba Plains Project 5*, 285, fig. 68. Andrews University/Institute of Archaeology)

The buried, discarded or donated metals would have constituted a loss of valuable material, which one might expect to have been recycled under normal conditions. Regardless of their exact purpose, they represent wealth, status and access to materials of limited distribution. Seals embodying the identity of individuals, families, larger social units and elite status signal the large social, political as well as economic interests and players involved. The presence of more than 30 finished and incomplete seals, in various deposits, suggests that from LBA II

through Iron Age I, ‘Umayri was connected with people of authority. Unfinished seals made of tuff imply that those at the site had the stature to make seals, the use of which had implications beyond ‘Umayri itself. As a consequence, it can be inferred that the social and physical landscapes of the people who contributed to the creation of the contents of the ‘pit’ extended beyond the tell and the surrounding mortuary space. Events leading to the deposition of these items, along with copious amounts of vegetal and animal foods, can be approached through closer

examination of the faunal remains, with a view to learning who was involved with the slaughter of so many animals.

Social zooarchaeology

The combination of carefully collected and analysed zooarchaeological data concerning the location, size, type, frequency and condition of the bones allows for assessment of the people responsible for an accumulation of faunal material (Crabtree 1990; deFrance 2009). The self-contained 'Umayri bone deposit permits investigation of the socio-economic status of those who organized, contributed, and participated in these events, i.e. who slaughtered, skinned, cooked, served, and ate the meat. It is assumed that the bones are in primary deposition given that all body parts of the dominant animals are present. Rodents, birds or other species that might be attracted to discarded bones are found among EBA faunal remains, but not in the 'pit' (Peters *et al.* 2002, 313, 315).

A large deposit of bones, apparently stewed in pots, evokes a meal that was consumed by a large number of people over a period of weeks or months given the good state of preservation. The unusually impressive quantity of bone fragments collected, preserved and protected close to buildings could result from three circumstances: sacrificial, hunting or feasting rituals. The minimal presence of burnt bones, or evidence for their exposure to intense heat, imply that sacrifice was not the primary source of faunal material, although the nature of the evidence does not allow one to eliminate it entirely as an explanation. While perfect and complete animals can be associated with a hunting ritual, seeking to retrieve ideal specimens again (Brown 2005, 142), the presence of less than 1% of unarticulated wild animals does not suggest that the assemblage commemorates a hunt.

Sizeable bone deposits are an uncommon find due to a pattern of human behaviour that is prevalent worldwide. Normally, after eating meat, the bones are fed to pets or scavenging animals. Ethnoarchaeological study of Bedouin in south Jordan reveals this practice: after eating meat, bones are tossed to animals and others are placed at a distance from the tents where dogs devour or scatter them around the camp (Banning and Köhler-Rollefson 1986, 163–64). In Druze villages, bones are divided into refuse categories according to how meat is cooked, served or eaten (Grantham 2000, 13). Bones are discarded in alleyways and courtyards for pets and scavengers. Little remains untouched. In contrast, the 'Umayri deposit preserves even the smallest bones.

If the treatment of bone refuse documented in more recent traditional societies also prevailed in antiquity, large faunal deposits will be the exception, and limited to carefully sheltered grave sites or deposits of 'sacred refuse' too important to be scavenged or left open to the elements. Examples are animal cemeteries at Ashkelon (Wapnish and Hesse 1993) and large accumulations of bones within a temple complex as at Tel Dan (Wapnish and Hesse 1991).

Another example is the Tel Hazor assemblage of 17,000 bone fragments, concentrated around a possible altar, and attributed to a LBA ritual feast (Zuckerman 2007). LBA cuneiform texts from the Syrian town of Emar describe periodic seven- to nine-day feasts to mark the death and inauguration of priestesses, among other events. Elaborate *Zukru* Festival feasts took place for seven days every seven years, in addition to less elaborate annual feasts (Lev-Tov and McGeough 2007, 92–93). Inclusivity and participation of the wider community is one element described in the texts: these events were not reserved for a religious or political elite. No specific cultic events occur during the feast, which was part of a large sacred ritual for the local gods. Emar texts define limited roles and obligations of the king and temple. While not an active player in the rituals, the king was responsible for providing the bulk of the feast provisions, or for the installation of a priestess a temple would provide animals for slaughter. In each instance, the general population who joined the feast were tacitly acknowledging the power and authority of their king, or the central authority of a local deity and his/her cult leaders. The texts describe who sat where as well as who ate what (Lev-Tov and McGeough 2007, 90–94). The comprehensiveness of the feasts marks them as religious events with subtle, but distinctly socio-political goals. The feast was thus one means to display and reaffirm the social status of each participant.

The Emar tablets repeatedly record common domesticated animals as appropriate for feasting (Lev-Tov and McGeough 2007, 99). In the case of Ugaritic LBA texts, contemporaneous with the 'Umayri faunal assemblage, the animals listed as dedicated to deities at both the urban centre and in rural settings are identical. Only in the two texts describing sacrifice and/or slaughter outside the city of Ugarit is there mention specifically of 'goat' in addition to the ubiquitous sheep recorded for city sacrifices (Pardee 2002, 119–21, 224). Earlier administrative texts documenting Ur III receipts and royal

expenditures of animals for cultic and kitchen use similarly involve sheep, goats, and oxen (Hilgert 2003, 50, 64, 77).

In faunal deposits at Hazor and 'Umayri, domesticated sheep/goat and cattle predominate. The species thus echo the situation as detailed in the Ur III cuneiform tablets from Mesopotamia (late 3rd millennium BC), texts from LBA Ugarit and Emar, and an Iron Age inscription from Zincirli, i.e. the periods before, during and after the 'Umayri bone accumulation. Ritually slaughtered animals at Iron Age Qitmit (Horwitz and Raphael 1995), Tel Dan (Wapnish and Hesse 1991) and Tel Miqne (Maher 2005) suggest that domesticates were the norm for sacrifices and feasts. Near Jerusalem, at the Tel Miqne Iron Age II Temple Complex, young males predominated (Maher 2006–07, 330). From the small Iron Age sanctuary at Lachish, bones, as well as hooves, belong to domesticated animals (Lernau 1975). To differentiate between faunal remains from domestic and cultic deposits, Horwitz (2000, 228–30) argues that the concentration and accumulation of material is more important than the specific type of animal, as evidence of cultic activity. In contrast, exotic animals are found in 'normal' temple refuse outside our region, in the Greek world for example (Boessneck and von den Driesch 1981, 245).

An archaic Aramaic inscription on a basalt mortuary *stèle* from Zincirli in Anatolia bears a feasting scene below the text, and depicts a man wearing a late 8th-century BC style of hat. The text mentions bulls and rams as appropriate for feasts at the time of death and forever afterwards, in a tradition shared throughout the ancient Near East (Pardee 2009, 54; Struble and Herrmann 2009, 29–30). Foods for banqueting or for mourning include the same range of animals as feature in tomb contexts in the southern Levant (Lev-Tov and Maher 2001, 99).

Emar texts stipulate domesticated animals for sacrifice, yet wild animals (gazelles, fish, birds and venison) constitute appropriate *gifts* destined for temple personnel exclusively (Lev-Tov and McGeough 2007, 99, 104). At 'Umayri exotic foods might have been reserved for elite, as was the case at Hazor (Lev-Tov and McGeough 2007, 107). The absence of cut marks on the tortoise carapace at 'Umayri could imply that it was brought there for purposes other than consumption. The mere presence of an exotic food or faunal artefacts can dazzle recipients (Ervynck *et al.* 2003, 431). For example, a single, decorated hippopotamus tooth, along with sacrificially slaughtered animals in an Iron Age II temple near Jerusalem, did not represent the presence

of the animal, but was a sacred gift of symbolic value (Maher 2005). The same could hold for exotic bones at 'Umayri.

The large size of the Nile perch implies an origin in Egypt, rather than a closer source (Peters *et al.* 2002, 328). Such items require expenditure of energy to obtain and transport. Gifts or tribute, as mentioned in the Emar ritual texts, were appropriate for temple personnel and the ruling elite. The Amarna letters, of the same date, record ivory inlaid chairs and metal drinking cups as gifts sent to Canaanite leaders from regional rulers (Zuckerman 2007, 189). Those who brought or sent animals to 'Umayri for their secondary products, or those who could procure exotic items, carried these to the site in order to preserve *their* current social status and that of the receiver. In this sense, it is argued, as recorded in the Emar and Amarna texts, that the religious and/or secular authorities at 'Umayri may have been the recipients of the exotic luxury foods.

There is no indication of the duration of the feast or the number participants. The texts from the urban centre of Emar provide an example of a seven-day minimum, but offerings and cult activities might have differed between small shrines and larger cultic complexes and thus produce different faunal remains (Horwitz and Raphael 1995, 301). The 'Umayri feast could have lasted a full month, once or twice annually, with people arriving from distant places at different times and overlapping with other groups.

Ethnographic reports of herders eating their animals specify special events of social, ritual or ceremonial significance, as for example occurs among the Khushmaan Ma'aza of Egypt (Hobbs 1992, 34). Bedouin of south Jordan eat meat on special occasions when large numbers of people converge. The long bones are chopped to allow marrow to enter the pot. The infrequent yet large slaughter requires enough people to eat the meat before it spoils. The resulting feast is an event remembered for its content, associations and people present. Afterwards, scavenging dogs feast on the bones (Banning and Köhler-Rollefson 1986, 163–64).

Instead of disposing of animal bones away from buildings, or allowing animals to scavenge the refuse, the material from 'Umayri was carefully, ceremoniously buried and protected, perhaps in the hope of ensuring the future of the herd and its owners, or to commemorate a major event, new alliances, seasonal work or weddings. In traditional villages societies that produce most of the foods they consume, feasts associated with holidays and family celebrations were the rare occasions of 'overeating', as in 1935

Yugoslavia (Bićanić 1981, 122). Ethnographic studies of communities in Mesoamerica and Africa also describe village feasts as sumptuous affairs involving food and beverages (Dietler and Hayden, 2001). Thus, when people came to 'Umayri with large numbers of animals to sacrifice, slaughter and eat, there would have been plenty food at even this rural site.

Rural settings worldwide benefit from the 'work feast', which is designed to mobilize collective labour to carry out specific large projects. Also known as 'festive labour' they require no reciprocation, unlike 'work exchanges', which will involve smaller numbers of people, perhaps friends or relatives. Generous quantities of food and drink characterize work feasts, whereas for work exchanges little, if any, food is offered. Instead, there is an obligation to reciprocate in the work exchanges of others. Individual societies can employ a range of situations that involve modified work feasts or work exchanges, but lavish work feasts are the best way to assure a labour pool (Dietler and Herbich 2001, 241–58). Thus, at rural 'Umayri, feasting may have entailed ceremonial events held seasonally when labour was required for a variety of tasks.

Feasts and ancestor commemoration in a ceremonial landscape

Feasts involve a larger group of people than normal, and they participate in a ritual of special food generally to develop loyalty, to a group and leader (Wright 2004, 133). Feasting is a more formalized communal consumption of food/drink than a normal meal, and marks the celebration of important events (Weismantel 2003, 142). Feasts can occur at the start or finish of an action, or the telling of stories and histories (Sherratt 2004, 308). They maintain networks and social ties between individuals, and groups of people, while personal and community transactions are undertaken. Feasts take place after positive or negative events. Food shortages or potential famines may be times to feast. Social stability is impacted by food scarcity and, as a result, conspicuous consumption can occur in societies with food dilemmas (Bray 2003, 1–3). Social networks and expressions of solidarity can become ever more critical during periods of food shortages or uncertainty (Garnsey 1999, 41). In antiquity, variable precipitation from year to year in the semi-arid region bordering the Jordan Valley probably rendered the availability of food a permanent concern, and the LB/Iron Age transitional period may have been a particularly stressful time in terms of political uncertainty.

The politics of animal use depends on the scale of operation, the geographical setting, and the goals or strategies of those involved. In complex pre-state level societies, in which people engaged in different activities beyond subsistence maintenance, political elites will organize labour and the economy to a greater or lesser extent. They decide allocation of labour, including animal rearing and subsequent use, with the goal of increasing their own wealth/status and that of the community in general. In particular, if people are separated from their families for any reason, elite control is necessary to procure and distribute food. Feasting can function to redistribute food and can serve many purposes that enhance the organizer and all the participants. A feast involves collecting and redistributing meat and other food along with the likely gathering of non-food tributes and gifts, as well as the mobilization of labour (deFrance 2009, 107–08).

The Emar texts and ethnographic studies of slaughtering animals, meat consumption and discard patterns suggest that feasts were infrequent, and somewhat lengthy participatory affairs involving the general populace, and were not the exclusive domain of elites. If the ethnographic and epigraphic information noted above is appropriate as a means to understand society at 'Umayri, one can infer that a large number of people feasted on domesticated animals slaughtered for a ritualized, ceremonial event. Bones of exotic species may have been presented to an elite group at 'Umayri as a token of respect, and point to some having access to goods from beyond the immediate region. The lack of weathering and scavenging, along with the unusual protection accorded a dense collection of bones, and their location adjacent to unusual storage and perhaps ceremonial buildings, points to these being the remains of an important occasion, perhaps involving people of different age, sex, occupation, lifestyle and position in society.

One way in which the sanctity of ancestor burials was maintained in antiquity was by return visits to cemeteries or burial grounds, perhaps carrying bones for secondary interment. The Zincirli inscription implies repeated feasts, by anyone who passes by, as it instructs 'Henceforth, whoever of my sons or of the sons of anybody (else) ...' should slaughter and apportion rams and bulls to the deceased in perpetuity (Pardee 2009, 53–54). Visits to family burial sites, with or without a body for deposition, would have allowed participants to meet periodically, and simultaneously to inscribe their own history onto a liminal landscape while retelling stories of those

buried. People linked themselves to their past and present through visits to the graves, and connected themselves, and all living celebrants, to the deceased relatives and to each other. The large number of graves around 'Umayri would gradually, over the centuries, have recorded people and created a complex genealogy handed down orally to successive generations. This sacred landscape of burials and shrines retained its sanctity as demonstrated by use of the 'Umayri hinterland for burials from the EBA through to the classical period. During periods such as LB/Iron Age I, for which there is no strong evidence of activity in the hinterland, there is architectural evidence to show that the tell remained a ceremonial centre, and thus a place to visit. The potential ritual or ceremonial artefacts excavated at the tell, when considered together with the hinterland burials, allow us to posit the existence of a sacred and ceremonial landscape near a rare freshwater spring. The standing stones, shrines, 25,000 animal bones, and artefacts at the tell might have been associated with, and administered by, authorized personnel who carried out community-wide ceremonies, whereas the burial sites are more likely to memorialize individuals, families or kinship groups.

In political terms, feasting events at burial sites, or elsewhere, would assist one to assert authority over others by donating animals for slaughter, as was the role of the king, or temple personnel according to the Emar texts. Other people who might contribute animals to be slaughtered would do so as a form of respect and loyalty to the local ruler or elite. For additional ceremonies, such as weddings, animals were slaughtered to feed wedding guests who in turn might present animals to their host, as documented ethnographically (Seger 1981, 98).

In 1867, Charles Warren described the hinterland of 'Umayri as lacking large hills or mountains. 'Over a tract of four miles square there is a never-ending succession of ruins. On each spur there appears to have been a village, on each hill-top a temple or public building' (Warren 1869, 29, quoted by Merling 1989, 28). While few of these structures remained for the Madaba Plains Project survey team to document, it is possible that dolmens were once scattered throughout the region. An expanded survey, extending to the south of 'Umayri, encountered large stones apparently from dismantled dolmens, reused as door lintels or in walls (Christopherson 1997, 292, 300). Hundreds of EBA IV, MBA II and Roman-Byzantine rock-cut graves survived, along with a smaller number of freestanding tombs (Younker 1991, 269). Over the centuries, it is likely that people

held ceremonial meetings in association with the burial sites surrounding 'Umayri. The LBA temple, LB/Iron Age cultic Building A, Iron Age model shrines, and later open courtyard cultic space, designate the site and hinterland as a sacred space for many millennia.

Feast participants

Several sources of information suggest that the 'Umayri feast involved people of different social status. Cooking technique, bone fragmentation, presence/absence of specific bones, and their condition can signal social status (deFrance 2009, 122). In the 'Umayri 'pit', all elements of the sheep/goat and cattle skeleton were present, including bones of both high and low meat value. Other than the hooves, everything was cooked.

Evidence of roasting, in the form of burn marks, is minimal. Fragmentation of the bones implies their use for stews. Most bones at 'Umayri are small, cracked and scraped to obtain as much protein as possible when boiled in a pot as a soup or stew. Highly chopped bones, which result from cracking to extract the marrow, fit well into a stew pot and extend the valuable protein source for the population at large. In contrast, roasted bones represent the opposite end of the spectrum: they are rare and could have been reserved for the elite. The abundance of evidence for bones associated with low meat values might signify the involvement of people of lower social status. In contrast, exotic foods were more likely to have been destined for elites or for use in special circumstances. In traditional Druze society, certain parts of the animal are reserved for specific dishes or occasions. Most meat cuts are equal in value except for the head, sternum and distal rib section, which are prepared for special social or religious occasions. Ribs and some neck bones go into soup, while the neck and limbs were ground (Grantham 2000, 12–23).

The remains of feasts, secular and/or religious ceremonies at 'Umayri, involving food for local leaders and their constituents, might not have rivalled the scale, size and pageantry of feasts at Hazor, Megiddo or Emar, but apparently included a wide range of participants. Bones buried ceremoniously in the 'Umayri 'pit' represent an abundance of animal meat for feasting, evidently by the full spectrum of population, and perhaps therefore depict a more 'egalitarian' event than those seen in the LBA urban centres. People practising a wide variety of lifestyles were likely to have been present — sedentary urban dwellers, rural villagers, semi-pastoralists, itinerant craftspeople, traders, etc., perhaps originating from

both sides of the Jordan Valley. Pottery styles link 'Umayri to sites in the Judean hill country, as at Mt. Ebal where collar rim storage jars, 'Manasseh bowls', and other similar vessel types occur along with seals (Herr 1999, *70; 2000b, 178; Egger *et al.* 2002, 246).

Those responsible for convening the people and the provisions presumably represented a ruling elite with the capacity to make and replace seals, and, while the social complexion and local hierarchy of 'Umayri did not rival Ur, Ugarit, Emar or other urban centres, the texts describing feasts held at these places can serve as examples for those at smaller settlements. Iconographic depictions dating to the later half of the 2nd millennium provide another perspective on feasting activities. Feasting scenes decorate an ivory 'Feast Plaque' found at Megiddo in a monumental palace, MBA and LBA cylinder seals from throughout the southern Levant, metal drinking cups, and an animal-headed cup from Hazor (Zuckerman 2007, 189–90; 2008).

Feasts could serve to bring people together in a place where large quantities of stored grain and water were available, and where animals would be slaughtered in quantity. They would serve to enculturate people, perhaps by defining or redefining individual or multiple social groups (Wright 2000, 89). As ritual meals link participants and perform necessary social functions among and between the living and dead (Mintz and DuBois 2002, 107), the site's location among hundreds of burial sites dating from the EBA onwards suggests that this may have involved the summoning of ancestors.

Visible from hills on three sides, 'Umayri provided a focal point for the physical, spiritual, and ritual sanctity for the community as a whole. It offered temples and shrines set in a sacred landscape that embodied family and tribal histories off-site, and so offered an opportunity for people from different groups, families or social units to conduct social affairs, and confirm or renegotiate agreements, as exemplified by the discarded seals.

The difficult, unpredictable semi-arid environment of south-west Asia contributed to economic and agricultural uncertainties, thus requiring multiple strategies for survival. Ritual feasts redistribute food and correct ecological imbalances resulting in occasional abundance and the inevitable periodic malnutrition brought by drought, disease and pests or a combination of all three.

Seasonality and scheduling among non-sedentary members of society past and present

The topography of Israel and Jordan presents diverse microenvironments, with areas in relatively close

proximity differing in altitude, slope, precipitation, flora, fauna, soil and temperature. Areas east and west of the Jordan Valley offer the full range of foothills and mountains, wide fertile valleys, dense forests with wild fruits and nuts, grazing, semi-arid zones and limited water sources. However, this natural setting demands seasonal scheduling of resources to maximize the natural abundance spread over regions that experience different rainfall patterns and quantities.

Feasts most likely revolved around the seasonal scheduling of resources. Slopes on both sides of the Jordan Valley are endowed with different eco-niches along their entire length (London 2009). After wintering in the Jordan Valley, or semi-arid zones to the east and south of 'Umayri, the availability of water and vegetation for grazing would have brought people to the Central Jordanian Highlands during the spring and summer dry season. Bones of sheep or goats below three months and even up to six months in age, are rare, implying a birthing locale away from 'Umayri, such as the Jordan Valley or the semi-arid zones to the south and east. Barley ripening in early spring would overlap with sheep shearing in April before the summer heat (Borowski 1998, 70). The local spring would have provided water to wash sheep, skins and wool, while store jars held abundant barley (Herr 2000b, 173; Clark 2000, 78).

Pottery production was probably restricted seasonally since traditional potters in the region prefer to work from May through October, i.e. in the dry season when clay is easier to collect and pots are quicker to dry and fire (London 1989, 224). Itinerant potters could have made the large jars close to where they were needed. Petrographic and instrumental neutron activation analyses demonstrate that they were fabricated in the vicinity of 'Umayri (London *et al.* 2008). Such itinerant craft specialists could account for the similarity of pottery both east and west of the Jordan Valley. Poorly executed pre-fire marks, on one or both handles, show a lack of precision that could indicate they are not potters' marks but represent community-wide ownership. Similar marks characterize jars from more than one building as seen in two handles previously published (Herr and Clark 2009, 87). Such marks, while common at 'Umayri, are rarely found on collar rim jars from other sites, which hints at a special circumstance or a specific need-related use of the site, perhaps as a meeting place for non-residents who contributed to the sizeable storage depot. Alternatively the marks could signal the intended use of the jar contents, for public, cultic or some other distinct purpose.

Building projects can be another task relegated to the dry season, as they require sufficient labour and considerable material (Clark 2003). Living quarters for a large resident population at 'Umayri, or nearby, during LB/Iron I have yet to be identified. A 'work feast' may have brought together the labour and resources necessary to quarry, construct, repair and maintain the rampart, enclosure wall and built space. The perimeter wall may have been designed to protect the sacred space and restrict access to appropriate leaders and specific participants of particular ceremonies. Ethnographic data suggest that hosting work feasts can lead to inequality, even among 'ideologically egalitarian' societies, but this is not always the case (Dietler and Herbich 2001, 252–54). Redistribution of food in the form of feasts prevents accumulation of wealth by an individual or family. Whatever is lost in material wealth is compensated by enhanced levels of status, credentials and charisma for anyone hosting a large group of people to perform specific tasks.

The highly varied and dispersed nature of water and grazing resources juxtaposed with the available technologies of the late 2nd millennium BC required that different activities were undertaken at different places, but not always by the same people. If 'Umayri was not a residential site during the LB/Iron transitional period, but home to a small number of people responsible for periodic ceremonial events, this implies the existence of other contemporaneous task-specific sites. A case in point is the presence of hundreds of small workstation sites in the vicinity of Jerusalem, which could accommodate another scene of summer and fall herding, with vegetation for grazing and wild fruits and nuts for harvesting and processing (London 2003). Acorns harvested in late summer–autumn, when alternative food and grazing sources are scarce, are rich in tannic acid, necessary for processing hides, and could have led to trade in acorns. Nutrient-rich acorns store well in granaries and pits for up to two years, and are suitable as animal fodder (Rosenberg 2008, 169). The multi-purpose olive, grown in hilly terrain, is also harvested in the autumn: green olives in September and ripe black olives later in the Autumn. Olive processing may also have been associated with task-specific sites.

Descriptions of feasting and slaughtering animals among current pastoralist populations in the Middle East can be problematic to use as models for ancient practices, but there are parallels given the long-term environmental constraints. People today and in the past had to deal with a challenging landscape, water scarcity, with a limited and unpredictable rainfall.

Drought is an almost annual occurrence today in the Levant. For those inhabiting the more marginally productive lands, small changes in precipitation can have large impacts. In antiquity, periodic drought was a perpetual threat region-wide (Rosen 2007, 7). Semi-nomadic pastoralists living on the outskirts of sedentary societies successfully cope with the natural limitations by living close to the carrying capacity of the land, and by coaxing land use beyond what can be tilled through the conventional methods. Rainfall that is restricted in quantity and season creates the need to experiment with dry farming. Marginally productive land tends to produce habits that repeat across time and space. Climate and terrain impact how far people move with herds and the herd composition (Hole 2009, 262) in a given location throughout history. From year to year the precise route of Bedouin herd movements changes to accommodate the availability of grazing for the animals based on local rainfall (Abu-Rabia 1994, 12). This was almost certainly also the case in antiquity.

Attention to the physical landscape allows people and flocks to exploit different ecological niches in rapid succession, east to west and north to south across present-day political boundaries. In the recent past semi-pastoralists would raise their own herds and/or hire themselves out to care for the animals of family members, sedentary neighbours, and strangers with whom they might trade for food and feed (Palmer 1998, 6). Their regular routes might incorporate the adoption of a permanent burial ground, often for secondary burials. After the burial takes place the area is afforded ritual or sacred status. Periodic, but not necessarily annual, visits to the burial sites serve to reinforce unity among family members who might not spend the full year together if some travel with the herds while others have a more sedentary, agrarian lifestyle. Visits to burial sites by an extended family can link them all together with past ancestors, present company, and the land. As travellers through the landscape, they read their history or genealogies in the burial sites associated with their territory, or territory that once belonged to them. This form of ancestor veneration can characterize any people, at any time, who practice subsistence pastoralism. The landscape maps the social and migratory history of people who navigate it to utilize the different ecological opportunities oblivious to all others.

When extended families of Negev Bedouin, who are separated during the year, meet at shrines or the burial sites of holy men they take the occasion to

slaughter an animal. They generally convene at places associated with ancestors or saint's burials, usually where water is available. Camel or horse races contribute to a festival atmosphere (Abu-Rabia 1994, 90). Annual visits to graves sites or shrines constitute a secular ritual for Egyptian Khushmaan (Hobbs 1992, 85).

Marx (1977) describes events following annual date harvests by the Bedouin of Sinai, which have changed over the years. After the date harvest, leaders call for a tribal gathering. Food is collected for a tribal sacrifice, which eventually is returned to the donors as boiled meat. A pilgrimage to a favourite shrine is set for a specific date. It brings people together to visit family and friends, share food and news while making their presence visible. A communal meal cooked by an elder involves sheep or a young camel. Everyone who contributed animals for the meal attends. When tribe members meet, shrine protocol requires that men sit in a circle as an announcer calls out the name of each man who then acknowledges his presence. A piece of meat passes from hand to hand until the announcer presents it to the man whose name was called. The food portion for his family symbolizes membership and loyalty to this particular group, yet group membership changes over time.

In addition to the men's circle, women and children enjoy the feast in family circles. Each family group slaughters an animal. Men circulate and return repeatedly to their family circle after they engage with other men to settle debts, end disputes or initiate new transactions, such as selling an animal. Shopkeepers sell drinks and sweets. Group gatherings, specifically at the saint's shrine, remind participants of their territorial rights expressed by the physical presence of the above ground tomb. The supernatural powers of saints protect not only the land and access to it, but also any personal property stored at or near the shrine, such as tents, farm equipment, etc. A visit to pay respects at a shrine reinforces family, community membership and a shared past, present and future (Marx 1977, 44–46).

Seasonal and task specific sites, such as workstations to harvest and process wild fruits and nuts in the Judean Hills in the autumn, or places for shearing, slaughtering, skinning and tanning animals at 'Umayri in the spring and summer, are designed to best exploit the seasonally and geographically uneven distribution of environmental wealth. Seasonal movement, or wandering, might refer to territories, or 'lands' associated with the Shasu, and

their transfer from one place to another as noted in Egyptian texts (Rainey 2007, 43–44). The Shasu lifestyle exemplifies the maximization of a semi-arid region, much to the discontent of any ruling authority with a preference for secure borders. An assessment of human ecology, the relationship between people, human societies and their natural, social and built environments, demonstrates an inherent contradiction between survival in the semi-arid zone and secure borders. People who cross borders or move from one region to another in search of grazing have never been well tolerated by sedentary society.

In the Jordanian panhandle, Rwala tribesmen have large tombs in a prominent place, near a well, where people might normally gather for grazing or watering. At a meeting less than 20 years ago, no one present knew the names of all group members. A 'confusion' of who belongs allows for political flexibility, a useful policy that permitted the inclusion of different people at different times. Some names incorporate the action of 'coming together' or 'those who sit down together' (Lancaster and Lancaster 1993, 163–65) regardless of how often it might happen. The meetings serve to socialize new generations and newcomers, while carrying out various obligations to family members, deceased or living, who thus gain a sense of community.

For millennia, ceremonial meetings in association with burial sites surrounding 'Umayri had at their core the LBA temple, LB/Iron Age cultic Building A, Iron Age model shrines, and later open courtyard cultic spaces. The impressive LB/Iron Age I storage capacity offered the resources to accommodate herds and villagers, traders, itinerant crafts people and others for periodic if not annual, seasonal events. If people came to 'Umayri early in the dry season, with large numbers of animals to clean, sacrifice, slaughter and eat, there would have been plenty to accommodate wedding feasts. In the late 1920s, Granqvist documented 'wedding seasons' which took place during times of abundance in May/June or October/November. Winter and harvest times were unsuitable due to the potential food shortages in the Judean Hills (Seger 1981, 74).

The ceremonial space encompassing 'Umayri portrays the genealogies of ordinary people past and present, inscribed on the landscape, in lieu of the texts used by ancient leaders to list their credentials in the form of a family tree to demonstrate legitimacy. For other people, mortuary remains preserved a sacred memory that could change repeatedly to accommodate more immediate needs.

Conclusion

Intentionally preserved remains of feasting, represent one aspect of multiple social events associated with political, economic, personal and communal obligations, arrangements and commitments that were carried out in the context of a spacious ceremonial landscape. The excess quantity of cooking pot sherds, bones, metals and seals distinguishes the ‘pit’ assemblage as residue of feasting provisioned by a local authority able to bring large numbers of people together periodically, to engage in a variety of activities from mundane to spiritual. Neutrality of the ‘Umayri spring, which was until recently a border between two Bedouin tribes, may have extended into antiquity. Rock-cut and free-standing tombs off-site, plus the temple/shrines on the highest part of the tell, established ‘Umayri as a ceremonial centre set among accumulated burials centuries old. The undisturbed EBA dolmen tomb near the spring, in a natural, physically accessible location, may have initiated the sanctity of the entire area. Water, barley, the age distribution of slaughtered animals, and possible pottery production, suggest minimally a spring/summer celebratory period. To unify a social network scattered across different settings, feasts during LB/Iron I brought together families and strangers, sedentary and pastoralist people, to redistribute the wealth of the spring harvest and flocks while engaging in the full range of social activities under the protection of long buried ancestors.

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