

City Planning and Architecture at the Iron Age City of al-Bālū' in Central Jordan

The site of al-Bālū' is located south of Wādī al-Mūjib at about 5km east of Jabal Shiḥān, which is the highest point in Arḍ al-Karak of Central Jordan. The excavation at al-Bālū' owes its importance to the fact that it is the largest Iron Age ruin in Central Jordan, covering almost all the periods of occupation from the Early Bronze Age to Mamluk times (Worschech 1989: 111-121; 1990: 86-113). However, the Early and Middle Bronze Ages — as well as the Iron Age occupation when the city was at its prime — are well represented, while evidence for the classical periods only comes from pottery finds, especially in the southwestern quarters of the site (Worschech 1986: 292), where there are also the remains of the large Mamluk village which was called "Shiḥān" by Medieval Arab travellers (Sourdél-Thomine 1953: 18).

City Planning at al-Bālū'

The ancient site of al-Bālū' is situated in the midst of fertile land above the breathtaking gorge of Wādī al-Bālū'. The walls of the gorge are formed by the typical basaltic pillar formations which served as natural quarries. The site is strewn with unhewn blocks which stem from the destroyed walls of the city's houses and installations.

A surface survey of al-Bālū' in 1986 has revealed that the older part of the city is the area immediately east and west of the impressive *qaṣr*, which may have seen some building activities in the Nabataean or Early Roman times. Here also Late Bronze and Early Iron sherds were picked up. The older part of the city had a defence wall of the casemate type with a small gate towards the east. During the Iron IIA-B period the city limits were extended eastward and another defence wall was built, thus enlarging the city by about 200m². The entire east-west extension of the city was about 450-500m in the Iron II period. Many of the wall lines can be traced on the surface, giving an idea of some of the building complexes and their locations without any excavation being necessary. Here the pottery is entirely of Iron Age date.

The results of the surface surveys indicate that there are two areas of occupation (FIG. 1): 1. the town which

had spread around the *qaṣr* during the Iron I. In this area west of the *qaṣr* Iron I and Late Bronze pottery was picked up by several surveys. Excavations in Area AI have produced mainly Iron II sherds but there is also evidence of early Iron Age pottery.

Structures belonging to this period may be sealed below the stratum of the partially uncovered house complex in Area AI; 2. the more recent town area was growing eastward from the *qaṣr* during the Iron II period. In this eastern part of al-Bālū' there are units of living areas as well as courtyard-like open spaces separating housing areas.

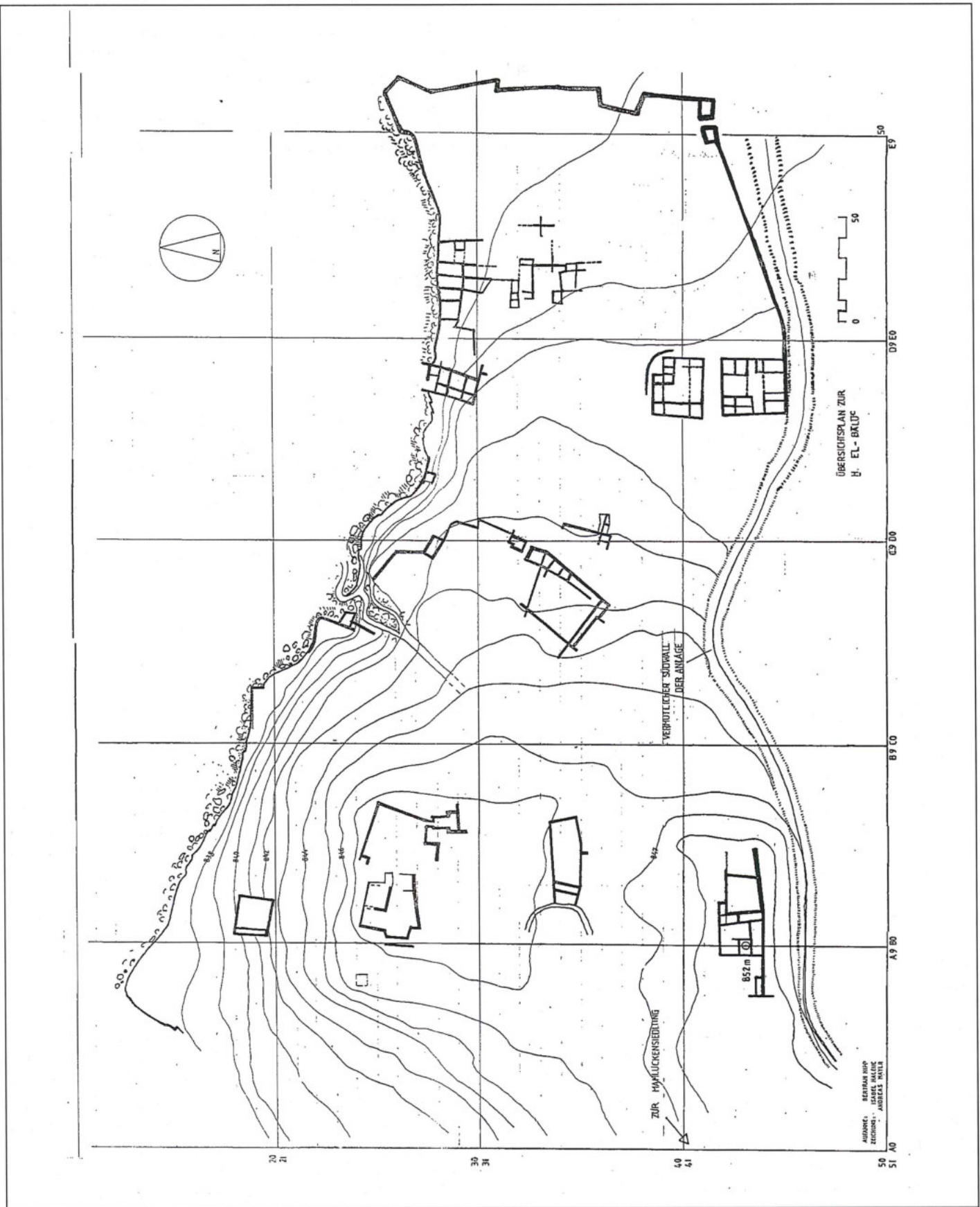
The defence walls are of the casemate type encircling the old town and its later extensions towards the east. Gates were located at the older city wall and at the later southeast corner of the city. The east wall appears to have had no casemates, however, there the defence wall was 2m wide and had bastions.

The decision to excavate in the area east of the inner city wall (Areas CI and CIII) was made, because here the rock fall was not as heavy as elsewhere on the site and also because the wall lines on the surface give a general idea of the type of building which was to be excavated.

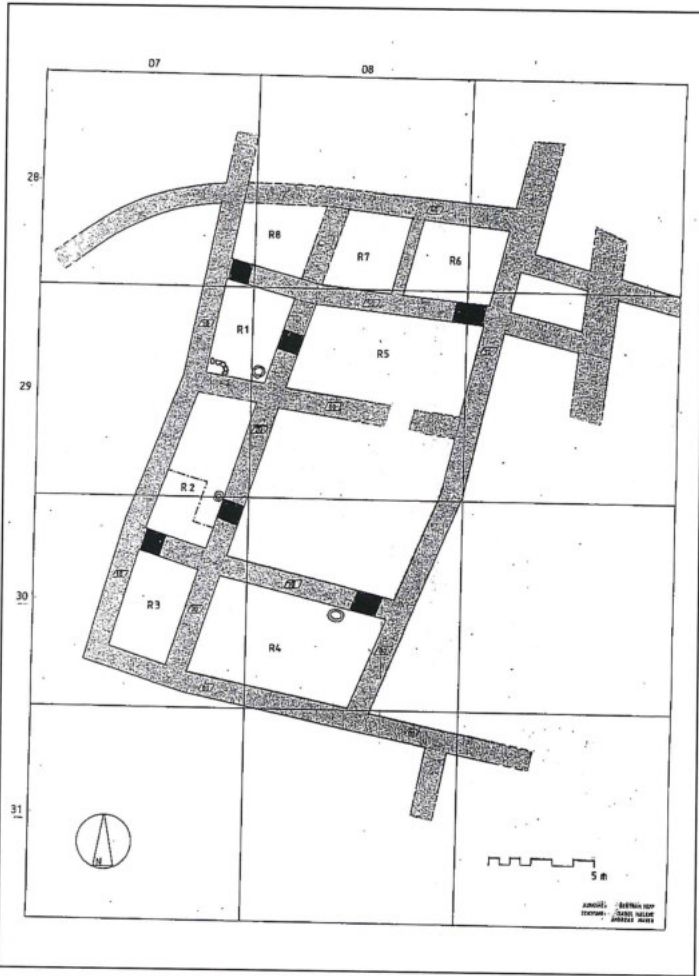
Areas CI and CIII — The Assyrian-Type House and the Casemate Wall

We called the house complex to the east of the casemate wall the "Assyro-Babylonian courtyard house" (FIG. 2), because of its resemblance to house types from Assyria. It is definitely not a three or four-room house of the Palestinian type (cf. Fritz 1983: 36-38). The pottery found in the hitherto excavated rooms (R1-4) dates to the Iron IIB-C period — containing also fragments of the Assyrian-type carinated bowls — thus linking the house type with the Assyrian or Babylonian presence in Palestine in the eighth to sixth centuries BC.

The architecture of this building demands attention, since this house complex as well as the architectural features in Areas AI and CIII are still standing to a height of



1. Plan of Khirbat al-Balū.



2. Schematic plan of the "Assyro-Babylonian courtyard house" in Area CI. The black sections of the walls indicate the positions of doorways.

1.50-1.80m. They reveal aspects of the building techniques of the Iron Age people in Moab using only unhewn stones for their building activities.

The Technique of Wall Construction

The material used for building the walls was the basalt rocks from the natural quarries forming the steep banks of Wādī al-Bālū'. The stones were not dressed but fitted according to space and size needed.

The unhewn basalt blocks of the walls were set on outcrops of the bedrock. In some places the bedrock was cut to form the foundation wall on which the basalt walls were erected. In order to give the walls more stability and to even out the rather rocky ground of the bedrock, layers of plaster were placed between the bedrock and the first row of stones.

At al-Bālū' two kinds of building techniques for the construction of the walls can be discerned: 1. the *main walls* were erected by carefully placing the stones in rows above each other. Small wedge-like stones were used to fill the gaps and to balance out the heavy basalt

rocks; 2. the *partition walls* were built without systematic placements of rows of stones. They were placed as size and space required, hence, the absence of wedging stones. The main walls were built covering the entire length of the house with the partition walls set between them abutting against the main walls (FIG. 3).

The Corners of the Main Walls

At places, where the main walls met, two construction techniques were combined (FIG. 4): 1. *overlapping* of the stones of alternating rows, which mesh with each other; and 2. sometimes stones were also set *diagonally* connecting the two walls. These techniques can only be seen with the main walls, which were thus firmly interlocked giving the house greater stability.

The Doorways

Doorways were located in the corners of some of the rooms, a feature which is typical of the Assyrian-type house (FIG. 2) (Fritz 1983: 38). The size of the doorways is rather uniform: the height is between 1.20-1.40m, and the width is between 0.80-0.90m. Of the nine entrances identified so far, five were excavated with their lintels still *in situ*. In three entrances the thresholds were also found *in situ*. A door socket was discovered inside the entrance in Wall 20.

Doorways built in the corners of the rooms are only found in the partition walls, while in the main walls (i.e. W20) the doors were set almost in the centre of the wall. In the Assyrian-type house, *ṭawābīn* were found inside the rooms close to all entrances.

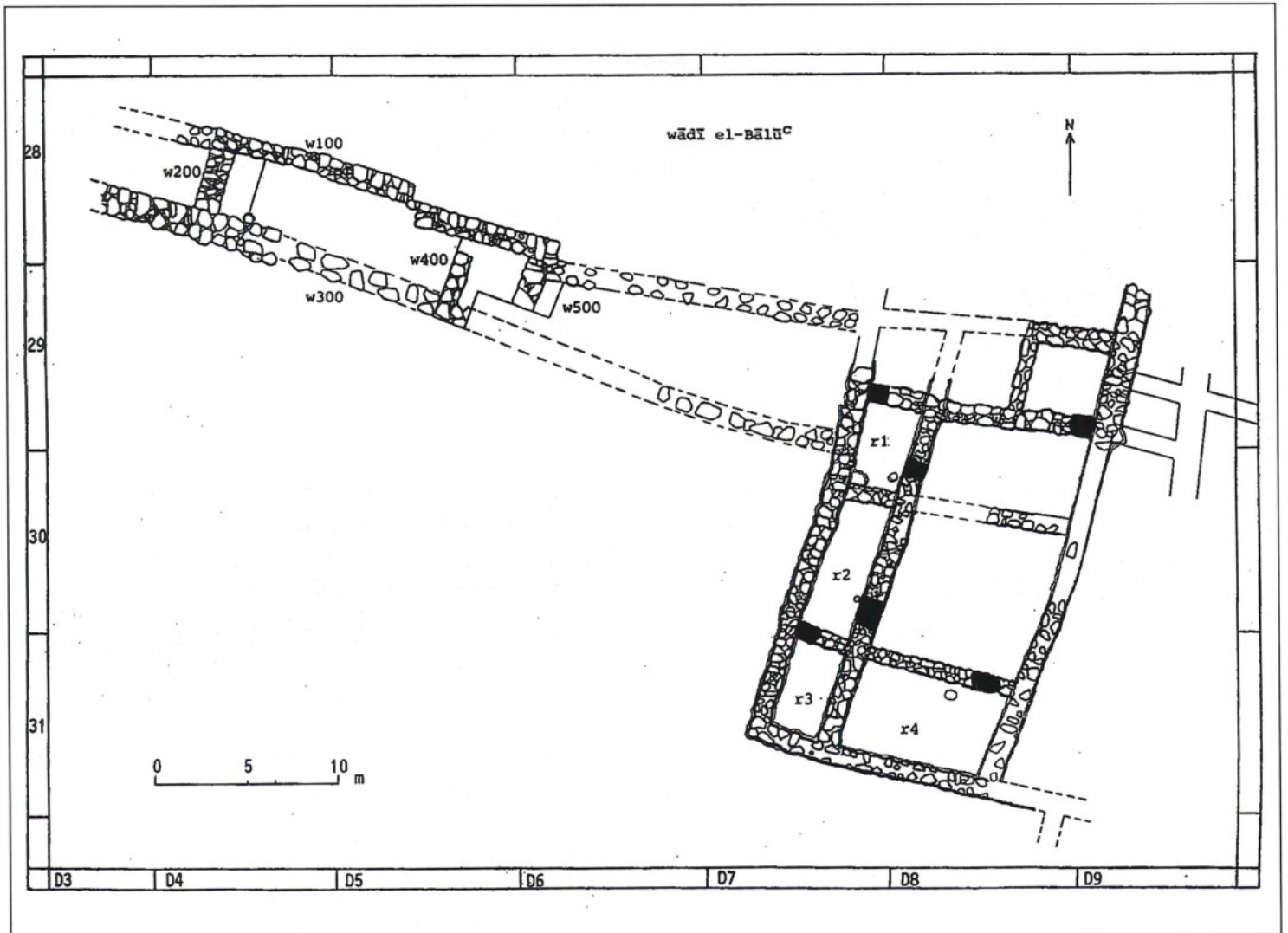
The Construction of the Floor

Although the floors were reached in almost all squares opened so far, only the floor in R1 of the house complex shows specific construction techniques, while the others consisted of beaten earth and a layer of plaster. The floor in R1 was constructed by alternating layers of *ḥuwwar*, sand, and ashes (compare Msās, Bi'r as-Saba'). This method was still used at the turn of the century when the houses of the "old villages" in Jordan were built.

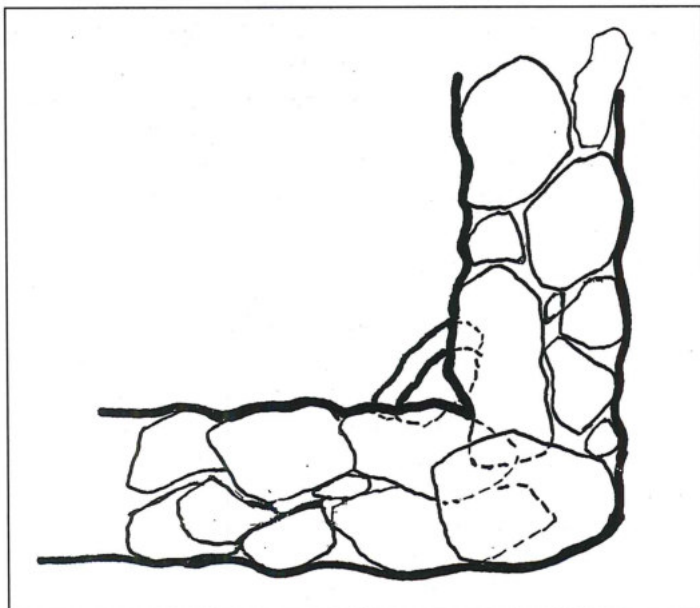
The Paravant or Screening Wall

The floor of R1 is c. 1.80m lower than the floors of R2, R3, and R4. There is a sudden rise of the bedrock from R1 to R2. In order to cover the rugged and cracked surface of the natural rock, an artificial wall of basalt rocks was built to screen out the bare bedrock. This screen of head-sized stones forms a thin line (c. 0.30m wide) at the bedrock level. In R2 this screening wall was covered by another wall line, being the north wall of the "reception hall". Of this north wall two stones have remained.

From this it can also be concluded that the ceiling of R1 was much lower than that of R2, R3 and R4, which



3. Areas CI and CIII: The casemate wall and house.



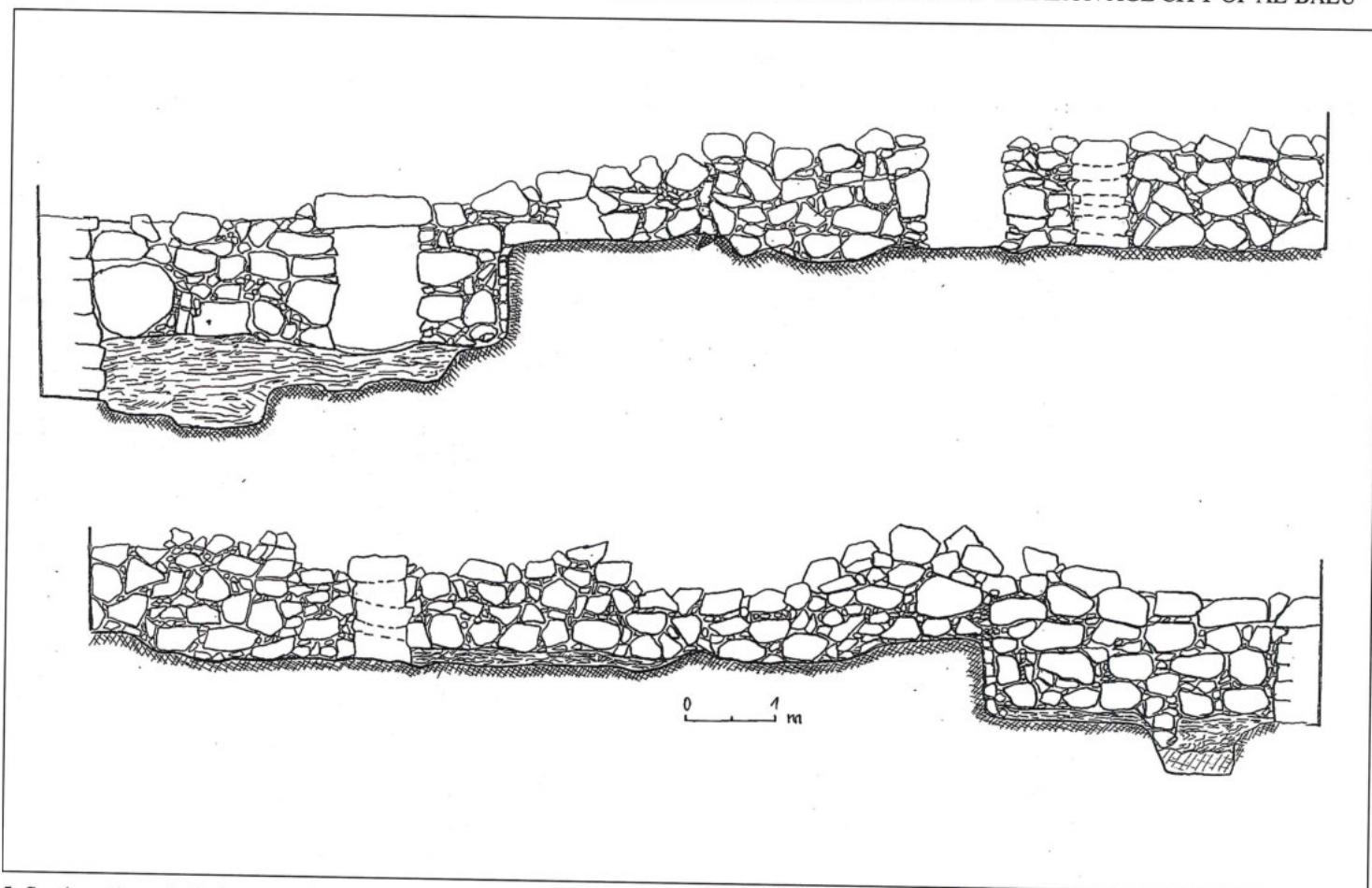
4. Main walls joining in a corner.

have the same floor level (see artist's conception of the house and the casemate wall, FIG. 5).

Area CIII

The northern defence wall of al-Bālū' can be followed westwards from the house complex. About 30m west of the house, W. F. Crowfoot did a sondage in 1933 (Crowfoot 1934: 76-84). To the east of his sondage area, two sondages were done in 1991. The excavations revealed two partition walls between the walls of the casemate-type defence system. The outer wall, located immediately at the edge of the escarpment to the valley of Wādī al-Bālū' is about 1.20m wide while its parallel wall is about 2m wide. The partition walls measure between 1.40 and 1.60m. The width between the parallel walls is about 3.20m.

Although the casemate wall was not fully excavated, its dimensions are impressive. The eastern sondage area is especially worthy of note, because here the casemate



5. Sections through the house and the casemate wall.

room seems to have been used as a storage area for large jars and kraters. An abundance of sherds have come to light, but unfortunately no complete vessels. This room was destroyed by fire as shown by the thick layer of ashy debris on the floor.

Further investigations are necessary in order to reach any definite conclusions with regards to the Assyro-Babylonian house complex and the casemate walls. But what has been excavated so far is rather promising for the future.

In conclusion it can be said that the verdict which W. F. Crowfoot passed upon the site of al-Bālū' in 1933: "...for future excavations Balu'ah does not appear to the writer to be attractive ... the prospects of important finds are not obviously promising" (Crowfoot 1934: 77), does not certainly not hold true and has already been disproved. It is hoped that excavations adding to our knowledge of the Iron Age period in the ancient Moabitis can be continued at al-Bālū' in the near future.

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