

THE TALL ZAR'Ā AND GADARA REGIONAL PROJECT 2009 - 2011

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Introduction

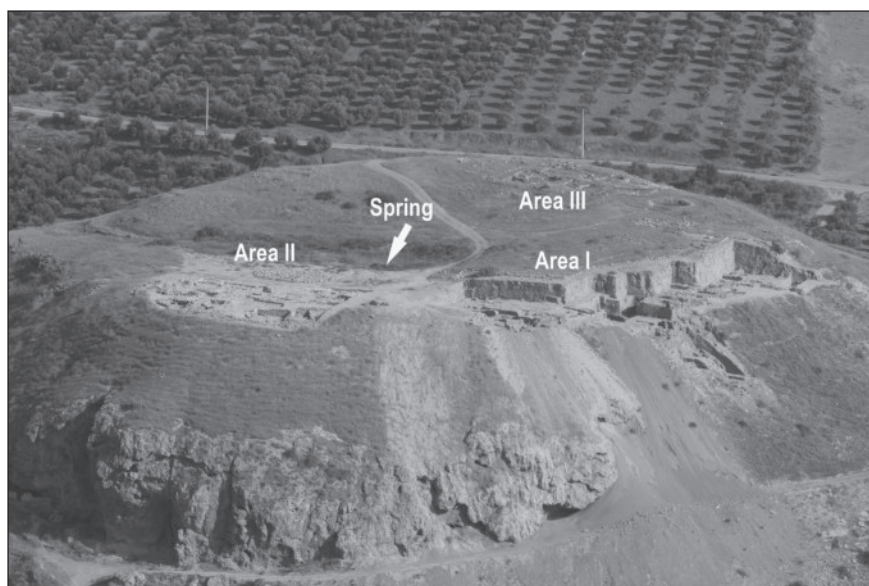
The 'Gadara Regional Project' was initiated by Dieter Vieweger in 2001. Since 2004 it has been a joint project of the Biblical Archaeological Institute and the German Protestant Institute of Archaeology under the direction of Dieter Vieweger and Jutta Häser. Yearly excavations at Tall Zar'ā, the most interesting site in the area, have brought an uninterrupted sequence of settlements from the Early Bronze Age to the Umayyad period to light (Vieweger and Häser 2008: 375-395). Three seasons were carried out between 2009 and 2011. During these seasons, excavations continued at Tall Zar'ā (Fig. 1). Additionally, surveys were carried out in Wādī al-'Arab and Wādī az-Zaḥar during the summer seasons between 2009 and 2011.

Area I

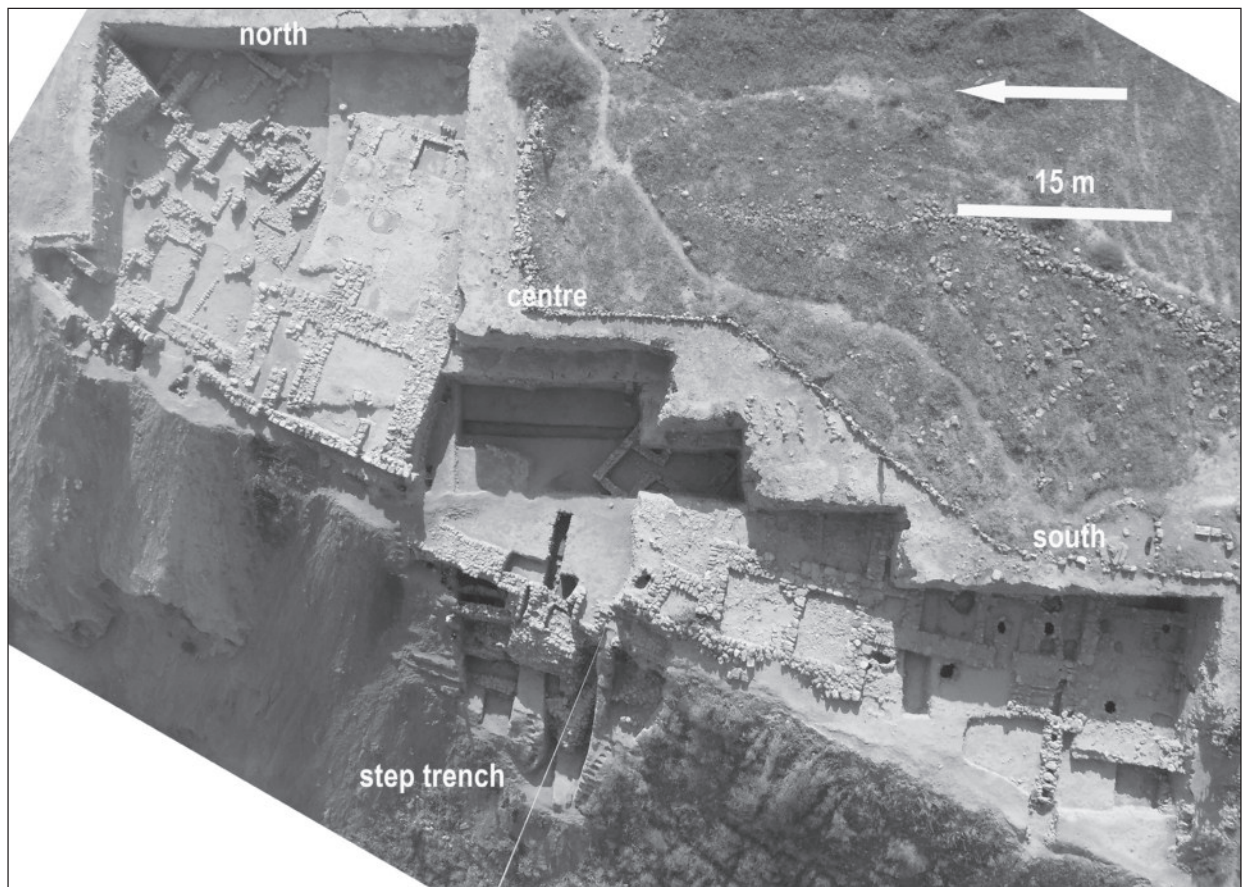
Excavation Area I is located on the north-western slope of Tall Zar'ā. By the end of the

2008 season, an area of 1,150m² had been excavated. In 2009, Area I was enlarged and divided into four sections: viz. the step trench and the southern, central and northern parts. The northern part was opened during the 2009 season. It measures 600m² and covers squares AP-AT 118-123 (Fig. 2).

By the end of the 2008 season, the southern and central parts of Area I had been excavated to the earliest Late Bronze Age stratum 11 (ca. -22.90m). This exposed a ground-plan of impressive Late Bronze Age architecture, with a casemate city wall, tower, some courtyard houses and two very large houses (Vieweger and Häser 2008: fig. 7). The area was extended to the north because some extraordinary finds were discovered in the monumental house at its northern end (Vieweger and Häser 2008: fig. 7, squares AP-AR 118-120). It was assumed that this building had a special function. This part of Area I was excavated from 2009 to 2011. It



1. Overview of Tall Zar'ā from the west.



2. Aerial view of Area I from the west at the end of the summer 2011.

yielded a continuous stratigraphic sequence dating from the Umayyad period back to the Late / Middle Bronze Age.

In the central part of Area I, the Late Bronze Age casemate wall and two courtyard houses were removed to investigate the Middle and Early Bronze Age strata. This work was carried between 2009 and 2011. The earliest strata, 20 and 19 (reached in 2011), date to the Early Bronze III period.

The step trench below the central part of Area I, which was opened in the 2004 season and had already revealed an Early Bronze Age city wall and additional glacis, was excavated further in 2010 and 2011. One of the aims of these seasons was to see if traces of a Middle Bronze Age city wall existed in this part of the site. Another aim was to establish the stratigraphic relationship between the Early Bronze Age defensive structures and the deep-cut channel of the overlying levels.

There were no excavations in the southern part of Area I during the 2009 season, but they

resumed in 2010. Parts of the Late Bronze Age city wall and large southern building were removed to the lowest level of their stone foundations. It was demonstrated that all structures of the latest Late Bronze Age stratum were erected on top of several metres of backfill on the western slope of the *tall* (see below). This was the reason for halting the excavations in this part of Area I.

Early Bronze Age

During the survey of the *tall*, a high concentration of Early Bronze Age finds were found on the north-western slope of the hill. Considerable architectural remains were therefore expected in this area. The excavations have confirmed this assumption. Part of an Early Bronze Age city wall and glacis were revealed in the step trench in the central part of Area I. Both the remains of this fortification and their absolute elevation were of interest. They start at a level of -26.35m, i.e. 9.32m below the earliest stratum which can be dated to the Umayyad period. This fortification was investigated to

a depth of -31.40m, i.e. 14.17m below the Umayyad stratum. The base of the foundations is expected to be at around 33m below sea level. The cultural layers therefore have a depth of 16m. For the time being, it cannot be determined if the Early Bronze Age city wall was connected to the architectural phases which have so far been excavated. It has to be assumed that it was associated with an earlier Bronze Age settlement phase.

The Early Bronze Age city wall was cut by a channel which ran 5m directly down from the latest Late Bronze Age stratum, *viz.* 11, and turned at a right angle to the slope at a depth of -31.20m (Fig. 3). The construction of the channel was associated with stratum 12 (backfill; reconstruction phase); it was re-used in stratum 11, i.e. Late Bronze Age II.

All other Early Bronze Age remains were excavated in the central part of Area I (AL-AO 118-119) during 2010 and 2011 (Fig. 4 [stratum 20]; Fig. 5 [stratum 19]). During the summer



3. Outlet of Late Bronze Age channel which cut through the Early Bronze Age fortifications.

2010 season, the upper level of the transitional period (Early Bronze Age IV / Middle Bronze Age I) was reached. In spring 2011, two strata with fireplaces, pits, floors and simple stone walls were discovered (strata 17 and 18). The finds demonstrate that this area was used for domestic purposes, such as cooking and storage. Below these two strata two Early Bronze Age III strata were excavated, revealing the remains of substantial walls belonging to a house with at least two rooms (strata 19 and 20) (Fig. 6).

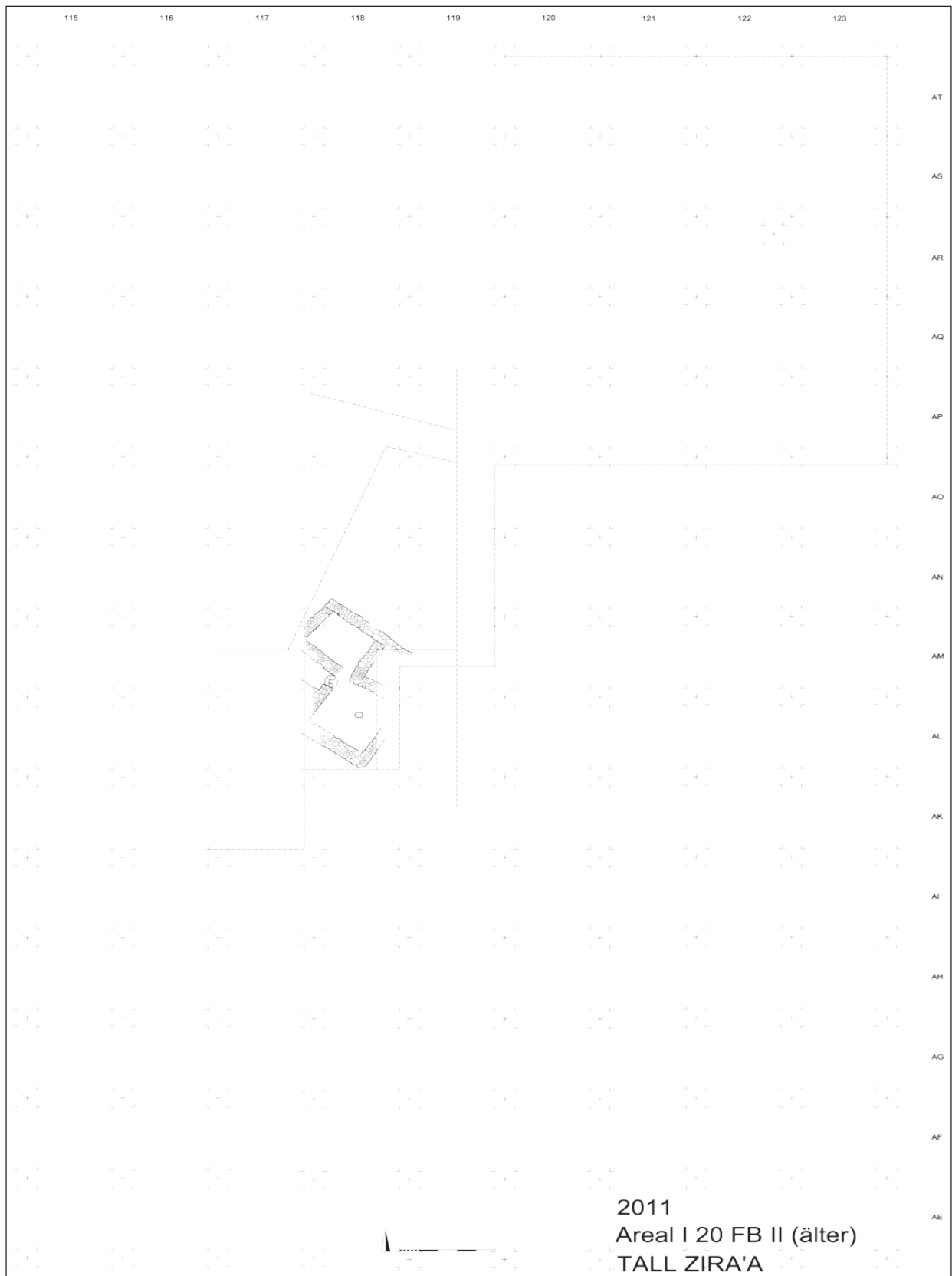
The excavation area associated with the Early Bronze Age remains is very small, so interpretations can only be preliminary. However, the finds confirm a general picture of the transition from the Early to Middle Bronze Age, which is marked by a sharp decline in the city's material culture.

Middle Bronze Age

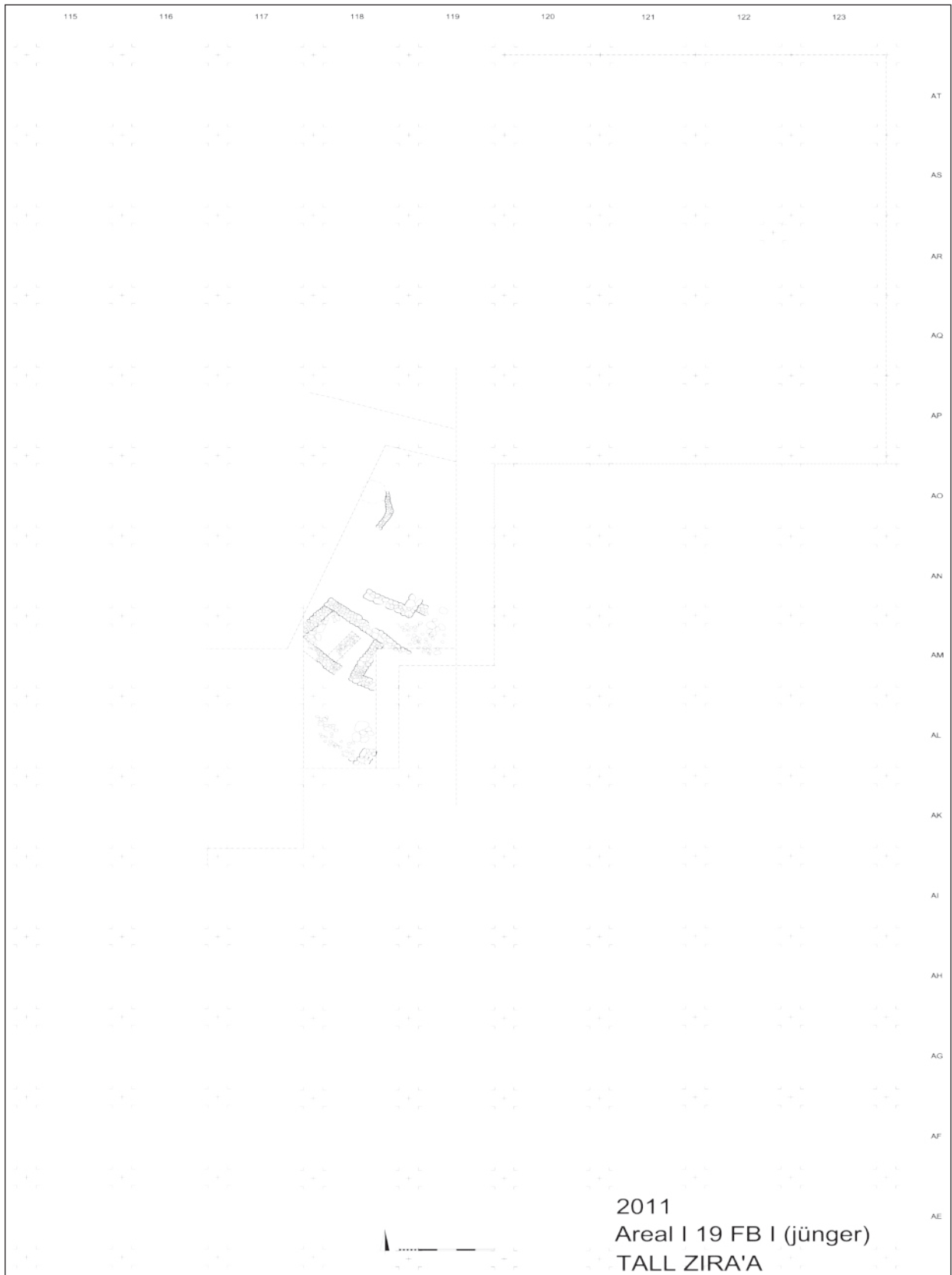
Although there was a remarkable change in settlement activities from the Early to Middle Bronze Age, the stratigraphic sequence continues without a break. Above the Early Bronze Age IV / Middle Bronze Age I strata (18 and 17), three strata of Middle Bronze Age date were excavated in the squares AL 118, AM 118, AM 119, AO 118 and AO 119 (strata 16, 15 and 14). The elevations of the strata were -25.40m, -26.05m and -26.35m. The remains of the Middle Bronze Age consist of the stone foundations of domestic buildings. On the western side they were truncated by the catastrophic landslide (see below). Therefore, the layout of the houses cannot be determined.

Middle Bronze Age stratum 16 was characterised by domestic activities with large storage facilities. In the next Middle Bronze Age stratum, *viz.* 15, a crucible with the remains of bronze was discovered which suggests that bronze or copper working took place in that area. Middle Bronze Age stratum 14 was again marked by domestic activities. Particularly interesting is the continuity of stone-built ovens, associated with smelting activities, which were constructed in the same spot during the Late Bronze Age and Middle Bronze Age (Fig. 7). The finds consisted of pottery sherds, grinding stones, mortars, flint tools and small fragments of bronze / copper.

In conclusion, the assumption that there was



4. Plan of Early Bronze Age stratum 19 (2011) (drawing Marianne Vogt-Werling).



5. Plan of Early Bronze Age stratum 20 (2011) (drawing Marianne Vogt-Werling).



6. View of the Early Bronze Age architectural remains of stratum 20 from the east.



7. Architectural remains of the Middle and Late Bronze Age strata in the central part of Area I.

no break between the Middle and Late Bronze Age, but merely continuous cultural change, can be strengthened. It is particularly visible in architecture and handicrafts. No trace of the Middle Bronze Age city wall was discovered in this part of the excavation, unlike the situation in other cities of comparable size. Possibly it also collapsed as a result of the catastrophic landslide during the Late Bronze Age.

Late Bronze Age

Late Bronze Age stratum 13 followed the earliest Middle Bronze Age stratum 14 without any hiatus in the settlement sequence in the central part of Area I (AL 118, AM 118, AM 119, AO 118 and AO 119) (Fig. 7). The remains consisted of two houses which were truncated by the later landslide, just like the earlier buildings of the Middle Bronze Age. This landslide happened around 1,400 BC. The actual cause is difficult to determine. It might have been caused by an earthquake, by the collapse of one of the many caves in the sinter of the *tall*,

by slope wash or, indeed, by a combination of different factors. The archaeological finds show that the inhabitants had many problems with the drainage of surface water. Therefore, they built several large channels to drain water to the edge of the slope. During the excavations between 2008 and 2011, it was discovered that this landslide affected at least 1500m² of the Late Bronze Age settlement, i.e. almost all of Area I. Only some squares in the north and central parts of Area I were unaffected. The eroded part of the slope was evidently important enough to the inhabitants of the Late Bronze Age city for them to rebuild the area by backfilling with soil layers 30-45cm deep, each covered by a stone pavement. This operation was carefully carried out at least ten times. In the central part, backfill of 4.50m depth could be demonstrated. These layers were strengthened by a stone wall on the edge of the slope. More than 75% of the pottery in the backfill was of Early Bronze Age date. This could mean that it was carried from the bottom to the top of the hill. The city wall, tower, large houses and most of the courtyard houses were erected on top of this back-fill. The city wall was constructed along with the retaining wall of the layers of back-fill.

The fact that a *ṭābūn* was found in one of the stone pavement layers showed that the backfill was created not in a single year, but over a longer period of time – no doubt to allow for compaction of the soil and stone layers. A channel which drained to a straight shaft in the upper-most layer is evidence of the need to drain surface water to the edge of the hill. Another channel was cut straight through the older Early Bronze Age fortifications (see above).

Even after this intensive rebuilding operation, the plot boundaries did not change very much. The outer walls of two of the houses, which were excavated in the central part of Area I, were rebuilt in the same place and the layout of the houses was very similar to that of their predecessors. In addition, a stone-built oven was constructed in the same spot as before.

All buildings of the latest Late Bronze Age stratum, *viz.* 11, were constructed on top of the back-fill, except the houses north of the monumental building in the central part (which was not affected by the landslide) and in the northern part of Area I (Fig. 8). In these areas,

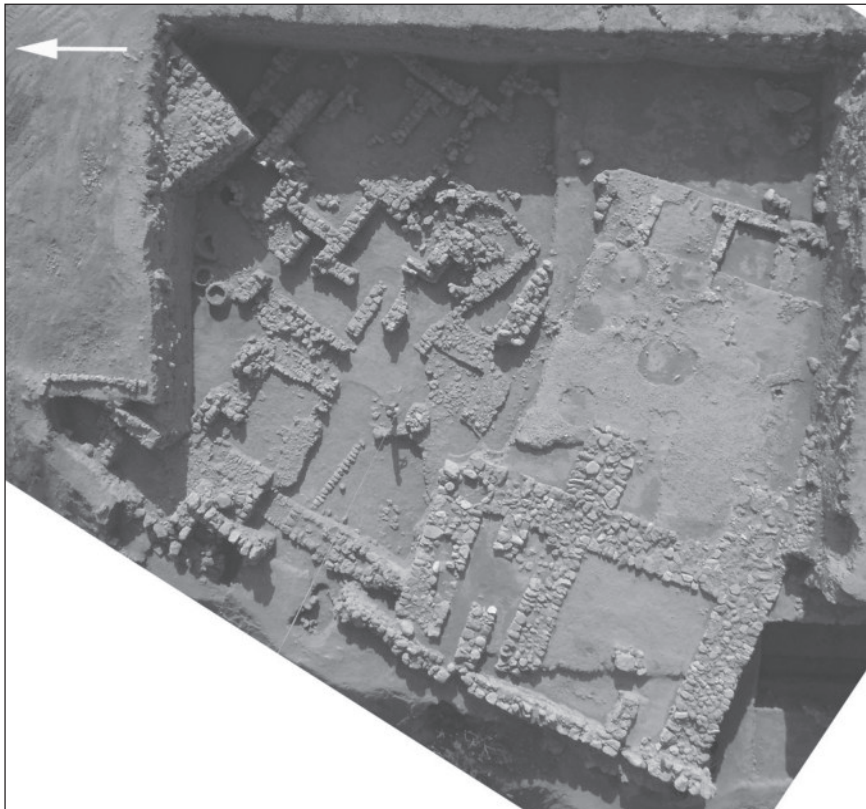
the transition from the Middle to Late Bronze Age could be examined. In the northern area, the excavations stopped at this transition in summer 2011.

Unlike the Early, Middle and earlier Late Bronze Age strata, the latest Late Bronze Age stratum, *viz.* 11, was completely excavated in Area I (1,750m²). Therefore, the architectural remains provide a good impression of the city's layout in the 14th-13th century BC. The most prominent structure is the casemate wall which fortified the city on its north-western side (**Fig. 8**). According to the radiocarbon dates, it dates to between 1,450 and 1,300 BC. This wall, the adjacent tower (with a small sanctuary) and the small gateway, as well as the courtyard houses in the central part of Area I, have been discussed elsewhere (Vieweger and Häser 2008: 379-384).

Two monumental buildings were found in the north and south parts of Area I. Their 3 m wide walls suggest that they had three floors. The southern monumental building, situated in squares AE-AF 114-116 consisted of several rooms which were re-designed four times. This has not been observed in other buildings of this stratum. None of the rooms could be identified

as a courtyard. A fireplace in AE 116 and the silo in AE 114-115 were both carefully constructed. In AE 115, the remains of a mud-brick wall on top of its stone foundations was still standing to a height of about 1m and was plastered with lime on both sides. This is rarely seen in other parts of the excavation. The 2m wide outer wall of this large building was used as a southern extension of the city wall. Directly to the north of this large building, a 10m long and 2m wide covered water channel with vertical shafts for maintenance was found. It was used to drain surface water to the edge of the slope.

The northern monumental building was partly uncovered in 2006. Only the stone foundations of its southern wall were visible. An adjacent room to the north yielded 23 cylinder seals in an area of only 1.5mx1.5m, as well as a silver pendant (Vieweger and Häser 2008: fig. 8) and a scarab with the cartouche of Amenophis III (Vieweger and Häser 2008: fig. 9). During subsequent excavations it turned out that this building (AR 119-120) consisted of a large room and stairway to the north (**Fig. 8**). Several pieces of quartz-frit inlay for furniture or boxes were discovered in the foundations of the staircase.



8. Architectural remains of the latest Late Bronze Age stratum in the northern part of Area I.

Unfortunately, these foundations were heavily disturbed by pits which were cut into the ground by the Iron Age I inhabitants. To the west, i.e. at the edge of the slope, a large Roman-period pit disturbed the earlier layers.

The excavations between 2009 and 2011 revealed the entire extent of this monumental building. It appears that three antae were built against the eastern wall. In front of them, a large and carefully paved courtyard was laid out. The eastern edge of this courtyard consisted of several small rooms. The northern outer wall could only be identified by its negative outline, i.e. the foundation trench and northern limit of the courtyard pavement, as the inhabitants of the Iron Age I settlement used the stones of this wall for their own buildings. The remarkably thin wall on the western side of the building might be explained by the realization on the part of the builders of this structure that they should not put too much load on the back-fill at the outer edge of the hill. Several more cylinder seals were found in the area of this building. Owing to the finds and construction, it can be assumed that this building had a special function in the Late Bronze Age city. It might have been a temple or an administrative building. Particularly notable are finds of the raw material and products of glass and faience processing.

In 2011, the excavations demonstrated that the entire building was founded on the back-filled hill. In contrast, the houses north of this monumental building were not affected by the landslide, as no back-fill was visible in this part of Area I. There is no observable change between the architecture of Late Bronze Age stratum 13 and that post-dating the reconstructions of stratum 12. This means that in this part of Area I, stratum 13 and stratum 11 are the same. In summer 2011, the relationship between the city wall and domestic architecture was clarified. The unique situation of this area made it possible to observe the transition from the Middle to the Late Bronze Age settlement.

The most interesting find in this part of Area I was a votive ceramic plate (TZ 18181; **Fig. 9**) depicting a man in an attitude of combat. Five heads are shown around him. The figure is worked in relief whereas the heads were scratched into the surface. We may be dealing with a king or a god who is surrounded by the



9. Votive ceramic plate with a depiction of a standing man in relief and five incised male heads (drawing Ernst Brückelmann).

heads of killed enemies. There is no parallel for this plate in the Near East, but the subject fits well with the depiction of kings with their slain or captured enemies.

Iron Age I

The cultural change after the decline of the Late Bronze Age city-states is obvious at Tall Zar'ā. The rejuvenation of the settlement on the *tall* during Iron Age I demonstrates new features as well as the continuation of traditions from the Late Bronze Age. The Late Bronze Age city on Tall Zar'ā (stratum 11) was destroyed around 1,200 BC. The reason is not apparent from the results of the excavation. It could have been an earthquake, local catastrophe, battle or similar. Especially striking is the fact that the inhabitants of the Early Iron Age settlement (stratum 10) did not create a new layout for the settlement, but

used the remains of the Late Bronze Age city instead. What remained of the stone foundations of the city wall were used for large silos (e.g. in AK 116, AL 118, AM 116-117, AN 117, AO 117 and AP 117) and hovels (AL 117-118, AN-AO 118-119 and AN 117-118). It has therefore been assumed that the Iron Age I inhabitants could still see and use the ruins of the Late Bronze Age city. However, the city wall itself was not rebuilt. The central part of Area I might be interpreted as an area used for agricultural tasks, with storage facilities, working and habitation areas. This would fit well with traditional perspectives on the beginning of the period during which the Israelites and Judaeans established settlements in the highlands west of the Jordan River.

However, a completely different picture arises from discoveries in the southern part of Area I (AE-AI 115-116 and AI 117) at Tall Zar‘ā. In AE 118, a double building with carefully laid stone foundations was built on top of the ruins of the Late Bronze Age house. A large oven with several layers of clay, lime and pottery sherds was constructed in the middle of the house. This building clearly shows a continuation of the Late Bronze Age courtyard house during the Iron Age I period.

The entrance to the northern house was carefully paved (AI 116). The door socket was still *in situ*. The layout of the northern house was that of a courtyard building with a large water jar, *ṭābūn* and grinding installation in the

south-western corner of the courtyard (AG-AH 116). The courtyard of the southern house could only be partly excavated. In addition to the abovementioned large oven, a large water basin was also installed there (AE 116). These two houses might have been used for administrative purposes or could have belonged to a high-ranking individual. However, this interpretation requires further analysis of room contents.

The two large storage silos in the northern and southern houses (AG 115-116 and AE 116) are most impressive in comparison to their counterparts in the central part of Area I. Unlike the simple stone-lined pits in AK 116, AM 117, AN 117 + 118 and AO 117-118, these large silos were built with mud-bricks and had a capacity of about 10m³. Owing to their depth, they cut deeply into the Late Bronze Age levels. A *Götterhaus* (“window pot”) was found within the silo in the southern house.

There is another large building in the north of Area I which can be dated to Iron Age I (AP-AQ 118-120). However, this displays characteristics of the new (so-called) four-room house, having a large courtyard with long, narrow rooms along the sides. The main room in AQ 120 is especially well-preserved. Here, raw glass and the remnants of glass processing were found. It can therefore be assumed that this house included a workplace for glass processing (**Fig. 10**). This seemingly demonstrates a continuity of glass processing in



10. Architectural remains of Iron Age I stratum 10 above the Late Bronze Age monumental structure (stratum 11) in the northern part of Area I.

almost the same spot from the Late Bronze Age to Iron Age II

Other houses were excavated north of the Iron Age I four-room house. These were heavily disturbed by subsequent building activities. Two radiocarbon dates from Iron Age I stratum 10 yielded dates of 1,220-970 BC and 1,270-1,040 BC respectively. Significant finds include a miniature silver vessel (TZ 12479), a bronze vessel (TZ 7082) and a near-complete kernos (TZ 2939). Two aniconic, well-cut cultic stones were found close to the glass-working area. They provide insight into the religious life of Tall Zar‘ā during the Iron Age I period.

Iron Age II

The settlement at Tall Zar‘ā became more consolidated again around 1,000 BC (stratum 9). However, it never reached the high quality of the Late Bronze Age city. Owing to the nature of the Iron Age IIA-B (10th-8th centuries BC) architectural remains, it is assumed that the population had risen. Fortifications were again built in the form of a zig-zag line shaped by the outer walls of the buildings. This cannot be compared with the high standard of the Late Bronze Age casemate wall.

An earthquake or attack was probably the reason for the destruction of some parts of the settlement. Several buildings clearly show two building phases. If the settlement had been attacked, this military conflict might have been associated with the Israelite - Aramaic battles documented in the Book of Kings or in the Tel Dan inscription. Since there were some alterations in the ground plans of houses after the rebuilding, the settlement architecture has been divided into two phases (stratum 9A [Iron Age II earlier phase; **Fig. 11**]; stratum 9B [Iron Age IIB later phase; **Fig. 12**]).

Generally, the architecture of the Iron Age II period seems to be a dense juxtaposition of domestic and public buildings (AI-AL 116-119) constructed with an agglomerative building technique. Double walls in AR-AQ 119-120, AP 118-120, AM-AN 117-118 and AH-AI 116 marked the limits of property and helped to differentiate several houses. In the areas with agglomerated buildings, the outer walls of the houses have created a zig-zag city wall. In contrast, the outer walls of the central part of

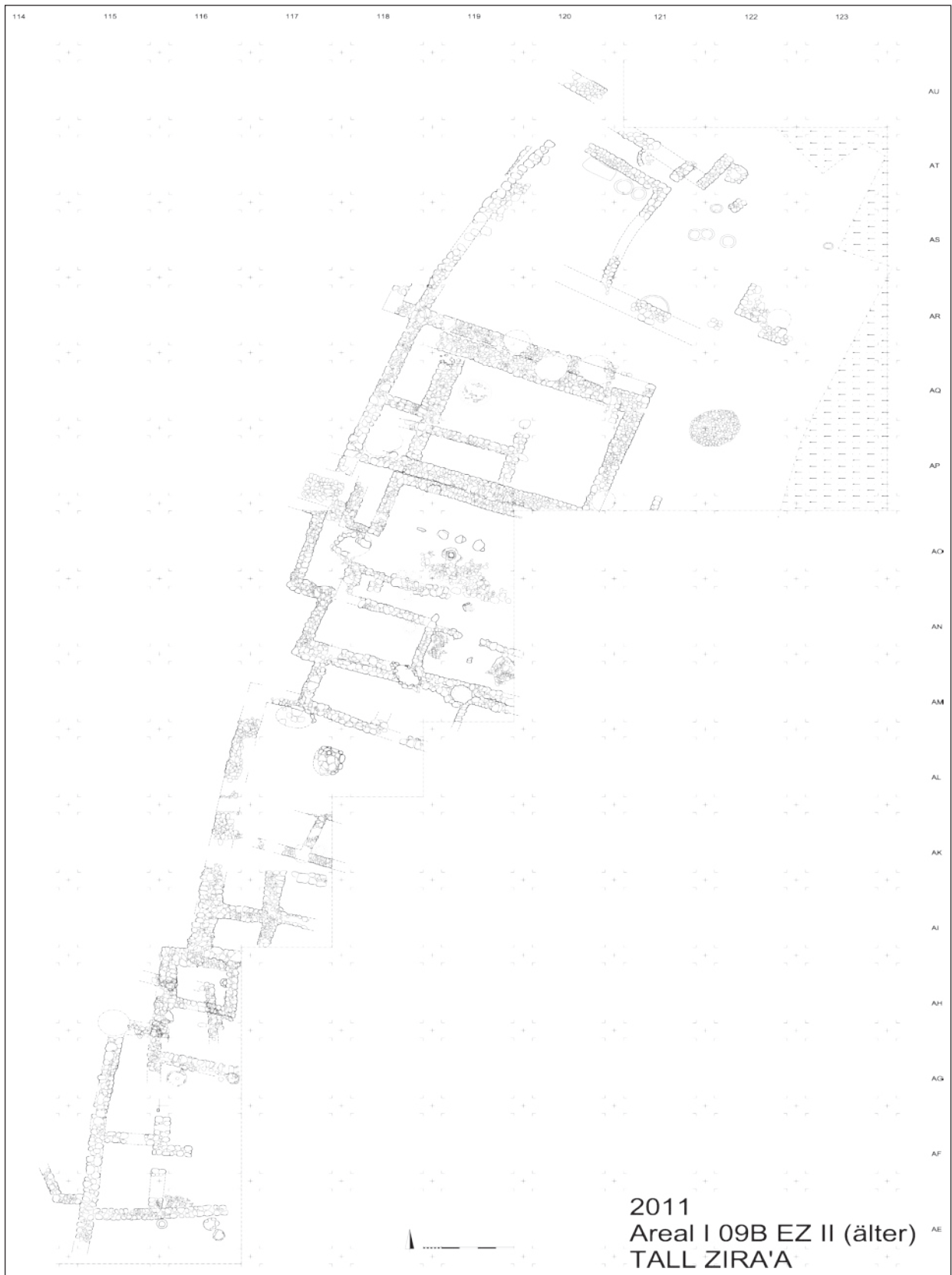
this settlement were thicker and ran straight. The quadrangular building in AH 116, especially in AI-AK 116-117, can be interpreted as towers; it could not be determined if there was a gate between these towers.

For the earlier Iron Age II period, the house in squares AP-AR 118-120 in the north of Area I is especially well-preserved (**Fig. 11**). The western part of the house has the characteristics of a four-room-house. The room at the rear (AP-AQ 118) was oriented to the zig-zag city wall. A large and carefully constructed fireplace was found in the centre of the courtyard. Inside this house – or at least in its vicinity – glass-processing activities were carried out. This assumption was underlined by the discovery of a so-called ‘industrial pot’ (**Fig. 13**) and raw glass (**Fig. 14**). A well-cut stone table was also found in the same context.

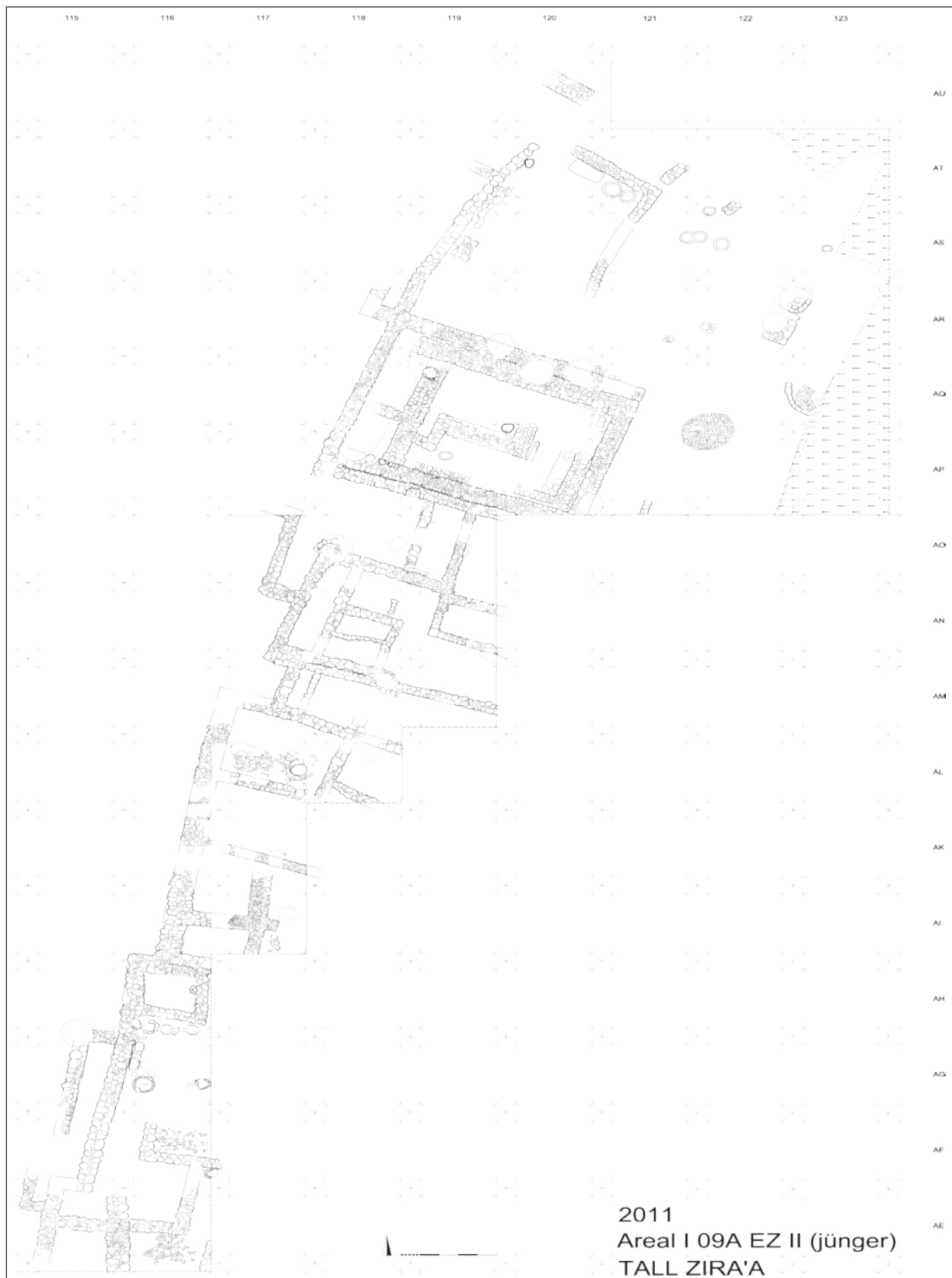
Another building was located directly south of this house and had similar architectural features. Four *ṭābūns* and a furnace with a crucible, a carefully built fireplace and a large storage vessel in the courtyard are amongst the remarkable finds of this house. The storage jar was situated close to three pillar bases and a cultic stone which were built in one row and found *in situ*. A radiocarbon date from the destruction layer in the room in square AO 118 yielded a date of 1,270-980 BC.

The proposed gateway (AM 118-119), a public area for the storage of oil and other staples (AI-AL 116-119), and other domestic structures (AE-AH 115-116) were found to the south. The most interesting finds of the earlier phase of Iron Age II are a cylinder seal, a bronze figurine of the god El plated with gold and silver (Vieweger and Häser 2008: fig. 17) and the head of a terracotta figurine (TZ 8349; **Fig. 15**).

The architecture of the later Iron Age II period (9th-8th centuries BC) is marked by alterations to many of the houses (**Fig. 12**). However, neither the zig-zag city wall nor the agglomerative building technique were changed. Three houses were identified in the southern and central parts of Area I. The possible public building in the center of Area I was altered, insofar as the large silo was covered with a large stone as it went out of use. The area around this big stone was paved and used as a courtyard. A radiocarbon sample gave a date of 1,120 to 900



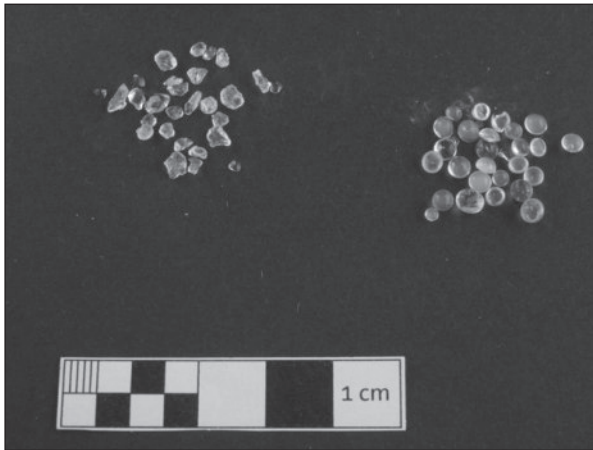
11. Plan of Iron Age II stratum 9A (later phase) (2011) (drawing Marianne Vogt-Werling).



12. Plan of the Iron Age II stratum 9B (earlier phase) (2011) (drawing Marianne Vogt-Werling).



13. So-called 'industrial pot' found in the Iron Age II stratum.



14. Raw glass found in the Iron Age II stratum.

BC.

The house to the north was divided into two sections: A and B. Section B was accessed by a large courtyard in AM-AN 119, with a broad room adjacent to the north directly connected to the city wall. To the south, there were two long rooms. The eastern one was divided into two parts. Section A consisted of at least one large room which also had a dividing wall. The western wall of this room was identical to the zig-zag city wall. Most probably, only the narrow eastern part of this room was roofed. The entrance to the house was situated to the east, connected with a courtyard or another room.

Squares AP-AT 118-123 in the north of Area I began to be excavated in spring 2009 and further building remains of Iron Age II date soon came to light. Ovens of various types were especially well-preserved. Two almost completely preserved ovens were constructed using alter-



15. Upper part of a female figurine with face of Hathor and side view of a lioness, perhaps the goddess Sekhmet.

nate layers of clay, lime and pottery sherds, of which samples were taken for archaeometrical analysis. Six of the 14 ovens had a domed roof. Cooking pots with four handles were still standing in two of the ovens.

Unfortunately, the Iron Age II houses in this area of the excavation had been badly damaged by Hellenistic and Roman pits. Therefore, only a few remaining walls of the houses could be identified. A seal impression with a depiction of a god standing on a bull (TZ 7146) and a basalt head of a man (TZ 9059) are some of the most interesting finds of the later Iron Age II stratum.

Classical and Umayyad Periods

By 2009, excavations had revealed an Umayyad house and extensive Roman - Byzantine occupation. Hellenistic architecture was represented by some house walls in the northern part of Area I. However, no ground-plan could be reconstructed. The Roman strata yielded several large, very well-built pits and the remains of some houses. The Byzantine occupation is characterised by large courtyard houses which follow the curve of the hill. They are very similar in layout to the Byzantine houses in Area II, and it seems that they were built in a co-ordinated episode of construction.

Generally, it can be stated that the northern part of the *tall* (Area II) was the nucleus of the settlement in the Classical periods. The north-eastern part of Area I contained the south-western parts of these impressive structures. Only in the prosperous Byzantine period did the settlement spread beyond the nucleus to cover the whole 'plateau' of the *tall* (including Areas I and III).

Area II

In 2006, the first excavations were undertaken in Area II on the northern edge of the *tall*. This part of the hill is slightly higher than almost anywhere else, with the exception of the southern part. It is also the most well-protected place on the *tall*, since there is a 40m cliff to the north and there is no access from that side to the buildings standing there. In 2009, the excavated area of Area II was extended to the west, south and east, eventually measuring *ca* 1,500m². A sequence of ten strata¹ was identified which date from the Late Hellenistic to Umayyad periods (Fig. 16).

Hellenistic Period

The lowest level reached so far (stratum 10) is marked by a 2.2m wide wall running 35m east-west through the whole excavation area. In the east, it was truncated owing to the steepness of the slope and later building activities. In the west, it ends at the edge of the excavation area and cannot be traced further. In the western part of Area II a large building was attached to the south side of this wide wall. The length and thickness of the wall suggest that it was part of some kind of fortification. However, it is too early to determine the exact layout and function of this structure, since only the uppermost stone layer had been excavated by the end of the 2011 season.

Roman Period

The next four strata (9-6) display a complete change of architecture, being characterised by the remains of several houses which are orientated north-west - south-east and follow the curve of the terrain. Owing to intensive building activity in the Byzantine period, the remains are very



16. Aerial view of Area II at the end of the summer 2011 season.

1. The strata in Areas I and II are numbered differently. The numbering of strata in Area II is still preliminary

and has not yet been correlated with strata in Area I; this will be undertaken for the final publication.

disturbed. The architectural remains of stratum 9 came to light in the northern part of Area II, where the surface slopes to the north. Two rooms or courtyards were identified. Stratum 8 is represented by at least three buildings. However, the remaining foundation walls show no clear layout for the time being.

Our picture of stratum 7 is more coherent. Three large buildings with several rooms and courtyards were identified. The best preserved is situated in the west of Area II; although soil and debris accumulated here in the Byzantine period, it was not used for new building (see below). Stratum 6 is only represented in the north-east where some unconnected walls were constructed on top of a stratum 7 building. It is possible that more walls of stratum 6 will become visible after the removal of the Byzantine walls in the adjacent squares. Generally, the walls of the different Roman strata were not built directly on preceding ones, but were constructed above them with a slight change of orientation. Their attribution to the Roman period is based mainly on the pottery sherds found in these strata.

Byzantine Period

There was another complete change of building orientation in stratum 5. A new building orientated almost perfectly north-south was constructed above an earlier house. Two rooms were revealed, with an entrance in the south-east marked by a threshold of stone slabs. A pillar base was set in the middle of the room. The orientation, location of the entrance, pillar base and layout of the building are very similar to the Byzantine building in the centre of Area I. By the time of this stratum, or at latest the following one, the whole area was covered with soil and debris to create a new surface for construction. However, the new building complex was not erected on top of this surface, but the foundations were cut deeply into the ground, destroying the remains of the Roman period.

During the period represented by stratum 4, the stratum 5 building was extended to the north and east. A large courtyard was built against its northern wall. A broad room was added north of the courtyard. Three rows of rooms and / or courtyards were added to the east of the former buildings and the courtyard. To the south, a rectangular room was added to the stratum 5

building and the entrance was moved from the south-east corner to the middle of the south wall. After this re-arrangement, the room could only be entered through the room to the south. The walls were built with field stones and dressed stones robbed from other buildings. Small wall-painting fragments were found in the debris, demonstrating that some rooms were decorated.

Some walls of stratum 4 were destroyed and it seems that a catastrophe occurred in the settlement. This could have been one of the disastrous earthquakes that struck during the Byzantine period. In the following stratum 3, the building was enlarged again. New rooms were constructed against the older walls and a large courtyard with a well-built entrance was added to the west. Interestingly, strict wall alignments were abandoned, although the north - south orientation was retained. The older rooms had evidently collapsed and were filled with sand, stone and roofing material. According to several coin finds, we can assume that these rooms filled some time after the early 6th century AD.

Umayyad Period

In the following stratum 2, the strict north - south layout was abandoned and a new north-west - south-east orientated house was built inside the large courtyard to the west. One room of this building was excavated completely and two others in part. The large Byzantine building complex was still in use. Some modifications could be identified on the eastern side of the excavation areas. Several Umayyad pottery sherds were found in this stratum. Therefore, a very late Byzantine or Umayyad date seems likely.

Later Islamic Periods

Only few sherds and other remains dating to the later Islamic periods were found in Area II. It therefore has to be assumed that the building complex was abandoned in the Umayyad period and that settlement activity shifted to other parts of the *tall*. During the 2008 excavations in Area III, many Mamluk pottery sherds were found in the building remains. Additionally, the *tall* survey conducted in 2001 identified a dense scatter of Late Islamic sherds around the well. These were presumably the main areas of Late Islamic settlement.

The Wādī al-‘Arab and Wādī az-Zaḥar Surveys

The summer seasons between 2009 to 2011 were devoted to a survey in Wādī al-‘Arab, conducted under the auspices of the ‘Gadara Regional Project’. Only a few surface investigations had hitherto been carried out in that region. The main aim of this sub-project is to document all archaeological sites in Wādī al-‘Arab and the adjacent Wādī az-Zaḥar in order to describe and interpret settlement distribution and history. This is important since it gives an insight into the development of the region which was centred on Tall Zar‘ā between the Early Bronze and Iron Ages, and on the Decapolis city of Gadara during the Classical periods.

Wādī al-‘Arab is extremely rich in springs and offers good conditions for agriculture. Its source is located in the highlands west of Irbid, from where it runs down to the Jordan River. Furthermore, Wādī al-‘Arab provides a straightforward ascent from the Jordan valley to the Irbid - ar-Ramtha basin and has therefore long been an important trade route from the Mediterranean coast to Damascus, Baghdad and ‘Ammān. Questions arise concerning the location of actual trade routes through this area and their changing importance. The survey focuses on evidence that might help to answer these questions. Clearly, the data collected from sites in the *wadi* and its vicinity needed to be as detailed and up to date as possible.

In summer 2009, the lower part of Wādī al-‘Arab from North ash-Shūnah up to Dūqarah was surveyed. Eighty archaeological sites were registered and described. Archaeological material was systematically collected and entered into a database. Thirty of these sites were previously unknown. More than 80 % of the sites were of Hellenistic and / or Roman - Byzantine date, while 20 % can be dated to the Bronze / Iron Ages and the Islamic period. The most important sites were already known, *viz.* Tall al-Kanīсах and Tall al-Qāq.

Two other sites should be mentioned here. One dates to the Middle Bronze Age, the other to the Roman period. The Middle Bronze Age site was previously known. This site and Tall Zar‘ā are intervisible; the entrance to Wādī al-‘Arab could be controlled from either location. The other site, which dates to the Roman period,

was located 50m upslope and was previously unknown. It is intervisible with Gadara, which is not the case for the Middle Bronze Age site. This gives a first hint of settlement movements in Wādī al-‘Arab in connection with the shift in the Hellenistic period of the regional center from Tall Zar‘ā to Gadara.

During 2010, a second survey season was carried out in Wādī al-‘Arab and Wādī az-Zaḥar. It covered the area from Dūqarah up to the Irbid area. The nature of the landscape changes as one approaches the upper reaches of Wādī al-‘Arab. The *wadi* is more incised, with most of the settlements on the edges, high above the *wadi*. The majority of ancient settlements are known through the work of Glueck and Mittmann. Almost all of the modern villages date back to at least the Roman and / or Byzantine periods, some of them as far back as the Iron Age or Bronze Age. Most of the ancient settlements, including many of the Islamic sites, have been destroyed by overlying modern settlements.

During the 2011 season, this close investigation of the Tall Zar‘ā hinterland (‘zone A’) was augmented with a wider investigation of the Wādī al-‘Arab region achieved through revisiting the major sites in the whole area (‘zone B’). The exact location of all sites was recorded by GPS, pottery was collected for comparative studies and descriptions of the current state of sites were updated. An important aspect of the survey consists of recording the increasing damage done to archaeological sites by construction and agricultural activities (Fig. 17). In one case, a known Roman site has been completely destroyed over the last two years. Despite the continuing destruction of ancient



17. Western section of foundation pit at the school at Qumm.

sites, representative samples of pottery were collected, from which a concise overview of the history of Wādī al-‘Arab can be derived.

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(For a complete list of publications see: www.tallziraa.de)

