

PRELIMINARY REPORT ON THE 2009 SEASON OF THE MADABA PLAINS PROJECT: TALL JALŪL EXCAVATIONS 2009

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Introduction

During the 2009 season, Andrews University continued excavations at Tall Jalūl and the Islamic village. The excavations on the tall were directed by Randall Younker and Constance Gane, of the Institute of Archaeology at Andrews University. The excavation in the Islamic village was directed by Reem al-Shqour¹. Over 50 faculty, students and volunteers joined more than 20 Jordanian workers in the excavations this season.

For background information on the site and the history of its exploration see the 2008 report submitted to the Department of Antiquities. In 2009, excavations on the tall were conducted in only three areas: Fields C, D and G.

Results of the 2009 Season at Tall Jalūl

Field C

The 2009 season of excavations in Field C

1. Reem al-Shqour, Research Associate for Archaeology at the Institute of Archaeology at Andrews University, will present a separate report for the 2009 season at the Islamic village. We wish to thank Dr Fawwaz al-Khrayshah for his support of the project this season. We would also like to thank the American Center of Oriental Research (ACOR) for their support, through the good work of Barbara Porter and Chris Tuttle, in launching the project this season. Finally, we appreciate the services of Mr Basem al-Mahamid and Mr Hussam Hjazin who served as representatives of the Department of Antiquities of Jordan.

Staff for the 2009 season included director Randall W. Younker and co-directors Constance E. Gane and Reem al-Shqour. Paul Z. Gregor and Paul Ray were associate directors. Sabal Zaben served as field archaeologist and facilitated the excavations of the Islamic village. The Field Supervisors this year were Paul Gregor (G), Paul Ray (C) and Jennifer Groves (D). Paul Ray served as the objects registrar and architect and Jody Washburn was the pottery registrar. Karen Borstad and Theodore Bergh conducted the GPS survey of Jalūl village, while Paul Ray, Zach Ray and Owen Chestnut oversaw the GPS readings on the tall and the Islamic village. Basem al-Mahamid did the architectural drawings for Field G.

brought clarification on the nature of the Late Iron II/Persian walls that had initially been exposed in previous seasons. In 2009, two rectangular buildings were identified in the southern part of Field C (which included Squares C5, C6, C7 and C8). The larger building is located on the west side of the field and occupied most of this season's excavation area. At least three building phases were detected for the western building (**Fig. 1**).

To the north of the large western building was an alley that separated it from the Late Iron II/Persian period pillared house found in earlier seasons (**Fig. 2**). This pillared house was initially constructed in the seventh century BC and continued to be used throughout the Iron II/Persian period. It was the building in which a cave, containing skeletons representing some 20 individuals, was found below the open courtyard floor. Based on the ceramics found in associa-

Paul Ray did the drawings for Fields C and D. Magalie Anna Dartus did the architectural drawings for the Islamic village. Zach Ray served as the objects artist. Square supervisors for Field C included Christie Chadwick, Chris Chadwick, Sarah Gane, Roy Gane, Jenny Shrestha and Audrey Shaffer. Square supervisors for Field D were Sean Porras, L. Scott Baker, Owen Chestnut and Jasmine Saunders. Square supervisors for Field G included Micah Johnson, Jeff Hudon, Chad Washburn, Michelle Berglin and Justin Singleton. Square supervisors for the Jalūl Islamic village included Magalie Dartus, Thomas Pieters, Ehren Lichtenwalter and Christine Chitwood.

Volunteers included Gary Achenbach, Stephen Allock, Abigail Arkusinski, Andy Arkusinsky, Ryan Atkins, Arnie Baker, Einra Baker, Lora Baker, Stefani Clouzet, David Cox, Kristina Cress, Denis Fortin, Erika Fortin, Rebekah Gauthier, David Glazer, Eva Glazer, Sasa Glazer, Chelsea Grimstad, Madeliz Gutierrez, John Heczko, Young Kim, Suzanne LaRue, Amanda J. McGuire, David Merling, Jeremy Merling, Kohl Merling, Timothy Paulson, Nadine Plummer, Vern Porras, Daniel Regal, Zenaida Salazar, Douglas Simmons, Victor Tenorio, Tine Vekemans, Frances Watkinson, Bob Wilkins and Florie Yang,



1. Iron Age II/Persian period building in Field C (middle and lower walls) and the alley way (in between upper wall where people are standing, and middle wall).



2. The alley or street in Square C6; the wall to the left (south) is the northern wall of the large western building that dates to the Iron Age II/Persian period.

tion with the skeletons, the bodies date from the seventh century BC.

The second building in Field C was found in the south-east part of the field; only the north-west corner of this building was exposed. A room in the north-west part of the building was paved with small stone cobbles. This north wall of this south-east building was robbed out in antiquity.

Suggested phasing for the results of the 2009 excavations in Field C can be summarized as follows:

Phase 1: Last street or alley phase (C5.37b=C6.8) and pavement in north-west corner of C5 (C5.22).

Phase 2: Iron Age IIC/Persian ‘buttress’ which strengthened the northern wall of the western building, and also serves as the southern boundary of the street or alley (C7.42 tumble or stone

fall=post-occupational phase of the building).

Phase 3: Iron Age IIC/Persian expansion of ‘western building’ to west. This expansion includes wall C8.17b=C11.11, C8.26=C5.21, C5.13, the thickening or widening of the center wall or pylon C8.16=C7.12, and the pavement C8.20=28 = 31 = C5.25. The middle pavement of the street or alley is part of this phase (C5.39 = C6.11).

Phase 4: Iron Age IIC/Persian ‘western building’: walls C8.17, C7.14, C8.16 = C7.12 (the center wall or pylon) and C6.21 = C5.8; pavement C5.29; wall C6.19 = C5.44 (also serving as the northern boundary of the street or alley) and pavement C5.42 (the street or alley).

Phase 5: An Iron Age IIC/Persian period building (C7.35 and 36); the north-west corner of this building includes a cobble pavement (C7.38 = C8.25).

Phase 6: An Iron Age II building (seventh century BC); the pillared building and cave (C1. 28) in Squares C1 to 4, found in previous seasons, continues.

Phase 7: What appears to be an Iron Age I wall (C4.29) found in Square C4.

Field D

Excavations in Field D on the tall continued to clear the rooms of the large Iron II/Persian period building that was found in earlier seasons (**Fig. 3**). In the course of clearing the rooms, large amounts of broken pottery continued to be found as was the case in previous seasons. This season’s finds included a piece of Attic



3. Iron Age II/Persian building from east; courtyard is in the foreground; rooms along the south (left) and west (top) sides are visible; fallen stones are from stone pillars.

ware -- typical of the Persian period. A number of small objects were also found, including a limestone cosmetic palette, at least four beads (one of which was made of glass and another of amber), parts of two horse figurines, the head of an Egyptian-style female figurine, and a plaque fertility female figurine (**Fig. 4**). An unbaked clay loom weight from D1 (actually the second such weight from the same room) and a couple of fragmentary stone loom weights, again from D1, were also found. In addition to the aforementioned objects, fragments of a couple of rhytons (small ceramic drinking vessels) were recovered; one of these was in the shape of a camel's head.

As well as the architecture and small finds, a broken seal and a *bullā* (piece of clay stamped by a seal) were found (**Fig. 5**). The inscriptions were Ammonite and date to about the seventh century BC. Thus, they were in use prior to the last use of the Iron II/Persian period building, showing that the building has an earlier history in the Late Iron II period -- around the seventh century BC.

The phasing in Field D is basically restricted to the Iron Age IIC/Persian period and its post-occupational/abandonment phase. However, there were several sub-phases of the Iron

Age IIC/Persian period building. The suggested phasing for Field D after the 2009 season is as follows:

Phase 1: Post-Iron Age IIC/Persian occupation (an abandonment phase).

Phase 2: Iron Age IIC/Persian late phase walls (D3.14 upper phase); D3.21.

Phase 3: Iron Age IIC/Persian wall D3.34; pillars 27 a, b and c.

Phase 4: Iron Age IIC/Persian walls D3.28, D4.18 and D1.44.

Phase 5: Iron Age IIC/Persian walls D3.33, 25 and 48.

The discovery of Persian period remains at Jalūl in Fields C and D (as well as in A and B during earlier seasons) is significant in view of the fact that material from this period has hitherto been rather rare. However, more recent archaeological work in Transjordan has been slowly altering that picture. Stern (2001: 454-59) has compiled a convenient list of those sites in Jordan for which the excavators have reported possible Persian period remains. In the Ammon region these include Ḥisbān, Tall al-'Umayrī, Tall Ṣāfūt, Khirbat al-Ḥajjār, Tall al-Durayjāt (excavated by the author), Umm Uthaynah, Abū Nuṣayr and tombs at Muqablayn, Khildā. To these sites Tall Jalūl can now be added².

2. See E. Stern *Archaeology of the Land of the Bible* Vol. II: *The Assyrian, Babylonian, and Persian Periods*

(732-332 B.C.E.), New York, 2001.

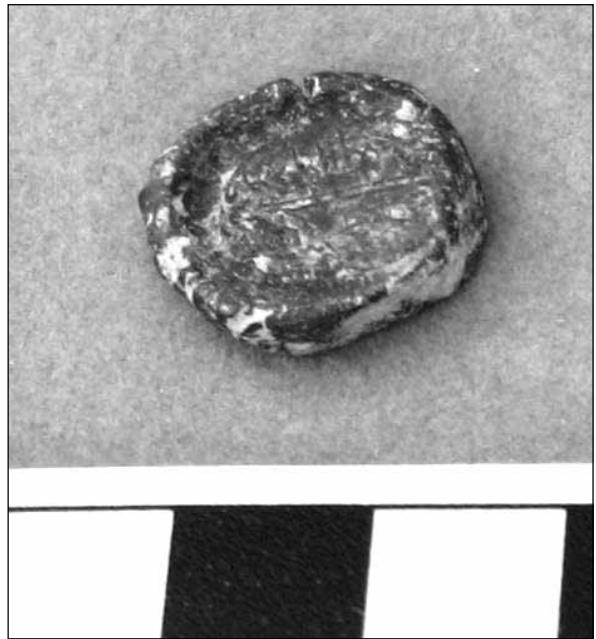


4. Iron Age II plaque fertility figurine from Field D.

Field G

The 2009 season in Field G continued to expose a city wall first found during the 2007 season (Figs. 6 and 7). This season, the city wall was traced across four 5m squares, meaning that at least 20m of the wall was exposed. The wall runs in a north-west, south-east direction and dates to the ninth century BC.

To the north of the ninth century city wall, in the eastern part of Field G, the south portion of a large Iron II (eighth and seventh centuries BC) building was exposed. This south portion contained a couple of small rooms that were located at the back of the building. One of these small rooms contained a considerable amount of smashed pottery that dated to the Iron II pe-



5. Iron Age II bullae from Field G.

riod (seventh century BC). The forms included cooking pots, decanters, oil lamps, bowls, storage jars, etc.

One of the most intriguing finds in Field G was a late Iron II/Persian period (seventh century BC) water channel that ran from a large reservoir located at the south-east part of the tell. The water channel cut across the earlier Iron II building and exited through the early Iron II wall. The water channel apparently drained the overflow from the water reservoir to a number of smaller reservoirs located outside the city wall to the east and south-east. It would therefore seem that Jalūl had an abundant water supply during the Iron Age.

Besides the architectural remains of Field G, a number of small objects were found, including arrow heads, bone tools and ceramic figurines, amongst them a number of female heads -- possibly of Ammonite fertility goddesses.

Phases for Field G after the 2009 season appear as follows:

Phase 1: Islamic period walls (G8.3; G9.2) (based on stratigraphic position).

Phase 2: Post-seventh century BC abandonment phase (G2.53-60; G4.19, 25; G5.1-8, 10; G8.1).

Phase 3: seventh century BC occupation: wall G4.36; water channel walls G2.38 = G5.9.

Phase 4: Post-eighth century BC abandonment: fills G1.8-14, 18 and 19; G4.26-32, 35, 38, 41



6. Final photo of Field G from west. Left shows rooms of 8th century BC building; center shows 7th century BC water channel that runs from water reservoir to outside the city wall; wall on right side of photo (south) shows 9th century BC city wall.

and 43; G5.11-16; G7.1-11, 13 and 14; G8.4-8.
Phase 5: eighth century BC occupation: plaster G1.15; walls G4.13, 15, 16, 17 and 33; G4.37; G4.40; G5.17, 18 and 19; G7.18; G8.12; G9.3-4.

Phase 6: Post-ninth century abandonment phase, including fills G1.16; G2.39-52; G2.61-64; G2.68-69; G4.44; G7.12, 15-17; G8.9-11.

Phase 7: ninth century BC occupation: the City Wall, including walls G1.17; G2.5 and 67; G4.34; G7.4 and 19; G8.2 and 13.

Mapping of the Islamic Village (Karen Borstad and Theodore Burgh)

The mapping of the Islamic village was conducted by Dr Karen Borstad and Dr Theodore Burgh. 22 structures were recorded during this initial season, including four houses complete to their roof-lines. Within the more ruined structures, special features such as doors, large lintel stones and arches were mapped separately (**Fig. 8**). A built wall amongst the ruined buildings, running up to a cave entrance, indicated a possible habitation cave. Several complete houses within 'old Jalūl' are currently occupied and their locations will be recorded in future seasons. Using GIS, the structures mapped in 2009 will be displayed on a geo-referenced aerial photo of the Islamic village site. Analysis of occupation and use patterning through time will

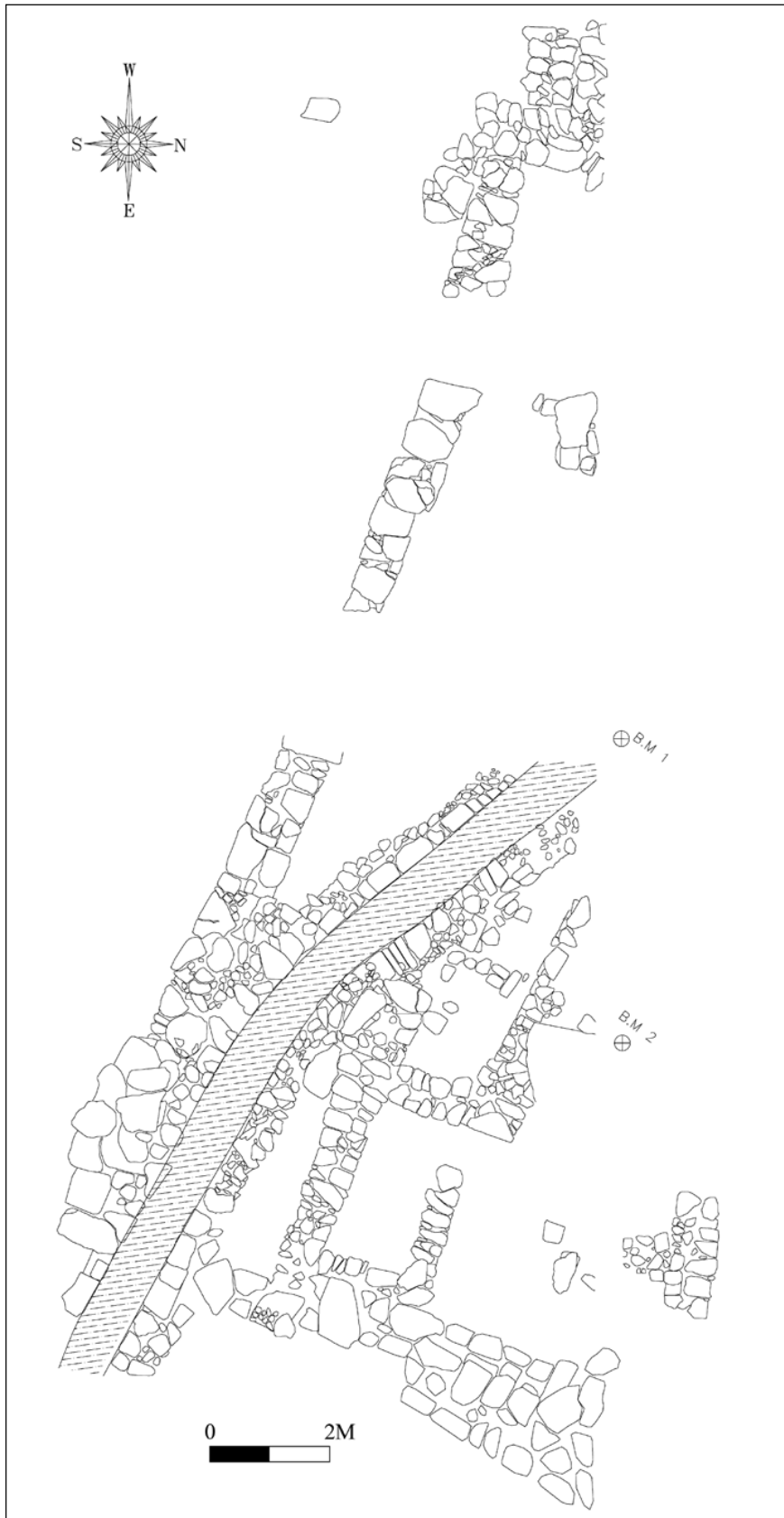
be possible through 3D modeling that is a part of the planned excavation and documentation project.

Mapping of Cisterns and Water Catchments

The water systems study was prompted by the discovery of five ground-level cistern openings along the ancient built road, found in 2007, that passes from north-west to south-east along the western side of Tall Jalūl (cf. Munjazat 2007: 74-75). In addition, two cisterns at the north foot of the tall were known, as was a large unexcavated cistern on top of the tall. Pottery sherds collected from the ancient road in 2007 indicated use of the road from Iron Age to Byzantine times, and possibly into the Islamic period as well.

The current mapping project led to a discovery of 25 cisterns within 500 meters of the tall, predominantly on the north and south sides. Due to time constraints only half of the north side area, devoid of houses or plantings, was surveyed thoroughly. An olive grove and private home occupies the area east of the tall, and new homes of the current Jalūl village occupy the immediate west side of the tall. The team conducted a cursory look in both areas. Following are brief descriptions of the types of cisterns found during the survey:

- 13 are a constructed hole in the ground, often



7. Topographic map of Field G
(by Basem Mohamid).



8. Islamic Village arch in Building 9.

difficult to see from more than 5-10m away. There were no noticeable markings near or around them (Fig. 9).

- Five are capped. The cap is a cement square structure, less than 1m high, often with a metal cover over the opening. Three of these had one or more external basins (Fig. 10).



9. Cistern along south end of ancient road.



10. Capped cistern south of the tall.

- Seven are collapsed (Fig. 11).

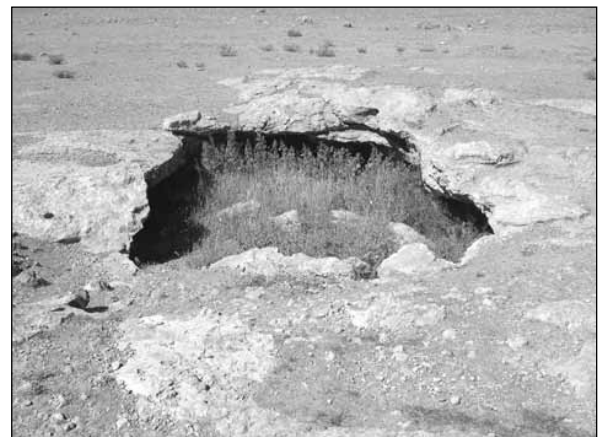
During the mapping of the cisterns, it became apparent that the natural topography south-east and north of the tall formed natural basins and terraces. The appearance of these areas was striking in view of their distinct shapes, the depth of the basins, and the variety and color of vegetation, especially on the south side of the tall. Sheep herds were observed in the spring-time drinking the standing water in the south terraces. On the north side of the tall, a striking feature is the high concentration of evenly spaced, uniformly-sized rocks concentrated at the lowest point of the basins. The mapping team estimated at least four of these natural basins on the north side of the tall and, on the south side, two prominent terraces and three basins. Owing to time and equipment constraints, the existence of these areas was simply noted; more detailed terrain mapping will be conducted next season.

Cisterns with Water Management Features

Four cisterns on the north side of the tall, and one on the south side, displayed seemingly man-made raised earth structures, reinforced with rock that formed a steep drain-like area with the cistern opening at the lowest point. They would appear to funnel flowing surface water or rain-water into the cistern. The team mapped these raised structures for future hydrographical analysis and 3D visualization.

Conclusions

The 2009 mapping project revealed what appears to be a significant concentration of cisterns



11. Collapsed cistern south of tall.

ADAJ 53 (2009)

and other water management systems around the tall and Islamic village at Jalūl. The high proportion of cisterns constructed at ground level is a unique feature that suggests long term collection of rainwater or, possibly, more plentiful surface water flow in the past. These cisterns are however difficult to date; the capped cisterns suggest current use and at least one ground-level cistern contained deep water in June. Preliminary comparative research suggests that sites with similar concentrations of cisterns are in remote areas and *caravanserai* closer to the desert fringe. Cisterns ring the ruins of the Islamic village and residents today buy water from three wells in the immediate area. Despite the fact that

Jalūl has no visible surface spring, the extensive water collection/storage system documented in this preliminary survey shows intensive use of Jalūl's natural landscape and geology, from ancient occupation of the tall and Islamic village up to the present day.

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