

## MADABA PLAINS PROJECT: EXCAVATIONS AT TALL AL-'UMAYRI, 2012

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### Introduction

A fifteenth season of excavation by the Madaba Plains Project at Tall AL-'Umayri occurred between 4 July and 8 August 2012. It was sponsored by La Sierra University in consortium with Andrews University School of Architecture (Michigan, USA), Canadian University College (Alberta, Canada), Pacific Union College (California, USA), Mount Royal University (Alberta, Canada) and Walla Walla University (Washington State, USA). Full reports have already been published for the first five seasons (first season [1984]: Geraty *et al.* (eds.) 1989; second season [1987]: Herr *et al.* (eds.) 1991; third season [1989]: Herr *et al.* (eds.) 1997; fourth season [1992]: Herr *et al.* (eds.) 2000; fifth season [1994]: Herr *et al.* (eds.) 2002). The sixth (1996 - 1998) is in press and the seventh (2000) is ready for submission for publication. Preliminary reports have also been published (first season [1984]: Geraty 1985; Geraty *et al.* 1986, 1987; second season [1987]: Geraty *et al.* 1988, 1989, 1990; third season [1989]: Younker *et al.* 1990; Herr *et*

*al.* 1991; LaBianca *et al.* 1995; fourth season [1992]: Younker *et al.* 1993; Herr *et al.* 1994; fifth season [1994]: Younker *et al.* 1996; Herr *et al.* 1996; sixth season [1996]: Younker *et al.* 1997; Herr *et al.* 1997; seventh season [1998]: Herr *et al.* 1999, 2000; eighth season [2000]: Herr, Clark and Trenchard 2001, 2002; ninth season [2002]: Herr and Clark 2003, 2004; tenth season [2004]: Herr and Clark 2005a, 2005b; eleventh season [2006]: Herr and Clark 2008a, 2008b; twelfth season [2008]: Herr and Clark 2010, 2013; thirteenth season [2010]: Clark and Bramlett 2011, 2012a, 2012b; fourteenth season [2011]: to be published with the current report. For a summary report of the first 12 seasons (1984 - 2008) see Herr and Clark 2009, Clark 2011 and Herr 2011 in Clark *et al.* 2011.

In the 2012 season, a team of 14 Jordanians and 37 foreigners participated in the fieldwork and camp activities of the interdisciplinary project at AL-'Umayri, located 12 km south of Amman's Seventh Circle on the Queen Alia Airport Highway, at the turnoff for Amman National Park. A much smaller team was fielded in 2011:

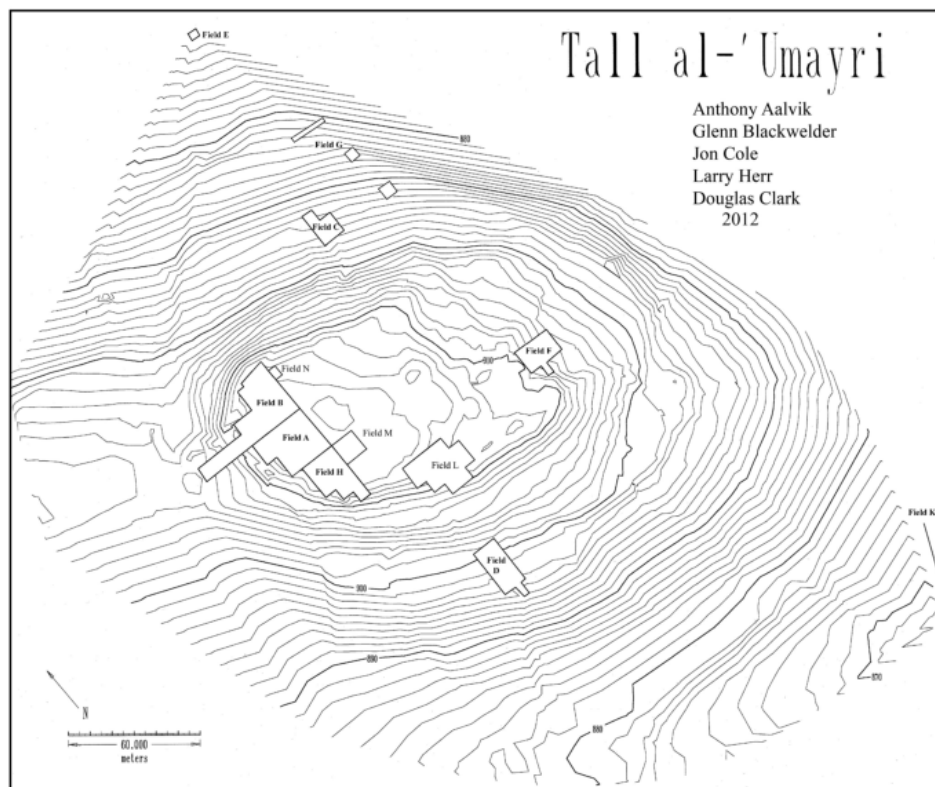


1. Aerial view of western 'Umayri.

four Jordanians and nine foreigners. (Fig. 1).

In the first season (1984) four fields of excavation were opened (Fields A, B, C and D) (Fig. 2). During the second season (1987) three of the four were expanded (Fields A, B and D), one was completed to bedrock (Field C) and two new fields were opened (Fields E and F). In the third season (1989) one field expanded (Field A), three fields reopened old squares and expanded slightly (Fields B, D and F), another reduced excavation from two squares to one (Field E) and a new field was opened on the northern slope as a series of three soundings (Field G). In the fourth season (1992) three fields deepened previously opened squares (Fields A, D and F), one deepened existing squares while expanding by one square (Field B) and two fields were discontinued (Fields E and G). During the fifth season (1994) one field deepened (Field A), another expanded and deepened (Field B) and one was added (Field H). In the sixth season (1996) three fields expanded (Fields A, B and H). The tomb excavations on the south-eastern slopes of the *tell*, already begun under the hinterland survey in 1994, became part of the

'Umayri *tell* excavations as Field K. During the seventh season (1998) two fields deepened their squares (Fields A and B), two expanded (Fields H and K) and a new field was opened on the southern edge of the site (Field L). In the eighth season (2000) we deepened three fields (Fields A, B and H) and expanded and deepened in two fields (Fields K and L). During the ninth season (2002) Field A was not worked, while Field B expanded to the north and continued in two other squares; Field H was limited to the large plastered and cobbled courtyard near the northern extent of the field (next to Field A); in Field L we exposed more of the Hellenistic structure by opening two new squares and reopening one other. During the tenth season (2004) Field A deepened squares begun during the 1980s; Field B deepened three earlier squares and expanded to the north to intersect the northern edge of the site; Field H deepened earlier squares in its northern part; Field L deepened three previous squares and opened one new square. During the eleventh season (2006) Field A concentrated on removing balks and small areas between walls to deepen the western part of the field to Late Iron



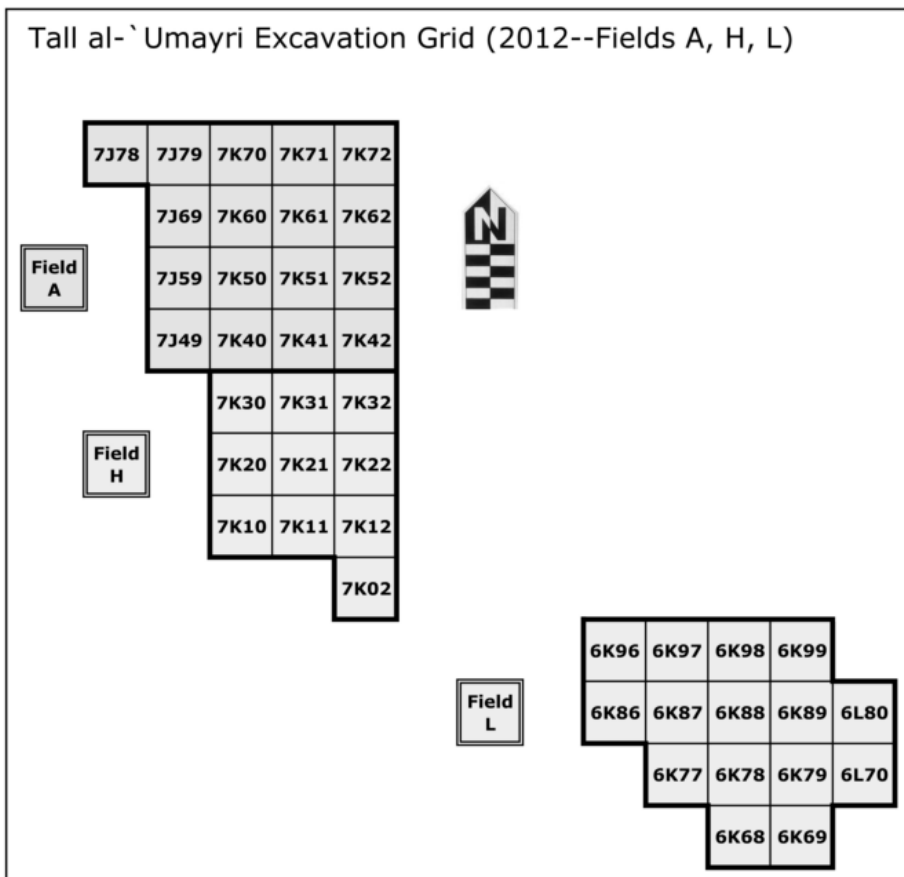
2. Topographic map of the tell.

I levels; one square was opened at the south-west corner of the field to examine a possible gateway. In Field B excavation concentrated on uncovering the floors of the northern extent of the remarkably preserved LB building. Excavation in Field H concentrated on bringing the southern part of the open-air sanctuary down to Late Iron I levels. Field L, on the southern edge of the site, expanded to the east and north with three new squares.

The 2008 season saw Field A expose the third LB / Iron I building in the southern part of the field by going deeper in most squares. Field B completed the excavation of the LB building and added a square to the east with a new field designation, Field N. Field H went deeper in four squares, exposing the top of the LB / Iron I levels and locating the bottom of the southern portion of the perimeter wall. Field L went lower in three squares and added two more squares to the west. Additionally, a new field was opened, Field M, east of Field H as part of our overall goal

of connecting Fields H and L. This season also saw the introduction of high-resolution GPS for the location of fields, squares and architecture. It forced a slight change of orientation to align all our squares with true north and we chose to locate squares on primary grid lines, causing some squares to be smaller in their east - west measurements.

The thirteenth field season (2010) continued work in four fields (Fields A, H, L and M) (for 2012 see **Fig. 3**). Field A extended the exposure of LB / Iron I domestic structures, clearing the third building and uncovering the major portion of a fourth. The clearance of the Late Iron I sacred precinct in Field H brought the team to domestic structures post-dating the Early Iron I buildings in Field A, but preceding the precinct. Field L cleared Hellenistic remains in several balks, clarifying in the process the function of an Iron II oil press, and exposing the tops of several Iron II walls. Field M cleared Late Iron II paved plaza levels surrounding what appear to



3. 'Umayri grid of Fields A, H and L.

be domestic buildings.

In 2011, the small team focused on Field H (continued clearance of post-Early Iron I debris in order to expose the remaining components of Early Iron Age Building M) and Field L (removal of all Hellenistic architecture in order to expose Iron Age remains).

After 14 seasons, the team felt a good deal of confidence in talking about final stratum numbers for the site. We think, reasonably, that no new significant settlements will be discovered beyond those we have already found, even if, as happened in 2012, we have isolated an important sub-phase in the Early Iron I Period. We thus include a stratigraphic chart (**Fig. 4**).

**Field A: Western Acropolis** (Stephanie Brown, University of California, Berkeley)

Field A is located on the western acropolis of Tall AL-‘Umayri and has been excavated in twelve previous seasons (1984, 1987, 1989, 1992, 1994, 1996, 1998, 2000, 2004, 2006, 2008 and 2010). Seasons 1984 - 1996 focused on the Late Iron II / Persian period of occupation in the eastern part of the field. Here a large Ammonite administrative complex was identified and excavated. Seasons 1998 - 2012 focused on the Iron I occupation in the western part of the field where excavators explored the relationship between the Early Iron I (1,200 - 1,100 BC) architecture and its subsequent destruction in the north-western area of Field A and in the south-western area of Field B. This architecture includes Field B’s Building B, ‘Umayri’s well-known ‘four-room house’ (Clark, 2000: 57-100). The 2008 season attempted to bring most of Building C in Field A into phase with the ‘four-room house’ in Field B, but by the end of the 2008 season this goal was only partially achieved. During the 2010 season Building C was fully exposed. Additionally, the western portion of a fourth Early Iron I building, Building D, was brought into phase with Buildings B, A and C. Finally, a fifth Early Iron I building, Building E, was posited.

During the 2012 excavations at Tall al-

‘Umayri five squares were excavated in Field A: 7J68, 7J69, 7J78, 7K50 and 7K60. The primary objective of the 2012 season was to expose Building D. All five of the buildings in this Early Iron I village were found beneath a massive destruction layer that consisted of mudbrick, ash, clay, plaster and fallen stones, in places up to 2 m in depth.

During the Iron IIB period a house was constructed directly on top of the destruction of Building D. This house was the so-called ‘pillared house’, so named because of a curvilinear courtyard on the western end of the house that had two standing stone pillars in its middle, or simply the ‘Iron IIB house’. The 2012 season saw the removal of this building, thus exposing more of Building D.

Below are stratigraphic descriptions of the 2012 field phases:

*Field Phase 13 (LB / Early Iron I)*

Phase 13 was rediscovered at Tall al-‘Umayri during the 2012 excavation season, the evidence suggesting an occupation of Buildings C and D that predated Field Phase 12. The evidence suggests that Building D had two major occupation surfaces, similar to those found in Building C.

The reinterpretation of the surfaces in Building D during the 2012 season was based on the existence of the two surfaces in Building C as well as on two features, now associated with Phase 12, from Building D, viz. a huge lower grindstone found in 2010 and a north-south curtain wall which abutted the building’s southern wall. Because the grindstone was situated above 0.2 m of brown clay material, it was assumed that the grindstone fell down from an upper storey. However, the position of the grindstone appears to be intentional. The curtain wall was positioned *ca* 0.1 m off the surface. Both of these features sat directly atop locus 7J69:075, clearly a distinct surface rather than collapsed roof debris.

In previous seasons, Phase 13 was associated

## Tall al-`Umayri Comprehensive Strata Chart (1984-2012)

|   |
|---|
| Stratum 22 (Chalcolithic Period) – 4500-3300 BC           |
| Hiatus  |
| Stratum 21 (Early Bronze Age IB) – 3200-3000 BC           |
| Stratum 20 (Early Bronze Age II) – 3000-2600 BC           |
| Stratum 19 (Early Bronze Age III) – 2600-2300 BC          |
| Stratum 18 (Early Bronze Age IV) – 2300-2250 BC           |
| Stratum 17 (Early Bronze Age IV) – 2250-2200 BC           |
| Hiatus  |
| Stratum 16 (Middle Bronze Age IIC) – 1650-1600 BC         |
| Stratum 15 (Middle Bronze Age IIC) – 1600-1550 BC         |
| Hiatus  |
| Stratum 14 (Late Bronze Age II) – 1350-1230 BC            |
| Stratum 13 (Late Bronze IIB/Early Iron I) – 1230-1200 BC  |
| Stratum 12B (Late Bronze IIB/Early Iron I) – 1200-1150 BC |
| Stratum 12A (Late Bronze IIB/Early Iron I) – 1200-1150 BC |
| Hiatus  |
| Stratum 11 (Iron IB) – 1100-1050 BC                       |
| Stratum 10 (Iron IB) – 1050-1000 BC                       |
| Stratum 9 (Iron IIA) – 1000-850 BC                        |
| Stratum 8 (Iron IIA) – 850-600 BC                         |
| Stratum 7 (Late Iron II/Persian – 600-550 BC              |
| Stratum 6 (Late Iron II/Persian) – 550-500 BC             |
| Stratum 5 (Persian) – 500-400 BC                          |
| Hiatus  |
| Stratum 4 (Hellenistic) – 200-50 BC                       |
| Stratum 3 (Early Roman) – 50 BC - AD 135                  |
| Hiatus  |
| Stratum 2 (Byzantine) – AD 350-650                        |
| Stratum 1 (Islamic) – AD 650-present                      |

4. `Umayri strata chart.

with an Early Iron I earthquake that damaged the Middle Bronze Age rampart, excavated in Field B, which protected the site. This rampart was repaired and expanded during Early Iron I (Clark 2002: 55-56). However, until now there has been no architecture to associate with Phase 13. The existence of two distinct surfaces in Buildings C and D separated by clay-based earth, which appears to be collapsed unfired mudbrick, suggests that the Phase 13 occupation at Tall al-`Umayri was brought to an end by the Early Iron I earthquake which was discovered over the Middle Bronze Age rampart.

Buildings A, B and C all had well-preserved 'casemate' rooms against the western perimeter

*D. Clark et al.: Excavations at Tall AL-`Umayri*

wall. Though a complete dividing wall has not yet been uncovered in Building D, in Square 7J69 there might be the remnants of such a wall, which would have created a casemate room in Building D. However, more excavation of the Phase 12 surface will be necessary in order to confirm the existence of this wall.

### *Field Phase 12 (LB / Early Iron I)*

The phasing for the squares excavated in Phase 12 of Building D was clearly identified in previous seasons when its relationship to Buildings A and B in Field B as well as to Building C in Field A was determined. Phase 12 of Buildings A, B, C, D and E was discovered beneath a massive destruction layer that was dated to the Early Iron I period. Exposing Building D down to its Phase 12 surface was the main objective of the 2012 season (**Fig. 5**).

Four squares were excavated as part of Building D in Phase 12, exposing three known exterior walls: northern, western and southern. The space seems to have been sub-divided by one north - south curtain wall.

A fill layer separated the later Iron IIB architecture from Phase 12 material. Below the fill loci was a thick layer of burnt mudbrick, ranging in thickness from 2 m in the western part of the building to *ca* 0.9 m in the east (**Fig. 6**).

Several objects were found in the upper layers of the destruction in Building D, including three mortars, three pestles, five upper millstones, two lower grindstones, three ceramic spindle whorls, one ceramic stopper, a bone bead, a bronze point, a carnelian lotus-seed pendant and two ceramic scarab seal impressions, one of which was a seal of Thutmose I (*ca* 1,506 - 1,493 BC). The bronze point lends credence to the possibility, demonstrated elsewhere at `Umayri, that the Phase 12 destruction was caused by a violent attack on the site. The remaining objects seem to confirm Building D as a domestic dwelling.

In the north-western corner of Room D1 (the western room of Building D) was a stone platform (**Fig. 7**). This was similar to the one found in Building C, though the stones are



5. Field A, Building D.

slightly smaller. The platform's use might have extended into Phase 13, but because a Phase 13 surface has not been confirmed this cannot be a certainty.

In Room D2 four small curtain walls were also exposed, all of which were made of unhewn limestone and were constructed in boulder-and-chink masonry style. These walls were preserved only one or two courses high and one or two rows wide, and appeared to divide the space in unique ways, including creating space possibly for a raised platform and providing a dividing wall unusual in its orientation.

A few objects were found on or just above the surface in Building D: a ceramic scarab seal impression, a small burned limestone mortar, a basalt upper grindstone and a complete ceramic saucer lamp (**Fig. 8**). The small number of



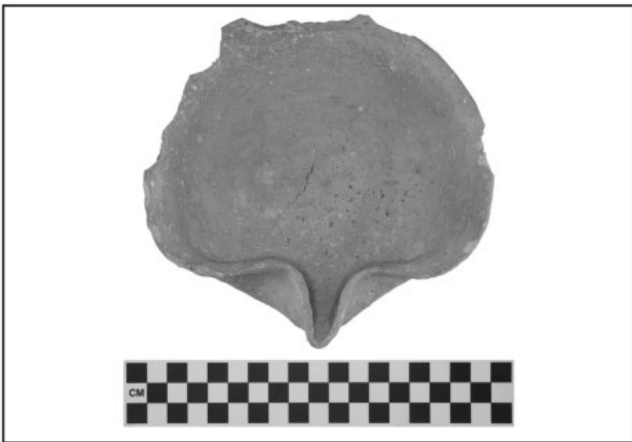
6. Field A, mudbrick debris.

artifacts may suggest, as in Building B, that most activities occurred in the upper storey or on the roof of the house.

A small amount of excavation was carried out in Building E (called Building F in the 2008 report [Herr and Clark 2010]). Building E is the fifth house in the Early Iron I village that ran along the inside of the western perimeter wall. Like Buildings A, B, C and D, this building was oriented to the east from the western perimeter wall and occupied the narrow space between Building D and the perimeter wall once the latter turned to the east. The existence of the two surfaces might indicate that, like Buildings C and D, Building E also had a Phase 13 and a Phase 12 surface. Many domestic objects found previously confirm the domestic use of this building, including grinding stones, storage jars,



7. Field A, stone platform.



8. Field A, saucer lamp.

a basalt bowl and two Iron I ‘pilgrim flasks’

Throughout Building D there was an ash layer, part of the destruction debris, immediately above the use surface. The same seems to be true in Building E. In this ash layer three objects were found: an upper milling stone, a partially incomplete pithos and a nearly complete bronze spear point (Fig. 9), likely providing evidence that the Iron I destruction was caused by an attack on the site.

As stated above, the primary goal of the 2012 season was to expose the Early Iron I Building D. By the end of the 2012 season, Building D was shown to be preserved in both of its phases. The exposure of Building D and analysis of its associated artifacts suggest that it functioned similarly to Building C. Although the use surfaces of Building D are almost a meter below those of Building C, the two buildings appear to have coexisted in both Phases 12 and 13, sharing

a common wall. The lower level of the surface in Building D, the *ca* 2 m of mudbrick debris and the plaster ceiling collapse all suggest that Building D had a second storey. Building C, however, does not have this kind of evidence and therefore may have only supported a single storey. The objects found in Building D suggest that the house served as a domestic dwelling, similar to Building C.

#### *Field Phase 8B (Iron II)*

Because the stratigraphy of Field A’s Iron IIB building appeared to suggest a lack of integrity between its two major rooms, as had been proposed previously, and because of a desire to access the eastern portions of Phase 12 Building D, it was decided to clarify the stratigraphy and remove the western room of the building. The discovery of a crucial foundation trench provided concrete evidence that what was thought to be one Iron IIB building was actually constructed in two different phases instead of one.

#### *Field Phase 8A (Iron II)*

The presence of a wall and a surface that sealed against it, which were later cut by a foundation trench, indicated another phase to the Phase 8 Iron IIB building. A later wall was constructed which was originally assigned to Phase 8B. This foundation trench clearly confirms that the Iron IIB house was constructed in two distinct phases.

**Field H: South-Western Acropolis** (Monique Vincent, University of Chicago, assisted by Nicole Oakden, University of Calgary)

This report covers results from the 2011 and 2012 seasons. The 2011 season was a short, specialized season focused primarily on Field H and excavation south of Wall 4. The 2012 season was a full-scale season of excavation and included work in nearly the entirety of the field.

The goals for excavation in 2011 included investigation along the southern face of Wall 7K10:004 (= 7K11:004 = 7K12:004) (Fig. 10).



9. Field A, spear point.



10. Field H, Wall 4.

Wall 4 borders the southern edge of the field and the *tell*; work here was designed to better understand Wall 4's construction and activities along the south-western edge of the *tell*. Wall 4, one of the last substantial architectural features remaining in the open areas of excavation in Field H, was also used in the Late Iron I / Early Iron II open air courtyard sanctuary, previously excavated and now mostly removed from the field. Our 2011 investigation south of Wall 4 indicated that architectural activity expanded south of this large bordering wall in the Iron II and Persian periods, using the southern face of Wall 4 to form rooms. Excavating along the length of the southern face of Wall 4 also provided a better understanding of the wall's foundation, its phases of construction and the earliest associated occupational phases.

Following work in 2012 we now know that Wall 4 had at least three phases, extending from

the Early Iron I to Persian periods. A second goal involved bringing the last areas of the nine central squares down to the Early Iron I phase, which is dominated by a large domestic structure, Building M (**Fig. 11**). Excavations in 1996, 2000 and 2006 reached the building's peripheral rooms, and work in 2008 and 2010 revealed the central rooms of the building. The excavated material confirmed Building M's domestic nature and completed the picture of the structure and its use.

A third goal of 2012 was to excavate several strategically placed probes to date the walls of the domestic structure and establish the stratigraphy of the Early Iron Age in relation to other fields at 'Umayri, especially Fields A and B.

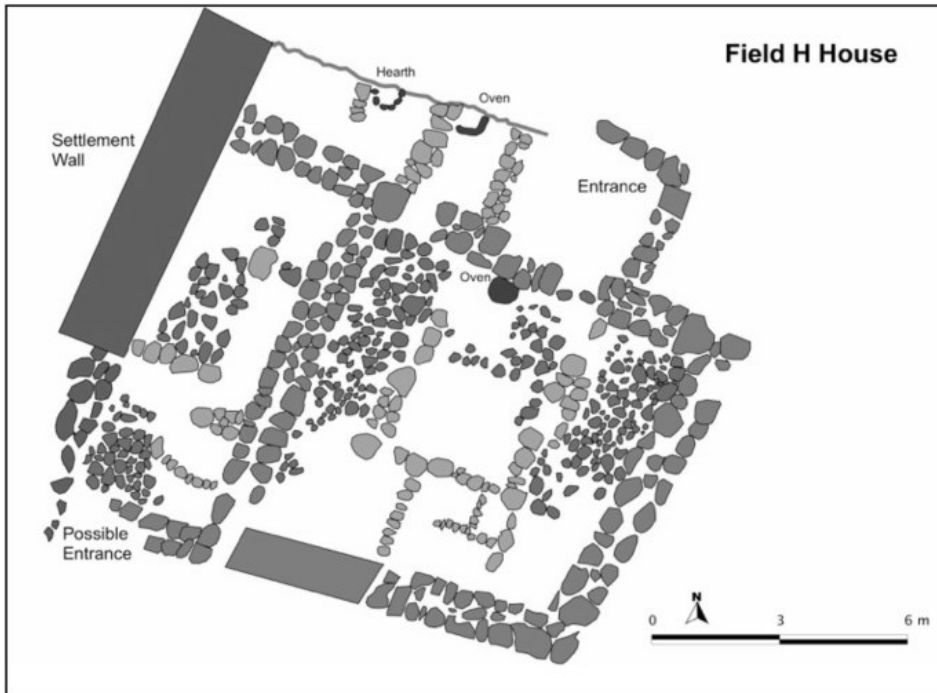
#### *Field Phase 14: Late Bronze / Early Iron I*

Elsewhere on the *tell*, this phase is represented in Fields A and B where a series of houses was excavated underneath a thick destruction layer. This season was the first time the same phase was identified with confidence in Field H after the excavation of four probes placed against walls inside the Phase 12 domestic structure. All of the walls of Building M were constructed during Phase 12, with Phase 13 and Phase 14 walls identified directly beneath them. A thick mudbrick destruction layer sealed against these walls. It would appear from the destruction debris that structures from the same LB / Early Iron I settlement extended as far south as Field H and suffered the same devastating destruction.

#### *Field Phase 13: Early Iron I (Iron IA)*

This is a new phase for Field H, identified with certainty in several probes in Squares 7K21 and 7K22, and tentatively in the 7K20 and 7K30 probes. The phase is very shallow and appears to have been constructed directly on top of the destruction debris from Phase 14. The pottery is more closely related to Early Iron I Phase 12 than to Phase 14; the rim and collar from a pithos in Phase 12 fill layer 7K22:078 date to roughly the middle of the Iron I period.





11. Field H Building M Drawing.

#### Field Phase 12: Early Iron I (Iron IA)

Excavation during the 2012 season uncovered several important elements of Building M, including two possible entrances (in Rooms 5 and 11) and the southern room of the structure (Room 4). The entire building - outer and inner walls, and surfaces - was constructed as a comprehensive whole at the beginning of this phase (Fig. 12), directly atop the earlier occupational debris of Phase 13.

Once the large, well-built, typically two-row and multiple-course outer walls were constructed, a series of small, poorly built, typically single-row inner walls were built to divide the building into smaller areas. Most of these walls have been described previously, but they are all excellent examples of partitioning walls. The central area of Building M, composed of long Rooms 1, 2 and 3, and broad Room 4, constitutes a typical four-room house plan bounded by substantial walls and divided by single-row walls. The northern and western rooms provide additional space flanking this central area, utilizing the perimeter wall and large wall as additional external walls.

When the building was constructed it contained mostly beaten-earth surfaces, though

cobbles were soon laid down in Rooms 2, 3, 9, 10 and 11. The cobble surfaces contain large and somewhat uneven rounded stones, dipping severely in places (Rooms 9 and 11). The beaten-earth surfaces in Rooms 1, 6 and 7 had heavy ashy build-up from the close proximity of ovens and hearths.

Starting with the central rooms and moving out, the rooms are described briefly in the following few paragraphs. The only new information about Room 1, the central long room, revealed thick layers of ashy build-up into which was laid the foundation stones of an oven. Further excavation in Room 2 showed that the cobble floor thins out and disappears in the south, where the surface instead consists of a beaten-earth surface with fragments of plaster.

In Room 3, more cobbles were found in the south with considerable surviving plaster. The space was divided from Room 4 by a single-row, five-course wall and was the only access route to Room 4, which itself was divided by flimsy, small, single-row, multiple-course walls. Room 4 must then have served as storage for agricultural goods or animal by-products.

In the northern series of rooms, Room 5 has proven to be the main, northern entrance to

Building M boasting a threshold to the building. The 2012 season produced no new information on Rooms 6, 7 or 8.

In the western series of rooms, Room 9 had been excavated previously, with a cobble surface preserved fragmentarily in the north section of the room. This room was heavily disturbed by later building activity, but an eastern balk preserved the original occupational and post-occupational debris. In Room 10, cobble flooring served as the main surface; however, surface build-up may also have served as a later use surface.

Room 11 was also entirely previously excavated but, with the removal of the east balk, the access point between Rooms 11 and 10 became clear between Walls 18 and 8. The possible southern entrance between Wall 17 and the perimeter wall would have served as an ideal livestock entrance, leading into the three cobble-floored Rooms 11, 10 and 9, which could have easily held small livestock. A back entrance would have facilitated the dumping of excess rubbish outside the building.

Building M seems best interpreted as a large domestic structure where several activities took place. Grinding stones were common. In conjunction with two ovens, a hearth and extremely frequent cooking pots suggested that food preparation was a major activity in the building. The heavy ash layers in the rooms with ovens / hearth attest to their frequent use. Spindle whorls were also common artifacts and several tuff pendant seals were found in Building M with hatching or dot patterns, indicating a concern for personal identification, transactions or perhaps ritual use (London 2011). Other artifacts included shells, carnelian and stone beads, one bronze ring, a restorable lamp and a hematite weight.

Stratigraphic and ceramic information locates this phase somewhere in the Early Iron I period. It succeeds the LB / Early Iron I transitional phase and precedes the Late Iron I phases. The cooking pots, the main diagnostic pottery type found throughout Building M, indicated a slightly later date in Early Iron I than the LB / Early Iron I period, but earlier than the Late Iron I period.

#### *Field Phase 11: Late Iron I*

This phase began with construction on top of the thick mudbrick debris from Phase 12. Most of Building M was covered by this mudbrick debris, though some walls were visible and reused. It is in this phase that Wall 4 was widened one row to the north, laying a series of stones along the top of the mudbrick debris against the north face of the wall. This widening of Wall 4 then allowed additional courses to be added.

#### *Field Phases 10B, 10A and 9*

Connecting the phases south of Wall 4 (**Fig. 13**) with those north of the wall was difficult at best, but for this and the following two phases attempts have been made on the basis of connections under the later eastern expansion of Wall 4 (currently assigned to Phase 6), pottery readings and elevations. During this phase, the open-air courtyard structure still dominated the northern half of the field. On the southern face of Wall 4, a rocky tumble of earth was about the same level as a fill layer associated with a stone feature, tentatively interpreted as a stone bench.

A stone feature of similar orientation and construction was excavated to the north in the actual courtyard in 2002 (7K22:035 [see Cormack 2002 Season, FP9 discussion]) and was interpreted as the foundation for an awning or stage. I suggest these stone features might also have served as benches for the presentation of the types of cultic objects also found in the courtyard that season.

Evidence from south of Wall 4 indicated the first activity since the construction of Building M in Phase 12. With much of the pottery providing Iron II or later readings, it would appear that during the Late Iron I phase (Phases 10 and 9) of the open-air courtyard structure there was little or no preserved activity south of Wall 4. The Phase 8 construction indicates a desire to expand the courtyard activities south with a similar stone feature and surfaces.

#### *Field Phase 7: Late Iron II*

Much of our work in this phase focused on old loci in 7K10's east balk, though removal of



12. Field H, Building M.

threshold 7K11:021 and work in 7K11's east balk allowed for some new excavation. Cobble surface 7K11:028 served as the primary surface for this phase, covering over a foundation trench and its fill.

#### *Field Phase 6: Late Iron II / Persian*

As previously described (Berge and Willis MPP 6: FP6 discussion), during this field phase the inhabitants constructed two rooms against the south face of Wall 4, including the architectural elements of north - south Wall 7K11:006 and threshold 7K11:021, and exposure surface 7K11:025 in the eastern room. Surface 25 was a fill layer of compacted mudbrick debris, the flat-lying pottery on top of it identifying it as a use surface. Similarly two additional layers functioned in the same way in the room.

#### *Field Phases 5 - 2*

Work in the north and east balks of Square 7K10 exposed topsoil and subsoil. Especially in the north balk, which had a dramatic slope

and height difference of nearly 2 m between its western and eastern ends, the material in earth layers 1 and 2 consisted mostly of debris washed down the side of the *tell* and windblown layers. In the western end of the north balk a small terrace wall was excavated.

The original construction of two-row, multiple-course Wall 4 can now be confidently dated to Phase 12 in the Early Iron I period, built as an integral part of the construction of Building M. In the succeeding phase, Phase 13, Wall 4 was widened a row to the north, the new large boulders being placed on top of the post-occupational debris from Phase 12. In Phase 7, the Late Iron II period, Wall 4 was extended to the east to meet Wall 7K12:005. During the Late Iron II / Persian period, Wall 4 was rebuilt with two courses of massive boulders, some spanning the entire width of the wall. Because the *tell* slopes downward in a south-western direction where Wall 4 is located, Wall 4 was built following the slope, so phasing is not level across the wall. These various phases of Wall



13. Field H, Wall 4 south side.

4 indicate a long continuity of use of a single architectural feature in Field H throughout the entire Iron Age, rebuilt to suit the needs of succeeding occupants. During the next season of excavation a primary goal will be to remove all later phasing from Wall 4, including the Late Iron I widening and the last of the later courses. This will help us to better understand how it connects with Wall 7K10:017 in the west and help locate the surface in Building M's Room 4.

South of Wall 4 there was little activity until the Iron II period (Phase 8), when the first signs of architectural construction appeared in the form of a stone bench and associated surfaces. Succeeding phases continued this expansion southward, adding a series of walls to form rooms along the face of Wall 4 and down over the southern edge of the *tell*. Whether or not these rooms were integral to the Iron II courtyard complex and, later, the Persian period complex

is unclear as access routes during the later periods were blocked by the formidable Wall 4. Perhaps access was gained from further to the east where the *tell* remains unexcavated. Future excavations should return to this southern edge of the *tell* to clarify the extent of occupation and access pathways in the later periods.

Excavating the last of the post-occupational debris from Building M and re-exposing features excavated and then buried in the western rooms brought the entirety of this domestic structure into view. Building M was a large rectangular structure with two major inner dividing walls and many smaller dividing walls. The pillars that stand at intersections in the house must have helped to support the roof; the two western pillars, pillars 18 and 19, were particularly large and well-built. Other large stones that would have served as pillar bases are in the central rooms of the building. No signs of a second storey were excavated from Building M; the extra rooms north and west must have been sufficient for additional living-space needs. Understanding Building M in stratigraphic relation to the rest of the *tell* was made possible through the probes. Discovering the transitional Late Bronze / Early Iron I stratum in Field H has clarified that Building M belongs to an Early or Mid-Iron I stratum not previously found at 'Umayri. Further studies of Building M will significantly contribute to our understanding of reoccupation at the *tell* following the massive destruction of the transitional period settlement.

#### **Field L: Southern Acropolis** (Carrie Elaine Duncan, University of Missouri - Columbia)

Field L was opened on the southern edge of Tall al-'Umayri's acropolis in the 1998 excavation season. The initial purpose of the field was to explore the various architectural features visible in the transition from the top of the *tell* to the southern slope. Excavators posited a continuation in Field L of the Early Bronze Age remains found in Field D, located lower on the southern side of the *tell*. Additionally, ground penetrating radar surveys conducted in the early

1990s indicated the possibility that Field L was the location of the city’s main gate, which has yet to be found after 28 years of excavation. Ensuing seasons of excavation have identified significant architectural and material culture remains from the Iron I, Late Iron II / Persian and Hellenistic periods, corresponding to site-wide Strata 12, 7 and 4 respectively.

Over the past several seasons, Field L concentrated on exposure and documentation of a Hellenistic farmstead and associated occupation phases. Various probes and soundings conducted during these seasons indicated that earlier phases of occupation dating to the Iron II and Iron I periods were present. Beginning in the 2010 season, the decision was made to begin removal of Hellenistic architecture (the associated occupational surfaces of which had long since been excavated) in order to better expose the underlying Iron Age remains. This process continued during a small, targeted season in 2011, during which several of the Hellenistic-period walls were removed by David and Amanda Hopkins.

Work in Field L during the 2012 season focused on clarifying the phases of occupation and dates of previously exposed architectural remains in anticipation of the possible need to adjust our research design owing to issues involving land ownership at ‘Umayri (see below). Specific objectives for this season were: (1) to determine the date of the large east - west wall that runs across the breadth of the field (6K88:014 = 6K89:010 = 6L80:023) by excavating probes on the north and south sides of the wall, and (2) to investigate the relationship of this wall to a north - south line of monumental stones to the north (6K88:024 = 6K98:019) by excavating the corner of their conjunction as well as the west side of the north - south wall. These tactics were sufficient to accomplish the stated objectives. The foundation course of the large east - west wall dated to the Iron I period, while the upper extant courses constituted an Iron II rebuilding along the earlier wall line. This rebuilt wall was contemporary with the construction of the

monumental north - south wall and together formed the southern and western walls, respectively, of an Iron II period room.

#### *Field Phase 7 (Stratum 12: Iron I)*

One of the primary goals of the 2012 season was to confirm the date of the large east - west wall running through Squares 6K88, 6K89 and 6L80. A probe conducted in the 2008 season against the south side of the wall in Square 6K89 had indicated an Iron I date for the wall. The size of the wall stones is somewhat surprising for the Iron I, given the smaller scale of construction characteristic of this period at ‘Umayri. Probes conducted on both the north and south sides of the wall provided a qualified confirmation of the 2008 findings. Sealing against the lowest course of the south side of the wall in Square 6K88, earth and surface loci yielded Iron I pottery. These findings appear to confirm the 2008 findings. A probe conducted on the north side of the wall in Square 6K89 also yielded Iron I pottery against the lowest course and beneath the foundation level of the wall. The situation of the wall was complicated, however, by additional findings elsewhere in Square 6K89, which are discussed below. These findings indicate that, although the lowest course of the east - west wall dates to the Iron I period, the courses above date to a later phase and constitute a rebuilding of the wall using the Iron I stones as a foundation course.

Iron I material was also found in Square 6K98, though not in association with any architectural remains or discernible occupation surfaces. Pottery from several earth loci dates almost exclusively to the Iron I period; although these remains cannot offer much insight into the nature of Iron I occupation, they do indicate that the Iron I period is represented more broadly in Field L than just Wall 6K88:014.

#### *Field Phase 6 (Stratum 7: Late Iron II / Persian)*

The most interesting and significant discoveries made in Field L during the 2012 season belong to Phases 6 and 5. An Iron II room emerged from a probe, measuring *ca* 4 x 6 m, bounded

by Walls 6K89:010 and 6K88:014 on the south, Walls 6K88:024 and 6K98:019 on the west, Walls 6K98:027 and 6K99:029 on the north, and Wall 6K89:021 on the east; it was paved with cobble surfaces and contained two free-standing pillars (**Fig. 14**).

This room is presumed to belong to a larger structure, although the dimensions and layout of that structure are currently unknown. Doorways were located in the south-east and north-west corners. Additional rooms might be expected to the east.

The size of the stones used, particularly in Wall 6K98:019 (= 6K88:024), suggests a structure of monumental size and / or defensive purpose. Discerning the purpose of the pillared room is not aided by any *in situ* pieces of material culture. It appears that the room was thoroughly cleared prior to its subsequent re-use; no objects remain on the floor surface to suggest whether a

domestic, administrative, military or any other function was likely. One suggestive aspect of the Iron II structure in Field L is the size of the stones used. The only comparably sized stones found thus far at ‘Umaryi form part of the Iron II refortification of the city wall at the confluence of Fields A and H. The possibility presents itself that Field L’s monumental Iron II construction is ‘Umayri’s long-sought city gate. The large stacked stones that appear just at the north-west corner of the excavation area in 6K98 could feasibly be a pier, and similar monumental stacked stones are visible approximately 3 m to the west in Square 6K97. Comparison with the Iron II gate at Khirbat AL-Mudayna demonstrates a similar width for the street between piers (Chadwick *et al.* 2000). In this reconstruction, the pillared room would form an admittedly unusual gate chamber, with additional chambers presumably located to the



14. Field L, pillared room [upper left] and basement room [lower left].

north and west. This hypothesis is intriguing, if highly speculative, and will require a substantial amount of additional excavation to demonstrate conclusively.

*Field Phase 5 (Stratum 7: Late Iron II / Persian)*

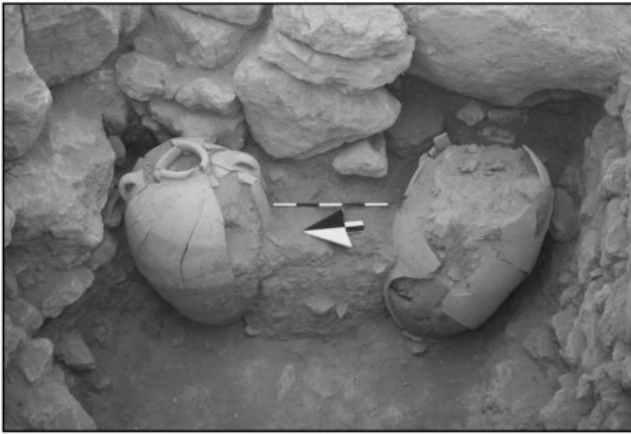
Excavation of material related to Phase 5 in the 2012 season has offered an interesting opportunity to rethink the phasing of Field L more generally. In past seasons, two phases have been assigned to the Late Iron II / Persian period, with the immediate phases before and after corresponding to the Iron I and Hellenistic periods respectively. Exposure of the Iron II pillared room and consequent dating of the upper courses of 6K89:010 to that period, as well as additional indications of a more purely Persian occupation in Field L, discussed below, suggest another possible understanding of Field L's phasing. Rather than seeing two Late Iron II / Persian phases, perhaps the first of these phases (Phase 6) should tend towards the earlier side of this designation and be considered Late Iron II, or even Iron IIB, while the later phase (Phase 5) might constitute a true Persian period occupation as has been argued for other sites on the Mādabā plains such as Jalūl (Yunker 2009). Alternatively, it is possible that additional field phases should be added to accommodate the 2012 Iron II and Persian finds. The current phasing is retained in this report for the sake of simplicity and in order to link finds from the current season to those of previous seasons.

The pillared room constructed in the Iron II period and preserved in Squares 6K88 and 6K89 saw renovation and reoccupation in Phase 5. The dimensions of the room were slightly diminished in this phase of occupation in comparison with the earlier room. Threshold 50 was laid at the west side of Wall 21. The material on the east side of the threshold did not reveal any structure, again leaving open the question of where this doorway, the only point of access to the room in this phase, might have led.

The Phase 5 use of the area west of Wall 6K98:019 is the most stratigraphically interesting

feature in Field L this season and is the impetus for suggesting a true Persian phase for Field L in general and for the later occupation of the pillared room structure specifically. As noted above, the doorway which had previously made the area west of Wall 19 accessible from the north-west corner of the pillared room was blocked during the Phase 5 occupation. In addition, it appears that Phase 6 cobble surface 6K98:036 was removed during the later occupation, with the later occupation occurring on the stratigraphically lower sub-cobble bedding surface preserved in the north-west corner and on the eastern side. Two large pithoi were sunk into the surface along this eastern edge of the room (**Fig. 15**). The addition of south and west walls turned the area into a *ca* 2 x 2 m storage basement. The resulting room is characterized as a basement because of the lack of a doorway providing access to the room.

The two pithoi were set side-by-side along the eastern edge of the room, bounded by Wall 6K98:019 at the same elevation and thus, presumably, at the same time. Strikingly, the northern pithos, a rather closed form, is generally characterized as a Hellenistic form, while the southern pithos, a holemouth variety, is usually associated with the Late Iron II / Persian period. The pottery from pit installation fills, associated with the northern and southern pithoi, yields an identical read of Late Iron II / Persian. The use of a jar otherwise considered characteristically Hellenistic suggests the early use of a late form together with the late use of an otherwise earlier form, and that both might meet in the middle during the Persian period. The contemporaneous use of pottery otherwise designated as Late Iron II / Persian with a purportedly Hellenistic form suggests that the Persian part of this designation merits heavier emphasis, or even sole usage, in Field L contexts. A similar case extends to a complete lamp found in the fill just above the south pithos. While the closed form immediately suggests a Hellenistic date, a lamp fragment of similar construction was found elsewhere at ‘Umayri in what was characterized



15. Field L, two pithoi.

as a solidly Late Iron II / Persian context (Herr 1989: . 19.17:14). Together, these finds indicate an overlap of Iron II and Hellenistic forms that most logically occurred in the Persian period. The contents of each pithos still await analysis, but the northern jar (Hellenistic) contained the skulls of five blind mole rats that clearly became trapped after attempting to consume what they found.

#### *Field Phase 4 (Stratum 4: Hellenistic)*

The earlier Hellenistic material in Field L consists primarily of fill layers representing a deliberate leveling of earlier occupation levels in preparation for construction of the Hellenistic farmstead. Several walls are included in Phase 4 not because they were still in use as walls during this phase, but because much of the Phase 4 Hellenistic fill layers seal up against them. The extant tops of these walls appear to be at the approximate level to which the Hellenistic builders were trying to build up the ground level. These walls are thus being used as guidelines for the Hellenistic construction's preliminary leveling phase.

#### *Field Phase 3 (Stratum 4: Hellenistic)*

No new loci associated with Phase 3 were identified in 2012, but four walls associated with the Hellenistic farmstead were removed to expose the underlying Iron Age architecture.

The research strategy for the 2012 season at 'Umayri was designed with the possibility of

this being the last season of excavation owing to land-ownership issues (see below). Primary attention focused on answering outstanding questions regarding the dates and phases of visible architecture and occupation. This season's work provides definitive conclusions regarding the date and phasing of the Field L's large east - west wall and its associated megalithic walls. The foundation course of the east - west wall dates to the Iron I period, either as part of an unexpectedly large building or as part of the city's defensive system. Additional courses were built upon the Iron I foundation, along with associated walls to the north, using megalithic stones in the Iron II period. This resulted in the pillared room and other, unexcavated, parts of the structure in the immediate vicinity. The Iron II structure enjoyed subsequent renovation and re-use, perhaps in the Persian period. A more nuanced understanding of the Iron II to Persian periods in Field L is an unexpected bonus to a successful season.

Field L would benefit from moving north and west to identify further and uncover the minimally understood megalithic Iron II structure. The intriguing possibility of having at last found the site's city gate increases the already high desirability of continuing excavation in Field L and at 'Umayri.

#### **'Umayri Survey Site 84** (David and Amanda Hopkins, Wesley Theological Seminary)

Among the MPP 'Umayri survey sites, Site 84, south of 'Umayri on land owned by the Bisharat family, was discovered in the 1989 survey and excavated during the 1994 season by David Hopkins. Its function as a Late Iron II / Persian farmstead, ostensibly connected to 'Umayri, was quickly established on the basis of its architectural plan and the remains found, as well as on the agricultural context of the fields and installations surrounding it.

Excavators focused their efforts in 2012 exclusively on clarifying the nature and function of a large rock-cut feature previously identified as a wine cellar, located 20 m from the 10 x 10 m



farmstead. The initial survey revealed cisterns, terraced walls, grape pressing installations with cup holes, quarrying marks and water reservoirs. The primary purpose of Site 84 was to produce wine.

Excavators again revisited Site 84 during the 2012 season, with the purpose of clarifying the use of this rock-hewn feature and to recover any material remains that might exist within the installation. The rock-hewn feature consisted of a curvilinear opening measuring 1.5 m by 2.4 m; this quickly expanded into a rounded dome measuring 5.24 m by 4.4 m (**Fig. 16**).

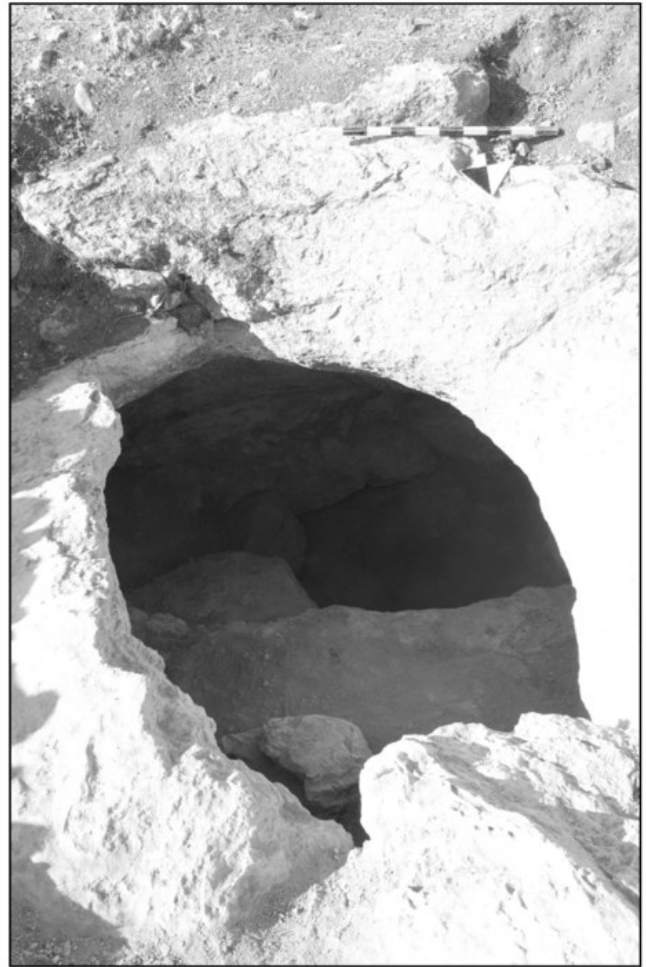
While the full extent of the cavity has yet to be cleared, excavators made initial observations about its construction and use. In the southern area of the cave, excavators noted evidence of chiseling and found the remnants of plaster, measuring 1.5 m by 0.4 m. They also encountered soil of varying consistencies and types, including a large amount of nari and a large pebble pocket.

Features included a channel and chiseled reworking of solution cavities. The pottery, whilst rare, was consistent with Late Iron II- / Persian-period use.

Previous surveyors identified this opening as a cellar that would provide a secure storage facility and an ideal environment for the fermentation of wine. They were led to this hypothesis by the large irregular opening that is uncommon for cisterns. Excavation results from the 2012 season challenge this hypothesis. Evidence of chisel work and plaster on the walls and ceiling of the cave indicate that it was probably used as a cistern. The chiseling of natural solution features into what can best be described as channels running into the underground space support this new interpretation. A more definitive view of the rock-hewn cave will not occur until excavators return and continue to clean this feature.

#### **Field K: Dolmen(s)**

Although there was no new excavation in Field K in 2012 (see earlier reports), the dolmen and what now appears, in a composite tripod-boom



*16. Survey Site 84, cistern opening.*

photo, to be an adjacent dolmen foundation(**Fig. 17**) were cleaned by Ela Dubis for purposes of more detailed photographic and laser recording formats (see below). This discovery also motivated a week-long sub-surface mapping project in the summer of 2013, developed in collaboration with Dr Bilal al-Khrisat of Hashemite University.

#### **Technology**

Tall al-'Umayri is currently the subject of negotiations connected to land-ownership issues. This has left the future of long-term excavations at the site in something of a state of flux, even if there is some promise of a resolution in favor of the cultural heritage preserved at the site.

This situation, which became apparent only weeks prior to the start of the 2012 season, forced a rapid restructuring of the project's strategic goals and research plan for the season. Among



17. Field K Dolmen and Dolmen.

the resulting outcomes came a commitment to record digitally every possible architectural feature on the site using every available digital technology for any contingency should the *tell* become inaccessible for research in the future.

Thus, the season saw the continued, even intensified, use of iPads and iPods for digital data-harvesting and of the tripod-mounted photo boom for composite geo-referenced photographic records from above. Additionally, the team used a stereo gigapan system to record a series of 28 3D digital spheres taken inside and outside of `Umayri's architecture. In addition, in conjunction with the Department of Antiquities, the team employed LiDAR technology to document, again in 3D and to a resolution of a few millimeters, most of the important structures at the site, should any of them need reconstruction in the future.

### Restoration and Preservation

Following excavation in 2012, all newly exposed architecture was consolidated and conserved, as happens at the end of each excavation season. This action has resulted in the complete preservation of almost all extant architecture at the site, making research easier for archaeologists and visualization of the

remains more meaningful for visitors.

The greater threat to the survival of cultural heritage at `Umayri is a dispute between landowners and the government (referenced above), which may leave all exposed surfaces and architecture vulnerable and which could force an end to excavation. All parties are of good will and are searching for a solution that respects both the cultural heritage of Jordan represented at the site and the rights of those who have invested in the land.

### Plans for 2014

The project is planning a full excavation season during the summer of 2014, from 25 June to 30 July. Work will occur in Field K, in search of additional dolmen burial chambers that were at least potentially identified in the brief sub-surface mapping survey in 2013. There will also be a step trench down the southern slope of the site between Fields L / H and D, and perhaps excavation along the top of the southern slopes in connection with observable defensive structures on the edge of the acropolis. Our move to the southern slopes, while important in its own right, has been motivated by the land-ownership dispute which, we hope only for the short term, will keep us from the acropolis.

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### Bibliography

- Clark, D.R.  
2011 The Late Bronze and Early Iron Ages at Tall al-'Umayri. Pp. 43-57 In *The Madaba Plains Project: Forty Years of Excavating into Jordan's Past*. (ed.), Douglas, R. Clark, Larry, G. Herr, Øystein S. LaBianca, Randall W. Younker. Equinox.  
2013 Challenges Encountered and Changes Envisioned: Learning from the Past 25 Years at Tall al-'Umayri and Imagining In *Studies in the History and Archaeology of Jordan XI: 263-275*.  
Clark, D.R. and Bramlett, K.V.  
2011 Madaba Plains Project—Excavations at Tall al-'Umayri, 2010. In *Annual of the Department of Antiquities of Jordan 55: 391-408*.  
2012a Madaba Plains Project-Tall al-'Umayri, 2010. *Andrews University Seminary Studies 50/2: 271-298*.  
2012b Tall al-'Umayri. *American Journal of Archaeology*, 116/4 (October): 713-714.  
Clark, D.R.; Herr, L.G.; LaBianca, Ø.S.; Younker, R.W., (eds.)  
2011 *The Madaba Plains Project: Forty Years of Excavating into Jordan's Past*. Equinox.  
Geraty, L.G.  
1985 The Andrews University Madaba Plains Project: A Preliminary Report on the First Season at Tell el-'Umeiri. *Andrews University Seminary Studies 23: 85-110*.

- Geraty, L.T.; Herr, L.G.; and LaBianca, Ø.S.  
 1986 Madaba Plains Project: A Preliminary Report of the 1984 Season at Tell el-'Umeiri and Vicinity. *Bulletin of the American Schools of Oriental Research Supplement* 24: 117-119.
- 1987 The Madaba Plains Project: A Preliminary Report on the First Season at Tell el-'Umeiri and Vicinity. *Annual of the Department of Antiquities of Jordan* 31: 187-199.
- 1988 The Joint Madaba Plains Project: A Preliminary Report on the Second Season at Tell el-'Umeiri and Vicinity (June 18 to August 6, 1987). *Andrews University Seminary Studies* 26: 217-252.
- 1989 Madaba Plains Project: The 1987 Season at Tell el-'Umeiri and Vicinity. *Annual of the Department of Antiquities of Jordan* 33: 145-176.
- 1990 Madaba Plains Project: A Preliminary Report of the 1987 Season at Tell el-'Umeiri and Vicinity. *Bulletin of the American Schools of Oriental Research Supplement* 26: 59-88.
- Geraty, L.T.; Herr, L.G.; LaBianca, Ø.S.; and Younker, R.W., (eds.)  
 1989 *Madaba Plains Project 1: The 1984 Season at Tell el-'Umeiri and Vicinity and Subsequent Studies*. Berrien Springs, MI: Andrews University/Institute of Archaeology.
- Herr, L.G.  
 2011 Tall al-'Umayri in the Early and Middle Bronze Ages, and the Late Iron I, Iron II, Late IronII/Persian, Hellenistic, Early Roman, Byzantine, and Islamic Periods. Pp. 28-42. In *The Madaba Plains Project: Forty Years of Excavating into Jordan's Past*. (ed.). Douglas R. Clark, Larry G. Herr, Øystein S. LaBianca, Randall W. Younker. Equinox.
- Herr, L.G. and Clark, D.R.  
 2003 Madaba Plains Project: Excavations at Tall al-'Umayri, 2002. *Annual of the Department of Antiquities of Jordan* 47: 279-294.
- 2004 Madaba Plains Project-Tall AL-'Umayri, 2002. *Andrews University Seminary Studies* 42: 113-127.
- 2005a Madaba Plains Project: Excavations at Tall AL-'Umayri, 2004. *Annual of the Department of Antiquities of Jordan* 49: 245-260.
- 2005b Madaba Plains Project-Tall AL-'Umayri, 2004. *Andrews University Seminary Studies* 43: 229-246.
- 2008a Madaba Plains Project: Excavations at Tall al-'Umayri, 2006. *Annual of the Department of Antiquities of Jordan* 52: 181-202.
- 2008b Madaba Plains Project-Tall AL-'Umayri, 2006. *Andrews University Seminary Studies* 46: 65-81.
- 2009 From the Stone Age to the Middle Ages in Jordan: Digging up Tall AL-'Umayri. *Near Eastern Archaeology* 72/2: 68-97.
- 2010 Madaba Plains Project: Excavations at Tall AL-'Umayri, 2008. *Annual of the Department of Antiquities of Jordan* 54: 51-72.
- 2013 Madaba Plains Project-Tall AL-'Umayri, 2008. *Andrews University Seminary Studies* 51/1: 89-119.
- Herr, L.G.; Clark, D.R.; Geraty, L.T.; and LaBianca, Ø.S.  
 1999 Madaba Plains Project: Excavations at Tall AL-'Umayri, 1998. *Annual of the Department of Antiquities of Jordan* 43: 99-114.
- 2000 Madaba Plains Project: Tall AL-'Umayri, 1998. *Andrews University Seminary Studies* 38: 29-44.
- Herr, L.G.; Clark, D.R.; Geraty, L.T.; Younker, R.W.; and LaBianca, Ø.S., (eds.)  
 2000 *Madaba Plains Project 4: The 1992 Season at Tall AL-'Umayri and Subsequent Studies*. Berrien Springs, MI: Andrews University/Institute of Archaeology.
- 2002 Madaba Plains Project 5: The 1994 Season at Tall AL-'Umayri and Subsequent Studies. Berrien Springs, MI: Andrews

- University/Institute of Archaeology.
- Herr, L.G.; Clark, D.R.; and Trenchard, W.C.  
2000 Madaba Plains Project: Excavations at Tall AL-‘Umayri, 2000. *Annual of the Department of Antiquities of Jordan* 45: 237-252.
- 2001 Madaba Plains Project: Excavations at Tall AL-‘Umayri, 2000. *Andrews University Seminary Studies* 40: 105-123.
- Herr, L.G.; Geraty, L.T.; LaBianca, Ø.S.; and Younker, R.W.  
1991 Madaba Plains Project: The 1989 Excavations at Tell AL-‘Umeiri and Vicinity. *Annual of the Department of Antiquities of Jordan* 35: 155-180.
- 1994 Madaba Plains Project: The 1992 Excavations at Tell AL-‘Umeiri, Tell Jalul, and Vicinity. *Annual of the Department of Antiquities of Jordan* 38: 147-172.
- Herr, L.G.; Geraty, L.T.; LaBianca, Ø.S.; Younker, R.W.; and Clark, D.R.  
1996 Madaba Plains Project 1994: Excavations at Tall AL-‘Umayri, Tall Jalul, and Vicinity. *Annual of the Department of Antiquities of Jordan* 40: 63-82.
- 1997 Madaba Plains Project 1996: Excavations at Tall AL-‘Umayri, Tall Jalul and Vicinity. *Annual of the Department of Antiquities of Jordan* 41: 145-168.
- Herr, L.G.; Geraty, L.T.; LaBianca, Ø.S.; and Younker, R.W., (eds.)  
1991 *Madaba Plains Project 2: The 1987 Season at Tall AL-‘Umeiri and Vicinity and Subsequent Studies*. Berrien Springs, MI: Andrews University/Institute of Archaeology.
- Herr, L.G.; Geraty, L.T.; LaBianca, Ø.S.; LaBianca; Younker, R.W.; and Clark, D.R., (eds.)  
1997 *Madaba Plains Project 3: The 1989 Season at Tall AL-‘Umayri and Vicinity Subsequent Studies*. Berrien Springs, MI: Andrews University/Institute of Archaeology.
- LaBianca, Ø.S., *et al.*  
1995 Madaba Plains Project: A Preliminary Report on the 1989 Season at Tell AL-‘Umeiri and Hinterland. Pp. 93-120 in *Preliminary Excavation Reports*, ed. W. G. Dever. Annual of the American Schools of Oriental Research 52. Atlanta: American Schools of Oriental Research.
- Younker, R.W., *et al.*  
1990 The Joint Madaba Plains Project: A Preliminary Report of the 1989 Season, Including the Regional Survey and Excavations at El-Dreijat, Tell Jawa, and Tell AL-‘Umeiri (June 19 to August 8, 1989). *Andrews University Seminary Studies* 28: 5-52.
- 1993 The Joint Madaba Plains Project: A Preliminary Report of the 1992 Season, Including the Regional Survey and Excavations at Tell Jalul and Tell AL-‘Umeiri (June 16 to July 31, 1992). *Andrews University Seminary Studies* 31: 205-238.
- 1996 Preliminary Report of the 1994 Season of the Madaba Plains Project: Regional Survey, Tall AL-‘Umayri and Tall Jalul Excavations (June 15 to July 30, 1994). *Andrews University Seminary Studies* 34: 65-92.
- 1997 Preliminary Report of the 1996 Season of the Madaba Plains Project: Regional Survey, Tall AL-‘Umayri and Tall Jalul Excavations. *Andrews University Seminary Studies* 35: 227-240.

