

# THE TALL ZAR‘A AND THE GADARA REGION PROJECT IN THE YEARS 2007 AND 2008

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## Introduction

There are only a few areas in Palestine where its history can be studied in such a concentrated manner as in the Wādī al-‘Arab. This valley, which is located roughly five kilometres south-west of the ancient Decapolis city of Gadara (today Umm Qays) provided excellent living conditions: numerous springs, fertile soils, and a moderate climate. In addition, a trade route ran through the wadi which once linked Egypt with Mesopotamia. The economic success and industriousness of the wadi’s inhabitants have left plenty of traces. Over one hundred sites mark out the distinguished history of human settlement in the region from the advent of sedentism to the Islamic period. The most imposing hill in the valley, Tall Zar‘a, possesses its own artesian spring and the very best potential for settlement. It is therefore not surprising that it was continu-

ously inhabited for over 5000 years (**Fig. 1**).

The German engineer Gottlieb Schumacher was the first European to visit the region since the crusades when he explored Transjordan in 1885 and happened upon the Wādī al-‘Arab. The valley, which had prospered for millennia had, however, changed a great deal since the Ottomans arrived. The Bedouins told Schumacher that the wadi had degenerated into a “favourite hideaway for fugitives and criminal riffraff” (Steuernagel 1926: 80-83).

## The 2007 and 2008 Campaigns

The ‘Gadara Region Project’ was initiated by Prof. Dr. Dr. Vieweger in the year 2001. The first extended excavation was carried out in 2003. Since 2004 the project is co-run by the Biblical Archaeological Institute in Wuppertal and the German Protestant Institute of Archae-



*1. Tall Zar‘a from south (spring 2008).*

ology under the direction of Prof. Dr. Dr. Dieter Vieweger and Dr. Jutta Häser.

The German team works twice a year on the Tall Zar'a. The campaign in 2007 was carried out from the fourth of March to the 10th of April and from the 31st of July to the 17th of August; in 2008 it took place between the seventh of March and the 14th of April and the 18th of July and the second of August.

### **The Tall Zar'a in the Wādī al-'Arab**

Tall Zar'a is the most central and strategic place the Wādī al-'Arab (**Fig. 2**). It lies at the confluence of it with its largest tributary, the Wādī az-Zaḥar, and rises impressively 22 to 40m above the surrounding countryside (depending on the direction). The circular-shaped hill has a diameter of 240m at its base and 160m at its plateau, and boasts an artesian spring in its centre. It was used for farming up until very recently, as expressed in its name: 'hill of agriculture'.

The artesian spring on Tall Zar'a always supplied enough fresh water for the people who lived there. The neighbouring wadis with their plentiful water supply, to which the many disused water mills in the area still bear witness, enabled the inhabitants to maintain a high standard of living and concentrated settlement activity, even in the Roman period when the tall was somewhat overshadowed by Gadara.

With its 12m of cultural layers, Tall Zar'a is as yet the only place in northern Jordan where settlement history from the Early Bronze Age to the Islamic Period — a period of over 5000 years — can be investigated at one single site. The tall contains information on all of the most significant historical periods in Palestine since the fourth millennium BC. As such, it sheds light not only on the local history of the area, but also exemplarily on thousands of years of cultural development in Palestine.

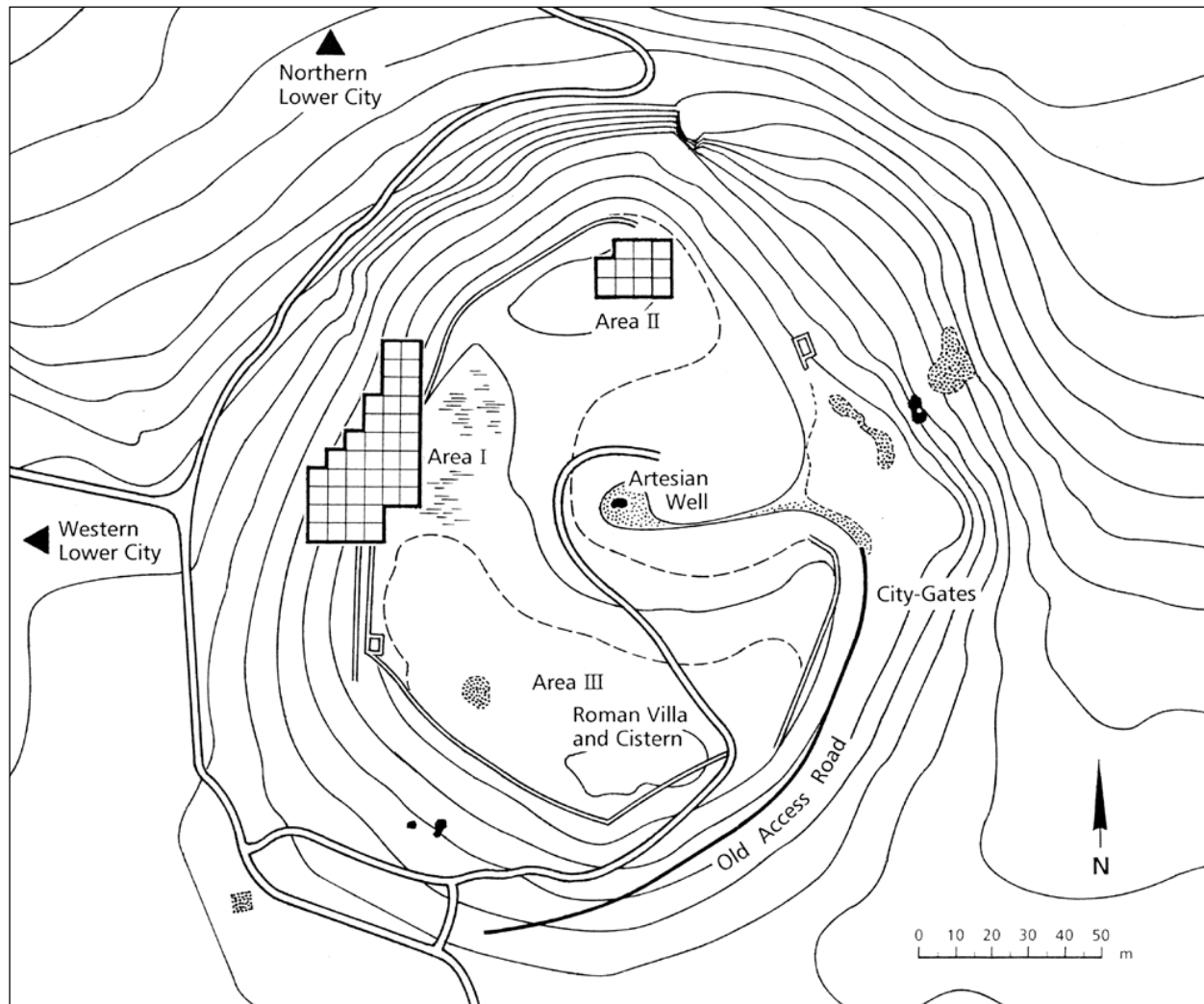
### **Areas I-III (Fig. 3)**

The main original objective of opening Area I in the western part was to understand the stratigraphy of the tall (Vieweger 2003, 2007; Häser and Vieweger 2005a, 2005b; 2007b, 2007c; Vieweger and Häser 2005a, 2005b). The topographical situation was also seen to be particularly suitable here. The natural slope of the hill is at its least protective in this spot: only 22-25m height difference to the foot of the hill. For this reason it was logical to expect the inhabitants to have built fortifications on this side. The gain from this area is impressive: the successive layers have given us a valuable insight into the history of northern Transjordan from the late Bronze Age to the Umayyad period.

By summer 2008, 1075m<sup>2</sup> had been opened and a further 500m<sup>2</sup> are prepared for excavation in Area I. The depth of the excavations at present



2. Tall Zar'a (center) between the Wadi az-Zaḥar (above) and the Wādī al-'Arab (below) above the modern dam from the north (Umm Qays).



3. Overview plan of the tall and its three areas [Sketch by Ernst Brückelmann, Brüggen-Born/BAI Wuppertal].

is a mere 4.5m of the presumed 12m; chronologically, the latest period of the Late Bronze Age has been reached. For logistical and, more importantly, safety reasons it is not possible to continue any deeper into the older strata until the Late Bronze Age stratum is excavated in the entire area and all the baulks are removed (**Fig. 4**).

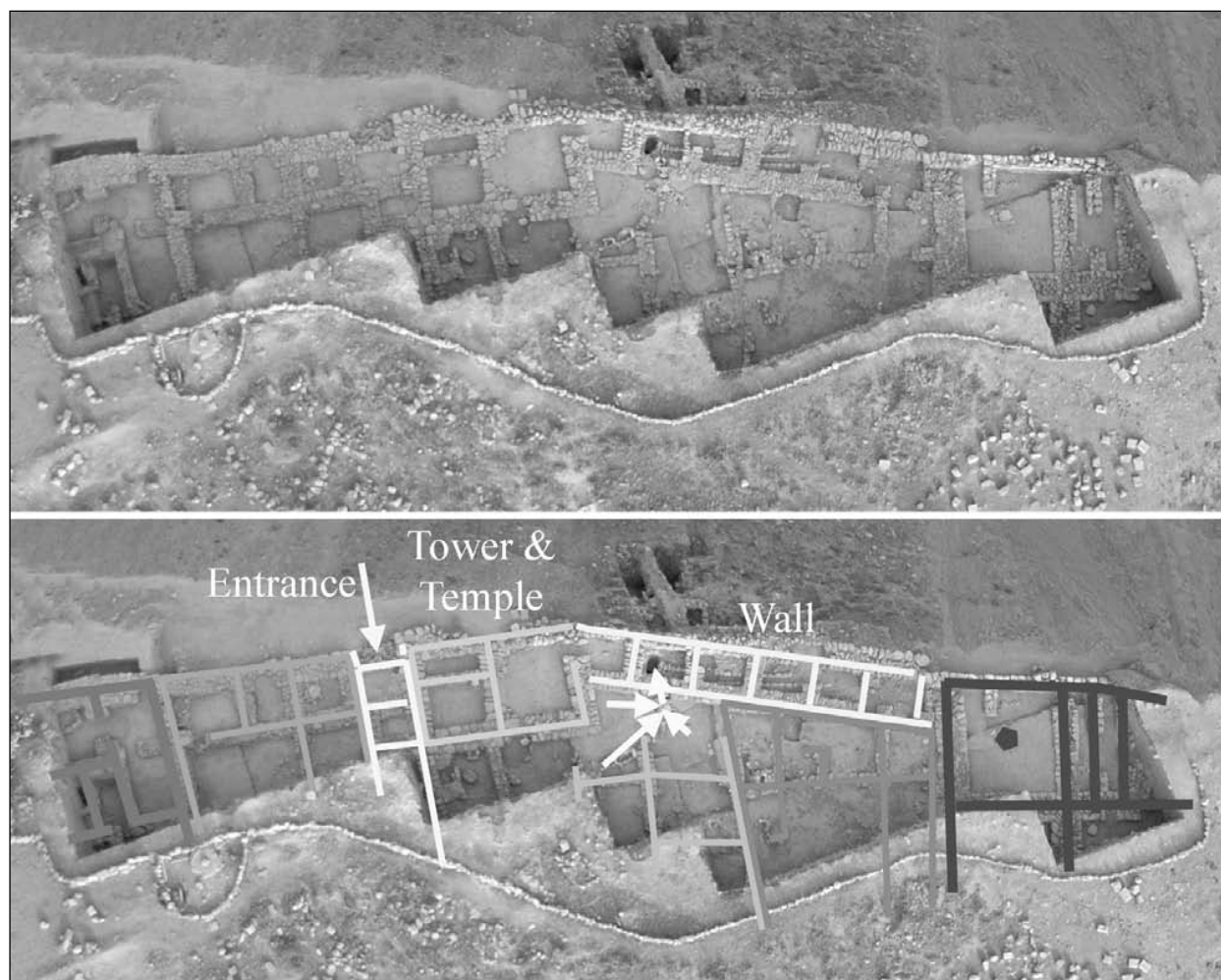
Area II was opened in the spring campaign of 2006 in the north of the tall (**Fig. 5**). It lies at the most prominent part of the tall's plateau, and was well protected from external enemies by the 44m high cliffs that form the slope to the north. Prestigious and/or administrative buildings are expected in this part of the tall. By spring 2007 there were 800m<sup>2</sup> opened in that area.

Area III was chosen in spring 2007 for future excavations. It is an area of about 1000m<sup>2</sup> in the

southern part of the tall which contains a large amount of rubble and Roman-Byzantine sherds on its surface, suggesting it houses the remains of a late antique rural settlement. A cistern was discovered in earlier years, which is currently accessible through a hole in its roof, and its dimensions are impressive: 10.5 by 6m at the base, and almost 5.75m high with an 8cm plaster lining. The fact that such a large cistern was necessary a mere 80m away from a bubbling spring and that a large ground plan could clearly be seen in the aerial photographs pointed to an imposing and significant installation (**Fig. 6**).

#### **Area I**

Excavations have been taking place in Area I since 2003, and the yearly reports have appeared



4. Aerial photograph and interpretation of Area I.

in previous issues of ADAJ (Vieweger 2002: 157-77; Häser and Vieweger 2005b: 135-46, 2007b: 9-20, 2007c: 21-34). In the following, therefore, the focus will be on the discoveries made in 2007 and 2008, which concern above all the strata of the late Bronze Age and the Iron Ages I and II.

The initial surface surveys already yielded great amounts of Early Bronze Age pottery in the northwest of the tell, suggesting that one would find considerable settlement remains from this period in this area. This has been verified, but due to the large number of other cultural layers above, this stratum has only been investigated in the form of the outermost, and very large, city wall. The wall does, however, give first impressions of the size and significance of the city: a well fortified settlement typical of the Early Bronze Age in Palestine.

A few meters above the Early Bronze Age wall, the remains of two strata of Middle Bronze Age structures have also been excavated (in layered trenches because of the gradient). They are domestic houses whose outermost walls have eroded down the slope. The wall will not only give insights into Early Bronze Age urban culture, but also the period of re-urbanisation in the Middle (1800–1550BC) and Late (1550–1200/1150BC) Bronze Ages.

At this stage we still know very little about the transition from the Middle to the Late Bronze Age, although the middle stratum of the Late Bronze Age has already begun to appear in some areas. The northern courtyard house (AL-AO 117-119), for example, already shows a similar size and ground plan in the middle Late Bronze Age stratum as in the later stratum of this period, although the later Late Bronze Age casemate



5. Aerial photograph of Area II.

wall clearly cut off the western part of the building. A closer look at the water chute (AM 117; later Late Bronze Age) reveals that this was also already in use in the middle phase. In the later Late Bronze Age stratum, the chute is extended upwards using fieldstones. This basic concept of drainage in the Bronze Age city using vertical shafts with dry stone lining is, however, perhaps even older. A structurally identical shaft can be found in AM 115/116, outside the walls of the Late Bronze Age city and presumably part of the Middle Bronze Age stratum.

Other observations also appear to support the idea of a certain amount of architectural continuity between the Middle and Late Bronze Ages.

Under the courtyard of the southern courtyard house a second bottle-shaped, stone-lined 'hollow' in the ground (AF 116) was uncovered in 2008. It has been excavated to a depth of 1.4m. An Egyptian faience figurine and a mace head were among the special finds from this context. The same structure could be seen in AH 115 in the later stratum of the Late Bronze Age court-

yard house. It has not yet been clearly identified, but it seems likely it was a large silo used for storing grain.

#### *Late Bronze Age (Later Stratum)*

The earliest layer that has been extensively excavated is the later Late Bronze Age stratum (14th to 13th century BC) (**Fig. 7**) (Häser and Vieweger 2007a; Vieweger and Häser 2007a). The most significant structure uncovered so far is the massive casemate wall that once protected the city on its north-western edge. The pottery dates it to the Late Bronze Age and the scientific analysis of charcoal remains confirms this, giving an approximate dating to somewhere between 1450 and 1300 cal. BC. Six casemate chambers have been excavated thus far. In peacetime they were used as storage rooms, in wartime they could be filled with earth and stones to produce an enormously thick wall that would protect the inhabitants of the city from attack. Behind the wall was a large courtyard with three covered channels. These collected



6. Aerial photograph of Area III.

the rainwater that accumulated behind the city wall into a settling basin in one of the casemate chambers, and from there into the vertical chute discussed above.

In the south the casemate wall ended in a large, inward-facing tower in two parts. In the southern half we found a large room which had seen a number of conversions, the latest of which involved a low partitioning wall in the west, creating behind it a small room only 1m wide. On this wall were two large basalt column bases which once supported wooden columns that held up the roof. The peculiar character of this small partitioned structure calls to mind the Bronze Age gate sanctuaries found elsewhere. A large stone, cut flat on the bottom and with a symmetrical peak towards the top, which lay toppled beside the column bases, may be a cultic stone due to its similarity to such cult stones found in Palestine.

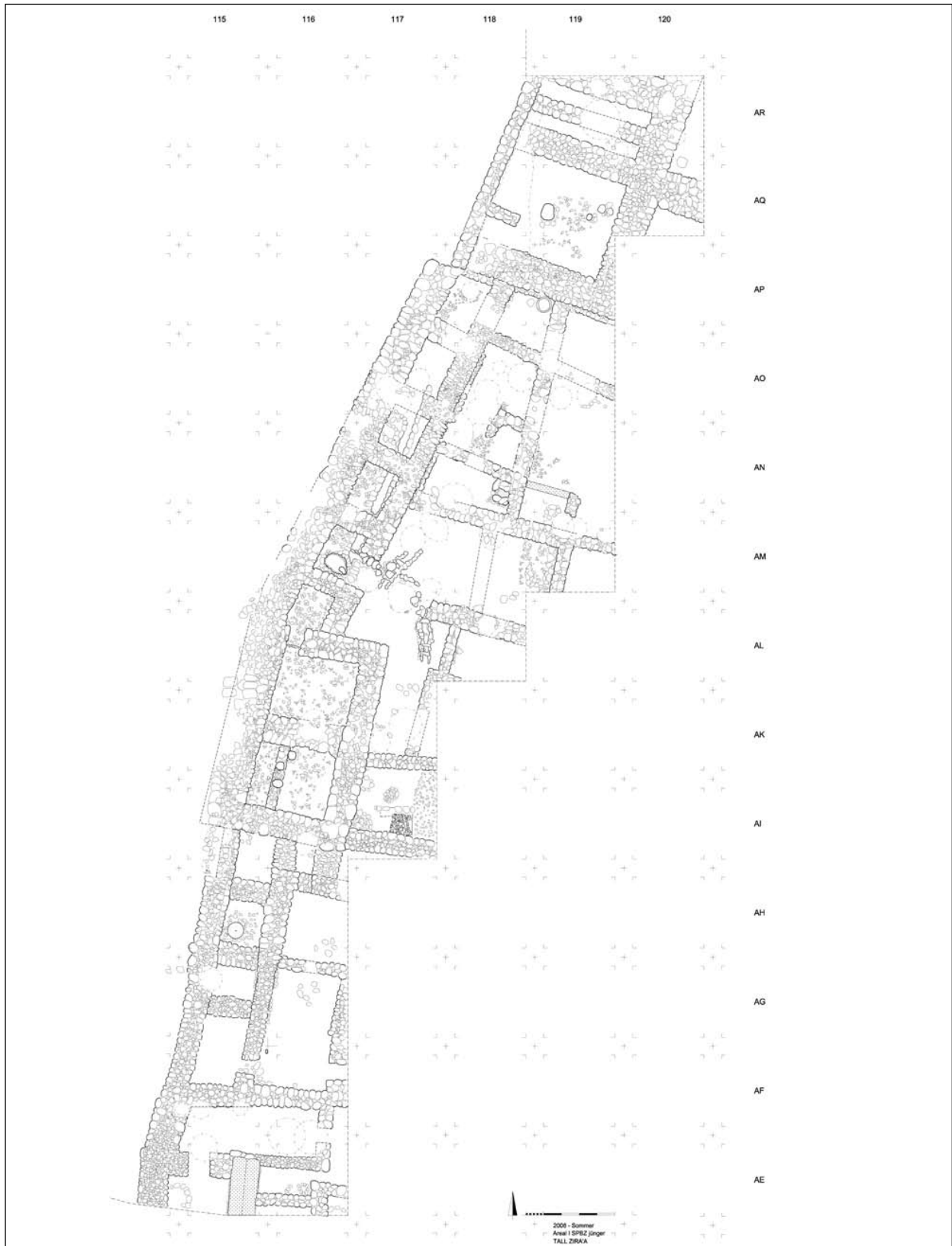
To the south of the 'gate sanctuary', we uncovered a 2.75m-wide gate opening. This gate would have provided the most direct access for

pedestrians to the lower cities to the north and west.

To the south of the gateway is also the bottle-shaped, stone-lined 'hollow' in the ground mentioned above (AH 115), the entrance to which was covered by a meticulously worked, disc-shaped stone with a diameter of roughly 1m and bearing a 15cm wide hole in its centre. The hollow has been excavated to a depth of 2.6m. Due to the problem of collapsing it is not possible to investigate this structure further until the surrounding layers have been removed.

Among the objects that were found on the paving surrounding the hole were the remains of a large red and black on beige painted jar with two handles bearing a number of animal scenes, one of which includes a human. Further pieces were found in the area in spring 2007, so it was possible to almost completely reconstruct the neck and base of the jar. The animal scenes in the middle frieze have now also been joined by a lizard. The images may depict scenes from legends or mythology, but it needs further research





7. Architectural plan of the Late Bronze Age (youngest stratum) from the 14th to 13th century BC [Drawing by Marianne Vogt-Werling/BAI Wuppertal].

to know for sure. This jar, its context, and the other pottery sherds found with it date to Late Bronze Age. A charcoal sample from the layer of loam in which the sherds of the vessel were situated dates to between 1440 and 1300 cal. BC.

In the spring campaign of 2006, the first domestic structures were found inside the casemate wall. Unlike their Iron Age counterparts, these houses have sizable ground plans. The width of their walls suggests that they possessed a number of floors. Three courtyard houses have been excavated to date, as well as two monumental buildings in the north and south of the excavation area. While the ground plans of the houses in AG-AI 115-116 and AL-AO 117-119 can already be surmised from the existing evidence, this is not the case with the building complex in AK-AM 117-119. In fact, none of these large house complexes have been excavated in its entirety, so in order to make sense of the contents and form of these buildings, it is planned to extend the excavation area to the east in 2010 and 2011.

The monumental buildings in the north and south deserve a special mention, even if they have only been partially excavated at this stage. The monumental house in the north consists of a large roofed room with a column base, a part of a staircase, a little uncovered part of the courtyard and one more adjacent room. Two radiocarbon samples from this context have yielded dating of 1450/1440 and 1300BC with 95.4 % probability. The valuable finds that were made in this structure suggest it may have had a special function. Among these is a cylinder seal measuring 3cm in height and 1.3cm in diameter. It is made of faience and covered with a green glaze. It is engraved with the image of two stags colliding and looking over their backs. They are divided by a further line and the seal also bears an interlaced border. The seal belongs to the western group of the so-called 'Common Style' of the Mitanni glyptics and can be dated to the 14th to 13th centuries BC.<sup>1</sup> Examples of the western version of this style have mainly been found in Palestine and Syria.

On the floor very close to where the seal was found, in an area of 1.5m by 1.5m, another

23 cylinder seals of varying quality and image type were found. It would seem that the seals, together with a silver pendant decorated with a standing figure (Fig. 8; 5.8cm x 3.4cm), a large scarab (Fig. 9; 3.7cm x 2.4cm x 1.4cm) and dozens of beads, fell to the ground from a higher surface (a table, cupboard or shelf) during the destruction of the house and were left scattered over the floor.

Cylinder seals were used both to identify and to certify. Because each seal had a different engraving, the seal's impression could be used to identify the seal's owner over large distances. Clay seals with such impressions were used, for example, to seal the knots tying various documents together or around the lids of closed containers of goods to protect their contents from unauthorised use, alteration or removal. The seals were an important element of legal procedure for thousands of years and played such a vital role in the economy, communications and politics that they were seen as signs of authority



8. Silver pendant decorated with a standing figure.

1. The authors thank Prof. Beate Salje for her kind help

with identifying the cylinder seals.





9. Scarab, found in the youngest Late Bronze Age stratum.

and worn as jewellery.

Most cylinder seals from Tall Zar'a are made of faience and are green-glazed. This material contains 90% ground quartz or natural sand with added lime and alkaline carbonates. Burning this produces a sintered material which is not completely melted, and, as such, is not quite glass. The motifs were engraved using a cutting wheel and a drill with a spherical head (Salje 1990: 103).

Adjacent to the large roofed room with a column base, another part of the building can be seen in AR 119/120: a staircase consisting of two thick, parallel wall structures. Permitting an interpretation of the barely-excavated area in AR 120 as a courtyard, based on its floor of carefully-laid pebbles between two layers of white plaster, the staircase can be interpreted in the following ways:

- a) A single flight structure would lead up from east to west. At the top, the person would walk back parallel to a second flight that would lead, again from east to west, to a presumed third floor. In this case, a realistic estimate for

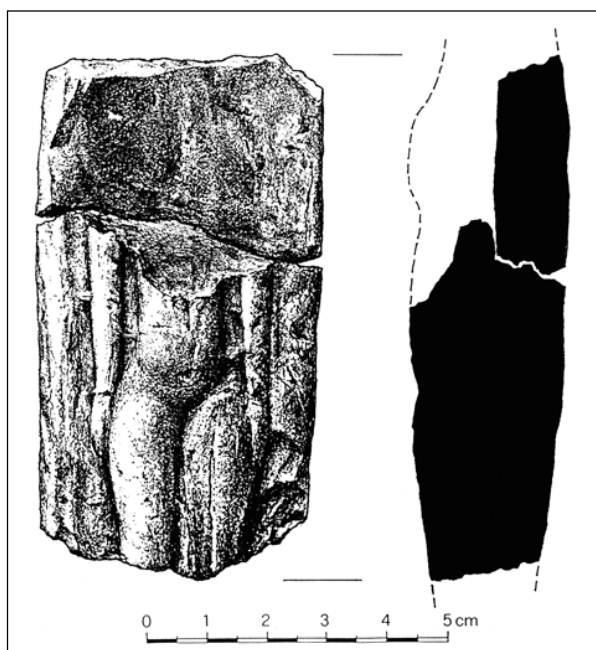
each floor height would be 2.2 to 2.4m.

- b) If it was a double flight structure, one flight would lead from east to west to a landing half way between the floors, a second would then lead from that landing from west to east to the next floor. In this case, a room height of 3 to 3.2m would be more realistic.

The large number of glass beads that have been found in this house complex and the appropriate industrial pottery vessels suggest that the tall may also have been home to a glass processing workshop in the Late Bronze Age. Further excavations are needed to answer questions concerning the function of the complex and the special activities in each room. The complete excavation of this complex is planned for 2009 to 2011. The preparation for this extension (removal of the waste soil from previous campaigns in 2003 and 2004 and of the colluvium) by another 500m<sup>2</sup> to the north and east was undertaken in summer 2008.

The monumental building in the south of the excavation area is similarly significant. Alone the 1m high mud brick walls with their white plaster rendering are impressive in their solidity. The monumental architecture of the new, partly uncovered, house in the south of Area I also points to an important function of the complex and an important owner of the house. Despite this, it is at this stage not possible to plan an appropriate extension of the excavation area 500-600m<sup>2</sup> to the south due to the focus on the stratigraphy of Area I.

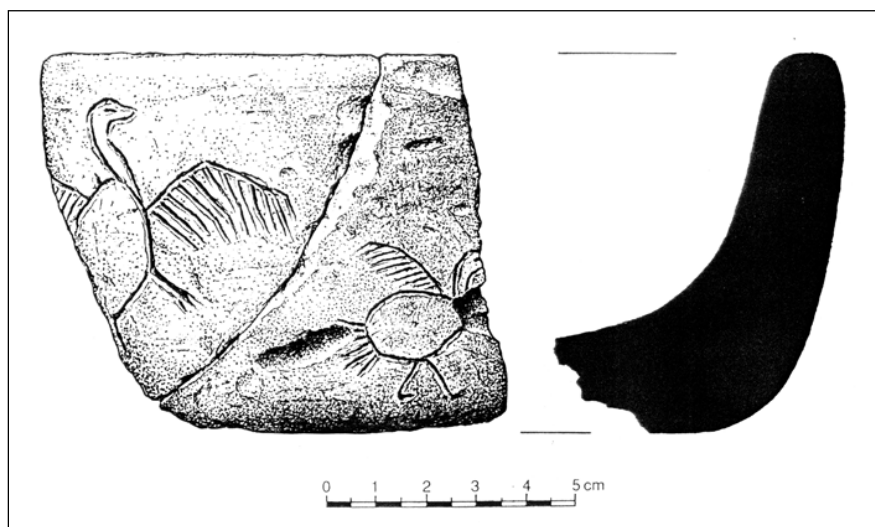
The wealth of the city in this period and its wide-reaching trade links are reflected in the manifold finds of this period, among them five scarabs (one inscribed with the praenomen *A-wsr-re*, a Hyksos ruler with the throne name Apophis, who reigned from about 1590 to 1550BC; 12; 1.5cm<sup>2</sup> 1.0cm<sup>2</sup> 0.7cm). Apart from the scarabs, cylinder seals and the numerous glass beads, a terracotta figurine of a naked, standing woman was found in one of the courtyard houses (**Fig. 10**). The middle section of a figurine depicts the Syrian-Palestinian fertility goddess Ashtarte/Ashera standing with her arms hanging down the sides of her body. Among the more interesting of our bronze objects (needles, awls and a chisel) was an arm of an originally wooden (?) figurine (**Fig. 11**). Noteworthy is also a calcite vessel carved with figures of birds (**Fig. 12**) alongside



10. Fragment of a terracotta figurine of the Syrian-Palestinian fertility goddess Ashtartel/Ashera. Height: 8.1cm; Width: 4.9cm [Drawing by Ernst Brückelmann, Brüggen-Born/BAI].



11. Bronze arm of an originally wooden (?) figurine from the Late Bronze Age stratum. Height: 4.3cm; Length: 4.9cm.



12. Calcite vessel carved with figures of birds from the Late Bronze Age stratum. Height: 7.8cm [Drawing by Ernst Brückelmann, Brüggen-Born/BAI].

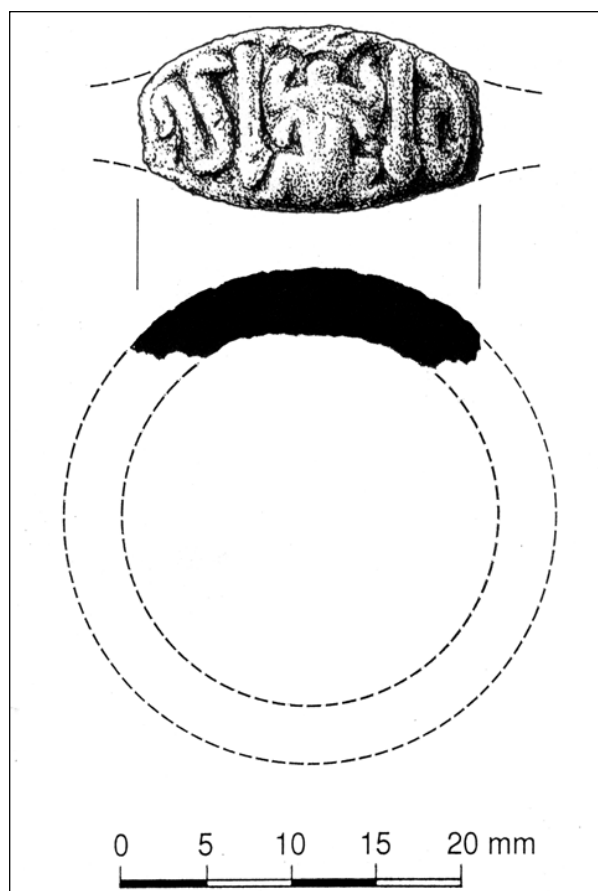
numerous sherds of imported pottery from Mycenaean Greece, Cyprus, and Egypt, and a decorated bone tool handle. Imported faience wares from Egypt include vessels with papyrus images and rings with seals (**Fig. 13**). Finally, a well-preserved kernos, a miniature silver vessel (?), an Egyptian/Egyptianising painted figurine and well-preserved daggers were found.

#### *Iron Age I*

The settlement on Tall Zar'a appears to have

experienced a dramatic cultural upheaval in the period that followed (12th to 11th century BC). This is directly or indirectly related to the disintegration of the Late Bronze Age Canaanite city-state system caused by the arrival of the Sea Peoples in Palestine. In place of the fortified city now stood an open village inhabited by farmers, without even an outer wall (**Fig. 14**).

The inhabitants of Tall Zar'a in the 12th to 11th centuries BC used the Late Bronze Age ruins for their own buildings (AO-AI 115-119).



13. Faience ring. Length: 2.1cm; Width: 1.3cm; Thickness: 0.4cm [Drawing by Ernst Brückelmann, Brüggem-Born/BAI].

The remaining foundations of the city wall were furnished with storerooms and workrooms for various agricultural activities. The walls of stables and simple sheds were built against the remains of the Bronze Age walls. What has been found corresponds to the traditional scholarly view of the beginnings of other settlements to the east of the Jordan such as Ammon, and of Israelite and Judaeen settlements in the highlands west of the Jordan as being small and village-based.

On the other hand, in the northern (AP-AR 118-120) and southern part (AI-AE 115-116) of Area I, very large and well constructed buildings were uncovered. The house in the south (AI-AE 115-116) was built with a paved floor at the entrance and with thick and elaborately constructed stone foundations. A door hinge stone was found in its original position. This courtyard house shows clearly the extent of continuity between Late Bronze and Iron Age architectural

style. The courtyard (AG-AH 116) contained a large water container and a *ṭābūn* oven and grinding stone in the southwest corner. While stone-lined silos dominate the middle area of the Iron Age I stratum (e.g. AK 116; AM 117; AN 117-118 and AO 117-118), the southern building contained at least two large, plaster-lined silos that reach deep into the Late Bronze Age layers (AG 115-116; AE 116). Of particular interest is also a well-preserved oven made of various layers of mud, lime and pottery sherds that was found in the courtyard in AE 116. It is not yet clear whether this area contains two attached or one single dwelling.

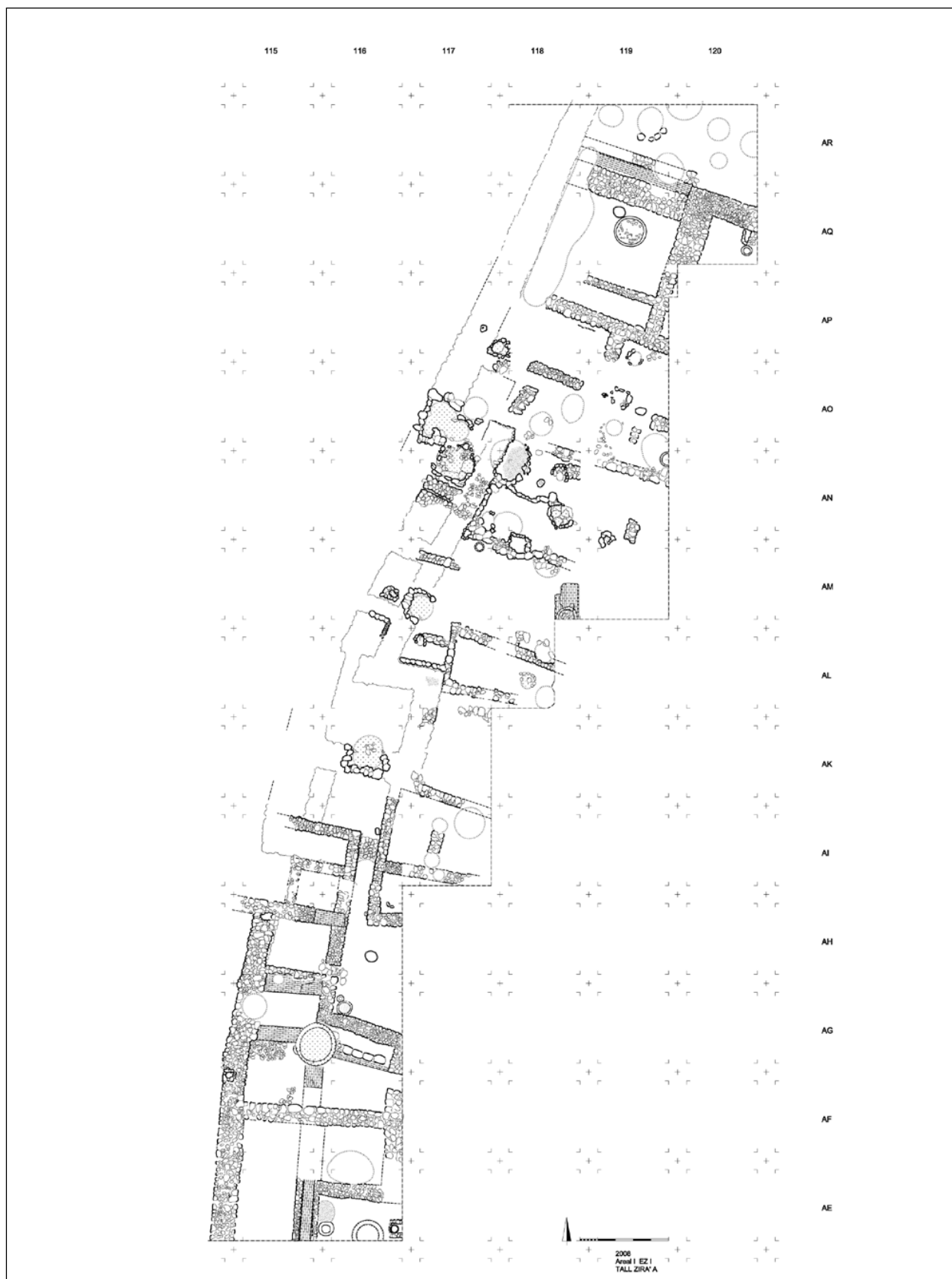
The northern building (AP-AR 118-120) was uncovered in 2008. With its large courtyard (AP-AQ 119), its long, narrow rooms built to the north and south of the yard and its well-preserved main room in AQ 120, it can possibly be defined as a so-called “4-room house” which is typical of the Iron Age I. Further excavations in 2009 and 2010 will provide an answer to this question.

In summary, in the Iron Age I period, Tall Zar'a was an agricultural settlement without fortifications, but with some larger buildings. Two charcoal samples from this stratum give a dating of between 1220 and 970 cal. BC, and 1270 and 1040 cal. BC respectively.

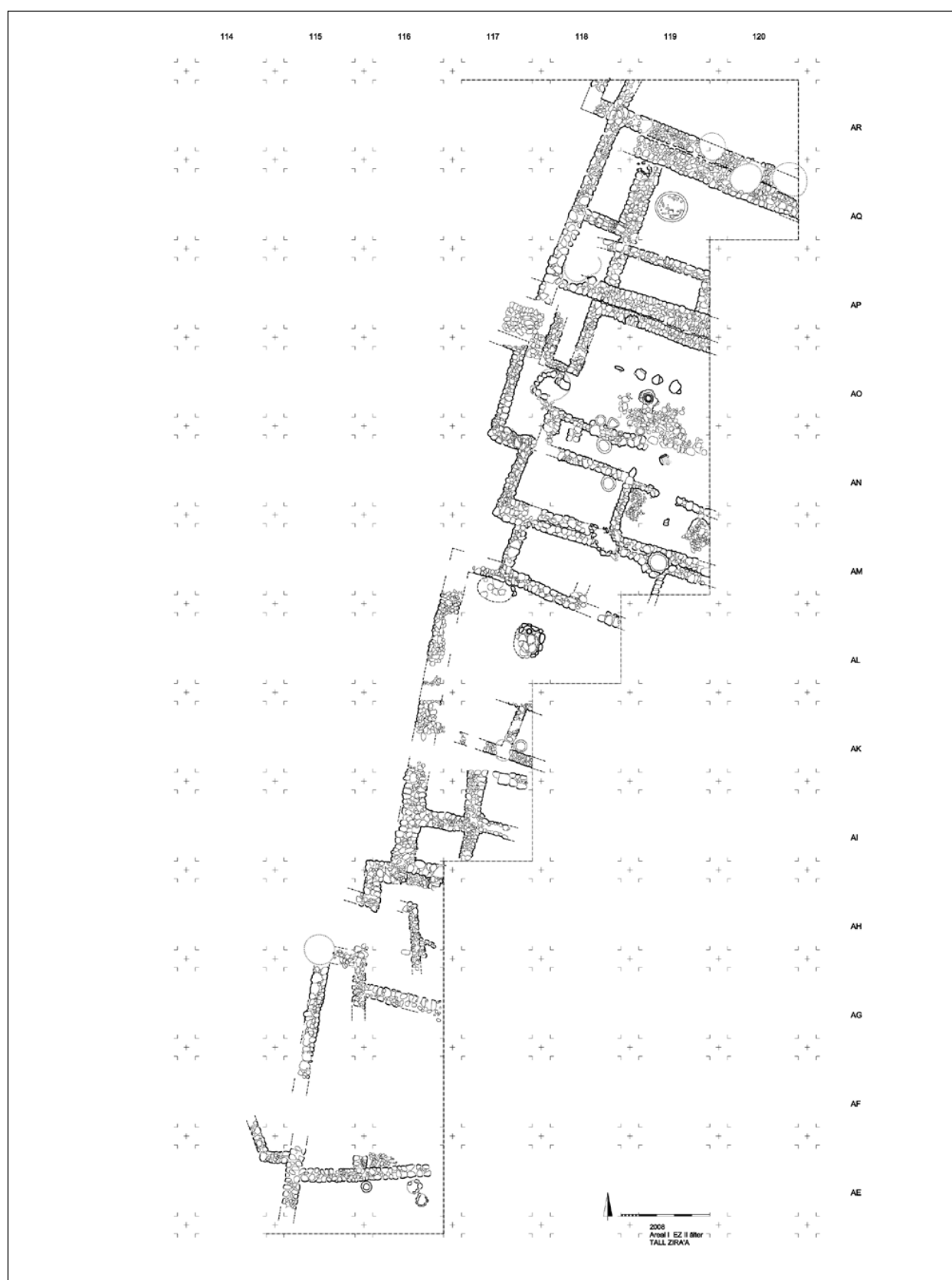
### *Iron Age II*

The architecture of the Iron Age IIA/B period points to a considerably larger population on the tall than in the Iron Age I period (**Figs. 15 and 16**). The settlement takes on an urban character and is once again protected by a town wall, albeit this time in zigzag form and a great deal less solid than its Late Bronze Age counterpart. Altogether the settlement appears to have developed in an agglomerate pattern, with houses built very close together and domestic and administrative structures directly next to each other. House and property boundaries are signified in many cases by double walls (two walls built directly next to each other).

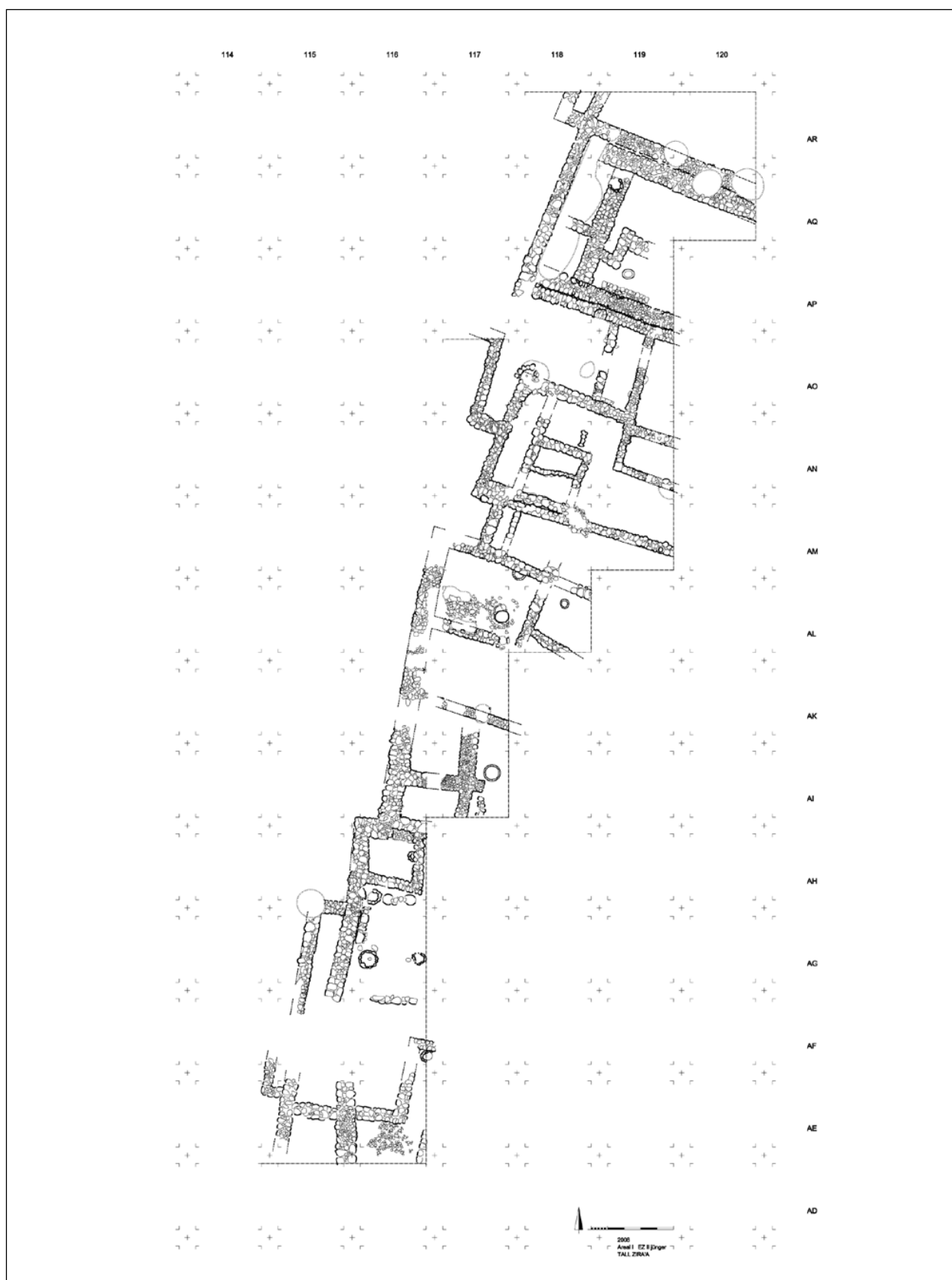
It can be presumed that an earthquake, a fire or an attack must have damaged parts of the town in around 900BC, as many buildings have two construction phases. The houses, with their large courtyards, were used not only for living but also storing supplies and producing food and



14. Architectural plan of the Iron Age I stratum in Area I [Drawing by Nicole Karagiannidou/BAI Wuppertal].



15. Architectural plan of the Iron Age II (older phase) in Area I [Drawing by Nicole Karagiannidou/BAI Wuppertal].



16. Architectural plan of the Iron Age II (younger phase) in Area I [Drawing by Nicole Karagiannidou/BAI Wuppertal].



wares. In one of the houses, three column bases of piled field stones divided a roofed space from a courtyard with oven and a large storage vessel. At the end of the row of column bases stands a cultic stone in its original position. The adjoining part of the house to the south was divided into four rooms and used as workshops: in the south-easternmost room, which was partially paved, a (metal or glass?) smelting furnace with a crucible was found. It was carefully excavated and is now being examined in the German Mining Museum in Bochum. Further to the north was a room or yard with an elaborate fireplace and five baking ovens that had once been used simultaneously.

Other remarkable finds were excavated in the Iron Age II layer, including a 2.4cm high cylinder seal, similar to the one described above. It shows two stags facing each other with their heads turned backwards and their bodies partly fused together. A naked man stands next to them holding a so-called bouquet tree. This depiction, like the other one, is in the style of the Mitanni glyptics and as such is also dated to the 14th or 13th century BC. As it was found in a later Iron Age context, it would appear to have been an heirloom.

The head of a terracotta figurine portraying Ashtarte/Ashera with a so-called Hathor-hair-style was also found in one of the houses. It is a remarkable piece due to the working of the face and profile; from the front it is the face of a woman, while from the side it is the profile of a lioness. This kind of representation is as yet unique in Palestine. The closest parallels are two Ashtarte figurines with Hathor wigs from Tall Massad al-Jisl (Rahmani 1959: 184–85 Pl. XXIV, 1–3) and Bayt She'an (Rowe 1940: Pl. LXVIII, 3) which, however, do not have the face of a woman but of a lioness and present a combination of the goddess Ashtarte with the Egyptian goddesses Hathor and Sekhmet.

Further interesting finds were made in the later Iron Age II stratum, the layer of rebuilding after the catastrophe, including a small, seated gold and silver-plated bronze figurine (7.5cm high) depicting the Syrian god El (also worshiped during this time in Israel and Judah) in a blessing stance (**Fig. 17**). The figurine was found above a burnt layer beneath the wall of an Iron Age dwelling, and perhaps served as a



*17. Seated gold-plated bronze figurine depicting the Syrian god El in a blessing stance.*

foundation sacrifice. The previous building was destroyed sometime between 1270 and 980 cal. BC, so the deposition of the figurine was later.

An oval seal impression in clay (3.6cm x 2.7cm x 1.7cm) also depicts a deity, this time Hadad or Baal standing on a bull. Impressions of tie fastenings can still be seen on the back of the piece.

Another fascinating find is the basalt head of a man (19cm x 12.5cm x 8.5cm). Although the facial features are not very clearly worked, one can easily make out the mouth, the nose, the eyes, and the ears. On the forehead is a small protrusion that suggests the head once had some sort of cap. The figure was buried face-down under a wall of an Iron-Age house, and, as such, must be older. It is unclear who is portrayed. Perhaps it also represents a god or one of the city's important men.

Everything changed dramatically with the Neo-Assyrian occupation of the eighth century BC; the cities of northern Transjordan ceased

to exist. Tall Zar'a also lost its urban character in this period. While the kingdoms of 'Ammon and Moab further south flourished and produced great cultural feats under Assyrian control, northern Gilead became a rural backwater.

#### *Hellenistic, Roman and Byzantine Era*

During the Early Hellenistic period (fourth to second century BC) Area I was used but not inhabited. The people lived in other parts of the tall. Area I was mainly used for waste disposal. Three large pits for storing grain had also been dug and carefully lined with stones. Among the more interesting objects of this era is the bronze head of a bear.

In the late Hellenistic period the settlement pattern on the tall changed fundamentally once again. Wādī al-'Arab and its settlements now lay in the hinterland of the new city of Gadara. Even the Roman roads ignored topographical sense and aligned themselves with the new urban centre. The tall ceased to be the central urban settlement of the region. But it was not deserted; on the contrary, it remained densely settled, probably due to its excellent water supply and fertile soils.

Five large houses have been uncovered from this period in Area I along a cobbled street that follows the contour of the hill (**Fig. 18**). Apart from pottery, glass, and metal finds, also a number of coins came to light that attest to continuous settlement from the first century BC to the eighth century AD.

#### *Islamic Period*

A catastrophic earthquake in the eighth century AD spelt the end of the flourishing city of Gadara. It was not rebuilt and was very soon abandoned and forgotten. Added to this were the fundamental political alterations and climatic changes to much drier conditions of the early Islamic period. The Wādī al-'Arab again gained importance, albeit only locally, perhaps due to its continued excellent conditions for settlement and agriculture. Umayyad architecture in two different strata is known in Area I.

#### **Area II**

Area II is situated in the northeast of the tall plateau. Because of its high position this area is expected to yield administrative and/or cul-

tic buildings. By the end of spring 2008 an area of 800m<sup>2</sup> (AT-AX 128-133) has been opened. A large building with several building phases of the Roman-Byzantine period has been uncovered which was reused in the Islamic period. It was built over smaller houses which probably date to the Roman period (**Fig. 19**).

The southern extension of the large Roman-Byzantine building excavated in the last two years could be followed. Three rooms and two courtyards have been found which show a reorganisation of the large structure after heavy destruction which can be dated to the Byzantine period. In the debris inside the rooms two complete and two almost complete amphorae were found. The entrances were blocked at the end of the occupation. A ṭābūn, a storage basin and a pillar base were found on an earlier occupation level in the northernmost room. In the room south of it a floor covered with lime plaster was found. A large oven was also found in the eastern room as well as in one of the courtyards. Some fragments of wall paintings discovered in the debris show that the house was originally decorated with frescoes.

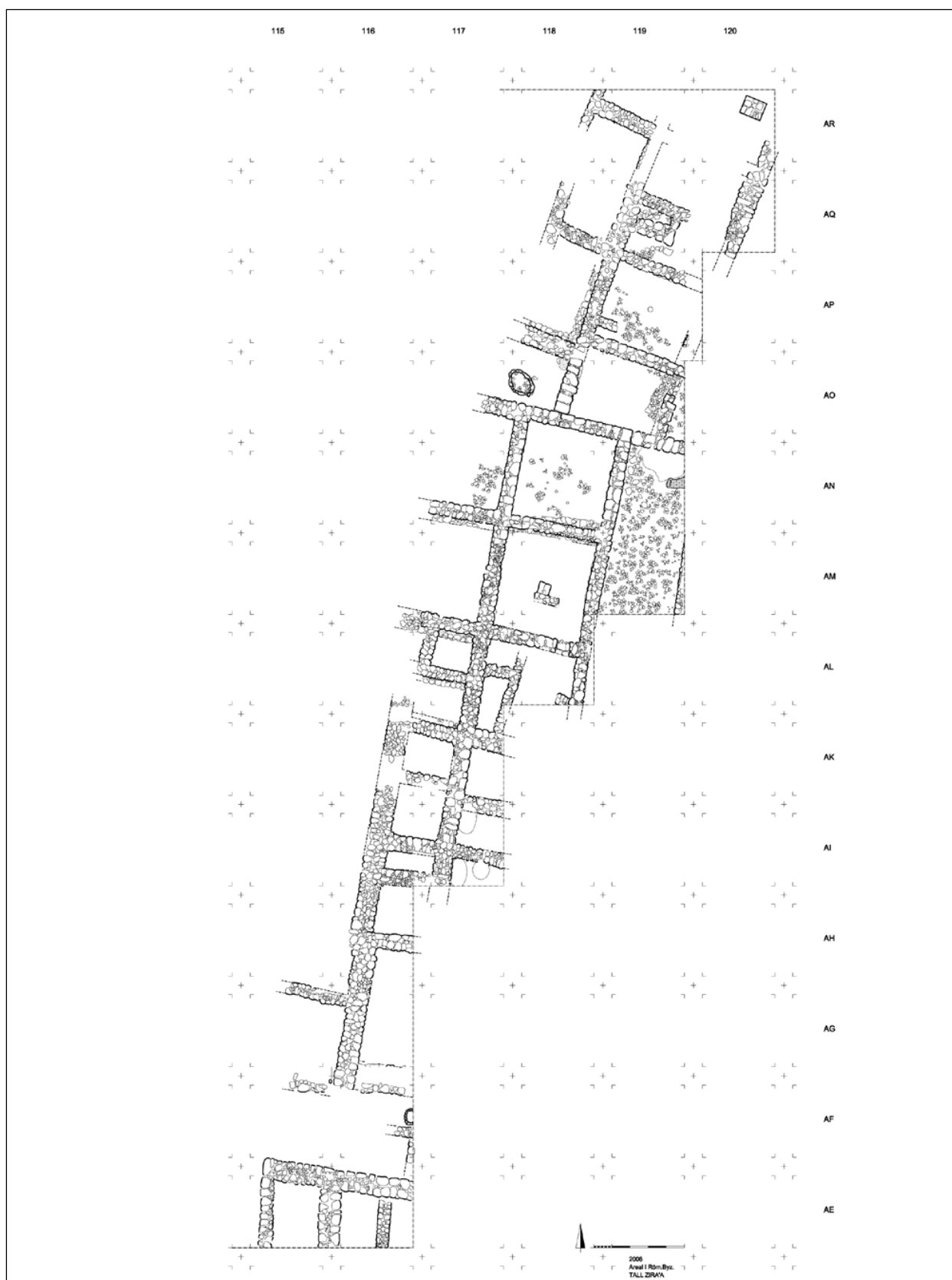
In the easternmost square, a separate building with several building phases could be identified. In AV 132 and AW 132 the easternmost extension of the large Roman-Byzantine building complex could be verified. In the squares AV 132 and AV 133 the eastern extension of the thick wall could be found which was already recognised in the squares AV 128 to AV 131 in the years before. However, in AV 133 all walls break off down the slope. In squares AY 131 and AX 132 the northern limit of the large Roman-Byzantine building could be identified.

In the next campaigns, the southern limit of the building phase has to be clarified. From the stones just under the surface it can be expected to be 2-3m to the south of squares AT 128-133. The western limits of this building complex also have yet to be found.

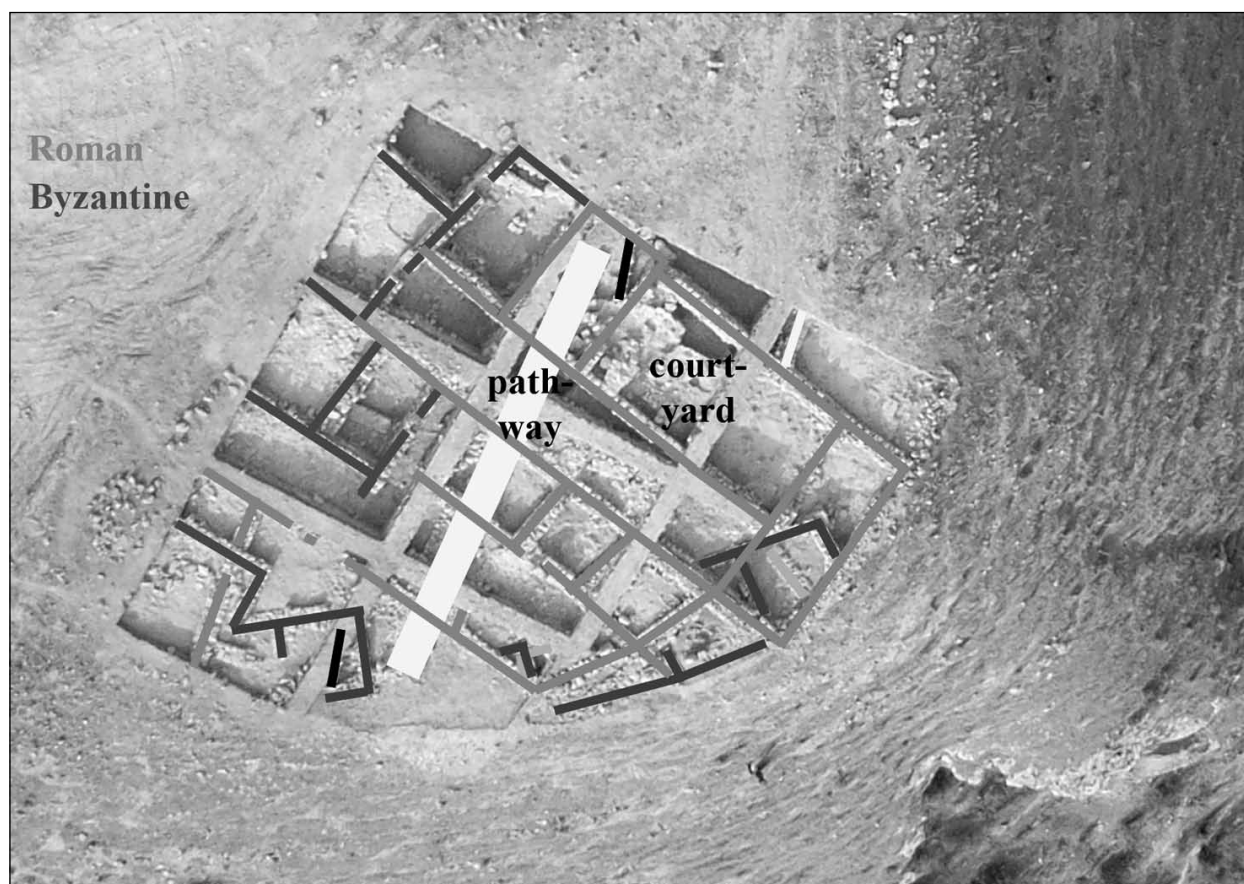
Work will continue in 2009 with an extension of the excavation area in order to see the complete extent of the building.

#### **Area III**

The excavations on Tall Zar'a in Summer 2008 focused on the new Area III in the southern part of the tall plateau. This area is the highest



18. Architectural plan of the Roman-Byzantine stratum in Area I [Drawing by Nicole Karagiannidou/BAI Wuppertal].



19. Aerial photograph of Area II with interpretation (All pictures BAI Wuppertal /DEI Jerusalem Amman).

on the plateau and has a large number of stones and wall structures on the surface. The survey of 2001 yielded a great deal of Roman and Byzantine pottery in this area, suggesting a large Roman-Byzantine building complex. Closer initial investigations also revealed the existence of two large Roman cisterns. In Spring 2007 all surface stones not obviously belonging to walls were removed and aerial photographs were taken using a helium balloon. In summer 2007 a test trench was opened in the western part of the area, revealing a Roman-Byzantine-period wall with gateway and part of a courtyard with some mosaic floor still intact.

Summer 2008 was the first large-scale excavation campaign. 24 squares of 5m x 5m, 600m<sup>2</sup> in total were opened in the central part of the area. These were U 123-128, V 123-128, W 123-128, X 123-128. The entire area, especially in the south, was badly disturbed by holes dug by grave robbers.

The oldest layer of settlement uncovered

in summer 2008 is part of a Byzantine-period building complex consisting of a large courtyard with some adjacent rooms. The main courtyard entrance (X 124) was a 2m-wide gateway of finely dressed stones which had a hole in the threshold for locking the gate. Towards the east, the courtyard contains the entrance to one of the large, barrel-vaulted cisterns mentioned above. The floor of the courtyard consisted of a layer of yellow plaster covered by a layer of white plaster which once formed the bed of a mosaic surface across the entire yard. This mosaic is now only preserved in parts near the gateway and in the middle, where a large roundel of patterned mosaic stones (red, black, white) was uncovered. A further section of mosaic is preserved near a basin and drain leading into the cistern from what may be the courtyard's northern wall. A similarly worked basin was found in the 2007 test trench (and in the meantime stolen) next to the gateway of the courtyard where it had served to collect rainwater from the gutters via a downpipe and

to redirect it via pipes below the courtyard surface into the cistern to the east. Together, these installations bear witness to a sophisticated and well-built rainwater catchment system and, considering the proximity of the artesian spring, a high water consumption of the building's inhabitants. Various large rooms measuring approximately 5m x 5m with smaller partitioning walls and white plaster floors were also uncovered adjacent to the courtyard to the south. Opposite the gateway across an alley a large wall (preserved to circa 1m) runs parallel to it with a badly damaged area that nevertheless suggests a similar gateway to that of the courtyard, albeit walled in at a later stage. Attached to this wall to the east is a low, long shelf consisting of a row of stones filled in with earth and an upper layer of mortar which may have been used to place containers or troughs on. The filling of this structure yielded only Byzantine sherds, showing it was also part of the original Byzantine structure, albeit perhaps a later addition.

The earthquake that destroyed Gadara in the mid eighth century AD can be expected to have also wreaked havoc on the settlement on Tall Zar'a and can perhaps be seen as the cause of the destruction of the Byzantine period building complex described above. It did not, however, stay uninhabited for long, as the next building phase in the complex used the older walls as foundations for new buildings, albeit with narrower, less well-built walls constructed from both rubble and from natural fieldstones. In squares U 123-125 and V 123-125 previous walls were leveled and incorporated into the flagging of a large, well-built courtyard, the stones for which were also taken from the rubble of the Byzantine buildings. This courtyard also contains a *ṭābūn*. A dwelling of this period appears to have been built over the eastern part of the Byzantine courtyard. Various layers of floor excavated in the courtyard and in W 125 and X 125 belong to this construction phase and date it to the Islamic period, whereby sherds of the Mamluke period represent a large portion of the finds, next to some from the Abbasid and perhaps Umayyad periods. A number of pits dug in the area of the Byzantine courtyard also date to this period.

At a later date, but while the walls of the previous buildings were still visible, a further small building was constructed using the older walls

as a foundation in the southeast of the excavation area. The filling of this building also contained a large number of Mamluke sherds.

At a much later date, the area was used again, but, unlike in the previous phases, the structures of this period do not use the bases of the earlier walls, nor do they very often follow their alignment, suggesting the area lay uninhabited for long enough for them to have disappeared from view before this last layer of settlement activity. The structures of this period are those which had been visible on the surface, and it was an important insight that there is little connection between these structures, which proved to be very shallow, and the layers that lie beneath. It is difficult to date this last phase, but it is likely to be well into the Ottoman period. The irregularity of the lines of stones and the fact that both foundations and floors are missing for this phase complicate matters further, and suggest that these were either destroyed as a result of use of the surface of the tall for farming, or that the structures from which the stones originate were very simple in the first place.

The remaining two trenches in the eastern part of the excavation area, squares U-X 127-128 must at this stage be treated separately, as, although adjacent to the rest of the area, they lie further up the slope. This and the fact that a large, multi-phased wall which has yet to be investigated in detail lies between this area and the rest of the excavation mean that it is as yet impossible to identify the structural link between the buildings and layers in this area and the rest of Area III as described above.

As of summer 2008, squares U-V 127-128 of this area were only excavated to just below the colluvium due to the intensity of work required in the northern section (W-X 127-128) where many walls and layers of floor were found. In this section, the two oldest walls form a right angle in the northeastern corner and are preserved to a height of over 1m. Further walls were added to the complex to the south and west at a later date, and all of these walls possess doorways with carved frame stones and holes for attaching the door. One of the rooms of the complex was filled with charcoal and ash, and the remains of a well-built door were found in the form of nails, hinges and handles. The courtyard of the complex was used over a long period: various levels of floor were revealed, each with a *ṭābūn*

still embedded into the floor. In the room created by the two oldest walls, a well preserved oil mill was uncovered, consisting of a round surface made of segment stones and bordered by a thin wall toward the outside. In the middle, the stone hub of the wheel contained a square opening to hold the structure supporting the arm of the mill. The mill sits circa 40 cm high in the room, but the bottom has not yet been reached. The mill was built into a later partitioning wall in this room. A ṭābūn on the floor of this room also dates to this later phase.

The chronological sequence of this section is still far from clear. The fillings of the various floor levels in the courtyard and rooms yielded a mixture of Islamic and late Roman sherds, whereby the lowest floor excavated in the courtyard is clearly dated by the pottery to the Mamluke period. The picture is, however, clouded by the fact that the two oldest walls mentioned above are similar in structure to those of the Byzantine building to the west. Moreover, on the last excavation day a small section of floor was revealed below the Mamluke layer in the courtyard which was paved with almost identical mosaic to that of the Byzantine courtyard described above, suggesting the oldest stratum of this building complex may indeed be much older and in some way tie in with the Byzantine courtyard building, perhaps via a flight of steps which have yet to be revealed (as this section lies much higher up the slope). It is hoped that all will be revealed in the next excavation campaign, when the large wall that divides the western section of the excavation from the complex described in this and the previous paragraph will be carefully dismantled and the southern part of this section excavated to a lower level.

In all, the building structures uncovered in summer 2008 show a very large-scale ground plan for the Islamic and in particular for the Byzantine period. For this reason it will be necessary, in the next campaigns, to extend the excavation area to the east, north and west to reveal more of the buildings that were grouped around the courtyard and to determine the general extent of the building complex (es). At this stage it is impossible to say very much about the type of buildings in Area III. Together with the findings from Area I and II, however, it is clear that Tall Zar'a housed a large rural settlement in

the Byzantine and pre-modern Islamic periods, and that agriculture played an important role in its existence. It is also possible to say from Area III that at least parts of the settlement were used over a very long period of time, as buildings dating to the Mamluke period still used the Byzantine walls for foundation and alignment, and there is no clear horizon of destruction from the mid-eighth century earthquake, suggesting that, at least in Area III, the buildings were cleaned up and rebuilt quite soon after the event. In this respect, it is hoped that the findings from this excavation will be able to shed much-needed new light on the nature of the transition from the Byzantine-Christian to the Early Islamic period in this region of the Near East.

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