

# PRELIMINARY REPORT OF THE SECOND SEASON OF THE DANISH-GERMAN JARASH NORTHWEST QUARTER PROJECT 2012

*Georg Kalaitzoglou, Achim Lichtenberger, Rubina Raja*

## Introduction

Between the 1<sup>st</sup> August and 11<sup>th</sup> September 2012 the Danish-German team from the University of Aarhus, Denmark and Ruhr-Universität Bochum, Germany conducted its second campaign in the Northwest quarter of the ancient city of Jarash. On the basis of the results of the 2011 campaign, which consisted of architectural, geodetic and geophysical surveys (see Lichtenberger and Raja 2012 and Kalaitzoglou *et al.* 2012 for the 2011 campaign); it was decided to lay out three trenches. These were chosen to gain further insight into the settlement history of the Northwest quarter of the city, which is the highest point within the ancient city walls and which until now has not been investigated in detail. The project, which is directed by Achim Lichtenberger and Rubina Raja, is funded by the Deutsche Forschungsgemeinschaft (DFG) and the H.P. Hjerl Hansen Mindefondet for Dansk Palæstinaforskning.<sup>1</sup>

We would like to thank the acting director general of the Department of Antiquities, Fares al-Hmoud, for the permission for the 2012 campaign and the director of the Department of Antiquities in Jarash Dr. Rafe Harahsheh for his and his staff's support during our campaign. Furthermore, thanks go to our representative Dr. Mohamed Abu Abileh, who was an invaluable help during our campaign.

The main aim of the campaign was to begin to clarify the settlement history of the hill.<sup>2</sup> Fur-

thermore aims were to complete the topographic map begun in 2011 and to map the Northern part of the city wall within the investigation area in detail. Three trenches A-C (**Fig. 1**) were laid out on top of the hill. These were chosen on the basis of the results of the 2011 campaign. Trench A, which was located on the highest point of the hill, was laid out to clarify an L-shaped geomagnetic anomaly detected in 2011.<sup>3</sup> Trenches B and C were located in areas where undocumented activity had already taken place. Trench B was chosen because strong walls and a monumental architectural element were already visible on the surface. Trench C was laid out in order to investigate the most prominent visible building structure on top of the hill, the so-called 'Ionic building'.<sup>4</sup>

In total approx. 95 m were excavated until bedrock or the oldest structures was reached. It was an objective to reach bedrock or virgin soil without disturbing any relevant ancient structures. All trenches were backfilled. The relative chronology of the trenches was reconstructed, but in most cases an absolute dating of the various features will be subject to further ceramic and find studies. The major part of the finds point to a Roman, Byzantine and later date, whereas a smaller amount of finds can be related to earlier periods. A representative part of the finds from the 2012 campaign is published in this volume of *ADAJ* as well (see Lichtenberger, Raja and Sørensen).

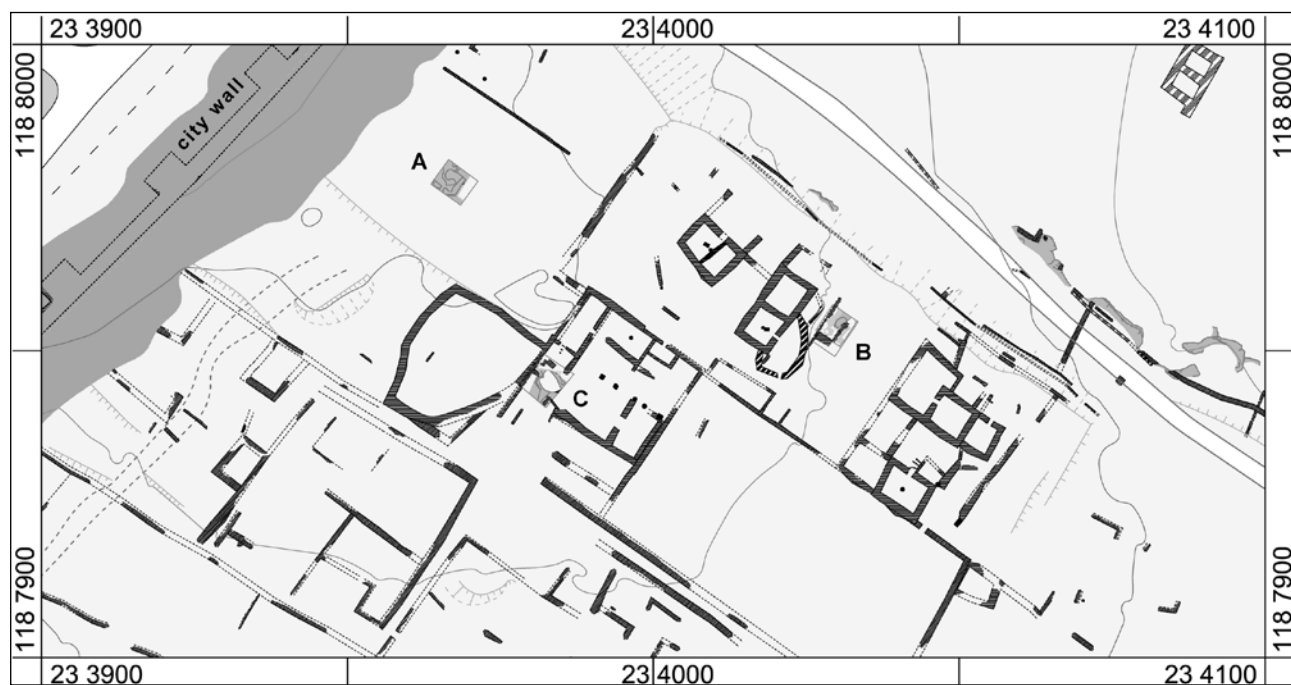
1. The team consisted of the two directors Achim Lichtenberger and Rubina Raja, head of the field team Georg Kalaitzoglou, head of the registration team Annette Højten Sørensen, architect Jens Christian Pinborg, conservator Helle Strehle, photographer Michael Bencke and the field and registration team: Dorothea Csitneki, Eicke Granser, Christoffer Pelle Hagelquist, Ditte Maria Damsgaard Hiort, Signe Børsen Koch,

Signe Krag, Signe Bruun Kristensen, Cathrin Pogoda, Anne Riedel and Stefan Riedel.

2. For preliminary reports on the field works in 2011 see Lichtenberger and Raja, 2012.

3. Kalaitzoglou *et al.* 2012.

4. The name derives from spoils of Ionic capitals implemented into this building.



1. Detail of the Northwest quarter with Trenches A–C, 2012.

**Trench A** (in collaboration with Christoffer Pelle Hagelquist)

#### *General Outline and Structures*

One objective of the 2012 campaign was to clarify an L-shaped anomaly on the highest place in the Northwest quarter near the ancient city wall, which the geomagnetic prospection of the 2011 campaign had revealed. Therefore, trench A, measuring 5 x 5 meters and later extended by 1 meter towards the East, was opened above the anomaly. Today the area is used as a football pitch (**Fig.2**).

The geomagnetic anomaly turned out to reflect soil that was lying up against curving bedrock in the eastern-most part of the trench. The most important feature in trench A is the discovery of a rectangular room about 1.5 m under the surface which was cut c. 2.5 m deep into the bedrock. A niche (ev. 12)<sup>5</sup> was uncovered in the top southeast corner of the room. Furthermore an installation on the floor consisting of two limestone blocks (ev. 24) was unearthed. Apart from these structures no other features were recorded in relation to the plastered bedrock (ev. 9) or floor (ev. 23). The inner face of the room shows one phase of plaster revetment



2. Trench A, overview from west with ancient under the modern fill.

only, which indicates that at least the room's architectural design is of a single phase. For some reason the room was filled up with various deposition layers which contained some intentionally deposited finds. The surface of the bedrock (ev. 2, ev. 5) that nearly covers the whole area of trench A has chisel marks in several places indicating that this area was used as a quarry before building activities started.

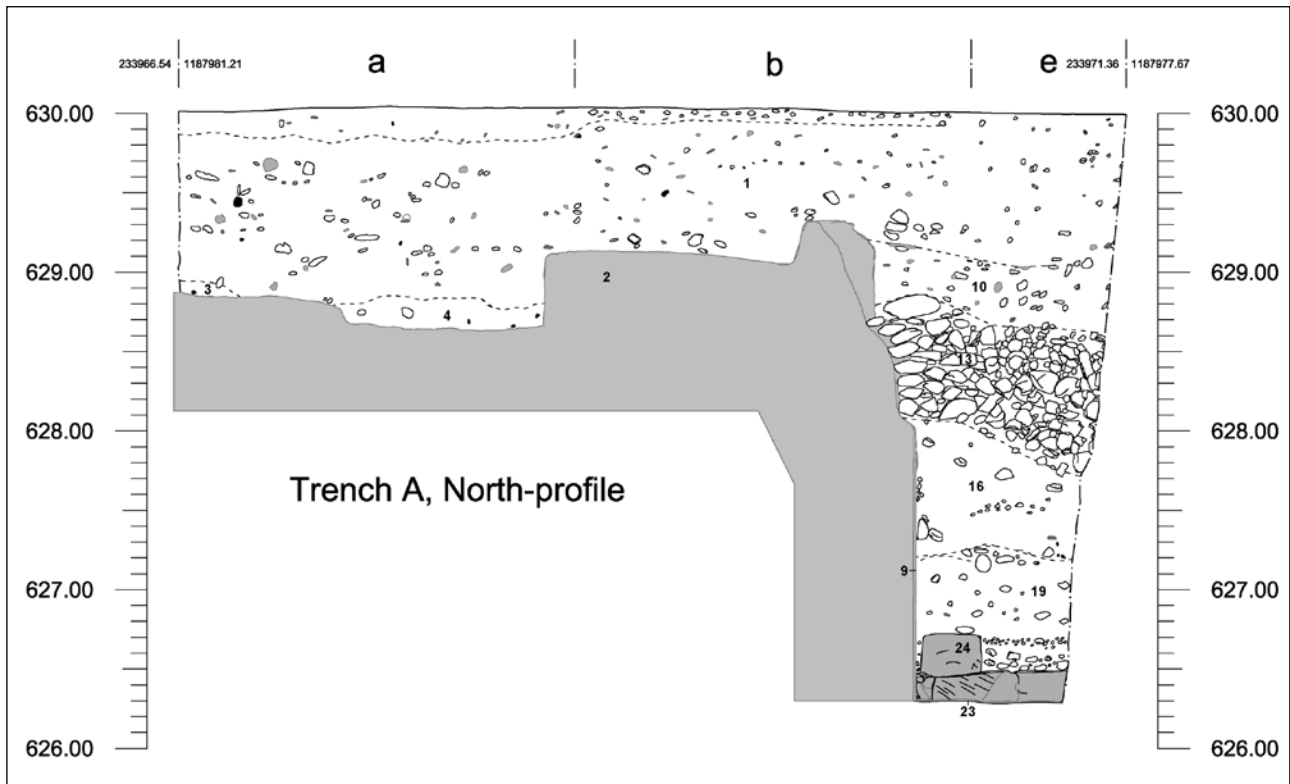
The soil stratigraphy is comprised of two main soil stratigraphic units; modern backfill layers (ev. 1, ev. 3, ev. 4 and parts of ev. 6) and ancient intentional fill layers (parts of ev. 6, ev. 7, ev. 8, ev. 10, ev. 13, ev. 16, ev. 19, ev. 22 and

5. Instead of "locus" or "unit" we use the term "evidence" to label archaeological complexes, assemblages

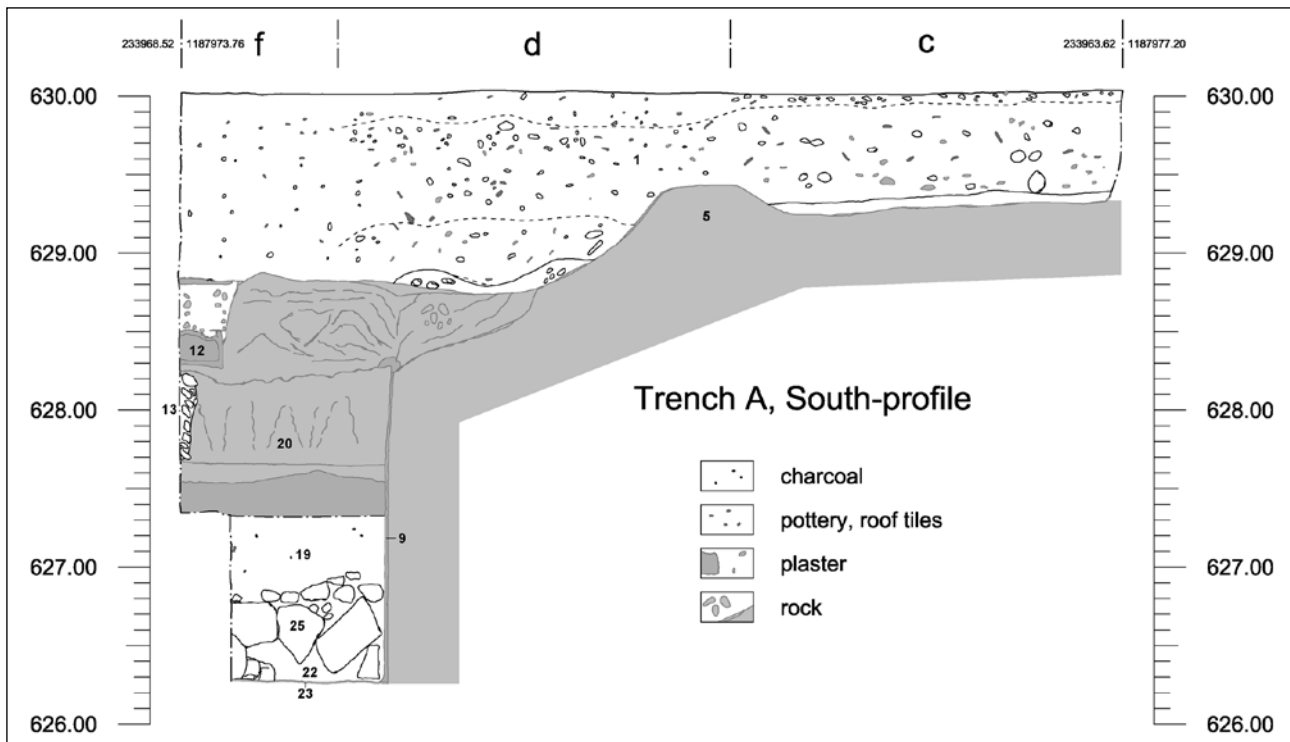
and also finds in situ.

ev. 25). The uppermost part of the ancient fill (ev. 6, ev. 7 and ev. 8) was already disturbed when the modern fill was deposited. The en-

tire trench has been covered by the modern fill about 0.20 m to 1.70 m thick (**Figs.3 and 4**). The modern backfill relating to a leveling of the



3. Trench A, North profile.



4. Trench A, South-profile.

area mostly consisted of a clayish soil which held material spanning from the Neolithic period to the early Islamic period. The material of the modern backfill does not necessarily come from the hill top or the vicinity and thus gives no reliable indications for the ancient settlement history in this particular spot.

The ancient stratified fill layers hold material, which provide information about the last phase of the structure. Although some dense stone clusters were encountered, the ancient fill lay-

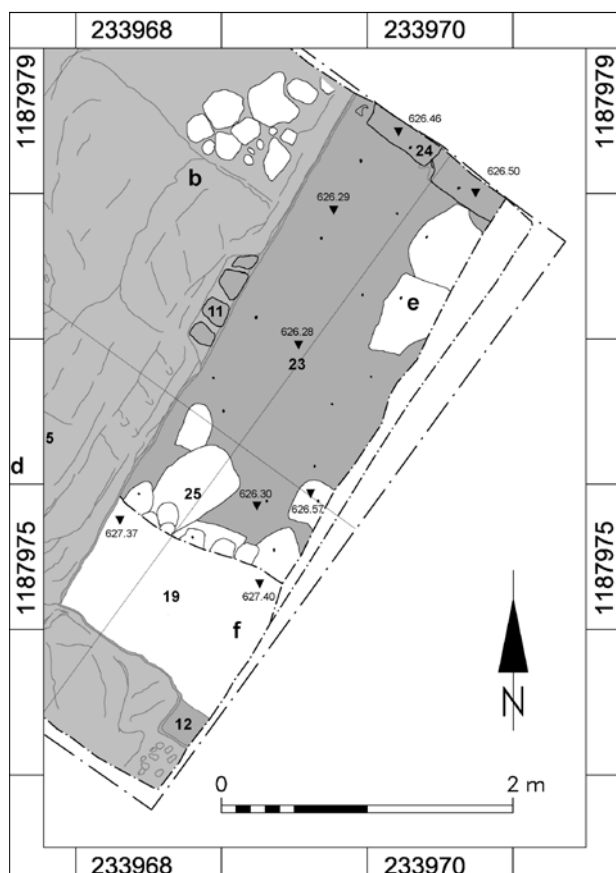
ers show little internal stratification suggesting a rapid infilling.

#### *The Rock-cut Room Phase*

The excavated parts of the plastered room measured approx. 4.5 m north-south, 1 m east-west by 2.5 m in height (Figs. 6, 7). The disturbance made from the modern backfill makes it difficult to establish an accurate height of the room, but traces of beddings for beams were located near the top of the curving bedrock. The



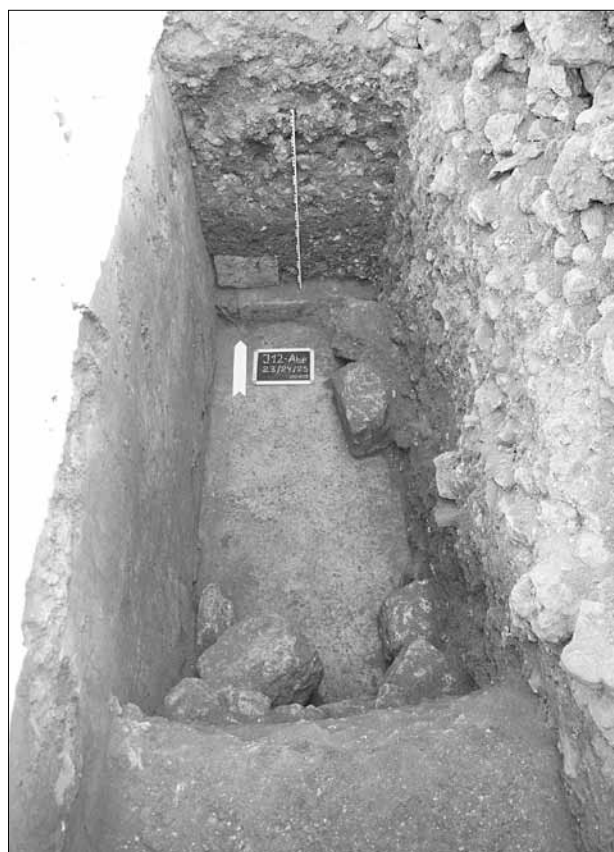
5. Trench A, level of the cooking pot deposits (ev. 14, 17, 18).



6. Trench A, eastern part, floor level of the rock-cut room.

south-eastern extent of the room is not clear, as this area was excavated for only 1 m in east-ern direction. As the floor (ev. 23) and plastered bedrock (ev. 9) together continue beyond the north-eastern limit of the trench, it was not possible to determine the exact dimensions of the room. The plastering in general was well preserved with a few minor cracks in the floor plastering; however, the plastered bedrock had suffered some damage. The plaster is of a white-greyish colour and approx. 1-2 cm thick. It cannot be classified as hydraulic plaster, because it is too porous and contains too much charcoal.

To achieve a flat surface, which the curving bedrock did not provide, some worked stones were placed to fill the gaps and plastered (ev. 11). A niche (ev. 12) located on top of the plastered bedrock in the southeast part of the trench was cut into residual clay. In the niche and in the fill in front of it fragments of a cooking-pot were found. The eastern extension of the niche remains unknown as it extends outside of trench



7. Trench A, plastered room under ancient fill, from south.

A. The installation of the two limestone blocks (ev. 24) connected to the plastered bedrock and floor in the northeast corner indicates further built structures but their use is impossible to determine as the stone setting extends outside trench A (**Fig.7**).

#### *The Archaeological Materials inside the Rock-cut Room*

C<sup>14</sup> datings of the fill of the room suggest a date of the filling in the second half of the 3<sup>rd</sup> century AD.<sup>6</sup> Lying near the installation of the two worked stones on the floor sherds from one large pithos (cat. no. 118-119) and fragments of other vessels including two good preserved specimens (cat. no. 79, cat. no. 90) were found indicating the latest phase of use of the room. All the pots were found in close proximity to each other and were covered by the ancient backfill. The diagnostic pieces of ceramic indicate a *terminus post quem* for the latest phase of use of the room in the Roman period. On the

6. Cf. Lichtenberger and Raja (in press).

floor no other traces of a collapse than the pottery were found which leads to the conclusion that the room was not destroyed or abandoned for a longer time before it was completely filled up to its former roof level with soil and debris.

The lower fill ev. 19 contained fragments of an incense burner lid (cat. no. 56) which also dates most probably to the Roman period. In the same part of the fill a Nabatean coin (Aretas IV), a fragment of a miniature altar (cat. no. 165), and an Eastern Sigillata A fragment (Af-19-16, not catalogued) were found. The existence of older finds in the fill shows that these early artifacts were present at the place where the material for backfill was taken.

In the fill layer ev. 16, above layer ev. 19, two almost complete cooking pots, placed upright, were found (**Fig. 5, 8**). They were deposited intentionally when the room had already fallen out of use and nearly completely filled. A reddish/red brown ware wheel made globular bi-ansulate cooking pot (cat. no. 98, ev. 18) was surrounded by stones and closed by a piece of tile (cat. no. 135). Inside this pot was a bottom layer of grey powdery ash with charcoal (cf. registration report in this ADAJ volume). Fragments of pottery and burned glass were located on top of the ash and the cooking pot had traces of fire on the outside. The other reddish/red brown ware wheel made bi-ansulate globular cooking pot (cat. no. 97, ev. 17) was situated up against the plastered bedrock beside a large stone with a piece of tile beside it. The cooking pot showed traces of fire on the outside. Inside was a bottom layer of grey powdery ash with charcoal (cf. registration report in this volume). In the fill around the cooking pots no traces of open fire or herds were found.

Above the deposition of the two complete

cooking pots fragments of other reddish/red brown cooking pots of the same type were found in the fill layer ev.13 (**Fig.5**). In it the bottom of a cooking pot (cat. no. 96) containing a similar grey powdery ash with charcoal was located (cf. registration report in this ADAJ volume). The pot sherds found in the niche (ev. 12) also stem from the same type of cooking pot. It is obvious that the cooking pots in ev. 13 and 16 were deposited intentionally.

A fine typology of local cooking pots in Jerash has not yet been established but a good starting is provided by Uscatescu.<sup>7</sup> The general bi-ansulate ripped and rounded cooking pot is found from the late Hellenistic and Roman periods until the 9<sup>th</sup> century AD. So far the closest comparanda for the pots in trench A stem from the Late Roman/early Byzantine period.

At first sight the situation of the intentionally deposited cooking pots may give the impression of being cremations. Generally cremation was no longer common practice in this region from the Roman imperial period onward<sup>8</sup>. Only some examples from the 3<sup>rd</sup> century AD are known.<sup>9</sup> However, since the ash inside the pots does not contain any traces of human bones an interpretation of the pots with ash as cremations is not possible.

Although the pots were used and partly darkened by fire, no concentrations of charcoal from hearths or open fireplaces were associated with the cooking pots in the different evidences (**Fig. 8**). In ev. 18 the ash was covered by two large glass sherds. There was no floor in direct association with these evidences as they were placed directly in a fill layer. Cooking therefore seems improbable and for now we have to be content with stating that we deal with intentional 7<sup>th</sup> century AD deposits whose intentions however remain unknown for now.<sup>10</sup>

7. Uscatescu, 1996.

8. Abu-Shmeis and Nabulsi, 2009, pp.513-525 table 1 is a list of 35 graves dating from the Late Hellenistic to the Late Byzantine/Early Umayyad times. These are unpublished or only noticed in preliminary reports. It remains unclear if the given historical periods date the graves or the incinerations.

9. An observation of two Roman cooking-pots used for cremation burials have been located at the Roman aqueduct near Megiddo, Palestine. The two cooking-pots contained burnt human bones that probably are related to Roman soldiers from 1st-2nd centuries AD (Hershkovitz, 1988-89; Tsuk, 1988). Bearing in mind that our cooking-pots had no evidence of burnt bones and were located in a Late Byzantine backfill demon-

strate a negative comparing between the two cases. – Other possible comparative cases could be assigned to two Roman cave tombs, located at the site of Umm as-Summaq al-Janubi and Hijra (Abu Shmais, et. al., 2009; Timm, Abu-Shmeis and Nabulsi, 2011). Both tombs involve Roman cremation burials with lead urns containing burnt human bones dating to the 2nd century AD. However, when considered in conjunction the lead urns from the two sites, and our cooking-pots, it is very clear that our cooking-pots are not associated with the same ritualization or content as the lead urns at Umm as-Summaq al-Janubi and Hijra.

10. See the discussion in Lichtenberger and Raja (in press).



8. Trench A, cooking pots (ev. 17, 18) in the ancient fill from east.

#### *Concluding comments about the rock-cut room and the deployment phases within the excavated area*

A relative chronology of the earliest phases of activity in trench A can be reconstructed as follows: The earliest activities seem to be related to quarrying and the younger rock-cut room (ev. 9, ev. 12, ev. 24) is the oldest evidence of building activity in the excavated area.

The construction date and function of the rock-cut room is unknown and the filling of the room seems to have taken place in the Roman period, in the second half of the 3<sup>rd</sup> century A.D. as indicated by the C<sub>14</sub> dates and the pottery typology. The pot sherds from the floor level indicate that the latest use of the rock-cut room took place in Roman times, too. The dating of the find material recovered from the different portions of the ancient fill (partly ev. 6, ev. 13, ev. 16, ev. 19, ev. 22, ev. 25) in the rock-cut room suggests that these archaeological materials had been deposited within a short period. The archaeological material in the bottom layer dates probably to the same periods as the ancient uppermost layer, possibly the Roman period. The cooking pots were deposited complete and more or less full of ashes; the reason for the deposition remains unknown until further analysis of their contents has taken place. It appears that the rock-cut room fell out of use and was subsequently filled in Roman times by soil containing earlier material.

#### **Trench B** (in collaboration with Cathrin Pogoda)

The trench was excavated at the eastern slope of the hill, east of a probably Mamluk house

(see **Fig. 1**). This house consists of two rooms and was erected on an older terrace. Former undocumented excavation activities left a semi-circular pit in front of this retaining wall which partly rests on bedrock. The excavated earth of the undocumented activities shows, that the whole area east in front of the terrace was filled with ancient debris. It contains a large amount of pottery, ashy soil and large stones. Due to modern finds it is possible to reconstruct at least two undocumented excavations: the first one in the year 1983, based on a juice carton with this expiry date and the second one during the years of 1994 till 1996, due to the expiry dates of two crisps bags. As a result of these undocumented activities ev. 2, 7, 12, 22, 25 and 28 were contaminated with Mamluk material. Already in 2011 a huge architectural block was seen partly uncovered at the surface (J12-Bcd-19). On two sides it showed an altar-relief. A second block (J12-Bd-2-1x) was found in addition to the architectural stone inside the excavated earth of the undocumented excavations. This block fitted on top of the large block. Together with the retaining wall the discovery of the two architectural pieces was the decisive reason to dispose the trench at this spot (for the architectural element see below).

#### *The First Building Phase: The Retaining Wall and the Pilaster*

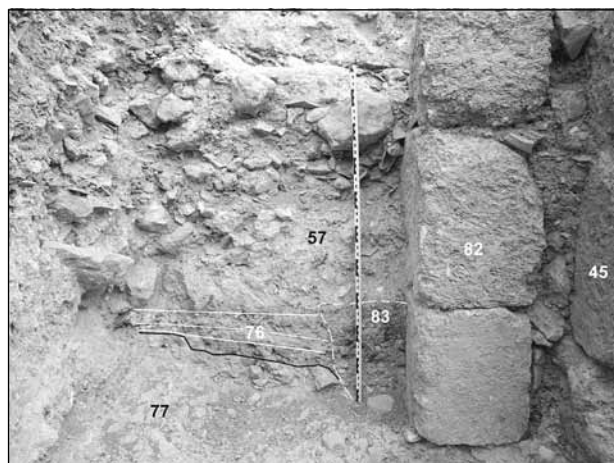
The northern part of the western retaining wall (ev. 5a) and a pilaster (ev. 45) which was built of relatively large stones belong to the first building phase because both structures were erected on solid bedrock and the pilaster lies in line with the south-eastern corner of the northern retaining wall (**Fig. 9**). The gap between pilaster and wall might have been covered with an arch, as the most upper block in the wall bents slightly to the east. The terrace extends to the north outside the baulk and composes a corner westbound. The front of the retaining wall is not particularly accurate dressed as the gaps between the limestones were filled with smaller stones (**Fig.10**). Either further pilasters followed from the corner of the wall via the pilaster to the east, or the masoned pilaster was generating the corner of a hall which was extending to the north. The last conjecture is most likely, because depos-



9. Trench B, excavated structures.



10. Trench B, overview from east.



11. Trench B, fundement ditch of the tower-like structure ev. 82 cutting the plastered floor (ev. 76), detail from west.

its of a simple mortar-floor (ev. 76) above the bedrock (**Fig. 11**), extending to the north, were preserved between the pilaster (ev. 45) and the retaining wall (ev. 5a). To receive a date for these earliest structures the solid bedrock

was exposed from the disturbed center of the trench till the northern baulk (**Fig. 13**). Neither the area around the floor plaster (ev. 76) nor beneath it yielded finds which are datable with acceptable accuracy.





12. Trench B, South-profile from north.

### *The Second Building Phase: The Oil Press Installation*

The oil press installation was erected in the course of the second building phase (**Fig. 9**). For this purpose a room was created in front of the older terrace. Therefore the surface of the bedrock was leveled with a fill and a flat fundament created. The northern part of the east wall (ev. 9) also stands on this fundament. Further walls were erected to create at least two rooms or chambers in front of the retaining wall (ev. 5a). A younger retaining wall (ev. 5b) was arranged next to the south-east corner of the older retaining wall (ev. 5a). This younger wall must have taken the place of an older boundary of the terrace (wall or stairs). The core of the younger wall (ev. 26b) differs from the core of the older wall (ev. 26a) in fabric and content (**Fig. 9**). The younger retaining wall proceeds the older terrace in southern direction and extends into the baulk. Against this terrace-string a wall was built in the south (ev. 16, later superimposed by another wall ev. 3) which comprises the younger retaining wall (ev. 5b) in some extend. The south wall is bounded in the east by a wall (ev. 9) which runs parallel to the retaining wall, proceeding further in southern direction and extending to the pilaster (ev. 45) in northern direction. The east wall has a 1.46 m wide doorway in its northern part. To support the pilaster from its northern side the older plastered floors were driven through to create a pit for erecting a small stone pilaster (ev. 82, see **Fig. 11**). This supporting pilaster and the pilaster ev. 45 are not standing attached to each other but separated by a gap filled with soil and smaller stones. Additionally



13. Trench B, North-profile from south.

the pilaster ev. 45 was supported in its fundament by a large block in the east. Because both the retaining wall (ev. 5b) and the east wall (ev. 9) extend beyond the baulks it is assumed that there is another room behind the south wall (ev. 16).

The south wall (ev. 16) has a door-like opening (ev. 39) whose jambs were built of two large rectangular blocks, but with 1.10 m in width and only 0.84 m in height this opening is obviously too low to be a door (**Fig. 12**). The sill was constructed by two smaller rectangular stones while a massive block serves as a lintel. This opening was obviously accomplished to attach the press-beam of the oil press.

In order to erect the oil press installation the room inside the walls (ev. 5a, 5b, 9, and 16) was further filled to create an adequate deep fundament for the anchorage of the press-piers (ev. 20 and the removed architectural block ev. 19, **Fig. 22**) and the weight-stones (ev. 13 and 78) as well as to delve the vat-shaped oil reservoir into the floor. Furthermore it was necessary to constitute a flat surface for the press-bed.

In the northern part of the trench (sector a) the floor consisted of a hard yellowish clay (**Fig. 13**) whereas in the southern part (sector c) it was made up of a package including smaller stones and plastered at the surface with simple mortar (ev. 36). Larger stones compose the surface of the raised floor. Large stone slabs, whose surfaces were elaborated to a rectangular embedment, compose the mouth of the oil reservoir (ev. 37), which is encased and sealed with a coarsely granular layer of mortar. The approx. quadrature immersion around the opening sug-

gests that the oil reservoir could be closed with a covering plate (stone or wood). The vat-shaped oil reservoir possesses yet another oval-shaped immersion probably to collect suspended particles. In northern direction, close to the reservoir, an oval-shaped press-bed (ev. 79) made up of lime stone is arranged. Into its edges parts of a channel were included whereas the remainder parts consist of mortar. The channel surrounds the press-bed and flows into a round opening beneath the stone slabs where the oil ran into the reservoir.

The firm press-block stands on a thin fill of stones and soil above the solid bedrock. It seems that the press-stone was reused because a rounded immersion with a lateral outflow at its southern surface was filled with mortar. The press-bed was obviously in use for a long time as it has deep furrows at the southern and northern edges, which had to be refilled partially with mortar to provide adequate press results<sup>11</sup>.

A large block (ev. 20) is arranged between the press-bed (ev. 79) and the younger retaining wall (ev. 5b) to assure the guidance of the press-mattings with the olives. Its counterpart was a large reused block (ev. 19) on the opposite side. It shows an altar-relief on two sides (see below). This block was not recovered *in situ* but found lying on top of the east wall (ev. 9) and probably had been moved during the undocumented excavation. Some plastic bags which were found under the huge block are an indication of this conjecture. Both piers of the oil press, standing vis-à-vis composed the guidance respectively

the sidewise restriction for the piles with press-mattings under the press-beam which was positioned in the low opening (ev. 39) of the south wall (ev. 16). The inner lateral surface of the stones was rendered concave.

In the immediate vicinity of the press-bed (ev. 79) in northern direction a construction (ev. 81) is attached, which served for the anchorage of the two weight-stones (ev. 13 and 78). Those three elements rest on a thin clayish layer above bedrock. The two weight-stones are almost cubic and drilled T-shaped. The whole construction – especially the two heavy weights – was displaced out of its original position immediately in front of the older retaining wall (ev. 5a), possibly due to an earthquake.

This very well preserved oil press is of lever-and-weight type. The general type, classified by Rafael Frankel as type 4.2<sup>12</sup>, is a slightly developed version of the simple lever press of the Iron Age<sup>13</sup> (his type 4) in this region and is known from Hellenistic<sup>14</sup>/Early Roman to Early Islamic times. This subtype of oil press is well known in Jordan as well and some years ago T. Waliszewski published some examples.<sup>15</sup> Up to 2012 only two examples were known from Jarash, one excavated in the late 1920<sup>th</sup> near St. Theodore and the second some decades ago at the South-gate.<sup>16</sup> Of the eight variants known of this subtype our olive oil press according to its technical features (a beam anchored in a wall niche, a press bed flanked by two plain piers and a lateral collecting vat) belongs to the so called Gerzim press type<sup>17</sup>. The advantage of the vertical stone

11. Similar marks are known from press-beds in Gerasa (west of St. Theodore, Fisher, 1930, p.9 with fig.6) and the Athenian Agora (Frantz, 1988, p.121, pl.76a) but also in Madaura in Algeria (Brun, 2004, p.11, fig. down right). Although chemical analysis of this special phenomenon has to our knowledge not been undertaken for press-beds, it is likely that these traces of wear result from mechanical erosion by the fluids and the dissolving power esterified oleic acid has on weak varieties of lime stone.

12. Frankel, 2009. According to the classification of Jean-Pierre Brun, which is limited to the mechanical features, it would be lever press type A3 (Brun, 2004, fig. on p.14).

13. cf. the example in Hazor from 8th c. B.C.

14. Although such an early date is not impossible for this type of oil press, it is questionable for the so called Alone Abba press which in some features (e.g. the form and T-shaped drilling of the stone weights) is very close to our oil press. See Porat, Frankel and Getzov,

2011, pp.51-81. 84\*-86\*. In the light of the finds made in Alone Abba, which date from Hellenistic to Middle Roman times, it seems improbable that all belong to the phase of the oil press installation. The earlier finds seem to be too precious and luxurious for a simple oil press and could belong to a grave/tomb that was perhaps located in the former cave. The cave was then reused for an oil press after its ceiling had collapsed.

15. Waliszewski, 2009. For the distribution of this type see the map on fig.8. Similar are the weights and pillars at Byzantine Jil'ad (Waliszewski, 2009, p.713 fig.6-7). Very similar weights were also found in a Byzantine oil press installation at 'Ammān Citadel (Waliszewski, 2009, pp.713-716 fig.9-14).

16. St. Theodore: Fisher 1930, p.9 with fig.6; South-gate: Seigne 1986, p.47 fig.6, pl. VI 1-2, pl. VII. It was built between and partly under the fundament walls of the southern chamber of the so called Roman 'souk'.

17. Porat, Frankel and Getzov, 2011, pp.84\*-86\*, esp. p.85 with fig.17:4.

pillars is that the baskets filled with olives were limited from both sides and therefore the pressure is given a more vertical direction centered on the press bed. As a result of the up and down moving of the pressed baskets the pillars are hollowed at their inner sides. It can be expected that in the area behind the north-baulk not only the northern wall of the press-room but most probably also a trapetum (crusher) were situated.

#### *The End of the Utilization of the Oil Press and the Filling of the Room*

The entire oil press-chamber and also the eastern adjacent area were found completely filled (**Figs.12–14**). Due to the fact that also the opening (ev. 39) inside the south wall (ev. 16) of the room was filled and that it exhibits an identical arrangement in layers compared to the interior room (ev. 27–29, 32–33) it is assumed that also the adjacent not excavated room to the south of the trench is completely filled with the same debris. The backfill of the pressroom happened at once and obviously in a short time. The pressroom was in good order and also empty before it was filled with debris, because no abandonment fill was found inside. The pottery from the debris was lying on top of the floor in sectors c and d and in the oil reservoir as well. Therefore the backfill happened immediately after the oil press and the room had been abandoned. Considering the different filling-layers inside the room, its boundaries, the pottery in between the backfill and the position of the larger stones it becomes apparent that the debris was filled continuous but quick. It is visible quite clearly in the profiles of the trench. Grey ashy layers were found as well in the southern part (ev. 27) and in the northern part (ev. 46) in almost the same



14. Trench B, East-profile from west.

height with the same concentration of pottery. Large stones which belong also to the backfill are arranged concentrated in the northern part of the trench (**Fig. 13**). Dense concentrations of pottery appear consistently lying in a horizontal position on a layer of debris. This indeed allows concluding in which order the different layers of debris were filled in. Due to the fact that the unusual high amount of pottery sherds looks quite homogenous and could be dated therefore to the same period, the intervals between the separate fillings could not be very long.

Finally it is necessary to clarify from where the debris was deposited. The enormous amount of similar pottery gives the impression of a potters' dump. But the absence of waster as well as the broad spectrum of vessel-types and a surprisingly high amount of debris such as stones, tesserae and pieces of mortar is in turn indication against this interpretation.

The oil press might have been filled in the course of an earthquake but several earthquakes are attested in the first Millennium AD for Jarash. In the course of cleanup efforts dumping places were needed for the debris. Apparently the oil press was no longer in use at this time so the room might have been used as dumping place.

No sufficient dating can be given because of the lack of finds from the first building phase. For this reason it is not possible to date the initial phase of the oil press. Through this missing link the inception of the second building phase is not precisely datable as well. A Late Roman rim of a jar or jug from ev. 53 (cat. no. 88) demonstrates that the northern clay floor could not be older than it and a rim of Late Byzantine to Early Umayyad date in ev. 62 (cat. no. 112) shows that the last renovation of the northern clay floor took place in this period. The pottery from the fill of same or similar type which could be dated into Byzantine to Early Islamic times indicates that the end of the oil press took place in Early Islamic times. One of the best datable finds so far is a lamp of the 2<sup>nd</sup> half of the 7<sup>th</sup> century AD (cat. no. 55) found in ev. 12. But this evidence was partly disturbed by illicit diggings.

#### *The Third Building Phase: A New South Wall and a Stone Structure in the West*

For the time after the filling of the oil press room a third building phase is attested. Another

wall (ev. 3), consisting of large lime stones, was built above the south wall (ev. 16) after placing a filling of soil and pottery (ev. 17) between the older and the younger south wall. The younger south wall (ev. 3) runs against the younger retaining wall (ev. 5b) which was still visible in this time. Above the core of the younger retaining wall (ev. 26b) at the western baulk of the trench a wall section was uncovered that belongs to a structure partly covered by the Mamluk house in the west (**Fig. 9**). Due to the absence of significant finds it is not possible to date the third building phase more accurately than between Early Islamic time (filling of the oil press) and the Ayyubid-Mamluk periods (use of the house on the terrace).

### *Concluding Remarks*

The older western retaining wall (ev. 5a) and the pilaster (ev. 45) are the oldest traces of building activities in the excavated area. There are no finds that permit the dating of the first building phase. The oil press was built in the second phase; just for this reason the east (ev. 9), south (ev. 16) and the younger western retaining wall (ev. 5b) were erected. Together with these walls the older western retaining wall (ev. 5a) composed the room within which the oil press was situated. Trench B gives strong evidence that this part of the Northwest quarter passed through considerable architectural and perhaps functional alterations at some point in its history. That the foundation of an olive oil press with such structural expenses was possible can be explained for the present in more than one way. This part of the settlement was either abandoned and deserted or rural products like olive oil were needed to such an extent that the investment and encroachment on the architectural layout were accepted. When exactly this happened is not clear yet. After the oil press was no longer in use, the room and its surrounding area were used as a dump and filled with debris. All finds were in good conditions and their dates span from Byzantine to Early Is-

lamic times, which gives a date for the destruction in Early Islamic times<sup>18</sup> and also a probable date for the end of the utilization phase of the oil press. This should be not much earlier, perhaps in the Late Byzantine to Early Islamic period. The oil press must have been erected some time before that because the worn press bed seems to have been used for some time. After the back-fill a last building phase can be reconstructed consisting of the younger south wall (ev. 3) and another wall built above the core of the younger retaining wall (ev. 26b). Due to the lack of significant finds this third and last building phase is not precisely datable but must be connected to the buildings on the western terrace and the youngest finds which consist of a few Ayyubid to Mamluk sherds in the ev. 2, 4, 12, 22, 25 and 28.<sup>19</sup>

### **Trench C** (in collaboration with Stefan Riedel) *General Outline and Structures*

The most prominent building on top of the hill of the Northwest quarter is the so called 'Ionic building'. It is a large courtyard house integrated in the local terrace system and showing signs of a series of repairs and alterations, which took place in the Early Islamic to Mamluk periods (**Fig. 1**). The trench was laid out in the south-western corner of this building. The rectangular outline of the excavated area measures approx. 6.50 x 6.50 m each side. To the north the level raises *ca.* 1.00 m towards the inner parts of the building and to the south it slopes, creating an altitude difference within this area of 1.15 m from north to south before the beginning of the excavation. The area was disturbed in recent times, since to the south of the trench many stones of various sizes were found and the east-west-orientated southern wall of the large building could not be traced in the trench where it was supposed to have been situated. The fill in most parts of the trench consisted of stones of different sizes, some of them dressed as blocks. On top of this fill, almost in the middle of the

18. The walls and some other structures especially the west walls (ev. 5a, b) and the press weights (ev. 13, 78) seem to be affected and moved by an earthquake and also the press piers were found fallen down, but it is not yet possible to link these facts to a specific earthquake that causes destructions in Gerasa especially the disastrous of AD 749. The collapse of the

piers could be caused by the ancient filling and we are sure that they were moved during the undocumented activities.

19. While ev. 4 belongs to the collapse debris of the younger (Mamluk?) house on the terrace the other evidences were partly contaminated during the undocumented activities.

trench, an Ionic capital of limestone was already recorded in the 2011 campaign (cat. no. 166). On closer examination, the capital revealed to have been exposed to fire.

Excavation in this area disclosed various structures which shed light on the history of the uppermost part of the walled city of Jarash at least from Byzantine/Early Islamic times to the Mamluk period. Especially in the northern and western sections of the trench several built structures which overlay each other were discovered (**Fig. 15**). However, the oldest traces in the area are chisel-marks and -channels on top of the bedrock in the south-western (ev. 44) and north-eastern (ev. 7) part of the excavated area,

proving that the spot was used as quarry before building activities started. The remaining traces indicate that almost square blocks of approx. 0.50 to 0.60 m were broken down in this spot. Bedrock was discovered in the southern (ev. 44), western (ev. 22), and northern (ev. 7) part of the trench. It was found to be part of a more than semi-circular natural structure which forms a karst-cave to the north of which the eastern ceiling partly collapsed in later times. Especially in its southern and south-western parts the bedrock was worked off and roughly dressed in order to function as a cistern, which was revealed in the centre of the area. Most of the unearthed structures are related to this cistern and therefore



15. Trench C, excavated structures.

their description and interpretation must emanate from the cistern itself. Beside the quarry, only the southern structures in the trench are older than the initial construction of the cistern.

### *The First Building Phase: the Southern Structures*

In the south-west of the trench the remains of a room were discovered. It once extended eastwards over the later cistern (Figs.15, 16). Since no traces of entablature or the like were observed which might have carried the eastern part of the room, it must be assumed that the cistern did not yet exist in the time of the house which the room was part of. That the room must be older than the cistern is attested by channels related to the mentioned quarrying activity which were partly cut off when the bedrock (ev. 44) was cut in order to serve as wall for the cistern. Furthermore, residual-clay (ev. 49) was discovered just east of the bedrock (ev. 44) and in the eastern

part of the trench (Fig. 16). This residual-clay was partly cut into in order to serve as foundation of the eastern wall of the south-west room (ev. 43). Within the eastern residual-clay large rocks with weathered surface were unearthed which show that this area was exposed to environmental conditions and therefore the southern part of the cave was never covered by a natural ceiling. Thus, the southern part of the cave at the time of the erection of the south-west room must have been filled by residual-clay which was strong enough to sustain the room's walls and a cave could only have existed in the northern part. This observation proves that the cistern was constructed after the room was already out of use.

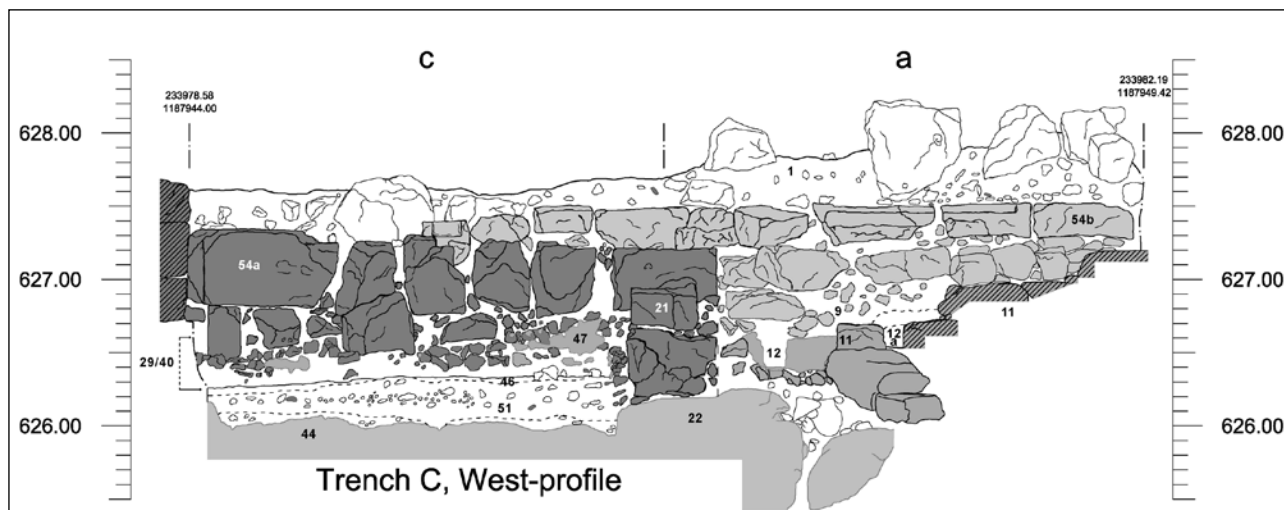
The western wall of the south-west room is constituted by two walls: an older wall (ev. 54a) which is partly overbuilt by a younger one (ev. 54b) coming in from the north (Figs.17, 18). Both lie in line with the west wall of the



16. Trench C, cistern wall and older structures in the eastern part, from west.



17. Trench C, overview from east.



18. Trench C, West-profile.

large building in the north ('Ionic building') and might have been used as its foundation in this spot. The older west wall stretches further south to an unknown extension where it seems to function as the foundation of the retaining wall of a small terrace situated west and south-west of the trench. To the north the older west wall forms the north-western corner of the room with the west-east-orientated wall (ev. 21). This wall is placed on bedrock (ev. 22) and was torn down most probably during the initial construction of the cistern, just like another wall in the very south-eastern corner of the trench (ev. 43) which shows similar traces of being torn down in this context. Furthermore, the latter is based on bedrock (ev. 44), too, and runs parallel to the older west wall (ev. 54a) at a distance of about 5.00 m. Thus, it is reasonable that this wall is the eastern wall of the discovered room. All three walls (ev. 54a, ev. 21, ev. 43) are composed of limestone blocks of which some are well dressed.

The lower parts of the older west wall and the wall (ev. 21) were covered by undecorated wall-plaster which was superimposed on an underlay of small irregular stones (ev. 47). The underlay and attached plaster were several centimetres pushed apart from the walls by an earthquake, an intentional breakdown or similar influence. Underlay and wall-plaster also covered a single block just in front of the older West-wall which might have served as pillar or support of a beam as part of the roof structure. A beaten earth floor (ev. 46) above a fundament of soil (ev. 51) runs against the wall-plaster (ev. 47). The northern and eastern parts of this floor were either removed during the cistern's construction or broke apart before. The south-eastern part most probably was destroyed due to the mentioned modern disturbances of the spot. The whole assemblage of these evidences (ev. 54a, ev. 21, ev. 43, ev. 47, ev. 46, ev. 51) will in the following be called the south-west room.

The end of the utilisation of the south-west

room is witnessed by the collapse of the roof and parts of the underlay with attached wall-plaster (ev. 29, ev. 40) which was found *in situ* upon the preserved floor (ev. 46) in front of the west-wall (ev. 54a). Below the northern part of the collapse (ev. 29) the fragmented bottom of a cooking vessel (ev. 45, cat. no. 100) was discovered, pressed into the beaten earth floor and slightly overlapped by the detached wall-plaster. Below roof-tiles within the southern part of the collapse (ev. 40) a bronze coin was found. Especially the latter evidence provides a hint for the dating of the collapse of the room and therefore the end of the first traceable building activity in this spot. Since only the base of the cooking vessel (cat. no. 100) was preserved, it cannot be dated precisely. The coin on the other hand provides a more sophisticated date. It is only 1.1 cm in diameter and worn. Only one side shows traces of a depiction, potentially Arabic letters. Of much more interest are the coin's clipped edges which left an irregular contour with seven angles. The edges must have been cut off to gain additional material for other purposes. Therefore it seems reasonable that the edges of the coin were clipped after the coinage reform of the Umayyad caliph Abd al-Malik in the late 7<sup>th</sup> or very early 8<sup>th</sup> century AD. This reform reduced the circulating coins' weights to make them fit the domestic standards the Islamic caliphs were familiar with.<sup>20</sup> Therefore, cutting off pieces from older, overweight coins was a suitable means to reduce it to the new standard and gain additional material. Due to the worn preservation of the coin and especially its edges it seems to be likely that the coin ended up in the collapse in about the middle of the 8<sup>th</sup> century AD.<sup>21</sup>

### *The Second and Third Building Phases: the Cistern and Related Channels*

After the south-west room collapsed, the cistern was constructed. This might have been

20. The metrological basis and the reduction of the weights is exposed and discussed by Grierson, 1960. Although he is almost exclusively concerned with gold and silver, the reform must consequently also have influenced the copper coinage, which he only very briefly touches upon (Grierson, 1960, pp.246-247).

21. The collapse of this room might be the result of the well attested earthquake in AD 749 which caused severe destructions in many cities of the Jordan-valley

since no other earthquake has been reported in those times or within this geographic region, neither from literary sources (cf. Guidoboni, Comastri and Traina, 1994) nor from archaeological investigations (cf. Marco et. al. 2003). For the dating and the various references in literary sources see Tsafirir and Foerster, 1992. The range of destruction in various sites is collected by Marco, *et al.*, 2003, table 2.



due to a partially collapse of the natural cave which became visible and was therefore used as a large part of the reservoir.<sup>22</sup> The cistern was of a roughly circular shape and measured around 4.00 m in diameter. To the south, west and north-west it was cut into the genuine rock, which also forms an outcrop that covers about a third of the cistern in the north. This outcrop (ev. 7) is worked in most parts of its southern edge, most probably as bedding for a lost wall whose eastern end might be marked by square, roughly pecked traces of a stand, measuring approx. 0.15 m each side (**Fig.19**). A complete excavation of the cistern was impossible due to the instability of the rock in the western and north-western part. It was carried out to a depth of approx. 3.00 m from the ceiling of the rock's outcrop but it continues at least for another 0.50 m. At its east and north side a continuous wall constitutes the limit of the cistern (ev. 38). This wall runs against the genuine rock in the south-east and probably also in the north-west (**Fig.15**, dotted lines). It consists of two faces of irregular stones with a maximum size of 0.35 to 0.20 m and a *ca.* 1 cm thick layer of mortar in between these two faces. The inner face of this wall shows two different phases of plaster-revetment which had been broken apart in the upper parts (**Fig.16**). The plaster of the older revetment is directly attached to the inner face of the wall. It contains tiny red and green inclusions and is well smoothened. Its reddish colour indicates



19. Trench C, build structures of the cistern phases in the northern part, from south.

that it might be some kind of hydraulic mortar which especially makes sense in the case of a cistern's revetment. At an undetermined later date a second layer of mortar was superimposed upon the first revetment, probably due to necessary repairs. The greyish mortar of this second revetment seems to be of inferior quality compared to the first one, containing small pebbles and charcoal-inclusions. The construction of the cistern cannot be dated precisely but at least to the time after the collapse of the southern building.

In total, four channels have been unveiled which are related to the cistern and three of them undoubtedly served to carry water from the higher located northern and western parts of the hill into the reservoir (**Figs.19-20**). The oldest channel, approaching the cistern from the north-west, is of rectangular shape and approx. 0.14 m wide and belongs to the first utilization phase of the cistern. Its visible northern part (ev. 34a) was cut from the rock in its western part and plastered to the east and at the bottom. The southern part (ev. 34b) which formed the ending of the channel from where the water fell into the cistern was completely cut from the bedrock. This part broke away at an undetermined date after the cistern was already backfilled since it lay on top of the younger fill (ev. 35). The alluvial deposits (ev. 36) in the northern, *in situ* part (ev. 34a) furthermore prove that the channel was already out of use before this backfill and even



20. Trench C, evidences in the northern part and cistern fill, from south.

22. The tempting interpretation that the collapse of the South-west room and the assumed collapse which unveiled the cave coincide cannot be testified. But it

seems reasonable that both might have happened due to the devastating earthquake of AD 749.



before the structures to the north and northwest of the cistern were built because they are partly built over the channel (**Fig. 20**). These structures altogether belong to the second utilization- and building phase related to the cistern since they are based on a common foundation layer which covers the older channel (ev. 34b) and the bedrock (ev. 7). They include a stair-like structure in the northwest (ev. 11) with two related channels (ev. 12, 12a), a structure of two large, well-dressed blocks east of it (ev. 3) and a plastered area (ev. 8) with a triangular plastered channel (ev. 16) which runs against the two blocks (ev. 3) and extends north- and eastwards.

The structure (ev. 11) is part of stairs elevating towards the north, which also comprise steps on top of (ev. 12 and ev. 12a). This stair structure is set against the older torn down wall (ev. 21). The lowest of these stairs is composed of mortar in its western part. This part serves as the northern wall of the second channel which, in its preserved course, was completely plastered and likewise 0.14 m wide. The third channel was observed just north of the lowest stair disappearing under the younger west-wall (ev. 54b) and merging with the second channel just before the water ran into the cistern. The exact situation of the water conduction is disguised through a collapse of the karst-cave in this part which included parts of the bedrock in the west (ev. 22), the rock-cut part of the first channel (ev. 34b), and even parts of the cave's ceiling in the north-western part of the cave (ev. 55, **Fig. 20**).

The surface of the two well-dressed blocks (ev. 3) lies on the same level as the third step of the stair-like structure (ev. 11). The rectangular space between these two structures measures approx. 0.20 m and was filled with irregular stones and soil in later times. Whether this was another channel coming from the north is reasonable to assume but cannot be ascertained. This part could not be excavated due to the instability of the cave in this spot. North of the two blocks at least one more rectangular slab was discovered, running against the north-eastern corner of it and disappearing in the trench's north-baulk. Since no construction fill of this phase or the like was found north of (ev. 3) it might have been part of

a basin or a similar structure.

From the east a plastered area (ev. 8) runs against the two blocks and the slab. It is horizontally straightened in the northern part but towards the south the plaster also covers an irregular and rough conglomeration of small and medium sized stones which stretches westwards in front of the southern block of (ev. 3). It is based on the same foundation layer (ev. 17) as the structures to its west (ev. 3, ev. 11). Almost in the middle of the plastered area a plastered triangular channel (ev. 16) runs in north-western direction in a slight curve. After approx. 0.30 m its northern part is covered by a small, slab-like stone and disappears below a plastered area (ev. 8). To the east the plastered area is covered by a collapse (ev. 13, ev. 18) upon which a north-south-orientated wall (ev. 15) of the large building was erected in later times. Beneath the eastern part of this collapse (ev. 13) traces of a small band of yellowish clay (ev. 24) and a 0.05 m to 0.10 m thick layer containing a large amount of pottery (ev. 14) were revealed. These are based on a foundation layer (ev. 25) which levels the uneven surface of the bedrock below (ev. 7) and raises the walked-on level to about the same height as the plastered area (ev. 8). Due to this observation and the circumstance that the collapse (ev. 13, ev. 18) covers the plastered area (ev. 8) and the walked-on level further east (ev. 24, ev. 14), the latter must belong to the same building phase as the described structures to its west.

A cistern, similar to the one in trench C was found on the slopes south of the South decumanus.<sup>23</sup> Such a cumulation of cisterns in the hilly terrain west of the river valley makes it probable that on the hill no common water-supply system did exist in Early Islamic times and water was collected by open channels for the households.

### *The Backfill of the Cistern and Final Building Phases of the Area*

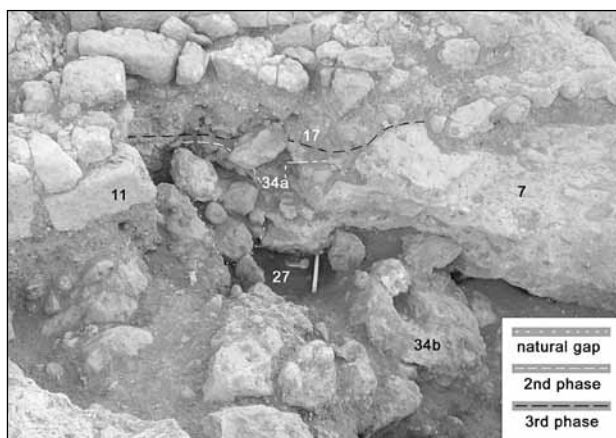
The backfill of the cistern happened in at least two steps. The older fill (ev. 42, ev. 50, ev. 52, ev. 53) mainly consisted of large blocks with hollow spaces in between and a limestone column drum (**Figs.15, 20**). The youngest piece of

23. Surveyed 2011 by the Danish-Jordanian Islamic Jarash project. For a brief summary see Keller, Porter

and Tuttle, 2012, fig.23 (area A) and fig.24.

pottery found in this mixed backfill (cat. no. 133) dates to the Mamluk period and indicate a 13<sup>th</sup> to 14<sup>th</sup> century AD date. Before a second, mixed fill (ev. 35, ev. 37) was filled in, parts of the cave's ceiling collapsed (ev. 55). The rock-cut part of the oldest channel (ev. 34b) also broke in this context. It formed the eastern part of a cavity under which an almost completely preserved glass-bottle (cat. no. 144) was found (**Fig. 21**). This bottle was found lying in smooth soil (ev. 27) which is part of a natural fill intruding into this part of the cave through small crevices before they were sealed for the first building phase of the cistern (channel ev. 34a). Nevertheless, it is astonishing that the bottle, which dates to the Byzantine period, remained untouched and in place during the utilization phases of the cistern until this part of the cave finally collapsed (channel ev. 34b) and fell on the older fill (ev. 42, ev. 50, ev. 52, ev. 53). Consequently, the north-western part of the bedrock bordering the cistern was not part of the reservoir itself but sealed in order to carry water directly into the cistern.

The final building phases of the excavated area are related to the erection of the large building. A preliminary step must have been the construction of the younger west wall (ev. 54b). This wall overlies the western part of the stair-like structure (ev. 11) with its channels (ev. 12, 12a) and parts of the older west wall (ev. 54a), a fact indicating that the cistern probably was already out of use. This wall is based on a foundation layer of soil and stones, included



21. Trench C, stratigraphical position of the glass bottle (cat. no. 144), from south.

several spolia and seems to have served as the fundament of the large building's west wall. Later the level of the northern part was raised in order to create the floor level of the large building. This fill (ev. 5) covered the older structures including the plastered area (ev. 8) and the two well-dressed blocks (ev. 3). The infilling goes together with the erection of the large building's interior westwall (ev. 15). North of the two well-dressed blocks (ev. 3) the Middle Islamic fill (ev. 32) included the dump of cow's bones and fragmented cooking vessels (cat. no. 95, 107). The latter are of a common type, and date to the Late Byzantine/Umayyad period.

#### *Concluding Remarks about the Sequence of Building Activities and the Utilisation Phases within the Excavated Area*

Beside the non-absolute dateable activities related to the area's use as quarry, the south-west room (ev. 21, ev. 54a, ev. 46, ev. 47, ev. 43) is the oldest witness of building activity in the excavated area. Despite the fact that the date of its erection is unknown, the destruction of the room can roughly be pinpointed to the middle of the 8<sup>th</sup> century AD and might be connected to the earthquake of AD 749.<sup>24</sup> The subsequent building activities seem to have succeeded each other in a comparatively short time interval. After the initial construction of the cistern with the older channel (ev. 34a) the stair-like structure (ev. 11) with its related channels (ev. 12, 12a) and the structures to the north above the cistern (ev. 3, 8, 14, 16, 17, 23, 24, 25) were erected. Since the channels (ev. 12, ev. 12a, ev. 16) belong to this phase, the cistern must still have been in use, and it is tempting to assign the second layer of plaster of the cistern's wall (ev. 38) to these activities as well. After the construction of the younger west wall (ev. 54b) the level at least of the northern part was raised in order to construct the large building. Judging from the pottery found within the fill (ev. 32, cat. no. 95, 107) this graduation also took place after Early Islamic times. The cistern must have been out of use at this time although its final backfill cannot be dated earlier than the Mamluk period because cat. no. 133 was found in the older fill (ev. 42, 50, 52, 53). To obtain a closer dating and idea

24. For the earthquake of AD 749 see above n. 19.

about the large building's purpose and possible previous buildings further excavation and analysis needs to be undertaken.

### **An Altar-like Architectural Element from Trench B**

(inv. no. J12-Bcd-19 + J12-Bd-2-1x)

A large architectural element, broken in two parts was found re-used in the oil press discovered in trench B.

(1) Monumental rectangular worked limestone block (J12-Bcd-19, **Fig.22**)

#### *Material:*

Soft whitish limestone

#### *Measures:*

Height: 1.95 m

Width: lower part: 0.89 m, upper part: 0.90 m

Depth: 0.55 m

#### *State of Preservation:*

The block is damaged in several places and the top part is broken off. The front top left and right corners are damaged as well as the front bottom left and right corners. The right most

part of the back side is damaged as well. On the front below the pilaster columns there is a deep square hole (secondarily made) and a depression runs horizontally from the hole to the left side of the block. This reworking probably stems from secondary use in the oil-press. The broad front side up until the pilasters is curving concavely also due to the secondary use of the block as a pier in an oil press. On the back side approx. one-third below the top there is a horizontal running furrow approx. 4-5 cm broad and 3 cm deep, which runs across the entire block. The right short side is damaged on both upper corners and the corner horns are partly broken away. The lower corners are also damaged. The left short side is damaged on all corners as well.

#### *Description:*

The block is worked on all sides.

#### *Front Side:*

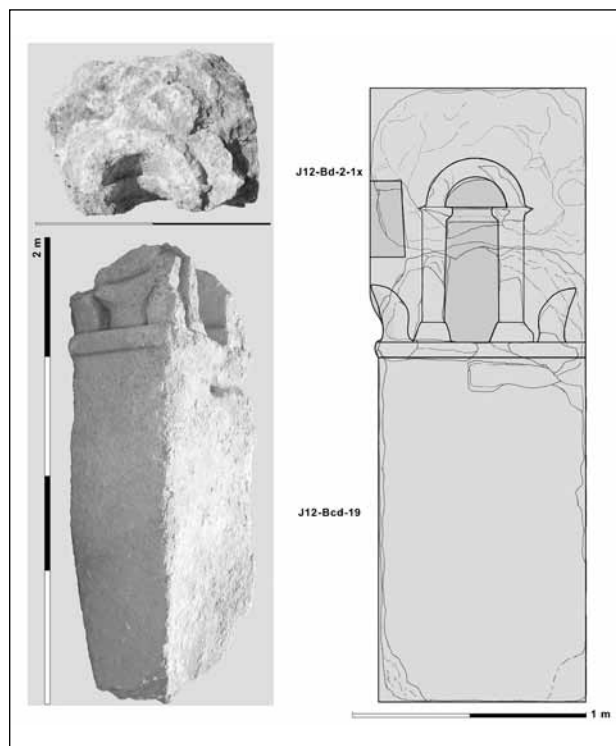
On the upper front side of the block the lower part of two slightly off-axis pilaster columns are visible. These are standing on a carved protruding basis, which runs horizontally across the front of the entire block and continues on the right short side of the block. Between the pilaster columns there is a deep narrow niche (23 cm wide, 41 cm high, 18 cm deep). Directly under the protruding basis a centrally placed square deep post-hole is visible. The stone curves slightly concavely on the approx. 2/3 under the protruding basis.

#### *Left Short Side:*

The upper corners of the left short side each has a horn-shaped element, which curves slightly outwards. Centrally a deep relief showing a stylized basin or bowl is placed. Due to the narrowness of this side the bowl is in its proportions very slender. These elements are placed on the carved protruding basis, which runs horizontally across the entire short side. Below the basis the stone is worked but without any decorative features.

#### *Right Short Side:*

The right short side is roughly smoothed along all four edges, but without any decorative features. In the central field an anathyrosis is visible. It has rectangular shape and is finely cut.



22. Photos and drawing of the altar-like architectural element from Trench B.

*Back Side:*

On the upper part of the back side there is a roughly worked horizontally running step on the top part of the back side. As the step does not cut and damage the horns, it remains unclear whether it relates to the original use or the secondary re-use in the oil-press. Approximately a third below the top there is a horizontal furrow, which cuts all along the back side of the monumental block. The rest of the back side is roughly worked.

*Top:*

The top of the block is heavily damaged.

*Bottom:*

The bottom of the block is partly damaged, but has been worked to a straight surface.

(2) Top part of monumental stone with niche (J12-Bd-2-1x, **Fig.22**)

*Material:*

Soft whitish limestone

*Measures:*

Height: 0.71 m

Width: 0.89 m

Depth: 0.69 m

*State of Preservation:*

The block is heavily damaged on all sides, the surface is badly weathered.

*Front Side:*

The upper part of the front side is damaged. Centrally in the lower part the curved part of a rounded niche is visible. The capitals of columns flanking the niche on each side are also visible. Inside the niche a protruding cornice is running.

*Left Side:*

The left side is also damaged and worn; a rectangular niche is worked in.

*Right Side:*

The right side, which is curving, is damaged and worn.

*The Back Side:*

The back side, which is curving, is damaged and worn.

*The Top:*

The top of the block is curving towards the back side, but is also damaged and worn.

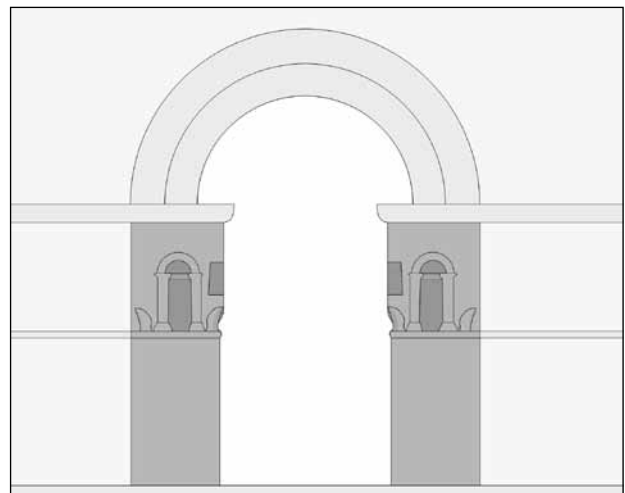
*The Bottom:*

The bottom of the block shows heavy signs of having been broken off.

*Interpretation:*

The parts belong together and the total height of the monument must have been approx. 2.70 m. An accurate dating of the block is not possible. It can be assumed that it stems from the Hellenistic to Roman period. Judging from the material (whitish soft limestone) one might suggest that the element did not belong to one of the post-Hadrianic monumental buildings within the city center, for which the harder reddish limestone was preferred.

The visual vocabulary of the block – the horns and basin on the right side and the horns and the niche on the front – implies altar iconography. However, the shape of the block indicates that it was not an altar but was used as part of an architectural framework, probably as flanking a doorway or gate (**Fig.23**). One might expect that it had a counter piece. In its original state the long-side with the niche was the front-view and the left side with the stylized basin/bowl and a rectangular niche on top was aligned with the passageway. The right side with the anathyrosis was probably connected with a wall. There is some possibility that the entrance was covered by an arch or a lintel, but this remains a hypothetical reconstruction.



23. Hypothetical reconstruction in an architectural position flanking a doorway.

Niches at the front of an architecturally framed entrance or passage are well attested in the architecture of the southern Levant such as in a monumental form at the Artemision in Jerash or in the Syrian sanctuary of Hösn Soleiman; especially entrances to sanctuaries were often framed by such features.<sup>25</sup> The altar elements (horns and basin) are common on Roman altars in Jerash, but they seem to be restricted to altars<sup>26</sup>, other architectural elements did not take over such altar motifs. This makes the monument exceptional in its eclecticism. The only remote comparanda for altar-iconography reduced to an architectural décor element or motif can be found in local sanctuaries of Lebanon and Syria. Two examples are found at Burj Baqirah and at close-by Khirbet el-Hatib in the Limestone massif.<sup>27</sup> Here altar reliefs frame the lintels of the entrances to the sanctuaries. This comparison, however, has to be put into perspective, since at Burj Baqirah a Zeus Bomos (Zeus Altar) was venerated and thus it seems self-evident to have depicted altars on the lintels. Another example of altar depictions framing a doorway is found at Sfire in Northern Lebanon.<sup>28</sup> There, two altars on either side of the front wall frame the entrance to the sanctuary court. Within the court of the sanctuary, no temple stood, but the main focus of the cult was a large altar. Again, as probably in the Limestone massif, we have a correlation between the depiction of an altar at the front and the nature of the cult.

From the comparanda one might suggest that the large block discovered in trench B was part of a monumental framing (perhaps entrance?) of a sanctuary.<sup>29</sup> Because of its eclectic composition and the material one might consider that it belonged to a pre-Hadrianic sacred building, but this must remain a hypothesis. The location of its primary use also remains obscure. One might consider that such a large block was not brought from far away to be re-used in an oil press and

that it thus came from somewhere close-by; but this also remains speculative.

## Conclusion

The three trenches excavated during the 2012 campaign yielded little evidence for occupation prior to the Roman/Byzantine period. Most until now documented building activity took place between the Roman and early Islamic periods with some reoccupations in the middle Islamic period.

The earliest traces of human activities are the quarries in trenches A and C. They predate the later building activities and might be an indication of a sparsely settled area during the Roman period. However, the hill might have been occupied also in Roman and earlier periods as attested by sparse finds of pottery dating to the Hellenistic and Roman periods. This is also suggested by the backfill of the rock cut room in trench A which took place in the second half of the 3<sup>rd</sup> century CE, indicating that there was some occupation during the Roman period. Furthermore the monumental altar-shaped architectural element, which was reused in an oil press, probably relates to an earlier period. However, it remains unsure whether this block had its original place of origin in the vicinity. At some point in the settlement history of the Northwest quarter a system of terraces was laid out in order to accommodate dense habitation, which covers the entire hill slopes. Even the oldest structures in the terraced area excavated so far follow the alignment of this system. As is evident by the overall mapping in general and in trenches B and C in particular some alterations of the inner arrangement took place over time.

The most prominent feature excavated in the 2012 campaign was a well preserved oil press in trench B. At least in some parts of the Northwest quarter, such as around trench B, the extensive fill with destruction debris in Late Byzantine or

25. Jerash Artemision: Parapetti, 2002, pp.27-28. Hösn Soleiman: Krencker and Zschietzschmann, 1938, pp.44-46. pl.33-34. In general for the motif cf. Freyberger, 1999, pp.133-134; Kader, 1996, pp.161-162 fig.77 and Freyberger, 2004, p.19 n.17. fig.2.

26. cf. e.g. Kraeling, ed. 1938, pl.98. 112. 115. 120; Browning, 1982, p.158 fig.91; Borkowski, 1989, p.80, pl.1 no.4. The motif stands already in a Late Bronze Age/Iron Age tradition in Palestine: cf. Zwickel, 1990, pp.116-128, fig.133-135; Hitchcock, 2002 with

references.

27. Burj Baqirah: Steinsapir, 2005, pp.50-51. 126. Khirbet el-Hatib: Kreuz, 1999, pp.24-25. pl.43-44. cf. also possibly an altar on the portal at Harab Sams: Tate, 1992, p.119, fig.173.

28. Steinsapir, 2005, p.70. pp.134-135.

29. However it also cannot be ruled out that the block stemmed from a funerary monument, although up to now no comparanda for such an architectural composition are known.

as in Trench C in Early Islamic times put an end to the settlement history.

Until the Middle Islamic period the excavated areas seem to have been more or less abandoned. From this period building activity begun again and the large courtyard house over the cistern in trench C was constructed. Smaller and simple houses were also erected. Repairs and modifications of the buildings prove that the occupants, who had Mamluk style pottery, lived in this area at least over a period of some generations.

## Bibliography

- Abu-Shmeis, A. and Nabulsi, A.  
2009 Cremation Burials in Amman, Jordan. *SHAJ* 10: 513-525.
- Ayalon, E., Frankel, R. and Kloner, A.  
1972 *Oil and Wine Presses in Israel from Hellenistic, Roman and Byzantine Periods*. BAR International Series, Oxford, Archaeopress.
- Borkowski, Z.  
1989 Inscriptions on Altars from the Hippodrome of Gerasa. *Syria* 66: 79-83.
- Browning, I.  
1982 *Jerash and the Decapolis*. London, Chatto and Windus.
- Brun, J. P.  
2004 *Archéologie du Vin et de l'Huile de la Préhistoire à l'Époque Hellénistique*. Paris, Errance.
- Déonna, W.  
1934 Mobilier Délien. *BCH* 58: 381-447.
- Frankel, R.  
1998 *Wine and Oil Production in Antiquity in Israel and Other Mediterranean Countries*. Sheffield, Continuum.
- Freyberger, K. S.  
1999 Das kaiserzeitliche Damaskus: Schauplatz lokaler Tradition und auswärtiger Einflüsse. *DaM* 11: 123-138.  
2004 Das Heiligtum in Hössn Soleiman (Baitokaike): Religion und Handel im syrischen Küstengebiet in hellenistischer und römischer Zeit. *DaM* 14: 13-40.
- Grierson, P.  
1960 The Monetary Reforms of 'Abd al-Malik, *Journal of Economic and Social History of the Orient* 3,3: 241-264.
- Guidoboni, E., Comastri, A. and Traina, G.  
1994 *Catalogue of Ancient Earthquakes in the Mediterranean Area up to the 10<sup>th</sup> century*. Rome, Istituto Nazionale di Geofisica.
- Hitchcock, L. A.  
2002 Levantine horned altars: an Aegean perspective on the transformation of socio-religious reproduction. Pp. 233-249 in D.M. Gunn and P.M. McNutt (eds.), *'Imagining' Biblical Worlds. Studies in Spatial, Social and Historical Constructs in Honor of James W. Flanagan*. Sheffield, Sheffield Academic Press.
- Fisher, C. S.  
1930 Yale University – Jerusalem School Expedition at Jerash. First Campaign. *BASOR*, 40: 2-11.
- Frantz, A.  
1988 *The Athenian Agora 24. Late Antiquity: A.D. 267-700*. Princeton and New Jersey, American School of Classical Studies at Athens.
- Herschkovitz, I.  
1988-89 Cremation, its Practice and Identification: A Case Study from Roman Period. *TelAvivJA* 15/16: 98-100.
- Kader, J.  
1996 *Propylon und Bogentor*. Damaszener Forschungen 7. Mainz, Philipp von Zabern.
- Kalaitzoglou, G. et al.  
2012 Report on the Geophysical Prospection of the Northwest Quarter of Gerasa/Jarash 2011. *ADAJ* 56: 79-90.
- Kehrberg, I.  
2009 Byzantine Ceramic Production and Organizational Aspects of Sixth Century AD Pottery Workshops at the Hippodrome of Jarash. *SHAJ* 10: 493-512.
- Keller, D. R., Porter, B. A. and Tuttle, C. A.  
2012 Archaeology in Jordan, 2010 and 2011 Seasons. *AJA* 116: 693-750.
- Kenkel, F.  
2012 *Untersuchungen zur hellenistischen, römischen und byzantinischen Keramik des Tall Zirā'a im Wādī al-'Arab (Nordjordanien)-Handelsobjekte und Alltagsgegenstände einer ländlichen Siedlung im Einflussgebiet der Dekapolisstädte*. Doctorate Thesis University of Cologne 2012, Cologne.
- Kraeling, C. H.  
1938 *Gerasa. City of the Decapolis*. New Haven, American School of Oriental Research.
- Krencker, D. and Zschietzschmann, W.  
1938 *Römische Tempel in Syrien*. Denkmäler antiker Architektur. Berlin and Leipzig, de Gruyter.
- Kreuz, P.-A.  
1999 *Kaiserzeitliche Heiligtümer im nordsyrischen Kalksteinmassiv*. Unpubl. MA Thesis, University of Cologne.
- Lapp, P. W.  
1961 *Palestinian Ceramic Chronology 200 BC-AD 70*. New Haven, ASOR.
- Lichtenberger, A. and Raja, R.  
2012 Preliminary Report of the First Season of the Danish-German Jerash Northwest Quarter Proj-

- ect 2011. *ADAJ* 56: 231-239.
- in press Intentional Cooking Pot Deposits in Late Roman Jerash (Northwest Quarter), Syria.
- Magness, J.  
1993 *Jerusalem Ceramic Chronology circa 200–800 AD*. Sheffield, Continuum.
- Marco, S. *et al.*  
2003 Archaeology, History, and Geology of the AD 749 Earthquake, Dead Sea Transform. *Geology* 31(8): 665-668.
- Parapetti, R.  
2002 Gerasa und das Artemis-Heiligtum. Pp.23-35 in A. Hoffmann and S. Kerner (eds.), *Gadara-Gerasa und die Dekapolis*. Bildbände zur Archäologie. Mainz, Philipp von Zabern.
- Porat, L., Frankel, R. and Getzov, N.  
2012 The Lever Presses of Eretz Israel in the Light of the Alone Abba Oil Press, *Atiqot* 70: 84\*-86\*.
- Seigne, J.  
1986 Recherches sur le Sanctuaire de Zeus a Jérash (Octobre 1982-Décembre 1983), Rapport Préliminaire. Pp.29-59 in F. Zayadine (ed.), *Jerash Archaeological Project 1981-1983*, I. Amman, The Department of Antiquities of Jordan.
- Steinsapir, A. I.  
2005 *Rural Sanctuaries in Roman Syria: The Creation of a Sacred Landscape*. BAR International Series 1431. Oxford: Archaeopress.
- Tate, G.  
1992 *Les Campagnes de la Syrie du Nord du II<sup>e</sup> au VII<sup>e</sup> Siècle*. Paris, P. Geuthner.
- Timm, S., Abu-Shmeis, A. and Nabulsi, A.  
2011 Zwei griechische Inschriften einer Bleiurne mit Leichenbrand aus Hirbet Hiğra in ‘Ammān, Jordanien. *ZDPV* 127,2: 175-184.
- Tsafrir, Y. and Foerster, G.  
1992 The Dating of the ‘Earthquake of the Sabbatical Year’ of 749 C.E. in Palestine. *BSOAS* 55,2: 231-235.
- Tsuk, T.  
1988/89 The Aqueduct to Legio and the Location of the Camp of the VIth Roman Legion. *TelAvivJA* 15/16: 92-97.
- Waliszewski, T.  
2009 Technological Similarities Across the Jordan Valley. *SHAJ* 10: 709-721.
- Zwikel, W.  
1990 *Räucher kult und Räuchergeräte. Exegetische und archäologische Studien zum Räucheropfer im Alten Testament*. Freiburg, Vandenhoeck and Ruprecht.

