

Feasting at Tall al-‘Umayrī in the Late Second Millennium BC

Animal bones from Early Bronze and Late Bronze/Iron I Age deposits at Tall al-‘Umayrī number over 50,000 and constitute an exceptional collection to assess the social dynamics responsible for animal husbandry, animal exploitation, pastoral products, trade, paleo-environment, and paleo-diet (Peters, Pollath and von den Driesch 2002). Ḥisbān faunal remains, from about 1200 BC – AD 1450, studied by von den Driesch and Boessneck (1995) provide a comparative collection. Results of the sex, age, and mortality rate of animals from the LB/Iron Age pit can inform on the social circumstances that led to the slaughter of so many sheep/goat and cattle over a relatively short period of time.

Tall al-‘Umayrī

South of the ‘Ammān, the small mound of Tall al-‘Umayrī (1.5 hectares) stands at 900m above sea level casting a low shadow on the rolling foothills. Yet, it is a site of excesses. There is an embarrassment of richness in glyptic, ceramic, storage, architectural, cultic and faunal remains (Franken and Abu-Jaber [1979] 1989: 418-9) surveyed the site and found seals and figurines in addition to sherds. During the 1984 initial fieldwork of the Madaba Plains Project, a seal of Ammonite script comes from topsoil (Geraty *et al.* 1987: 196).

Excavations in alternate years by the Madaba Plains Project (Geraty *et al.* 1989; Herr *et al.* 1991, 1997, 2000, 2002) produced over 30 seals and impressions spanning the Bronze, Iron and Persian periods. They include reference to “Ammon” and personal names of prominent officials of the Persian Period (Eggler *et al.* 2002; Herr 2002a). Although these post-date the LB/Early Iron transitional era, together with the administrative building they portray remains of an Iron II provincial center for the region.

For the LB/Iron I period, seal impressions with an irregular grid pattern are plentiful and mimic those found in the western highlands (Tell Beit Mirsim, Mt. Ebal, el-Gib, Bethel) and Negev (Arad and Masos) and Jemmeh (Eggler *et al.* 2002: 246, 260). The spring at al-‘Umayrī is the only natural water source between the towns of ‘Ammān and Mādabā. It enticed settlers and visitors throughout the ages.

Ceramics: (Herr 2000a: 275) differentiates among the ceramics to delineate phases within the LB II, LB/Iron I and Iron I. The ceramics show strong morphological and functional similarities with assemblages in the highlands north of Jerusalem (Herr 1999: 74), although of local manufacture according to petrographic and INAA analysis (London, Plint and Smith 1991: 435). Herr (2000b: 176) compares highland site ceramic assemblages, on both sides of the Jordan Valley, and finds over 75% of the pots are utilitarian in nature. Specific shapes such as the “Manasseh bowl”, defined by Zertal (1986-87: 147) and once thought to typify the western highlands sites, much as the collar rim store jar, are frequent at al-‘Umayrī. Mineralogical and chemical analyses show that the jars and bowls excavated at al-‘Umayrī are products made in the central plateau region of Jordan.

Ceramics at al-‘Umayrī include a large collection of collar rim store jars not duplicated anywhere in Jordan or Israel. For an ordinary house to offer storage facilities comprising 50 or so large jars of any type is exceptional. The jars vary in fabric and precise manufacture (Clark and London 2000: 104-5), but their exact number remains to be determined given their potential use-life of minimally 100 years. The jars could have been produced and used for decades if not for a century. Replacement jars might stand inside broken jars. Nevertheless,

the storage capacity was beyond the normal needs of a family and perhaps even an extended family.

Architecture: In terms of structural design, the outer wall of buildings in Fields A and B belongs to a casemate wall encircling the site and stands over 2 meters high. Building B represents the immoderation typical of al-‘Umayri: it is the tallest, largest, and best-preserved four-room structure (FIG. 1). It housed the 50 plus collar rim store jars, the largest known storage capacity of the period. Adjacent are plausible sacred spaces or shrines with standing stones, baked and unbaked figurines of LB and LB/Iron I dates (Bramlett 2004). Building A consists of several rooms and shares a long east-west wall with Building B. In Room A2 a flagstone floor area with an oval piece of smoothed limestone rests in front of a standing stone of the same type of limestone, which differed from the norm. The excavators cautiously interpret this as a possible ‘cultic corner’ (Herr 2000a: 277) although no other undeniably cultic artifacts were found in front of the standing stone. The absence of such remains is mitigated by the complete lack of artifacts on the paved floor. Elsewhere in the building, Room A1 is a dirt-paved courtyard with a hearth, storage bin, bench, ground stone tools, collar rim jars, bones of birds, small mammals, of a horse with butcher marks (Clark 2000: 78). Cattle bones come from a possible extension of Building A (Clark 2002: 56). A large number of animal bones come from ca. 0.80m above the floor of Room AI where remains of a partially articulated mammal with butcher marks, portions of small mammal, bird bones are found along with a piece of metal slag and a lamp (Clark 2000: 78).

In Building B the floor again was clean above the two areas of flagstone paving. Room B1, a small paved rectangular (2.8m by 3.6m) area at the south end appears to be an anomaly for four-room structures at other sites and perhaps was an animal pen (Herr *et al.* 1996: 68 and Herr 2000a: 279). The excavators designate the entrance to Building B in the eastern part of the north wall where a substantial door and anteroom lead to the area of the refuse pit filled with animal bones to a depth of over 2 meters (Herr 2000a: 279).

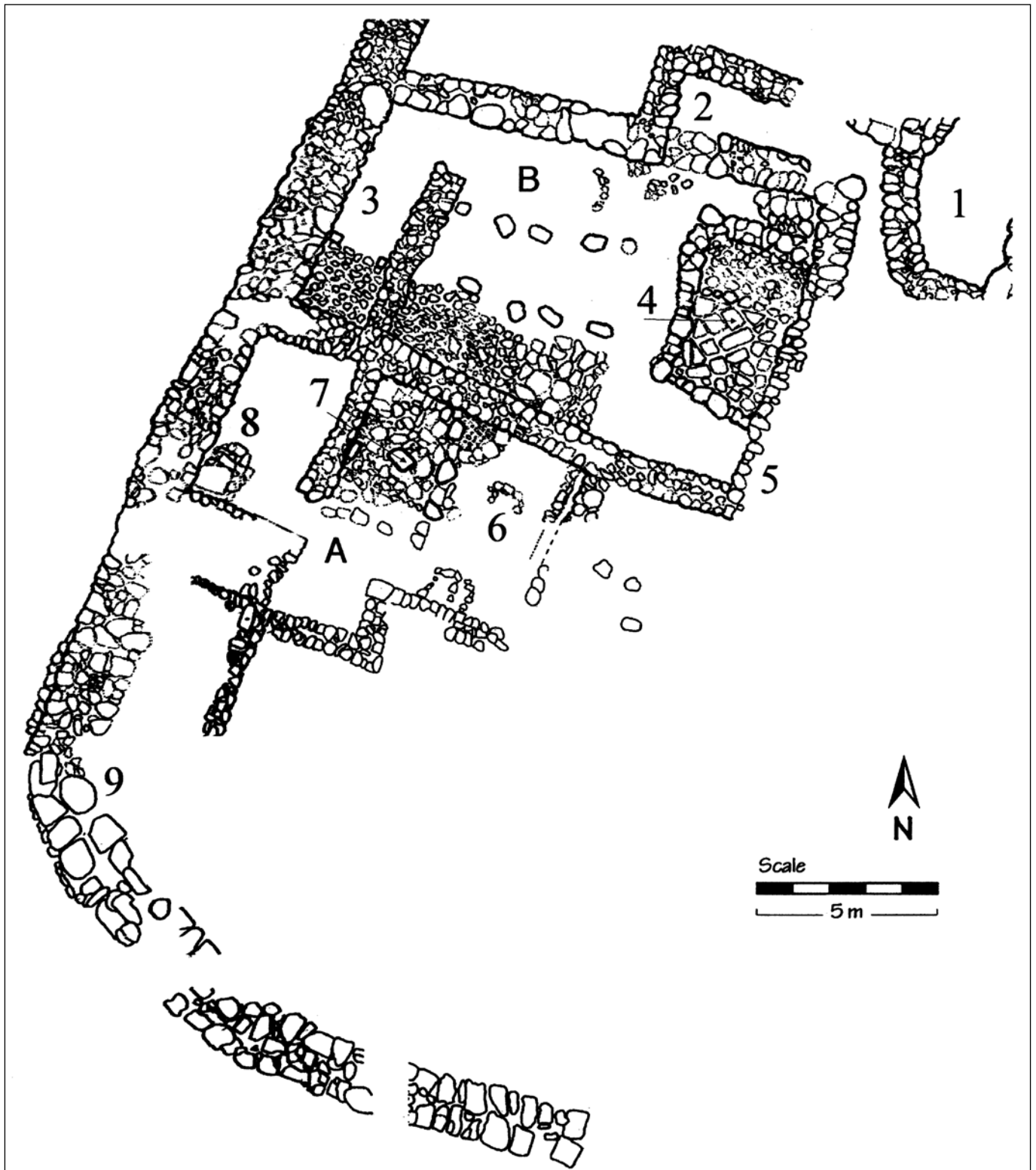
Cultic Finds: Artifacts cultic in character include baked or unfired figurines of people and animals (Dabrowski 2000), moulds for the latter, standing stones and the proposed cultic corner. Although the finds range in date between the LB II through Iron II, they attest to use of the space for sacred activi-

ties over hundreds of years. Room B1, covered with flagstones, if not an animal pen could have been a butchering area for animals slaughtered as part of a ritual feast and celebration. No artifacts remain on the floor of B1, although uneaten cuts of meat were found in Building B.

Rather than ordinary “domestic dwellings” and storage facilities, collectively the LB/Iron Age finds suggest an official/community-wide ritual use of the space, while at other hill country sites, most of which are smaller than al-‘Umayri, the four-room structures might serve the needs of an extended family or clan social structure (Herr 2000a: 277, 281), not at al-‘Umayri. Nor are these the later ‘classical four-room houses’ Faust and Bunimovitz (2003) describe. The evidence for use of the site and structures by a broader community includes the excessive number of jars that create a vast storage facility which stands adjacent to sacred spaces and a deep refuse pit directly outside the door and anteroom. The large deposit (5m long by 2m wide) contains homogeneous material, as if deposited over a relatively short period of time. Minimal exposure to the elements or scavenging characterizes the remains in contrast to the appearance of EB bones (Peters *et al.* 2002: 305). The paleozoologists conclude that the deposit contains remnants of kitchen and cooking activities. The quantity of animals suggests that this was not the remains of ordinary family meals.

Differences among highland sites: Beyond similarities in the ceramics, seals, and basic architectural features of the four-room structures, there are important distinctions between al-‘Umayri and the other hill country sites. Exotic imports, infrequent or absent from many other sites, include Mycenaean sherds, alabaster, and Nile perch at al-‘Umayri. The fish came dried or smoked to the site (Peters *et al.* 2002: 329). Only al-‘Umayri boasts a major wall and moat system in sharp contrast to the other sites which also tend to be smaller in size. At Giloh is a unique solid rectangular tower as is a possible defense wall enclosing dwellings and animal holding pens (Mazar 1990b: 92). The outer wall appears to have been the work of different groups of people working in slightly different techniques (Mazar 1982b: 168). The construction could involve different groups working roughly at the same time, or seasonal work carried out by different people.

The diversity of late second millennium artifacts at the al-‘Umayri four room structures imply a site



1. Buildings A and B at Tall al-'Umayri: (1) deep pit containing over 25,000 animal bones deposited in the LB/Iron 1 era; (2) ante-chamber and possible entrance to Building B; (3) inner and outer casemate walls create a room, partially paved with cobbles, and containing over 50 collar rim storage jars; (4) paved area of an animal pen; (5) southern entrance to Building B; (6) area of beaten floor and food preparation implements; (7) possible cultic installation with an altar (at arrow point) resting in front of a tall standing stone in the wall: altar and standing stone are made of the same type of stone which differs from the walls; (8) room in building A and inner casemate wall; and (9) outer casemate wall.

function that extended beyond an individual residence unless the family exercised considerable political, economic, and social power. In contrast the limited categories and quantities of artifacts in the hundreds of west highland sites restricts their activities to food production: cultivating, harvesting, processing, cooking, preparing, preserving to storing. Animal bones, when present, are sparse, yet herding pens and grazing were available. At Giloh, cookware and store jars of all sizes represent 80% of the ceramics although there is neither arable land nor water in the immediate vicinity (Mazar 1982b: 168-69). A good number of hard limestone saddle querns and flint or limestone pestles at Giloh were used as hammers or grinders, perhaps for processing acorns from forest trees (Mazar 1990b: 89). Other sites, such as Mt. Ebal have similar stone tool equipment in a region where an oak and terebinth forest stretch over the hills. The densely forested slopes in some areas constitute an impediment to settlement and agriculture (Aharoni 1978: 158).

Faunal remains: Outside Building B, a garbage pit containing some 20,000 animal bones informs on the events that led to their deposition. An analysis of 5989 animal bones, of which 73% were identified to species and/or genus level, finds that the majority belongs to domesticated sheep/goat (Peters *et al.* 2002: 306). Ethnoarchaeological research can account for three circumstances resulting in large animal bone deposits: sacrificial, hunting or feasting rituals. In the absence of burning from intense heat due to roasting the bones, the remains did not constitute a sacrificial offering. Few were wild animals (> 1%) and the absence of complete, articulated wild animals eliminates a possible hunting ritual offering to assure future success. Animals associated with such rituals should be perfect specimens in order to obtain ideal specimens again (Brown 2005: 142). The third situation resulting in an accumulation of animal bones is feasting and evidence derives from multiple sources, including butchering and cut marks found on broken bones.

Both from the pit and from inside Building B further proof that the meat was eaten or intended for a meal is the division of animals into conveniently sized portions for distribution and cooking. Two shanks of butchered large mammals remain uneaten in the building (Herr 2000b: 174). Fragmentation of bones at both ends indicates that people could extract and eat marrow from the long bones, which were stewed or boiled rather than roasted (Peters

et al. 2002: 306). Crushed and cracked bones are atypical of animals offered as hunting ritual. All sheep/goat and cattle body parts, large and small, are present and indicate that their slaughter took place near the pit not too far from the point of consumption. Nothing was lost. One of the only distinctions in bone type is the slightly higher representation of hind limbs over forelimbs for sheep/goat (33% vs. 20% and cattle, 28.4% vs. 18%). Hind limbs contain more marrow leading greater shattering than forelimbs (Peters *et al.* 2002: 16) and again point to slaughter for meat consumption. Among the Druze of the Golan Heights, distribution of animal bones depends of food preparation techniques: bones bearing the most meat, including the fragmented hind limbs, are processed in a courtyard or backyard where food is prepared rather than eaten (Grantham 2000: 13). In south Jordan, two hearths at a site coincide with a meal involving meat. Ordinarily there would be one hearth unless a *mansaf* took place (Banning and Kohler-Rollefson 1986: 164).

Animals age and sex statistics imply differences in the use of animals for the EB and LB/Iron deposits according to the paleozoologists. In the latter deposit, cattle were raised primarily for beef production and no longer for tilling fields as in the EB. Cattle bones in the pit belong to young calves and juveniles, who would reach their maximum meat weight between 1 ½ - 2 ½ years. The few mature cows apparently were kept for milk. Calves may have been slaughtered to make cow milk available for human consumption and to give more pasture space to the economically more valuable sheep (Peters *et al.* 2002: 316-7, 327).

According to Peters *et al.* (2002: 317-25) among the sheep/goat, which account for 85% of the LB/Iron I domestic stock, 45% were slaughtered during their second year at their peak body weight. Male rather than female goats were killed as kids or juveniles. Of the mandibles, 35.5% belong to adults, (2 to over 4 years) who would provide the best and most wool. Sheep/goat increase at the expense of cattle, implying that wool manufacture intensified in importance during the LB/Iron I times. Sheep outnumber goats in a pattern preserved regionally throughout the Iron Age until the Byzantine period. Goats rose in prominence at Ḥisbān during the Ayyubid-Mamluk period, suggesting a deterioration of the landscape with a decline in available food for sheep, but not for the less particular goat.

Goats manage to find food in a sedentary setting, tolerate bitter foods better than sheep and under transhumant conditions give more milk than sheep (Swidler 1999: 25).

Sheep size was stable throughout the EB, but late second millennium sheep are bigger and significantly taller when compared with MB and LB remains from other sites. Both the sheep and goat breeds probably differ from their EB counterparts. Adult female goats outnumber male goats 1:6 and were maintained primarily for milk production. The dearth of horse, donkey and mule bones result from their demise outside the site. There is a single camel rib bone; it has cut marks (Peter *et al.* 2002: 311, 320-326).

Al-‘Umayri catchment site sustainability - The paleozoologists express their reservations about how the immediate al-‘Umayri catchment area might have sustained year-round pasture for the sheep, especially given their large size. In the late second millennium, the presence of certain wild animals suggests that the area supported a more diverse animal population. Younker (1989) describes the current temperature and rainfall as capable of supporting denser vegetation than the current dwarf shrubberies. In a study of the plant ecology of the nearby Ḥisbān region, Lacelle (1986) reaches the same conclusion. A greater array of floral and faunal specimens is likely given that the current precipitation range of 300-500mm annually, suffices for the National Forrest planted on a hilltop opposite al-‘Umayri can thrive (Geraty *et al.* 1987: 7). *Terra rosa* soils are found in the wadi bottom and cultivated fields, but originated from the adjacent slopes where the parent rock can be found. Younker (1989: 36) assumes that the soil developed under a dense forest, but once people and grazing animals removed this original vegetation, the soil washed down to the lower, flatter spaces.

The paleozoologists conclude that in order to maintain a constant herd size it was obligatory to herd the animals seasonally perhaps at a great distance from al-‘Umayri and find food. Furthermore, sheep/goat “herding must have been integrated into a regional pattern of land use.... This is, however, difficult to prove on the basis of animal bones” (Peters *et al.* 2002: 322). The LB/Iron I Age larger and taller sheep/goat population were particularly suited to trek long distances between food sources and might have been selected for their ability to travel independent of their ability to produce more and

better fleece (Peters *et al.* 2002: 322). Although the bones provide no clue regarding where the herds grazed, there is other archaeological material culture to support this idea as presented below along with an assessment of three questions concerning the faunal remains: 1) why are so many bones found in close proximity to a building and what are the implications for site use and function?

Scheduled Seasonal Use of a Versatile, Multifaceted Landscape

The interior land formations on both sides of the Jordan River present enormous geographic and topographic diversity. Microenvironments abound. Precipitation patterns, temperatures, bedrock, water sources and soils vary considerably east to west and north to south. Most rain or snow falls between November – April, although sensational anomalies and flash flooding can occur in early Spring or Fall. In the Judean Hills (1000m above sea level) receive 600-700mm annual precipitation while in the Jordan Valley, the lowest terrestrial land on earth, dipping down to -390m below sea level, rainfall ranges between 50 – 100mm annually. The Judean Foothills receive 400-500mm precipitation each year in a transition zone ranging 100-400m from west to east (Orni and Efrat 1966:53, 85 and 95). The northern highlands of Gilead in Jordan are comparable ecologically to the Judean Hills, but receive less rainfall, 550mm (Palmer 1998b: 2).

Salinity and overgrazing are constant threats as is water shortage. Topographic and environmental differences offer seasonal opportunities for those willing or required to utilize them to their advantage. In the more fertile plains and river sediments, dry farming succeeds, but elsewhere agriculture is risky, unpredictable, but always a possibility. In the Negev, two in every four years brings drought (Abu-Rabia 2002: 206). To the north, in the region of ‘Ajlūn, the wheat harvest fails once every five years (Palmer 1998b: 2). Successful utilization requires appropriate patterns of land use geared to the specific area, yet flexible enough to accommodate annual or seasonal fluctuations. Vegetation available for sheep/goat herds blooms at different times in the disparate regions and can support herds moving slowly from one area to another periodically. Semi-arid areas blossom after a single rainfall and can result in a field of grain (Hobbs 1992: 45). Regardless of the drought years, Negev Bedouin consider crop cultivation economically useful and rely

heavily on the dew accumulation rather than rainfall (Abu-Rabia 2002: 206). Dew is an important factor throughout the region and collects in large quantities practically every night near al-'Umayri (Cole 1989: 41). In the Judean Hills, dew falls 100-180 nights (Orni and Efrat 1966: 121).

Herding animals - People who travel with their herds, as pastoral nomads, are considered successful in their adjustment to an ecologically difficult environment (Moghadam 1988: 391). The idea of moving with the herds as the seasons change maximizes the available geographic diversity of the interior regions bordering the Jordan Valley. Bedouin tend to raise more animals than the land seems capable of supporting because they live with the notion that someplace soon there is fodder for the herds (Hobbs 1992: 37). Semi-pastoralists can navigate their territory to accommodate the needs of herds and crops, both cultivated and more ephemeral farming that takes place wherever water puddles and seeds burst into life after a brief, but infrequent rainfall. Bedouin roam within the Negev ecosystem exploiting the abundant wild plants and occasional ephemeral barley harvest (Abu-Rabia 2002: 208). Spring grazing blooms in the wadi bottoms where flashfloods coax seeds to germinate.

Food for herds is a constant challenge, but never more problematic than in the summer. The Negev Bedouin allocate and reserve certain areas for summer use exclusively. They punish anyone who uses the dedicated summer grazing patches too early in the season. Tribal law strives to prevent overgrazing and aims to replenish natural vegetation for fodder (Abu-Rabia 2002: 209). In antiquity, summer in the hill country north of Jerusalem and in northern Jordan meant access to the forests, wheat stubble and straw, and water. Herders living in tents or outside on rooftops, would help to harvest and process wild and cultivated crops. Until recently, herders sleep in caves and receive their family as weekend visitors (Abu-Rabia: 1994: 74).

Interdependence of animal and crop husbandry - Farmers in northwestern Jordan, who persist with traditional farming strategies and little machinery or fertilizer, consider many different factors, including their animals, in deciding what to plant and what to leave fallow. The decision influences crops of the following year, in the plains (500m above sea level) or in the hills as high as 1100m at the 'Ajlūn massif. Crops grow in the valley bottoms below terraced slopes and grazing takes place in

the rough patches between the fields and forest clearings. The flatter plains are ideal for agriculture, but as elsewhere in the region, the soils lose fertility after long periods of use. Precipitation is unpredictable and often insufficient. One in every five years the wheat crop fails. Crop rotation to some extent depends on the presence or absence of livestock. Those farmers with sheep or goats tend to include a cycle of lentils as animal feed, which has the ability to stabilize nitrogen levels in the soil to improve the crop planted in the following year. Manure from the livestock likewise dramatically helps to revitalize soil (Palmer 1998b: 1-6). Fields left to fallow offer space for animals to graze while instantly fertilizing the soil.

In the past, laborers hired as herders would receive one of every three or four lambs in addition to cereal grains. Today's laborers prefer cash and have become too expensive for the farmers who simply chose to eliminate their livestock despite the concept of animals as wealth and necessary for religious feasting (Palmer 1998b: 4, 8). Legumes are suitable for sheep, goat and cattle, but animal fodder is a constant problem for the farmers. As in the Negev, only in the Spring does natural growth suffice. As a consequence, farmers grow plants specifically for fodder: wheat chaff and straw, barley, bitter vetch, lentil straw and white sorghum until recently. Bitter vetch, the "child of 40 days" is the last winter crop sown, but the first harvested, after just over a month. Legumes are less detrimental to the soil given their short growing period, but they require hand sowing, weeding and harvesting.

As a result of recent technological and social changes, some farmers who divested themselves of livestock nevertheless grow lentil straw to sell to nomadic pastoralists who visit in Spring and summer. Animals graze on the Spring vegetal growth plus the stubble following a harvest. Similarly in the Negev, Bedouin deliberately herd their animals to wadi beds in the morning to graze on green vegetation. In the evenings, the flock eats stubble in the field in order to prevent overgrazing (Abu-Rabia 2002: 208). Sheep and goat require constant herding to grazing and browsing areas and prevent them from intruding on crops. In contrast, cattle require less maintenance.

In terms of crops, following bitter vetch in March, barley harvesting in April/May coincides with the annual sheep shearing before the summer heat (Borowski 1998: 63). Miller (2001: 7) sug-

gests that in antiquity barley production increases through time as animal feed rather than for human consumption and would provide adequate stored fodder before fresh Spring vegetation accumulated in the wild. Barley was abundant at al-‘Umayrī in both buildings (Herr 2000b: 173; Clark 2000: 78). The short growing period of bitter vetch means an early Spring harvest, before barley. After the harvest, the herds clean way all barley stubble.

From late April to the end of May, wheat follows the barley harvest. Next on the schedule is goat shearing which takes place once a year in May/June (Borowski 1998: 63). Goat hair provides for tents and sacks, goatskins for scrolls, clothes, liquid containers, and water rafts, many of the portable items useful on a migration. In contrast, sheep wool was made into clothes and textiles (Borowski 1998: 70). A water source is useful for washing the sheep prior to shearing. Washed fleece sells by weight, but unwashed fleece, heavy with dirt, goes by the piece. Goat hair is not pre-washed, but regardless of the operational details, shearing was a major endeavor that brings together large numbers of people to control, shear and process the animals, first the sheep and then the goats.

Migrant herders, whether or not they owned the animals, establish ties with sedentary people, perhaps, their own family members, on both sides of the Jordan River. The highly specialized activities of pastoral nomads require that they engage in sociopolitical and economic ties with sedentary populations (Moghadam 1988: 397). Each community needs the other to survive within the particular environmental niche they consider as their territory. The question arises concerning the identity of the people who traveled with the herds. Ethnographic studies from throughout the Middle East reveal that animal owners hire people to shepherd their flock (Aronson 1980: 177). Herd owners can be of the same or different families, clans or tribes as their hired herders. In northern Jordan, an entire village, especially those on the plains, would hire nomadic pastoralists to care for animals (Palmer 1998a: 160).

Given the overall health benefits of a vegetarian diet, Miller (2001: 7) explains why people bother to domesticate and raise livestock who require constant attention? For several reasons livestock is part of the ancient Near Eastern economy. Domestic animals offer the security of a mixed agricultural economy. Livestock can move to fresh habitats

whereas there is no way to salvage a dead plant. Seeds survive one year. Areas adjacent to sites and suitable for farming can be in short supply, but land inferior for cultivation might to support an animal population. Finally, the plant-eating livestock consume plants inedible for people while producing food suitable for human consumption. Herds that migrate through agriculturally marginal territory allow people to make use of difficult microenvironments and semi-arid areas home to relatively few people.

Sinai Bedouin, who rely on wage labor, maintain their ‘unproductive’ economic alternatives, such as raising meager crops and herding animals, in order to keep their economic alternatives alive. In doing so, they foster the social relationships to maintain both horticulture and herding (Marx 1980: 111). Trade in medicinal grasses, plants and herbs, supplements wage labor, herding and gardening where feasible, but for the younger men, jobs in Egyptian towns keep them away from their families for long stretches of time (Marx 1980: 114). Certain Karak residents in the 19th century would live outside the town for part of the year, cultivating crops or herding animals based on ethnographic accounts described by van der Steen (2004: 109).

Feasting at al-‘Umayrī

Feasting involves a larger group of people than normal who share a ritual of special food and beverage to achieve and inspire an attitude of loyalty, belonging to a group and leader (Wright 2004: 133). It is more formal than a normal meal and involves communal partaking of food/drink to celebrate important events (Weismantel 2003:142). Reasons to hold feasts include the beginning or end of an action or to tell stories or histories (Sherratt 2004: 308). Feasts maintain networks and social ties between people and groups of people while social transactions take place (Bray 2003: 1). Such events maintain critical social relationships that involve access to resources, labor and security. They can establish subsistence and defensive alliances.

Both positive and negative social situations are stimuli for a feast. Periods of food shortages or potential shortages are deemed times to feast. Greeks and Romans obsessed about food due to common food shortages (Garnsey 1999: XL) although ancient authors do not describe famine, but episodic malnutrition and hunger (Bray 2003: 2). Food crisis threaten political, economic and social stability

of society as a whole and as a result, conspicuous consumption becomes necessary in societies experiencing food uncertainties and an overall lack of plenty (Bray 2003: 3). Given the vagaries of precipitation from year to year in the semi-arid region of ancient Israel and Jordan, food shortages might have been an issue, if at best temporary. As a consequence social networks became ever more critical during periods of food shortages or uncertainties (Garnsey 1999: 41).

The region-wide political and economic upheavals of the late second millennium BC, the interior hill country cut by the Jordan Valley lost most Mediterranean coastal links as detected in the dearth of imported Mediterranean or Philistine pottery at highland sites. It became essential for basic survival to further develop inland ties. Inhabitants of the interior invariably included sedentary and non-sedentary elements. LaBianca (1990; LaBianca and Younker 1995) characterizes the periodic shift from urban-centric society to expansion of the non-sedentary element of the population throughout the history of the region. The ceramic and architectural similarities of late second millennium BC hill country sites on both sides of the Jordan Valley present evidence of links stronger than before. As diverse people came together at certain times of the year, they assured their mutual survival in a politically and socially evolving precarious situation. Unpredictable rainfall and storage possibilities led to the inevitable potential for shortages of food and feed. Feasting was an ideal mechanism and necessary to commemorate the successful seasons and to guarantee the future.

The animal bones from the al-‘Umayri pit offer evidence of feasting. Organic debris is abundant in the pit (Herr 2000a: 279). Bones resulting from feasting activity should be numerous, long bones broken at both ends, and display cut marks, all features of the refuse pit deposit. Hind limbs, with their greater meat source, outnumber fore limbs. Juveniles were killed in high numbers resulting in the availability of milk for human use and meat to eat. Animals killed towards the end of their immaturity have reached peak meat weight with minimal investment by the herder (Borowski 1998: 57). The latter not only avoids feeding young animals, but the mother is at maximum milk production, which will last for several months. The age distribution and nature of the bone fragments result from butchering animals for food. Finally, among the bones

were cooking pot sherds found in greater frequency (35%) than elsewhere (20%) at the site (Peters *et al.* 2002: 327).

Steel (2004: 281) describes food as ‘anthropogenic’ because as it is culturally transformed from its raw state into an edible artifact, it informs on those involved in the various stages of production and use. At al-‘Umayri, the huge refuse pit in close proximity to buildings. Ashy deposits with Iron I sherds in Field C, outside the wall, suggest the remains of a garbage dump, but has no animal bones (Battenfield 1991: 85). Rather than dispose of all the bones immediately at a location away from the buildings, or feed them to animals, they were practically protected from dogs and pigs, possibly as an attempt to ensure the future of the herd by recycling or ritually planting the bones of eaten animals. The juxtaposition of the pit with likely cultic spaces in Buildings A and B could represent a sacrificial stage of the secular ritual.

Herd owners raise livestock, but consume little of their marketable resource according to ethnographic research (Hobbs 1989: 34). Borowski (2003: 67) describes the ancient diet as largely vegetarian. To slaughter an animal requires political ceremonial, ritual, or social events, often involving a large group of people, to benefit from the slaughtering (Hobbs 1992: 34). The large number of animal bones implies the presence of a sizable number of people to eat the meat. Otherwise it spoils. In south Jordan, Bedouin consume meat on special occasions only. Depending on the number of people, usually a male goat(s) is slaughtered. As many as can four fit into the pot. For a wedding, a female goat might be killed as well. The long bones are chopped to allow marrow to escape into the pot. Bones are tossed to dogs as the women take their turn after the men finish eating. Some bones are put at a distance from the tents where the dogs find them easily and devour or scatter them around the camp (Banning and Kohler-Rollefson 1986: 163-64).

Between the ages of 1 – 3 years is the optimal time to butcher animals due to the need to cull the flocks to accommodate the carrying capacity of the land and to benefit from the efforts already invested in feeding younger animals. Animals killed before age three are associated with a meat economy in which animals were slaughtered near where they were raised or brought to a site for consumption (Borowski 1998: 59). Young male animals consti-

tute a large part of the al-‘Umayrī refuse deposit.

The onset of Spring, is an appropriate time to slaughter young animals to reduce the overall size of the herds prior to the dry summer months when available vegetation diminishes throughout the region. Borowski (1998: 214) associates the slaughter and resulting feast with the beginning of the *rahīl*, the Springtime seasonal movement of herds to greener areas than the drier semi-arid zones. Greener patches sprout wherever Spring or Fall flash floods fill the dry wadi beds. Often the best places to take herds are known water sources where a sedentary population might reside. The confluence of vegetation for animals, grains grown in seasonal wet spots, potable water and sedentary population with their cultivated crops, result in an occasion to mark a successful recent or future sojourn. The slaughter and feast prior to the wandering period constitute a form of sympathetic magic instigated to provide good fortune during the migration. After the migration, another feast is in order. A Spring feast at al-‘Umayrī, after a winter in the Jordan Valley, is in order given the large quantity of barley harvested in April/May.

Any large assemblage of people, before or after the seasonal migrations is time for a feast, including animal meat. In the al-‘Umayrī refuse pit hunted animals form less than one percent of the bones. There is hardly any evidence of hunting to gather meat for the feast. Hunted meat was consumed on the seasonal migration route when the opportunity arose. A lone phalanx represents the remains of a lion (Peters *et al.* 2002: 311). In contrast, the region is considered rich in domesticated animal resources and has been exploited for millennia by Egypt and Assyria. Wall reliefs and texts enumerate recurring transfers of livestock to the political rulers without depleting the local flocks (Borowski 1998: 68-9, 79). The native vegetation, although sparse at times, allows livestock to flourish. Among nomadic or semi-pastoralists, a season and a stretch of territory (Hobbs 1992: 84) can be identical.

Who Participated in the Seasonal Migrations Culminating in Feasting Rituals and Who Crossed Jordan Seasonally?

Hapiru and Shasu - From towns and cities in Egypt and Canaan the Tel el Amarna letters and Execration Texts blame roving mercenaries, soldiers, outlaws, and robbers, named the ‘Hapiru’ for their problems. The deliberate use of these terms would

likely scare anyone into submission or action. The Hapiru were an easy target to accuse, but van der Steen (2004: 18) notes that the same people are elsewhere listed as messengers, entertainers, jewelers, scribes, workers, soldiers, and servants in the Palace, temple or private homes. Moran (1987) considers the term generic for the enemies of Egypt. Those enemies changed throughout the years.

Shasu, another term denoting enemies of Egypt, were mercenaries, rebels, highway robbers, etc., and refers to non-sedentary people, not unlike Bedouin, from the negative perspective of sedentary peoples (van der Steen 2004: 20). In turn, the sentiment is reciprocated thousands of years later by the Khushmaan desert dwellers inhabiting the region between the Nile Valley and the Gulf of Suez. They refer to Egyptian sedentary people as “peasants” and “strangers” (Hobbs 1992: 24).

Regardless of how texts derived from an urban-centric society describe people who lived outside the settlements, the identities, subsistence, livelihood, actions and activities of these people changed through time. In addition non-sedentary peoples as others, have multi-identities. They were part of a family and the larger groups to which it claimed loyalty. Outsiders would call the group by yet another name. For example, the Egyptian government issues cards to the Khushmaan Bedouin permitting them to buy foodstuffs at government controlled rates. The cards list the Khushmaan’s occupation as ‘farmer’ although none of the tribe would agree with that designation (Hobbs 1992: 24). For the Judean and Samaritan sites, Dever (2001: 118-9) divides the region and suggests the term “Proto-Israelite” for the 12th-11th century “village culture” given that the area later became Israel and assigns the sites in Jordan to the Shasu-bedouin. Alternatively is a perspective that considers the hill country on both sides of the Jordan River as a viable and necessary unit of study (Parr 1982: 127; Herr 1999; Younker 1999: 204; and van der Steen 2004).

Predominantly young and male - If one abandons the negative perception of those named in the texts, the activities of the Hapiru and Shasu call for a largely youthful and male population. Occupations listed above, such as soldiers, mercenaries, servants, and wage laborers imply a fairly young group of men, although there undoubtedly were exceptions. Young men, capable of soldiering, raiding, etc. could have garnered their strength and youth to engage in seasonal tasks wherever needed, for crop

cultivation and harvesting, or animal herding and shearing. They could toil as laborers in fields and/or travel with animals not their own while existing on the edge of urban and rural society, at times sympathetic to one or another community or political entity. One might not know on whose side they stood. Groups might join forces at one point for a specific purpose and once achieved, disband immediately (Moghadam 1988: 397, 405). They might become involved in raids to plunder towns or to grasp grazing lands for their flocks. As migrant herders, they observed information of use to absentee rulers who could buy their services. They provided the type of information only natives could acquire thanks to their intimate familiarity with the terrain. Conversely, they could forewarn locals of impending military actions.

They constitute a necessary evil in a physical environment known for uncertainty and a political system in upheaval. They moved from north to south and east to west seasonally to exploit the highly varied geography in order to benefit from the scheduled use of resources. Their power lay in their youth and the information they might provide to the highest bidder. An easy target for all sides to blame them for any mischievous and unlawful act. They could accommodate the needs of different masters, at different times. Perhaps some were innocent apprentices learning a trade. Bedouin hire apprentices as herders (Abu-Rabia 1994: 47) who travel with the flocks, but stay in contact with their families and with those who own the flock.

Ethnographic and ethnoarchaeological studies of Bedouins, semi-pastoralists, and nomads, inform on issues relevant for understanding interaction between sedentary and non-sedentary population (e.g. Swidler 1999: 23-4 and refs. in Hopkins 1993: 205). Herders can have strong family ties to the people resident all year in towns. The Khushmaan of the eastern desert of Egypt, work as guards, road builders, salt miners, wage laborers and collect herbs and wild fruits to sell in markets in addition to their traditional animal and dairy products. This multi-resource nomadism involves women who stay with the youngsters and tend the crops while the men migrate with the herds, hunt, or collect wild plants. Normally they resort to odd jobs as laborers during drought (Hobbs 1992: 30-32, 39). In the 19th century Karak residents would leave the town to cultivate crops or care for animals (van der Steen 2004: 109).

Whatever name we confer to the seasonal workers who might migrate with herds, or cultivate and harvest the crops, it surely is not what they called themselves. A group of young men might belong to different families. They belong to a region-wide movement of people and what took place in the highland bordering the Jordan Valley was "...a marginal feature of this movement, which changed the entire ethnic and political order of the eastern Mediterranean and the lands of the Fertile Crescent" Aharoni (1978: 157). There can be a tendency to emphasize historical texts whose rhetoric might overplay the role of Egypt in local events. Pastoral nomads are a normal part of the human landscape and can live peacefully with agriculturalists. Another instance of mutual collaboration is in Chad, where despite the Mamluk Egyptian historical records of major political events and attacks against nomadic Arab tribes, life among the nomads was peaceful (Holl and Levy 1993: 174). They utilize lands no one else could and willing gave tribute, in the form of animals, to the rulers. As for the LB II/Iron Age I pastoralists, call them what you will, they were young, landless, male and likely went by many names. Their families, the women, children, older segment of the population and the wealthier leaders traveled less or not at all.

Ancient sites correspond to the temporary, seasonal division of population. The approximately 300 very small sites (Dever 2001: 110) in the western highlands, visited by animal herders, lack substantial buildings or maintain a few supplied with ground stone, and ceramics suitable for crop production, food processing and some storage. In contrast is al-'Umayri with a greater diversity of population, artifacts, buildings, and almost an excess associated ritual, cultic, and storage facilities. The contents of Building B at al-'Umayri include tools to process and preserve foods (stone grinders), weave clothe, tents or rope, luxury items (alabaster container and bronze figurine peg) and several bronze weapons (Herr 2000b: 177-9).

LBII and LBII/Iron Age I workstations — Some of the small and very small sites of the hills north of Jerusalem, functioned initially, more as workstations than as permanent settlements based on the limited utilitarian artifacts and meager construction (London 2003). At sites smaller than al-'Umayri, the artifacts are predominantly utilitarian ceramics, abundant ground stone, and even flint tools, including an Iron Age rectangular sickle with sickle gloss

(Rosen 1982: 41). Collar rim storage jars exist, but capacity never attain the scale of al-‘Umayrī. Sites with cultic apparatus of one type or another include: the Bull Site (Mazar 1982a: 33-4), possibly at Mt. Ebal (Zertal 1986-87: 113-18), Kh. Raddana with its bull headed krater (Callaway and Cooley 1971: 18), and Shiloh (Finkelstein 1988: 220-34, 291). In the Jordan Valley is Dayr ‘Allā (Franken and Kalsbeek 1969; Franken 1992) and other sites cultic in nature, Umm ad-Danānir plus burials such as Saḥam (Fischer 1998). Despite a lack of settlements, there is confirmation of people in the area (Yunker 1999: 194). This is the evidence van der Steen (2004) gathers to demonstrate people traveling through the Jordan Valley en route to the highlands. In the absence of settlements, tents and caves suffice. LB burials, far from settlements, on both sides of the Jordan Valley, are another aspect of scheduled, seasonal use of the land (Gonen 1992: 12, 18, 148-9).

Pottery at the hill site workstations in part perpetuates LB traditions. Similarly, figurines and drawings of bulls continue to represent the Canaanite god El (Dever 2001: 152). LB villages might be poorly preserved, ploughed under, or misidentified as later in time. Pits characterize the earliest deposits at new sites, as at Masos (Str. IIB), Beer Sheva (Str. IX), and Hazor, for storing grains or ovens for cooking (Herzog and Bar-Yosef 2002: 164-5). The poorly built structures that follow, as at ‘Izbet Sartah, Giloh and Tel Masos (Mazar 1990a: 337, 1990b: 92) includes the minimal effort to level the bedrock at Giloh (Mazar 1981, 1982b: 169). Rather than evidence of nomads lacking a building tradition, seasonal visitors to the sites had little incentive to improve or invest in the sites until at a later time, when more people lived there permanently in the Iron I period. The small number of LBII/Iron Age I people were otherwise occupied with herds, gathering wild fruits and nuts, and harvesting crops. Another possibility is that the earthquakes responsible for destructions at Dayr ‘Allā and al-‘Umayrī, impacted the LB II population to the extent that they preferred to live in tents.

Differentiation between LB and Iron I Age pottery remains a thorny issue (Kletter 2002: 33-5) given the overall morphological continuity in combination with a dearth of decorated wares at stratified habitation deposits. Large store jars and cooking pots, the two shapes most abundant at sites of all sizes, offer conflicting dating information: jars

have the longest period of use and cookware has the shortest. The range is 100 years for jars and about two years for cooking pots based on ethnoarchaeological research (Longacre 1981: 63; London 1989: 78). van der Steen (1997) convincingly demonstrates that changes in pottery morphology or technology are inadequate to determine who was using the pots. Many cooking pots types can overlap with the same jars. As a consequence dating remains difficult despite all the efforts of ceramic typology. The paucity of other artifacts at the sites reflects an absence of potentially datable finds, but also the restricted range of activities carried out by the limited number of residents who were busy collecting wild plants and tending crops and grazing herds outside the site. Whatever they tended or produced might have been used on route or taken to fresh grazing land where they met family members.

Scheduled burial deposits – LB II multiple burials deposits are plentiful in the western highlands and can contain hundreds of ceramic pots, including the decorated and imported pieces lacking at hill country sites. At Duthan, Ta‘anach, Shechem, Hebron, Jedur, and Gibeon, tomb deposits could belong to the LB/Iron I transitional period. The tombs tend to be dated LB II based on decorated wares and imports. However, people curate ordinary pots destined for their burial, based on ethnoarchaeological study in Cyprus. I observed utilitarian jugs placed above recent burials in village cemeteries display decorations that went out of use years earlier. Older women save a jug for their tomb, whether or not they were former potters. In another instance, on the burial of a former potter is a jug her daughter made.

Terrace agricultural field systems - While Egyptians myopically viewed the area as consisting of the coastal strip and the less penetrable hills of the interior (Gonen 1992: 37), did the local inhabitants feel the same? If none of the hill country sites were used in the LB II, the implication is that the Late Bronze Age population of the lowlands feared the foothills and mountain ranges. Their herds never strayed in search of food, herbs and flowers that grow in the upper elevations, but not in the lowlands or foothills. They preferred the hot humid summer of the coast and periodic bouts of malaria.

If people from the coast and lowlands did wander up to the hills for a summer time picnic, the archaeological remains would be non-existent. If they did venture up to the highest hills and look

down, did they never wonder what sparkled in the depths of the Jordan Valley?

If people had no prior experience with terrace agriculture, the alternative requires that they master it as soon as/while they built houses “with amazing swiftness” (Aharoni 1978: 162). Terraces belong to the EB and MB landscape (Gophna and Porath 1972: 197; Edelstein and Gibson 1985; Gibson 2001). If they fell into disrepair during the LB, they were functioning once again in the Iron I (Stager 1985: 6). Gal (1992: 92) considers LB II villages as Canaanite on the edge of the Jezre’el Valley, including Tel Qiri, Tel Qashish, and Tel Shadud. Agricultural products grown in such foothill and mountain during the Late Bronze Age could escape detection and taxation by Egyptians, yet supplement the lowland crops and make feasible Iron I settlements to follow.

Dating agricultural terraces is as difficult as creating them. The differential weathering of limestone of various composition and hardness results in a natural stepped formation on the hills. However, the same limestone erodes and produces soil very slowly. Construction of terraced fields initially requires time or effort to import soil, and build stonewalls. Would people cut stone to erect buildings in the highlands with the mere hope that crops could grow on the terraced slopes, or did they know in advance, based on years of experience? Without plants, trees or walls, the soil washes down the slope with each rainfall. Lowdermilk (1944: 42) attributes malaria to the breakdown of terrace agriculture. As stone walls decay, the system slips into disrepair as the soil and stones laboriously carried up the mountainside washes down to clog the streams and prevent adequate drainage. Did they know that once established, terraced fields require minimal, yet diligent year-round repair? They knew from experience that instead of small individual terraces, the configuration of the deeply carved Judean Hills suited construction of large-scale systems of terraced slopes (Ron 1966).

Initially the hundred’s of hill country small sites served as workstations where a small group lived year-round responsible for cultivating and maintaining the terraced fields. They might experience a periodic in flux of people in the Spring and summer months when extra hands helped to harvest the crops and shear the animals, before the sojourn to the Jordan Valley to winter the animals in a warmer environment. In the 19th century, people sought the

milder temperatures of the Jordan Valley during the winter lambing season (December/January) and would then slowly climb the mountains, east and west, to find summer residences in caves or tents in a route that might have functioned in antiquity (van der Steen 2004: 110; 124) as well. McGovern (1986: 6) similarly suggests Spring migration routes between the al-Baq’a Valley via Wādī az-Zarqā’. Only later did settlers build more substantial constructions at the former workstations. Hopkins (1993: 210) considers the rounded enclosures of those sites, as well as Hazor, and Beer Sheva, as meeting seasonal needs of pastoralists. Subsequent to the initial deposit at Masos, Beer Sheva, Giloh, ‘Izbet Sartah, etc., later buildings display better building technique (Herzog and Bar-Yosef 2002: 164-5). The precise migration route cannot be known given the ecological, political and economic constraints semi-pastoralists contend with regularly. In any given year, people might decide to move or stay at a place where fresh vegetation grows (Abu-Rabia 1994: 12).

Importance of Feasting in Late the Second Millennium

After the hard work of harvesting and shearing subsides, the periodic assembly of livestock and people at highland sites could culminate in a celebration feast. Borowski (2003: 23-5) considers cultic celebrations as appropriate after shearing and harvesting, possibly followed by social transactions. Ritual slaughtering of ideal specimens might have also taken place to assure successful future herds. People with livestock wintering in the Jordan Valley, where green patches sprout weeks earlier than elsewhere, would travel east or west to the hill country in the early Spring. They would find fodder for animals available slightly later, first bitter vetch in March, and then the barley harvest in April and May coincides with sheep shearing season. Shortly afterward is the wheat harvest and goat shearing time. Summering in the mountains allows man and beast to benefit from the cooler temperatures than in the Jordan Valley. As summer progressed, the fruits would be harvested until the grapes and finally the olives were harvested and processed by September/October or even early November. Rather than endure the cold, wet hill country winters where snow is feasible, the Jordan Valley and Negev offer a warmer refuge for all. The occasional flash flooding creates opportunities for ephemeral

farming of grains etc. If they ripen, someone will be there to benefit. Wild fruits, herbs and seeds are also available.

Feasts impress people, create cooperative relationships between social groups and households, organize labor, and extract surplus produce from the general population for use by community leaders. Agriculturalists and semi-pastoralists, using al-‘Umayrī as a storage and ritual center, would join the seasonal feasts. In drought years, low crop yields left the storage jars unfilled, empty of barley seed for fodder and future crops. Years of low grain harvest unequivocally meant the slaughter of animals to survive winters. When possible, people would feast in the face of potential food shortages.

At Tall al-‘Umayrī people in various subsistence activities could congregate given the availability of a natural water source. Crops would grow in the vicinity and animals can find vegetation at nearby green patches within a day’s walk. The sacred spaces at the site, with the remains of many animals, suggest a rare feast of animals raised outside the al-‘Umayrī catchments basin. One function of al-‘Umayrī and Dayr ‘Allā was of regional market (van der Kooij and Ibrahim 1989: 79-80) involving people from more southerly areas as well (van der Steen 2004: 283). Perhaps they are responsible for the single camel bone found at al-‘Umayrī. In addition to the above reasons for people to meet there, the presence of Early Bronze Age settlement and tombs at the foot of the mound gives the site an aura of tradition, antiquity during an earlier, possibly less complicated era. It could afford to the leaders a sense of legitimacy. The earlier remains are immediately below the surface and perhaps still visible some six centuries later. If not, the LB II shrine and cultic accouterments present a recent memory.

Leaders, religious, political, or social, who would respond to local conflicts that might arise as a result of infringement on territory, access to the limited usable resources such as grazing areas and water. In addition to resolving internal fighting, there was the larger external threat of Egypt. The latter helped to mobilize and reinforce allegiance within the group against the common enemy. With the breakdown of social norms in the late second millennium, new ties, new spheres of interaction, new alliances with new people could flourish and benefit from a display of striking abundance in the face of food shortages, uncertainty and insecurity.

Conclusions

Whatever they called themselves and whatever names others used, young people performed a range of services involving all aspects of subsistence strategies to prevail during a period of region-wide political turmoil and accompanying power vacuums. They contributed to community survival, during uncertain political times in an unpredictable environment, by moving with the herds systematically to exploit the versatile landscape on both sides of the Jordan Valley. Conspicuous consumption of animals in an economy that relies on herds celebrates the start and finish of successful passage from one region to another despite the ever-present potential food shortages in years of negligible precipitation or if the herds did not reach grazing destinations in time. The feasts would bind together those who came to al-‘Umayrī as traders, herds, farmers, and family.

Feasts were not new, but did gain a greater importance due to political, economic, and social changes. Similarities of the pottery and architecture on both sides of the Jordan Valley represent the movement of people in a pattern suggested by van der Steen. Semi-nomadic pastoralists would wander with their animals or hire herders and as a consequence, families would separate for part of the year. Families split part of the year, due to an ecosystem in which various patches of land bloom in rapid succession, is not conducive to a symbiotic relationship with sedentary populations and yet, interaction between the two groups secures their future. “Relationships require maintenance” (Marx 1977: 39) and feasts can satisfy many of the requirements for mutual cooperation.

To maintain the relationship for economic security, social ties benefit from ritual reinforcement of group membership. Among the Sinai Bedouin, the date harvest brings everyone together on their own territory. They visit family and friends, share food and news, and make their presence visible. They use annual visits to graves sites or shrines as a secular ritual, as do the Egyptian Khushmaan (Hobbs 1992: 85). Marx (1977: 44) describes the protocol as tribe members meet at a shrine. While sitting in a circle, an announcer calls out the name of each man for all to hear. A portion of meat, wrapped in flat bread, passes from hand to hand until it reaches the announcer who hands it to the individual. A visit to pay respects at a shrine has the impact of reinforcing community membership.

Bedouin communities in different geographic areas sacrifice sheep and goat at certain shrines in the similar manner, perhaps following ancient customs. The sacrificial animals are young, male and under 2 ½ years of age, precisely as in the al-‘Umayri excavated pit. The sizable barley stores at the site could provide feed for animals in early Spring and when necessary, food for people.

People coming from diverse locations, for different reasons, would meet at Tall al-‘Umayri with its permanent water source to partake in a feast that involved religious/cultic ceremonies, not to mention economic, social, and political eventualities. The LB II shrine was a recent memory. Any leader who could convene people in the ritual landscape surrounding al-‘Umayri, with the aura of numerous highly visible EB and MB dolmen, legitimized his authority by reconnecting to a setting known by millennia of previous generations.

Acknowledgments

With much pleasure I thank Drs. L.T. Geraty, L.G. Herr and D.R. Clark, Directors of the Madaba Plains Project-Tall al-‘Umayri, for the opportunity to study the al-‘Umayri and Ḥisbān archaeological material, especially ceramics. At the archaeological laboratory created by Dr. D. Clark at Walla Walla University, where the collared rim storage jars have been under reconstruction by community volunteers and students over the years. They have assembled a remarkable collection of large jars with the assistance of many people, including Cheryl Weis, Hester Thomsen-Chilson, Adriel Chilson, Edna Canaday, Lorraine Jacobs, Josie Elia, Denise Garrow, Marcy Monteith, Marion Dressler, Virginia Gonthier, Deborah Haberman, Monique Acosta, and Lindsey Hill. My thanks to Dr. Aref Abu-Rabia for directing me to Bedouin sources.

Over the years, H.J. Franken discussed the site of al-‘Umayri with me and described it as small enough to actually learn what happened there. My thanks to those who heard this paper at the ICHAJ in Washington D.C. Drs Izthaq Beit- Arie, Raz Kletter and Eveline van der Steen read the paper and offered their comments.

Thanks to the White-Levy Program For Archaeological Publications for making petrographic and INAA pottery feasible. A Fulbright Research grant 1986 and an NEH Fellowship in 1999 enabled my ethnoarchaeological studies in Cyprus. Over the years, ASOR contributed in numerous ways and

deserves much praise. The helpful work of ACOR Directors, Patricia and Pierre Bikai, is gratefully acknowledged. Excavations of terraced fields near Jerusalem and conversations with traditional farmers in the 1970’s contributed to my understanding of how terraces function.

Finally, my thanks to Doug Clark and Barbara Porter, Conference Co-organizers, for their efforts to create, with their Jordanian colleagues, a wonderfully, informative meeting.

Bibliography

- Abu-Rabia, A. 1994. *The Negev Bedouin and Livestock Rearing*. Oxford: Berg.
- 2002. Negev Bedouin: Displacement, Forced Settlement and Conservation. Pp. 202-211 in D. Chatty and M. Colchester (eds.), *Conservation and Mobile Indigenous Peoples: Displacement, Forced Settlement, and Sustainable Development*. New York: Berghahn Books.
- Aharoni, Y. [1978] 1982. *The Archaeology of the Land of Israel*. Ed. by M. Aharoni. Translated by A. F. Rainey. Philadelphia: Westminster.
- Aronson, D. 1980. Must Nomads Settle? Some Notes Toward Policy on the Future of Pastoralism. Pp. 173-184 in P.C. Salzman (ed.), *When Nomads Settle*. New York: Praeger.
- Banning, E. B. and Köhler-Rollefson, I. 1986. Ethnoarchaeological Survey in the Beda Area. Southern Jordan. *Zeitschrift des Deutschen Palästina-Vereins* 102: 152-170.
- Borowski, O. 1998. *Every Living Thing* Walnut Creek, CA: AltaMira.
- 2003. *Daily Life in Biblical Times*. Atlanta: Society of Biblical Literature.
- Bramlett, K. 2004. A Late Bronze Age Cultic Installation at Tall al-‘Umayri, Jordan. *Journal of Near Eastern Archaeology* 67: 50-51.
- Bray, T.L. 2003. To Dine Splendidly: Imperial Pottery, Commensal Politics, and the Inca State, Pp. 93-142 in T.L. Bray (ed.), *The Archaeology and Politics of Food and Feasting in the Early States and Empires*. New York: Kluwer Academic/Plenum.
- Brown, L. 2005. Planting the Bones: Hunting, Ceremonialism at Contemporary and Nineteenth-Century Shrines in the Guatemalan Highlands. *Latin American Antiquity* 16: 131-146.
- Clark, D.R. 2000. Field B: The Western Defense System. Pp. 59-94 in L.G. Herr et al. (eds.), *Madaba Plains Project 4: The 1992 Season at Tall al-‘Umayri and Subsequent Studies*. Berrien Springs, MI: Andrews

- University.
- 2002. Field B: The Western Defense System Pp. 48-116 in L.G. Herr, *et al.* (eds.), *Madaba Plains Project 5: The 1994 Season at Tall al-‘Umayri and Subsequent Studies*. Berrien Springs, MI: Andrews University.
- Clark, D.R. and London, G.A. 2000. Investigating Ancient Ceramic Traditions on Both Sides of the Jordan, Pp. 100-110 in L.E. Stager, J.A. Greene, and M.D. Coogan (eds.), *The Archaeology of Jordan and Beyond: Essays in Honor of James A. Sauer*. Winona Lake, IND: Eisenbrauns.
- Dabrowski, B. 2000. A Preliminary Report on Figurines and Clay Objects. Pp. 215-237 in L.G. Herr *et al.* (eds.), *MPP 4. Madaba Plains Project: The 1992 Season at Tall al-‘Umayri and Subsequent Studies*. Berrien Springs, MI: Andrews University.
- Dever, W.G. 2001. *What did the Biblical Writers Know and When Did They Know it?* Grand Rapids, MI: Eerdmans.
- Edelstein, G. and Gibson, S. 1985. Investigating Jerusalem’s Rural Landscape. *Levant* 17: 139-155.
- Eggler, J., Herr L.G. and Root, R. 2002. Seals and Seal Impressions from Excavation Seasons 1984- 2000. Pp. 234-304 in L.G. Herr *et al.* (eds.), *Madaba Plains Project 5: The 1994 Season at Tall al-‘Umayri and Subsequent Studies*. Berrien Springs, Michigan: Andrews University.
- Faust, A and Bunimovitz, S. 2003. The Four-Room House: Embodying Iron Age Israelite Society. *Journal of Near Eastern Archaeology* 66: 22-31.
- Finkelstein, I. 1988. *The Archaeology of the Israelite Settlement*. Jerusalem: Israel Exploration Society.
- Fischer, P.M. 1998. A Late Bronze to Early Iron Age Tomb at Sahem, Jordan. *Journal of Near Eastern Archaeology* 61: 255.
- Franken, H.J. 1992. *Excavations at Tell Deir -Alla: the Late Bronze Age Sanctuary*. Leuven: Peeters.
- Franken, H.J. and Abu-Jaber, R. 1989. Yadoudeh: The History of a Land. [1979]. Reprinted as Pp. 407-436 in L.T. Geraty *et al.* (eds.), *MPP 1. Madaba Plains Project: The 1984 Season at Tell el-‘Umeiri and Vicinity and Subsequent Studies*. Berrien Springs, Michigan: Andrews University.
- Franken, H. J. and Kalsbeek, J. 1969. *Excavations at Tell Deir `Alla I*. Documenta et Monumenta Orientis Antiqui 16. Leiden: Brill.
- Gal, Z. 1992. *Lower Galilee during the Iron Age*. Translated by M. R. Josephy. ASOR Dissertation Series No. 8. Winona Lake, IND: Eisenbrauns.
- Geraty L.T., Herr, L.G. and LaBianca, Ø.S. 1987. The Madaba Plains Project: A Preliminary Report on the First Season at Tell el-‘Umeiri and Vicinity. *ADAJ* 31: 187-199.
- Geraty, L.T., Herr, L.G., LaBianca, Ø.S., and Younker, R.W. 1989. An Overview of Goals, Methods and Findings Pp. 3-19 in L.T. Geraty *et al.* (eds.), *MPP 1. Madaba Plains Project: The 1984 Season at Tell el-‘Umeiri and Vicinity and Subsequent Studies*. Berrien Springs, Michigan: Andrews University.
- Gonen, R. 1992. *Burial Practices and Cultural Diversity in Late Bronze Age Canaan*. Lake Winona, Indiana: Eisenbrauns.
- Grantham, B.J. 2000. Qasrin and the Druze: A Cuisine-Based Model of Bone Distributions on Archaeological Sites. *Journal of Near Eastern Archaeology* 63: 9-19.
- Herr, L.G. 1999. Tall al-‘Umayri and the Reubenite Hypothesis. *Eretz Israel* (Cross Volume) 26: 64-77.
- 2000a. Social Systems in Central Jordan: Moving Toward the First Millennium BC and the Earliest Iron Age Polities. *SHAJ VII*: 275-283.
- 2000b. The Settlement and Fortifications of Tell al-‘Umayri in Jordan during the LB/Iron I Transition, Pp. 167-179 in L.E. Stager, J.A. Greene, and M.D. Coogan (eds.), *The Archaeology of Jordan and Beyond: Essays in Honor of James A. Sauer*, Winona Lake, Indiana: Eisenbrauns.
- Herr, L.G., Clark, D.R., Geraty, L.T., Younker, R.W. and LaBianca, Ø.S. (eds.) 2000. *MPP 4. Madaba Plains Project: The 1992 Season at Tall al-‘Umayri and Subsequent Studies*. Berrien Springs, MI: Andrews University.
- 2002. *Madaba Plains Project 5: The 1994 Season at Tall al-‘Umayri and Subsequent Studies*. Berrien Springs, Michigan: Andrews University.
- Herr, L.G., Geraty, L.T., LaBianca, Ø.S., and Younker, R.W. (eds.). 1991. *MPP 2. Madaba Plains Project: The 1987 Season at Tell el-‘Umeiri and Vicinity and Subsequent Studies*. Berrien Springs, Michigan: Andrews University.
- 1997. *MPP 3. Madaba Plains Project: The 1989 Season at Tell el-‘Umeiri and Vicinity and Subsequent Studies*. Berrien Springs, Michigan: Andrews University.
- Herr, L.G., Geraty, L.T., LaBianca, Ø.S., Younker, R.W. and Clark, D.R. 1996. The Madaba Plains Project 1994: Excavations at Tall al-‘Umayri. Tall Jalul and Vicinity. *ADAJ* 40: 63-81.
- Herzog, Z, and Bar-Yosef, O. 2002. Different Views on Ethnicity in the Archaeology of the Negev. Pp. 151-181 in E.D. Oren and S. Ahituv (eds.), *Aharon*

- Kempinski Memorial Volume: Studies in Archaeology and Related Disciplines*. Beer-Sheva: Studies by the Department of Bible and Ancient Near Eastern Studies. Vol. XV Beer-Sheva: Ben-Gurion University of the Negev.
- Hobbs, J.J. 1989. *Bedouin Life in the Egyptian Wilderness*. Austin: University of Texas.
- Holl, A.F.C. and Levy, T.E. 1993. From the Nile Valley to the Chad Basin: Ethnoarchaeology of Shuwa Arab Settlements. *Biblical Archaeologist* 56: 200-211.
- Hopkins, D.C. 1993. Pastoralists in Late Bronze Age Palestine: Which Way Did They Go? *Biblical Archaeologist* 56: 166-179.
- LaBianca, Ø.S. 1990. *Sedentization and Nomadization: Food System Cycles at Hesban and Vicinity in Transjordan. Hesban 1*. Berrien Springs, MI: Andrews University.
- LaBianca, Ø.S. and Younker, R.W. 1995. The Kingdoms of Ammon, Moab and Edom: The Archaeology of Society in Late Bronze/Iron Age Transjordan (ca. 1400-500 B.C.E.). Pp. 399-415 in T.E. Levy (ed.), *The Archaeology of Society in the Holy Land*, New York: Facts on File.
- Lacelle, L. 1986. Ecology of the Flora of Tell Hesban and the Area, Jordan. Pp. 99-119 in Ø.S. LaBianca and L. Lacelle (eds.), *Hesban 2. Environmental Foundations*. Berrien Springs, Michigan: Andrews University.
- London, G.A. 1989. On Fig Leaves, Itinerant Potters, and Pottery Production Locations in Cyprus. Pp. 65-80 in P.E. McGovern and M.R. Notis (eds.), *Cross-craft and Cross-cultural Interactions in Ceramics, Ceramics and Civilization IV*, Ed. W.D. Kingery. Westerville, OH: American Ceramic Society
- 2003. Four-room Structures at Late Bronze/Iron I Age Hill Country Workstations. Pp. 69-84 in B.A. Nakhai (ed.), *The Near East in the Southwest: Essays in Honor of William G. Dever*. AASOR 58. Boston: ASOR.
- London, G.A., Plint, H., and Smith, J. 1991. Preliminary Petrographic Analysis of Pottery from Tell el-`Umeiri and Hinterland Sites, 1987. Pp. 429-439 in L.G. Herr et al. (eds.), *Madaba Plains Project II*. Berrien Springs, Michigan: Andrews University.
- Longacre, W.A. 1981. Kalinga Pottery: an ethnoarchaeological study. Pp. 49-66 in I. Hodder, G. Issac, and N. Hammond (eds.), *Pattern of the Past*. Cambridge: Cambridge University.
- Lowdermilk, W.C. 1944. *Palestine: Land of Promise*. New York: Harper.
- McGovern P.E. 1986. *The Late Bronze and Early Iron Ages of Central Transjordan: The Baq-ah Valley Project, 1977-1981*. Philadelphia: University Museum.
- Marx, E. 1977. Communal and Individual Pilgrimage: The Region of Saints' Tombs in South Sinai. Pp. 29-51 in R.P. Werbner (ed.), *Regional Cults*. London: Academic Press.
- 1980. Wage Labor and Tribal Economy of the Bedouin in South Sinai. Pp. 111-123 in P.C. Salzman (ed.), *When Nomads Settle*. New York: Praeger.
- Mazar, A. 1981. Giloh: An Early Israelite Settlement Site near Jerusalem. *IEJ* 31: 1-36.
- 1982a. The "Bull Site" – An Iron Age I Open Cult Place. *BASOR* 247: 27-42.
- 1982b. Three Israelite Sites in the Hills of Judah and Ephraim. *Biblical Archaeologist* 45: 167-178.
- 1990a. *Archaeology of the Land of the Bible 10,000 – 586 B.C.E.* New York: Doubleday.
- 1990b. Iron Age I and II Towers at Giloh and the Israel Settlement. *IEJ* 40: 77-101.
- Miller, N.F. 2001. Down the Garden Path: How Plant and Animal Husbandry Came Together in the Ancient Near East. *Journal of Near Eastern Archaeology* 64: 4-7.
- Moghadam, F.E. 1988. Nomadic Invasions and the Development of Productive Forces: An Historical Study of Iran (1000-1800). *Science and Society* 52: 389-412.
- Orni, E. and Efrat, E. 1966. *Geography of Israel*. Second edition. Jerusalem: Israel Program for Scientific Translations.
- Palmer, C. 1998a. "Following the Plough": The Agricultural Environment of Northern Jordan. *Levant* 30: 129-165.
- 1998b. The Role of Fodder in the Framing System: a Case Study From Northern Jordan. *Environmental Archaeology* 1: 1-10.
- Parr, P. 1982. Contacts between North West Arabia and Jordan in the Late Bronze and Iron Ages. *SHAJ I*: 127-133.
- Peters, J., Pollath, N., and von den Driesch, A. 2002. Early and Late Bronze Age Transitional Subsistence at Tall al -`Umayri. Pp. 305-347 in L.G. Herr et al. (eds.), *Madaba Plains Project 5: The 1994 Season at Tall al-`Umayri and Subsequent Studies*. Berrien Springs, Michigan: Andrews University.
- Ron, Z. 1966. Agricultural Terraces in the Judean Mountains. *IEJ* 16: 33-49.
- Rosen, S.A. 1982. The Flints. Appendix. P. 41 in The "Bull Site – An Iron Age I Open Cult Place. *BASOR* 247: 27-42.
- Swidler, N. 1980. Sedentarization and Modes of Eco-

- conomic Integration in the Middle East. Pp. 21-33 in P.C. Salzman (ed.), *When Nomads Settle*. New York: Praeger.
- van der Steen, E.J. 1997. Pots and Potters in the Central Jordan Valley. *ADAJ* 41: 81-93.
- 2004. *Tribes and Territories in Transition*. Leuven: Peeters.
- von den Driesch, A. and Boessneck, J. 1995. Final Report on the Zooarchaeological Investigation of Animal Bone Finds from Tell Hesban, Jordan. Pp. 67-108 in Ø.S. LaBianca and A. von den Driesch (eds.), *Hesban 13. Faunal Remains*. Berrien Springs, Michigan: Andrews University.
- Weismantel, M. 2003. An Embarrassment of Riches. *Current Anthropology* 44: 141-142.
- Dietler, M. and Hagden, B. (eds.) 2001. Review of *Feast: Archaeological and Ethnographical Perspectives on Food, Politics, and Power*. Washington, D.C.: Smithsonian Institution.
- Yunker, R.W. 1989. Present and Past Plant Communities of the Tell el-‘Umeiri Region. Pp. 32 – 40 in L.T. Geraty et al. *Madaba Plains Project 1. The 1984 Season at Tell el -‘Umeiri and Vicinity and Subsequent Studies*. Berrien Springs, Michigan: Andrews University.
- 1999. The Emergence of the Ammonites. Pp. 189-218 in B. MacDonald and R.W. Yunker (eds.), *Ancient Ammonites*. Leiden: Brill.
- Zertal, A. 1986-1987. An Early Iron Age Site on Mount Ebal: Excavation Seasons 1982-1987. *Tel Aviv* 13-14: 105-165.

GLORIA LONDON