TALL ḤISBĀN 2011 - 12: A PRELIMINARY REPORT

Robert D. Bates, Jeff Hudon and Øystein LaBianca

Introduction

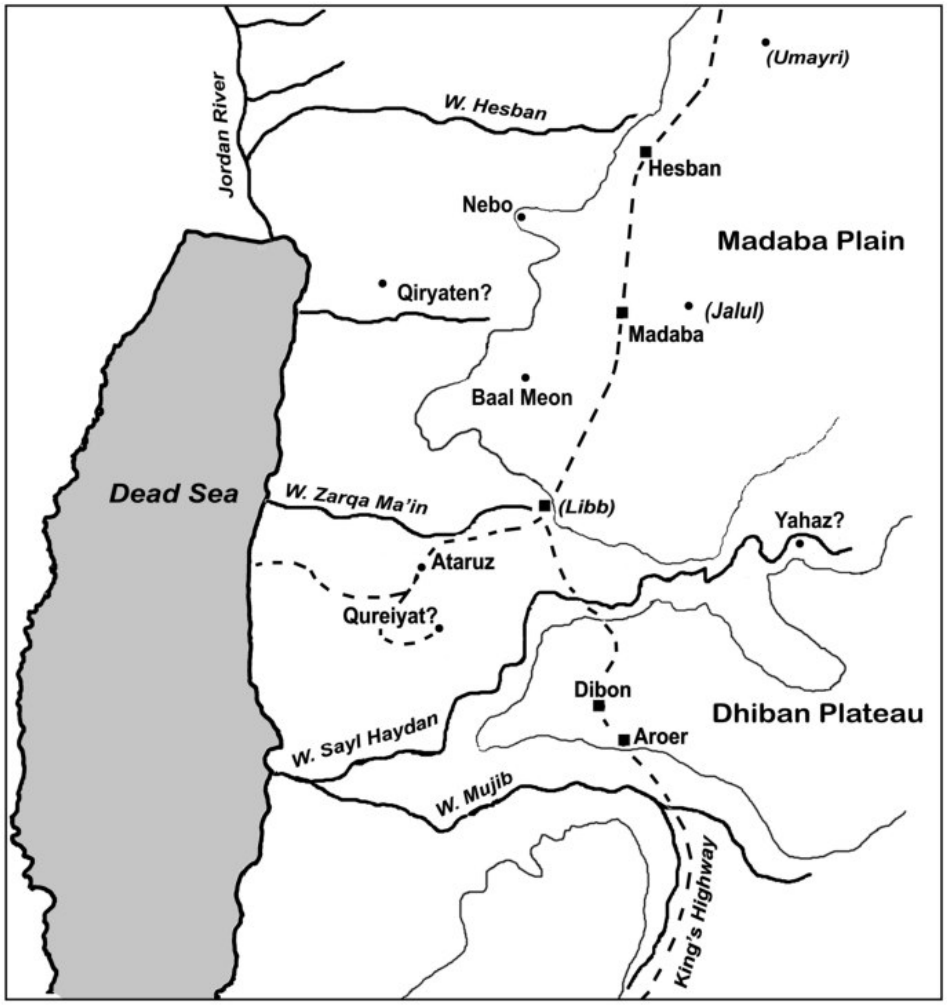
Tall Ḥisbān is a witness to global history and a window on daily life in Jordan through the ages. Since 1968, excavators have discovered traces of multiple civilizations and empires, including a thriving market town from the Assyrian, Babylonian and Persian periods, a large quantity of amphora jars that stored fish sauce in the Greco-Roman period, the foundations of several public buildings from the Roman period, two basilica churches from the Byzantine period, and the private residence and bath (*hammam*) of the Mamluk governor of this part of Jordan during the 14th century AD. Over the course of its nearly 45-year history, the excavations at Ḥisbān have experienced many changes while maintaining the highest standard of excellence in academic research. It has become a model for other excavations in Jordan and has trained numerous professional archaeologists, volunteers and students. Working in conjunction with a consortium of universities as part of the Madaba Plains Project, it continues to develop new ways of exploring the historical and cultural context of Tall Ḥisbān in order to make the site relevant to scholars, visitors and local residents alike.

History of Excavation

Tall Ḥisbān has been investigated by archaeologists in two phases: the first, known as the Heshbon Expedition, took place from 1968 to 1976. The primary focus of the first phase was the quest for the site's biblical connections - hence the initial name of the expedition which attests to the excavators primary interest in finding a connection between biblical Heshbon and the site of Tall Ḥisbān **(Fig. 1)**.

The founding director of the Heshbon Expedition was Siegfried H. Horn, Professor of Old Testament and the History of Antiquity at the Seventh-Day Adventist Theological Seminary at Andrews University in Michigan, USA. Horn organized three expeditions: the first in 1968, the second in 1971 and the third in 1973. His successor at the SDA Theological Seminary, Lawrence T. Geraty, organized two subsequent seasons: one in 1974 and another in 1976. The chief archaeologist for all five seasons was Roger Boraas of Upsala College in New Jersey. The chief ceramicist was James Sauer, a doctoral student in Ancient Near Eastern Studies at Harvard University. Øystein S. LaBianca served as the 'bone specialist' for the Heshbon Expedition.

The second phase known as the Hisban Cultural Heritage Project - began in 1996 as a 'clean-up operation' with the goal of making the site more accessible to tourists. Starting in 1997, stratigraphic excavations were resumed in order to clarify problems that became apparent during the process of planning and preparing for restoration and presentation of the site's most prominent archaeological features. Most problematic, in this regard, was Tall Hisban's Mediaeval and Early Modern history. A deliberate decision was therefore made in 1998 to make these later periods a major focus of renewed stratigraphic excavation and restoration activity during 2001, 2004, 2007 and 2010. Another major emphasis during this second phase were efforts to engage the local community in helping to restore, protect and develop the site for tourism. To this end the Hisban Cultural Association was formed - a local NGO with which the excavators could partner



1. Regional map of the Madaba plains and the location of Tall Ḥisbān in relationship to other sites nearby.

in developing the site for tourism. Thanks to the Nabulsi family, who own several large farm buildings in the nearby village, a location for a future Visitor Center for Tall Ḥisbān has been secured.

Jordan Field School

The 2011 season marked the introduction of the Jordan Field School as a multidisciplinary approach to managing and preserving Tall Ḥisbān as a cultural heritage site. Training and education have always been an important part of the Heshbon Expedition and Hisban Cultural Heritage Project; past projects at Hisban had centered almost exclusively on excavation and the training of field archaeologists and anthropologists. In 1998, the project introduced a new model that involved various stakeholders who were not necessarily archaeologists. The Jordan Field School continues this model with a range of disciplines being offered to students, some of which have not been previously included in the curriculum. The primary focus has shifted from archaeology to cultural heritage preservation and presentation allowing students to be involved in other aspects of learning and creative expression. Courses such as agriculture, architecture, communication, community development, history, landscape design, political science, religion and sociology, as well as archaeology and anthropology, are now a part of the curriculum. Many of these courses are only offered in Jordan because they involve hands-on projects and training that is only possible in the field. In addition, unlike previous expeditions that only returned to Jordan every 2 - 3 years, the Jordan Field School will try to return every spring / summer to continue its research and community projects. Despite the diversity of subjects taught

and methods of research involved in the delivery of the Jordan Field School, what ties the various components together is a common agenda, namely to work closely with local partners and stakeholders toward sustainable development, protection, presentation and the dissemination of the cultural heritage of Jordan and Hisban.

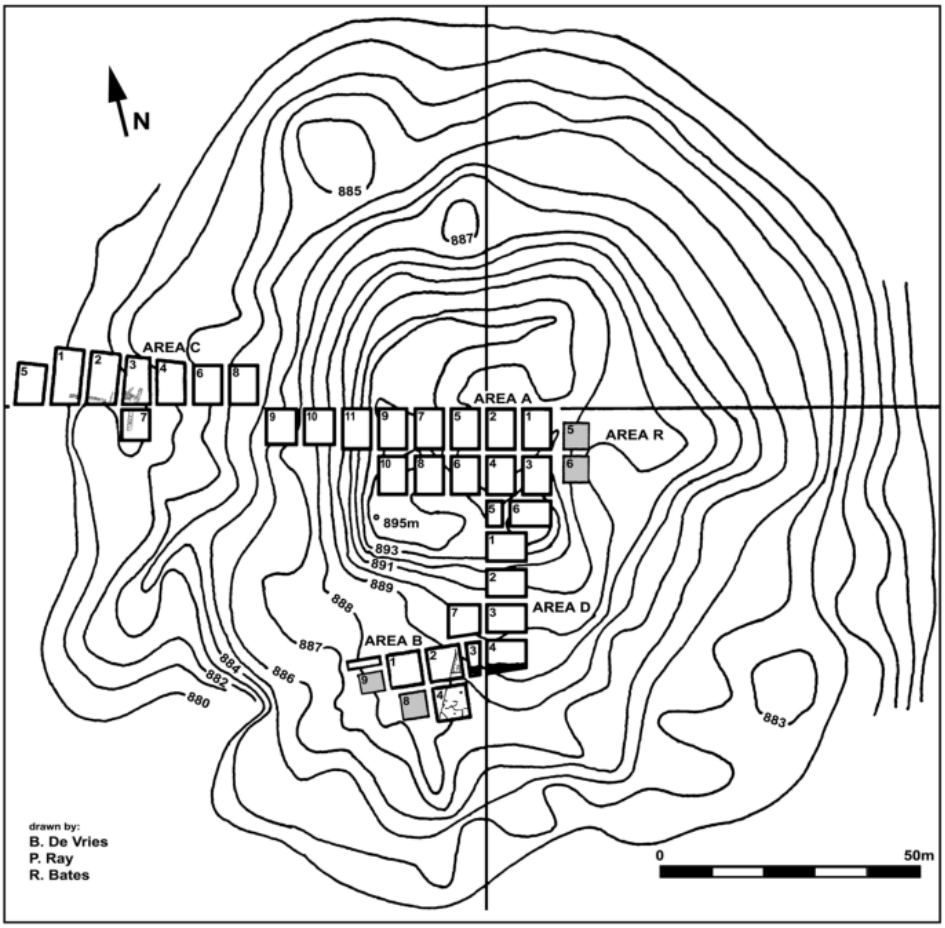
Excavation

2011 Season: Reopening the Reservoir Excavation[1]

In the 1970s several squares (B1-2; B4) were excavated in Area B on the south side of the acropolis **(Fig. 2)** that left a large L-shaped trench. There were many discoveries in this area, including a large Roman platform, an Early Byzantine kiln and an Iron Age reservoir. The reservoir attracted particular attention because of its size. Further excavations showed that it was abandoned by the end of the Iron Age and was gradually filled in during the Hellenistic period. Among the debris found in the fill were several ostraca (inscribed pot sherds) and numerous pottery sherds (Ray 2009: 29-56). The earliest sherds found in the reservoir and below its plaster floor have been recently dated to the Iron Age IC (= Iron Age IIA) period (Ray 2001: 107-108). This date roughly corresponds to the time of Solomon and it has been suggested that this reservoir may have been one of the «pools of Heshbon» mentioned in Song of Solomon 7:4.

Goals and Objectives

The 2011 excavation season was conducted from 12 to 31 May 2011. The main purpose of the 2011 excavation was to return to the south side of the acropolis in order to reinvestigate of the area surrounding the reservoir **(Fig. 3)**.



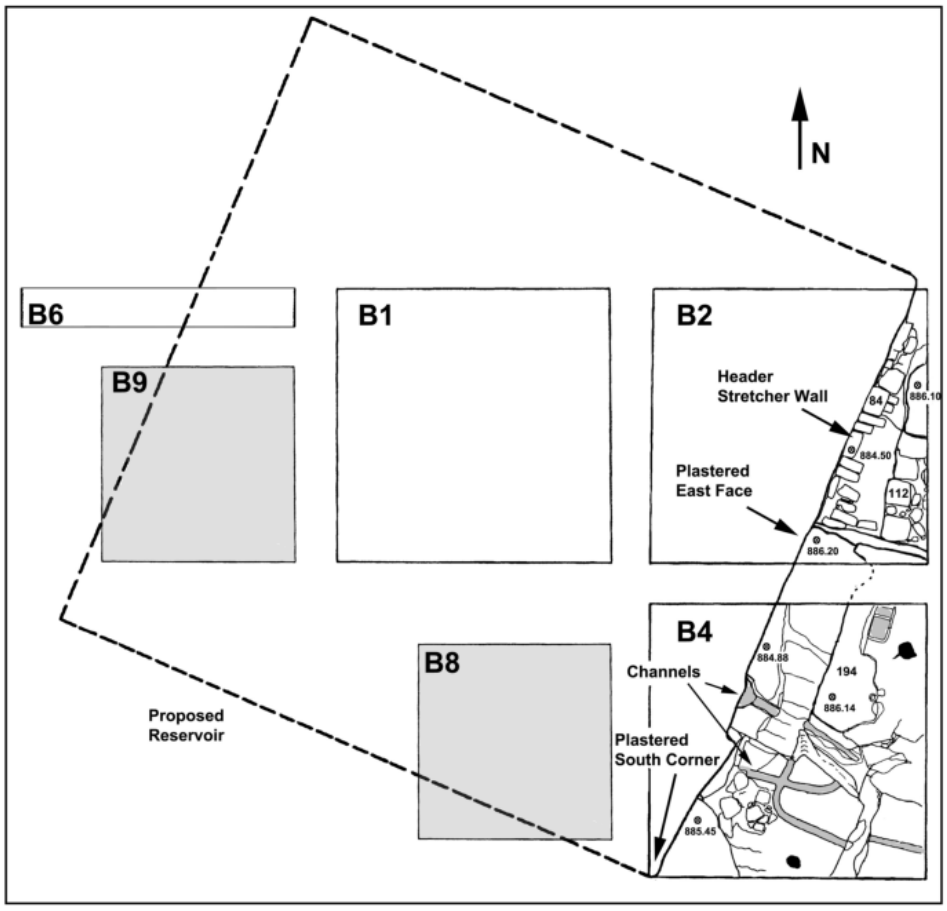
2. Topographical map of the Tall Ḥisbān acropolis showing Areas A - D and R. New squares highlighted in gray.

1. The authors would like to thank the participants of the 2011 excavation season, including area supervisor Robert D. Bates (Area B), square supervisors Jennifer Shrestha (B8) and Chris Jenkins (B9), and volunteers Elizabeth Bates, Jessica Bates, Rebecca Bates, Jonathan Thomson, Ruth Wanyko and Mandy Womak.

Many questions still remain regarding the exact size and function of this ancient water system. Some have suggested that the pool may have ranged from as small as 5.1 x 5.1 m in its early phase to as large as 17.5 x 17.5 m in its later stages. An estimate of volume suggests that this reservoir may have held as much as 2.2 million liters of water, well above what was needed for small Iron Age city (Ray 2001: 98-99, 107-108). Indeed, unless a natural water source is found on the site, it is likely that the entire reservoir was filled using seasonal rainfall and water imported from local sources. This process would have taken a significant commitment of resources, including an organized labor force and centralized leadership. However, the question still remains: why did this site need so much water and where did the water come from that filled the reservoir?

The proposed estimate of the size and function of the Hisban reservoir during the Iron Age remains a matter of debate. If this water source was only 3 - 5 m square and 3 - 4 m deep, but was seldom more than half full when it was being used, then it would have been of reasonable size to sustain a small town and its surrounding residents. However, if the reservoir were 16 - 17 m square and 4 - 5 m deep, even if it were only half full whilst in use it would still be the largest known water reservoir in Transjordan built during the Iron Age[2]. Indeed, it would rival most reservoirs built later during the Roman and Byzantine periods in the area.

Unfortunately, the exact size of the reservoir has not been clearly delineated since only one side has actually been uncovered. In Squares B2 and B4, a 17 m long rock face with a smooth, probably worked surface was discovered.



3. Area B. Square location B8 and B9. Note the plastered east face and south corners of the early Iron Age reservoir including the plastered channels and header stretcher wall.

2. A similar reservoir dating from the Iron Age II period has been found at Tall Jalul, but further excavation is needed to clarify its actual dimensions (see Gregor, Ray, Younker and Gane 2011: 359-61).

Where the natural stone ends, a header stretcher wall was used to fill in the gap. A thick (5 - 8 cm) layer of plaster was applied to the rock surface and header stretcher wall to make them waterproof. Rock-cut channels with plastered surfaces were made on the top of the rim to direct water into the reservoir or to other parts of the water system. The full length of the east side during the Iron Age was identified by clearly articulated plastered corners at both the north and south ends of this wall **(Figs. 4 - 5)**. In addition, three layers of plaster were found applied to the floor of the reservoir to keep it waterproof (Ray 2001: 100). However, although the east wall of the reservoir was discovered, the north, west and south walls were never found. It has been suggested that the remaining walls of the reservoir may be in the unexcavated areas west of Squares B1 and B4 **(Fig. 3)**.

In an effort to establish the dimensions of the Iron Age reservoir, two new squares were opened in Area B **(Fig. 3)**. Square B8 was located on the south side of Square B1 and the west side of Square B4. Square B9 was located on the west side of Square B1, north-west of B8 and immediately south of B6. It was hoped that positioning Square B8 next to B4 would expose the south side of the reservoir and that positioning Square B9 on the west side of B1 would expose the western side of the reservoir. Owing to the elevation (elev. 887.68) of the two new squares, it was anticipated that it would take several seasons of excavation to bring them into phase with the top of the reservoir (at elev. 884.88) and several additional seasons to bring them down to the bottom of the reservoir (at elev. 882.20).

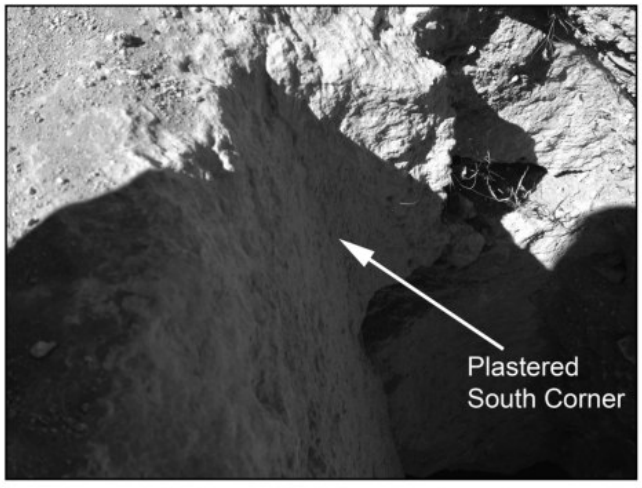
There were several challenges to excavating Squares B8 and B9, since the east balk of each square formed precipice that dropped between 7 - 9 m into B1-2 and B4. In addition, the original squares were laid out as 8 x 8 m squares with an extension added to B1 in order to further excavate a lime kiln (B1:10) that was discovered (Boraas and Horn 1973: 44-48, **fig. 3A**). Although, B8 was laid out as 6 x 6 m square, much of the north balk had eroded away in the interim between seasons so the balk had to be limited to a section only 0.2 - 0.3 m wide, while the west balk was only 0.6 - 0.7 m wide for the same reason. Unfortunately, the east balk of B9 was removed during the original excavation of Squares B1-2 and B4. In order to accommodate the irregularity a 0.25 m sub-balk which was created to maintain stratigraphic control. Square B9 was treated much like a large probe, with the overall size of the excavation area limited to 3.5 x 5 m following the adjustment **(Fig. 3)**.

Findings

Field Phase 3: Middle to Late Islamic

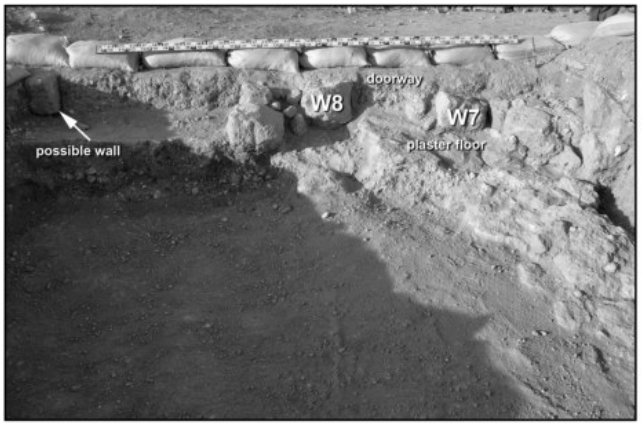
In Square B8, approximately 1 m of soil was

4. Facing south. Square B8. Note the plastered corner on the south end of the early Iron Age reservoir.



5. Facing south. Jennifer Shrestha, Jonathan Thompson and Ruth Waynko take final measurements in Square B8. Note the plastered corner of the early Iron Age reservoir in the north - south excavation trench.

6. Facing north. Final photo of Square B8. Note the stone wall in the foreground.



7. Facing south. South balk showing Walls 7 and 8, doorway, plaster floor, mud foundation and free standing stone in Square B8.

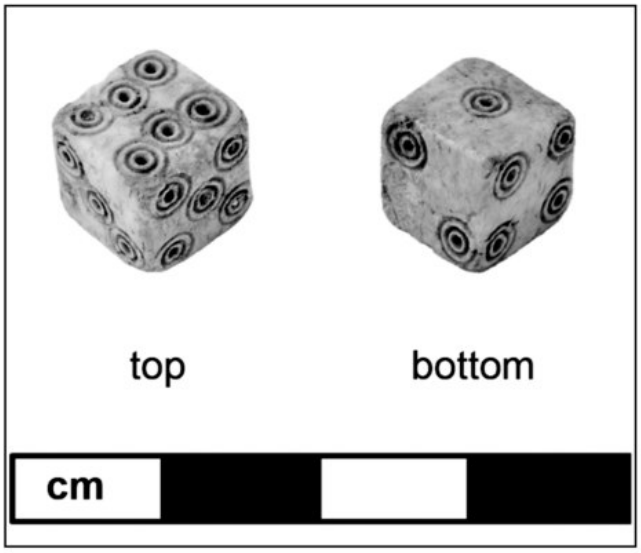
excavated and much of it was fill **(Fig. 6)**. The pottery was a mixture of Middle Islamic glazed and painted wares with some Late Byzantine cooking pots, jars, glass fragments and tesserae. There were remnants of architecture found on the west and south sides of the square. A hard-packed mix of clay and soil extended from the south balk to the north balk on the west side of the square. This may have been used as a foundation for a robbed-out wall. Wall 7 (B8:07) was found in the south-west corner of the square, extending out from the west balk approximately 2 m. The wall consisted of a single course of square-shaped unworked limestone blocks in two parallel rows. An 8 - 10 cm thick plaster floor was found sealing against the wall, which may have been built on top of a plastered floor. The plaster continues from the north side of the wall around the east end to form a passageway **(Fig. 7)**. Although, glass fragments and small tesserae were discovered throughout the square, heavier concentrations were found near the plastered floors and walls on the south side of the square.

A second wall (B8:08) was found in the south balk, east of Wall 7. This wall was also made of two parallel unworked medium sized (0.25 x 0.3 m) limestone blocks with a plastered base and continues into the south balk. The gap between Walls 7 and 8 appears to form a plastered doorway approximately 0.7 m wide. A third stone wall may also emerge from the south-east corner of the square. A single ashlar stone block of unknown size stands parallel to Wall 8 and may form a room approximately 2 m wide. The plaster floor between Walls 7 and 8 does not extend around the wall at and into the area between Wall 8 and the single stone block. Further excavation is needed to determine the relationship between Walls 7 and 8 and the stone ashlar in the south-east corner to determine if they form a building **(Fig. 7)**.

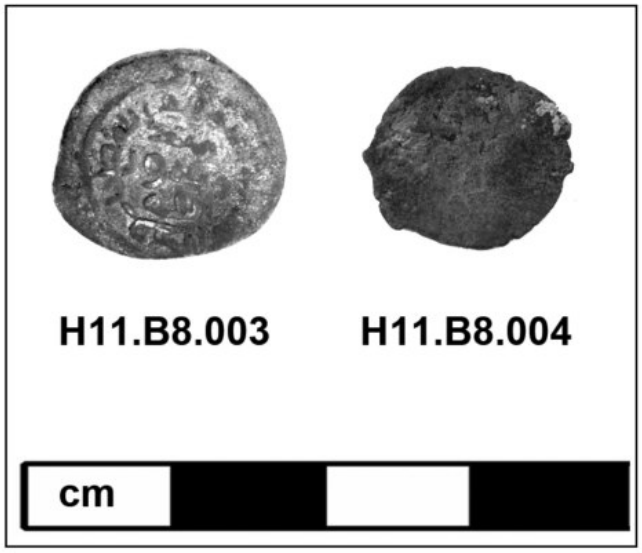
Objects

Four small objects were found in Square B8. Near the north-west corner, a small (1.1 cm2) white cube-shaped die with incised circular patterns was discovered in the sift (H11.B8.002 (**Fig. 8**). The die is made of ivory and the pips consist of two concentric circles with an incised hole in the center (double circle and dot). These incisions give the pips the illusion of being two raised circles. Like conventional dice, each of the opposite faces add up to the number seven where numbers one, two and three are arranged on a vertex in a clockwise or right-handed fashion. The patterns of the other numbers are arranged so the number one is in the center of one face, while the other number runs top left to bottom right as is typical of most dice. Similar gaming pieces have been found throughout the Middle East.

Three dice have been found at Tall Ḥisbān in previous excavations including a small bone



8. Top and bottom view of a single ivory die found in Square B8. Note the double circle and dot pips giving a raised appearance.



9. Islamic coin and metal disk or possible coin.

cube with dotted circles from Statum 9 (object no. 1441; HAM 73.071), a crudely fashioned limestone die with dark impressions from Stratum 3 (object no. 2415; HAM 76.0292) and a well-made ivory piece with dotted circles also from Stratum[3] (object no. 2653 [Ray 2009:143, 145 and fig. 9.25]). Additional Roman-period examples were found at el-Bahnasa (ancient Oxyrhynkhos [or Oxyrhynchus?]) in Egypt as well as similar examples from the Late Byzantine period at Tel Beth Shean (Mazar 2006: 667, 672-73; no. 101515). Indeed, the double circle - dot concentric incised pattern is frequently found on ivory knife handles and kohl sticks, as well as on castanets and hair pins which date to the Roman and late Byzantine periods (Mazar 2006: 667, 669-71). In addition, similar dice have also been found from the Early - Middle Islamic period[4]. Since there is no typology for gaming piece in the ancient Near East, it is difficult to determine whether the die date to the Late Byzantine or Middle Islamic periods.

Two metal objects were found near the north and west balks. The first was a thin, flat, round copper disk, 1.8 cm in diameter **(Fig. 9a)**. It was badly corroded with no letters or symbols visible. It may have been either a coin or a decorative piece attached to a necklace or garment. The second object is a copper coin, 1.9 cm in diameter, from the Early Islamic period (ca 600 - 800 AD). Commonly known as an Umayyad fals or copper coin, it was minted in the city of Tabariya (Tiberius) on the Sea of Galillee, which was a regional capital at the time **(Fig. 9b)**[5].

Both the obverse and reverse sides of the coin bear an inscription typical of Umayyad coins from the period. One side of the coin declares the oneness of God and the other the role of Muhammed as a prophet. Together these two statements make up the *Kalimat ash-Shahādah,* which is the first and most fundamental declaration of Islamic faith. This statement can be found on many plaques hanging in mosques as well as on the state flags of Saudi Arabia, Somaliland and Afghanistan. It is similar to the motto "In God We Trust" found on modern American currency.

The obverse side consists of three lines within three concentric rings or decorative braids and

3. New York Metropolitan Museum of Art, nos 97.4.123-24, 26.
4.New York Metropolitan Museum of Art, nos 38.40.93-95; 48.101.211b-e.
5.Type 289 in Ilisch and Lutz 1993. Sylloge numorum Arabicorum Tübingen 4a : Bilād aš-Šām ; 1, 4a : Bilād aš-Šām ; 1. Tübingen: Wasmuth.

was struck slightly off center. The three lines form the beginning of the Shahada and read:

Lā ilāh
Illa Allāh
Wah.dahu

(There is no god but God the one)

The inscription on reverse side consists of three single-word lines and a marginal inscription that forms the border that surrounds them. *The circular border inscription identifies the place* where the coin was struck or minted. It reads:

bism allah d.uriba hadha al-fals bi-T.abariya
(In the name of God, this fals was struck in Tabariya)

The three words within the circular border contain the common epithet for Muhammad:

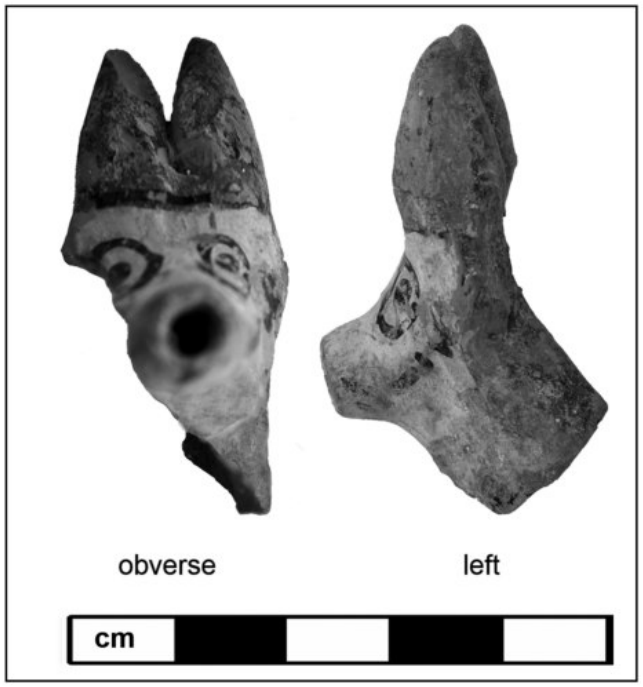
Muh.ammad
Rasūl
Allāh

(Muhammad is the messenger of God)

The obverse side was also struck slightly off-center[6].

The forth object found during the 2011 season was a small terracotta zoomorphic head that was broken diagonally from the right eye to the left side of the neck (H11.B8.001 [**Fig. 10**]). The inside of the head was hollow and connected to a 1 cm hole in the snout. Two black ears or horns (2 cm) protrude from the forehead with a black line painted at their base. The face and neck were painted a pale white or cream color and the back of the neck shows the remains of black paint that may have once extended from the ears or horns down the back of the neck to the body. Two eyes are painted in black, with concentric circles, but the right eye is partially broken. A thin black line runs along the left cheek just below the snout and under the eye, and extents to the back of the neck, probably connecting with the black line at the base of the ears or horns. These features give the general appearance of the popular American greeting card characters Hoops and Yoyo.

Zoomorphic figurines with hollow snouts are found throughout the ancient Near East. This type of vessel is known as a rhyton and has Aegean roots. Typically the head was attached to a hollow, tubular body that roughly reflects the animal's shape. A hole was placed in the middle of the back of the animal and a spout, lip and/ or handle was added. Legs, horns, eyes and tail were usually attached or painted after the body was connected to the head. A white slip was applied and it was decorated with black lines. Liquid (probably water) was poured into the vessel and usually mixed with wine to dilute its contents. The body was then tilted and the liquid contents poured out through the snout. Frequently, these vessels were used for libation, with the contents being poured over sacred objects like altars or into other sacred vessels. Sometimes the contents were poured directly into a recipient's mouth.



10. Animal figurine with painted eyes, ears, harness, mane and a pouring spout.

6. The authors would like to thank Warren Shultz of DePaul University, Chicago for examining and translating the Umayyad coin

Early Iron Age Canaanite and Philistine rhytons were found at Ekron and include both bovine and equine zoomorphic examples. Although it is highly unlikely that the zoomorphic head found in Square B8 is as early as the Iron Age given the location of its discovery, it does share many of the same features. For example, like Philistine Bichrome zoomorphic

eyes, a blunted snout, cheek strap and black horns or ears (Ben-Shlomo 2010: 107). However, Philistine zoomorphic rhyton heads extend vertically from the body at a near right-angle to the snout and the horns or ears project out from the sides. The head from Square B8 would have extended from the body at an angle (Ben-Shlomo 2010: fig. 3.56). Canaanite zoomorphic heads are attached at an angle but their bovine snouts are typically longer and lack decoration. Several bovid figurines have been found at Tall Hisban that date to the Late Iron Age, but these fragments do not represent parts of rhytons.

Unlike bovid-shaped rhytons, equid-shaped rhytons are fairly rare. The most complete example of a horse / donkey vessel was found at Ekron. Its body had two filling spouts where miniature vessels would have been attached (Ben-Shlomo 2010: 65). Like the Ḥisbān zoomorphic head, the ears of the Ekron vessel appear to have extended upward, the snout was blunted with a through hole to the body, and the head and neck attached at an angle. Unlike the Hisban head, however, the Ekron vessel was not decorated. Although, equid rhytons were unusual, equid figurines were fairly common, especially during the Iron Age (Ben-Shlomo 2010: 121-125, fig. 3). Examples have been found at Tell es-Saidiyeh and Busayra as well (Pritchard 1985: fig. 169:2; Bienkowski 2002: 381-387). Many equid figurines were fitted with a human figure riding on the back of the horse; these are known as 'horse-and-rider figurines'. Several equid figurines that may have been of the horse-and-rider type were found at Hisban, including head fragments and other body parts (see Table 1). However, most of these figures were solid or partially hollow and were not parts of rhytons. Many of the equid fragments were painted with a chin, cheek or neck strap, or some other type of harness feature, like the one painted on the zoomorphic head found in Square B8.

The zoomorphic head found in Square B8 was most likely part of an equid rhyton or other spouted vessel and, although equid rhytons or other zoomorphic vessels are rare, it should probably date to the Middle Islamic period[7]. The head resembles a horse, donkey or possibly a mule found at Tall al-Umayri that has preliminarily been dated to the same period. Its short neck would have been attached at an angle to a hollow vessel used for libation or drinking. The

Table 1: Terracotta bovid and equid figurine fragments from Tall Ḥisbān.

Object no.	HAM no.	Description	Painted decoration	Location	Date
76.2581	76.0357	Bovid head and neck		B2:137:337	Ir2/Per
73.unreg	-	Bovid hump		Unknown	Unknown
2581	-	Bovid head		Unknown	Unknown
71.0817	71.0273	Bovid hind quarters?	Criss-crossing stripes	B4:15:47	Ir2
1576	-	Equid head and neck	Neck strap	B1:143:395	Ir2/Per
71.0651	71.0194	Equid head fragment	Brow strap and harness	B1:78:227	Ir2/Per
73.1681	73.0352	Equid head fragment	Cheek and nose strap	C2:44:503	Ir2/Per
73.1595	73.0290	Equid head and neck		B2:40-48:475	Ir2/Per
74.1793	74.0134	Equid head and neck		B4:205:403	Ir2/Per
76.2781	-	Zoomorphic spouted head	Head and neck paint	G14:16:36	Umm

7. Object B080023, Square M7K24, Locus 002. This object was found in topsoil above a wall and may have been formed in a mold. Its function is undetermined. Further comparisons are needed to determine its function and precise date.

animal′s body probably had fixed legs, a painted tail and other decorations on the back. A filling spout or hole would have been on the animal's back in order to add liquid that was poured out through the snout. This head is very similar to an Umayyad zoomorphic head found in probe G.14 locus 16:36 (76.2781) at Tall Ḥisbān. Both have a blunt, spouted nose that attached at an angle to a vessel and painted eyes. However, only the zoomorphic head found in Square B8 has clearly identifiable equine harnesses painted on the object.

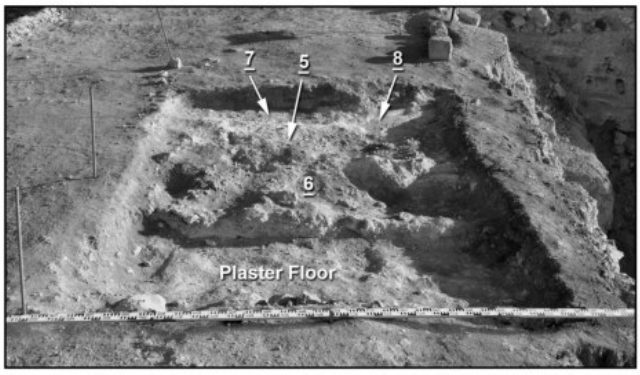
As noted above, Square B9 was opened as a 3.5 x 5 m probe with a 0.2 m sub-balk on the east side **(Fig. 3)**. Approximately 0.25 - 0.35 m of soil was removed exposing an east - west wall and a plaster floor. Wall B9:04 was approximately 0.5 m wide and extended 3.5 m along the south balk. It was made up of small- to medium-sized, unevenly shaped field stones. Although its height was not fully exposed, the balk from the adjacent squares suggests that the wall stood at least 1 m high.

The plaster floor covered the entire probe (17.5 m2) and was laid down in several phases. The first layer (B9:08) consisted of a pale white chalky limestone plaster, approximately 3 - 5 cm thick with a few small limestone chalk inclusions. The surface was hard-packed with a relatively smooth even surface. The second phase (B9:07) was similar in appearance to the first phase but had more inclusions and the surface was more uneven with a slightly pinkish tint. The remaining layers (B9:05 - 6) were thickly laid (8 - 12 cm), with many large chalky limestone and other small inclusions. Some of the plaster had been worn away, with fill dirt being compacted into the gaps to create a more even surface **(Fig. 11)**. Although Mid - Late Islamic-period pottery and glass sherds were found on the plaster surface, it is difficult to determine whether the surface was disturbed by more recent restoration activities.

2012 Season: Exploring The East Slope of the Acropolis[8]

The 2012 season excavations at Tall Hisban were conducted from 14 to 31 May by faculty and students from Andrews University and a small group of volunteers. As with the 2011 excavations, this project was associated with the Jordan Field School, a multidisciplinary three-week study tour that functions as a part of the Hisban Cultural Heritage Project, directed by Øystein S. LaBianca as described above. Stanley H. Beikmann planned an overall landscape design for the site, and cleared trails and assembly areas for visitors with the help of other Andrews University students. The Tall Hisban archaeological director, Bethany Walker, read the pottery and Maria Elena Ronza, director of restoration and conservation for the site, provided invaluable logistical support. Nassem Talal Obeidat was our Department of Antiquities representative. Our efforts enjoyed the full support of ACOR, including

logistical support and the loan of a transit level and tripod.



11. Facing north. Plaster surfaces in Square B9.

8.The authors would like to thank the participants of the Tall Hisban 2012 excavations, including area supervisor Jeff Hudon from Bethel College, square supervisors Sheryl Beikmann (R5) and Shirley Grall (R6), volunteers Ruth Wankyo, Conrad White and Anastasiia Tishina from Andrews University and Terje Stordalen from the University of Oslo. We would also like to thank the energetic group of 13 young men from the village of Hisban who worked alongside us.

Goals and Objectives

For the past several seasons, an important objective of our project has centered around developing several key features of Tall Hisban in order to present the site as a tourist destination in Jordan and to share the story of Hisban with a much wider audience. In 2012, the project focused on the acropolis and developing visitor trails at the site. The goal of the excavation was to expose additional sections of the perimeter wall along the eastern face of the acropolis in order to confirm stratigraphically the Hellenistic date it had previously been assigned (Mitchel 1992: 17, 38).

Two parallel squares (R5-6) were opened on the steep slope immediately east of a recently constructed educational trail in the newly inaugurated Area R **(Fig. 2)**. It was believed that the western edge of these squares would abut and therefore follow the ancient wall since the exposed south-east and north-east corner 'towers' of the wall clearly indicated that its course ran just opposite the apse of the Byzantine church on Hisban's acropolis. However, the topography and surface of both squares made excavation rather challenging. Unfortunately, earlier (Phase I) excavations may have used Square R5 as a dump since a large number of previously excavated stones, including roughly-worked building stones, ashlars and column fragments, were carefully collected and placed in parallel lines along the eastern half of both squares. This created what was essentially a 'stone garden' **(Fig. 12)**. Subsequently, much effort was expended in moving these architectural stone fragments to alternative locations. Large quantities of tumbled building and field stone, as well as rubble, in both squares led to the conclusion that the area was also used as a dump in antiquity when renovations were made on the acropolis during the Mamluk and perhaps also during the Ottoman period.

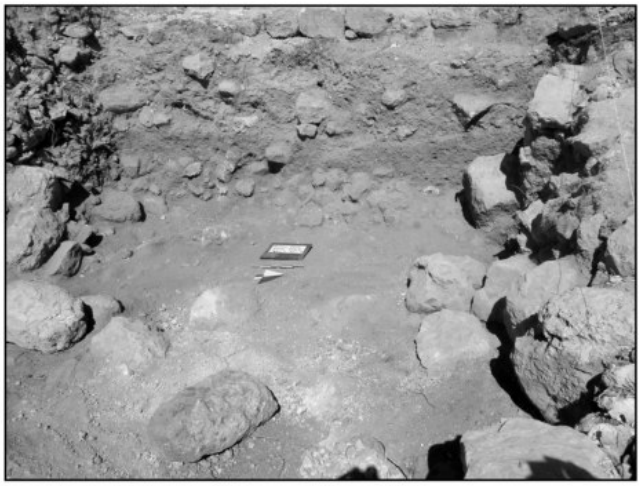
Findings

While the quantities, styles and dates of the ceramic material and objects recovered from both squares correspond closely with Hisban's occupational history and do not contribute anything substantially new to our understanding of the site, the material finds are nevertheless an important contribution to our ongoing quest to understand and appreciate the people and cultures that inhabited Tall Hisban in antiquity. The few Iron Age II sherds and jar rims, like the other material found in the squares, probably originated on the acropolis and represent occupational strata that were virtually obliterated by later clearing operations and construction.[9] The bulk of the recovered artifacts came from Square R5.

Owing to the steep topography of Square R5, excavation began along its western edge and progressively encompassed more of the square, expanding towards the east, as excavation continued **(Fig. 13)**. Only at the close of the season did the level of excavation reach ground level along the eastern edge of the square. As the entire slope was fill material, comprised mostly of stone rubble, there was no clear stratification nor any *in situ* architectural features. However, several interesting architectural finds were unearthed, including

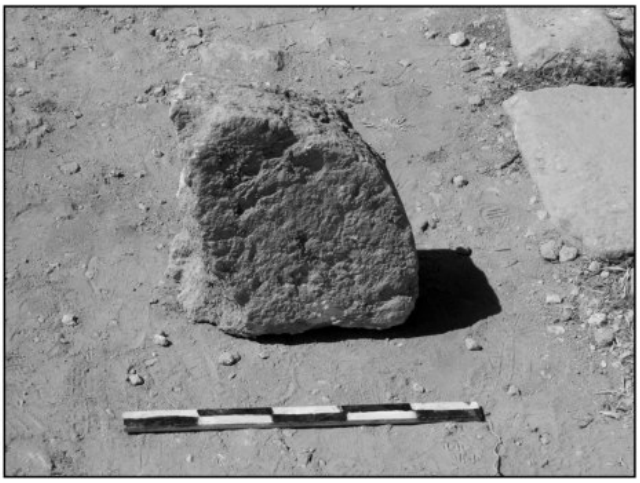
12. Facing south. Area R before excavation; note the steep slope and heavy concentration of stones.

9. Mitchel reports that only one Iron Age locus was excavated in Area A (A.3:56), but Iron Age material was found in mixed loci from various squares on Hisban's acropolis (ibid. pp. 18). Based on the amount of material deposited in the Iron Age reservoir, Herr (cited by Mitchel 1992: 18, 38) suggested that an average accumulation of approximately 2.2 meters of earlier material existed on the summit before the builders of Stratum 15 began their clearance operations.



13. Facing west. Square R5: final Photo.

16. Another possible socket for a gate or door.



14. A possible wall crenellation or tympanum fragment.

15. A possible socket for a gate or door.

a possible wall crenellation or tympanum fragment from a small doorway **(Fig. 14)**. While possibly from the Islamic period, this nicely worked limestone piece probably originated from the Byzantine church or another classical structure that once stood on the acropolis. In addition, two large limestone blocks with offset sockets (or cup marks) were found. The blocks were similar in size but not identical as one was more nicely worked than the other. Their original function is uncertain, but they may have served as threshold sockets for a gate or door hinge **(Figs. 15 and 16)**. Both of these blocks were transferred to the Byzantine church on the acropolis and placed next to a column base alongside the nave.

Only a handful of pre-classical body sherds, with the white grit in the fabric that is characteristic of Iron Age II, were identified. No identifiable sherds from the Hellenistic period and only a few from the late Roman period were found. A good assortment of ribbed Byzantine-period sherds and eastern terra sigillata (North African - rouletted design) ware were retrieved along with Late Byzantine – Umayyad-period palace ware and white-and-gray ware, red and white painted jars, red-on-red ware, white ware, gray ware and Samarra ware from Iraq (Sauer and Herr 2012: 525, 531) were retrieved. Only a few Ayyubid sherds were found, including Raqqa ware jars,

red-on-red painted jars and some Iraqi blue-stained frit wares. The majority of the sherds were from the Mamluk-period occupation of the site, including a concentration of Handmade Geometrically Painted Ware (HMGP) and other Mamluk-period sherds, including glazed cooking pots, sugar pots, molded glazed relief ware, Syrian imported ware, Sgraffito, monochome glazed bowls and elephant-ear cooking pots that were uncovered in Square R5 (Sauer and Herr 2012: 562-63, 577-80). Some non-specific Ottoman-period sherds were also recovered. However, many of the sherds were small in size, exhibiting significant edge wear from migration after breakage, and appeared to have originated from a variety of vessels. Hence, it is rather unlikely that partially restorable forms exist among this assemblage.

Square R6 was located south of R05 and east of Area A **(Fig. 17)**. It had a north - south line of stones (Wall R6:03) on the east side of the square, with two faces that gave an indication of a wall, but the excavation did not go deep enough to uncover any additional courses. This wall extended into Square R5 and the final stone of this wall line appeared to be floating. A flimsy course of stones (Wall R6:02 - not illustrated) ran along the surface in a north - south line close to the western edge of Square R6, but contained only one or two courses of stone and may have served as part of a more recent sheepfold or pen. Wall 7 (R6:07) abutted the north end of Wall 3 (R6:03) and ran roughly south-west for about a meter and a half before turning north-west as Wall 8 (R6:08) and then running into the balk. Only a single course was exposed and no floor was uncovered that could be related to this wall. A small, roughly worked rectangular basin (or mortar) was found upside down at the corner **(Fig. 18)**. No stratigraphy was noted in either square as only tumbled stone and mixed fill material were found.

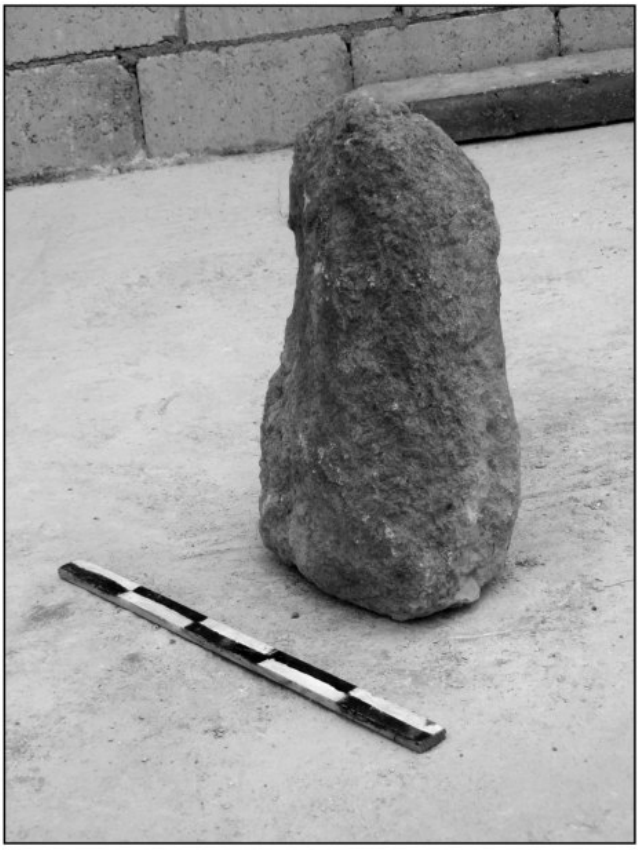
The pottery sherds found in Square R6 dated from the Hellenistic to Mamluk periods, with the majority dating to the latter. Hellenistic-period bowls and handles, Roman-period glass and a number of ribbed Byzantine-period sherds were retrieved. Roof tiles, numerous tesserae and painted plaster fragments from the church were recovered, as were several bottle stoppers of uncertain age. Late Byzantine - Umayyad palace and painted ware, white-and-gray ware and glazed jars were also found.[10] Some Abbasid sherds including a Turban-handle lid, imported Iraqi bowl and Iraqi splashed ware were recovered[11].

17. Facing west. Square R6: final photo showing walls R6:03 and 07-08.

18. Three stone objects: the basalt massebah, a pounder (pestle) and a small rectangular basin (mortar).

10. Ibid. 525.

11. Ibid. 531.



19. A crudely worked basalt object, possibly a massebah.

20. Facing north. New pathway along the west side of the acropolis that leads to the west visitors platform.

21. Facing south. New pathway along the west side of the acropolis that leads to the west visitors platform. Note the small trees planted along the edge.

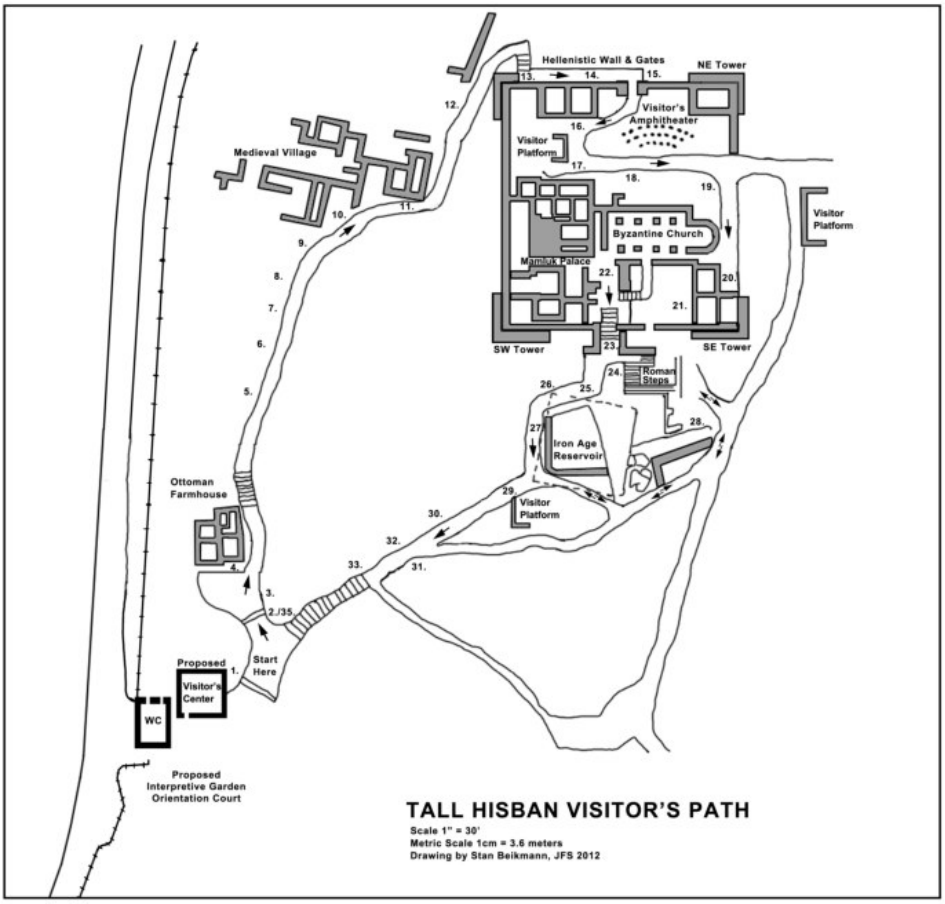
Like Square R5, Square R6 had a wide variety of Mamluk-period glazed and painted wares including HMGP jars, white ware, molded glazed relief ware, slip-painted bowls, blue-and-white Syrian frit ware, Sgraffito and monochrome glazed bowls, together with coarse wares, sugar pots and an elephant-ear cooking pot.[12] Some mono-glazed Ottoman-period jar sherds were also retrieved.

Progress in both squares was slowed considerably by the constant removal of field stones and rubble. In Square R5, siftable soil could only be collected from pockets within and around clusters of stone rubble. In Square R6, soil had to be completely removed from clusters of stone in order to ascertain whether the stones were part of a wall, an installation or simply tumble. Hence, this extra care and caution, although necessary, slowed progress. Unfortunately, the western balks of both squares consisted entirely of earth fill and, consequently, no stone courses were exposed that might relate to the acropolis wall.

Objects

Notable among the excavated objects were early Roman- and Byzantine-period plaster (including painted plaster), numerous tesserae and roof tiles (probably from the Byzantine-period church), lithics, a grinder, green marble, Roman glass, a pedaled rim of a glass juglet, a complete thirteenth-century Ayyubid glass bangle, an Arabic inscription reading "everlasting glory" from a glazed relief Mamluk-period bowl, a crudely worked basalt object that possibly served as a massebah **(Fig. 19)**, a basalt pounder (pestle) **(Fig. 18)**, (as yet) unidentified coins and fragments from a tabun.

12. Ibid., p. 577-80; 562-63.



22. Proposed plan for the Tall Ḥisbān visitors path showing the 35 proposed stations for new Arabic / English signs along the educational trail by Stan Beikmann that leads up to the acropolis.

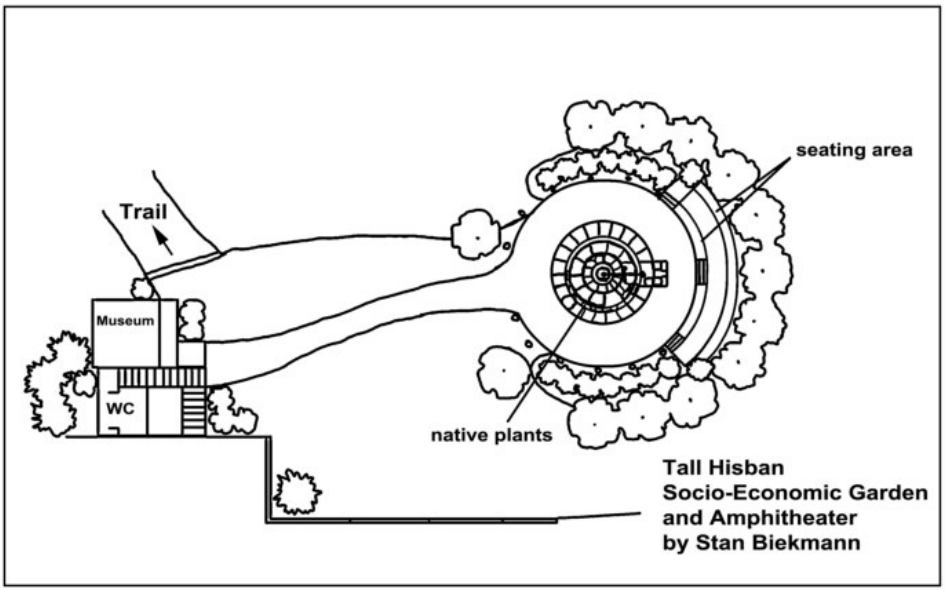
Conservation and Preservation

Another goal of the 2011 - 12 seasons was to address some of the safety concerns related to the continued deterioration of the reservoir. Squares B1-2 and 4 were originally excavated in 1968 - 1976. In the process, an area approximately 17 m north - south and 12 m east - west was excavated, leaving behind a nearly 10 m deep, L-shaped hole. Although the balks have held up remarkably well over the years, the crumbling edges and steep sides pose a hazard for the many local and foreign visitors to the site. In addition, the seemingly endless maze of pits and trenches are often difficult for the casual visitor to decipher, even with the assistance of the many signs available on the site. Many of the important features of Tell Hisban›s historical past have become unrecognizable as a result of site deterioration. It was hoped that by re-establishing balks, building new paths and retaining walls, and revisiting the excavation in this area a safer environment could be achieved.

Trails and Signage

During the 2011 - 12 seasons, the trails that lead primarily to the Hisban acropolis were redirected to include other places of interest at the site. In 2011 an area along the west side of the acropolis wall was cleared, leveled and widened. A pathway was extended from the reservoir to the north-west corner of the acropolis to allow easier access to the visitor›s platform **(Figs. 20 - 21)** on the west side. The main trail that leads from the Ottoman-period farmhouse to the Mediaeval village was also connected to this path as well as to the small staircase that goes up to the visitors platform. Additional pathways were added along to the south side of Iron Age reservoir together with expanded viewing areas along its north and west sides.

In 2012, renovations on the trails continued under the direction of Stan Beikmann and students from the Agriculture / Landscape and Design Department at Andrews University in order to



23. Proposed plan for the 'socio-economic garden' that will be at the entrance of Tall Ḥisbān featuring many native plants by Stan Beikmann.

24. Convolvulus dorycnium (splendid bush morning glory) produces a bright pink flower that is drought tolerant. It is one of the many flowering plants native to Tall Hisban that is suitable for arid climates in the United States.

25. Astralogus strigosa (blue forget-me-not) has a brilliant blue flower that grows in dry arid climates.

26. Salvia sp. (golden sage) produces a bright yellow flower that thrives in hot, dry climates like those found in Jordan and in the western United States.

27. Building A in the Nabulsi Complex will become the Hall of Landscape and Agricultural History.

develop a more cohesive educational trail system **(Fig. 22)**.[13] *Beikmann's* team cleaned, repaired and rerouted several trails and created a small amphitheater on the acropolis overlooking the Byzantine period church. The amphitheater was made from large ashlars and discarded column fragments from the original church to provide a place for on-site lectures. At the close of the season, Beikmann and his students submitted a comprehensive landscape design for a circular 'socio-economic garden' to be established in a natural bowl-shaped depression just inside the entrance to the site **(Fig. 23)**. This site will provide a place for groups to gather before following the educational trail system. Native plants from the region will be included in the garden as well. Construction of this garden is planned for the 2013 season.

In addition, Biekmann and his students began a project to document the indigenous vegetation present at Tall Hisban and study how these plants have adapted their environment. An intensive survey was carried out on the site and over 100 xeriscapic plants were collected, examined, photographed and recorded. Xeriscapic plants require less water for survival than most other plant species and have especially adapted to the arid climate that surrounds Tall Hisban despite grazing pressure, drought and harsh conditons. The team noted the physiological differences of each plant and compared them to plants from wetter climates. Biekmann determined that at least three species of plants were most suitable for transplant to semi-arid landscapes in the United States. These species include: Convolvulus dorycnium (splendid bush morning gloria) **(Fig. 24)**, Astralogus strigosa (blue forget-me-not) **(Fig. 25)** and Salvia sp. (golden sage) **(Fig. 26).** Each plant produces a bright colorful flower but requires little maintenance.

Conclusions and Future Plans

The results of these two seasons represent the end of the Phase II excavations at Tall Hisban and reveal a small, but significant, part of Hisban's role as a consistent witness to global history and as a window on local culture and survival over the longue durée. We anticipate that future excavations at the site will continue to reveal and clarify Hisban's significance as a showcase for local traditions as well as for regional and global power. Work will also continue on the trails and signage at the site with the goal of creating a new seating area at the entrance, with a garden featuring many of the native plants identified in the 2012 season. In addition, the long-term goal of involving the local community in the preservation and conservation of the site will continue as future plans involve developing a visitors center in the adjacent Ottoman-period buildings, also known as the Nabulsi Complex **(Fig. 27)**. These buildings will make Tall Hisban a destination for learning about how the past can inform present-day and future planning in Jordan and beyond. To this end, exhibits will be developed and displayed in the Nabulsi heritage buildings at Hisban that highlight how archaeology can illuminate the history of innovations in agriculture and water systems over the centuries and millennia. A special emphasis will be placed on understanding how the past can help us plan for a sustainable future.

13. The authors would like to thank the members of the Agriculture / Landscape and Design team, including director Stan Beikman (Andrews University) and students Bjorn Choo, Aliaksei Mikitsiuk, Slava Silyaev, and Kristen and Jeffrey White.

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