

THE 2002 SEASON AT QAŞR AL-ḤALLĀBĀT: A PRELIMINARY REPORT

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With a Contribution by Maria Elena Ronza

Introduction

The site of Qaşr al-Ḥallābāt (قصر الحلابات) is located 25km to the northeast of the city of az-Zarqā', on the southeast edge of the modern town of al-Ḥallābāt al-Gharbiyya. The site occupies an area of 50 acres, with the *qaşr* located on the top of the mound, dominating the site. It was erected as a defence fort during the Roman period and maintained its function during the Byzantine period. In the first half of the eighth century, during the Umayyad period, it has been completely rebuilt and transformed into a palace richly decorated with frescoes, incised stuccoes, and mosaics. During this period, the *qaşr* was a residence, such as the other Umayyad installations in the desert.

A small mosque is located 14m southeast of the *qaşr*. It was built during the Umayyad period and presents stylistic similarities with the first architectural Islamic style in North Africa and Spain. Its plan is rectangular and it is divided into three naves by columns. The remains of several houses and an elaborate water system, which supplied the entire area, are clearly visible around the *qaşr*.

In spite of the great historical and archaeological importance of this site, it did not receive the complete attention. The whole area needs to be transformed into a well-organized archaeological site, which includes tourist development as well as respect of the antiquities. Within this context, a project to construct a visitor centre, which will provide informative material and all the necessary tourist facilities, is under study.

Two archaeological projects have been carried out in the site. A partnership project between the Department of Antiquities of Jordan and the Spanish Historic Heritage Institute, Ministry of Culture, aims at the restoration of the *qaşr* and the mosque, under the direction of Architect Ignacio Arce. During the year 2002, a season of excavation and cleaning up of the collapsed structures was conducted, before approaching the issues of restoration. Additionally, the Department of Antiquities

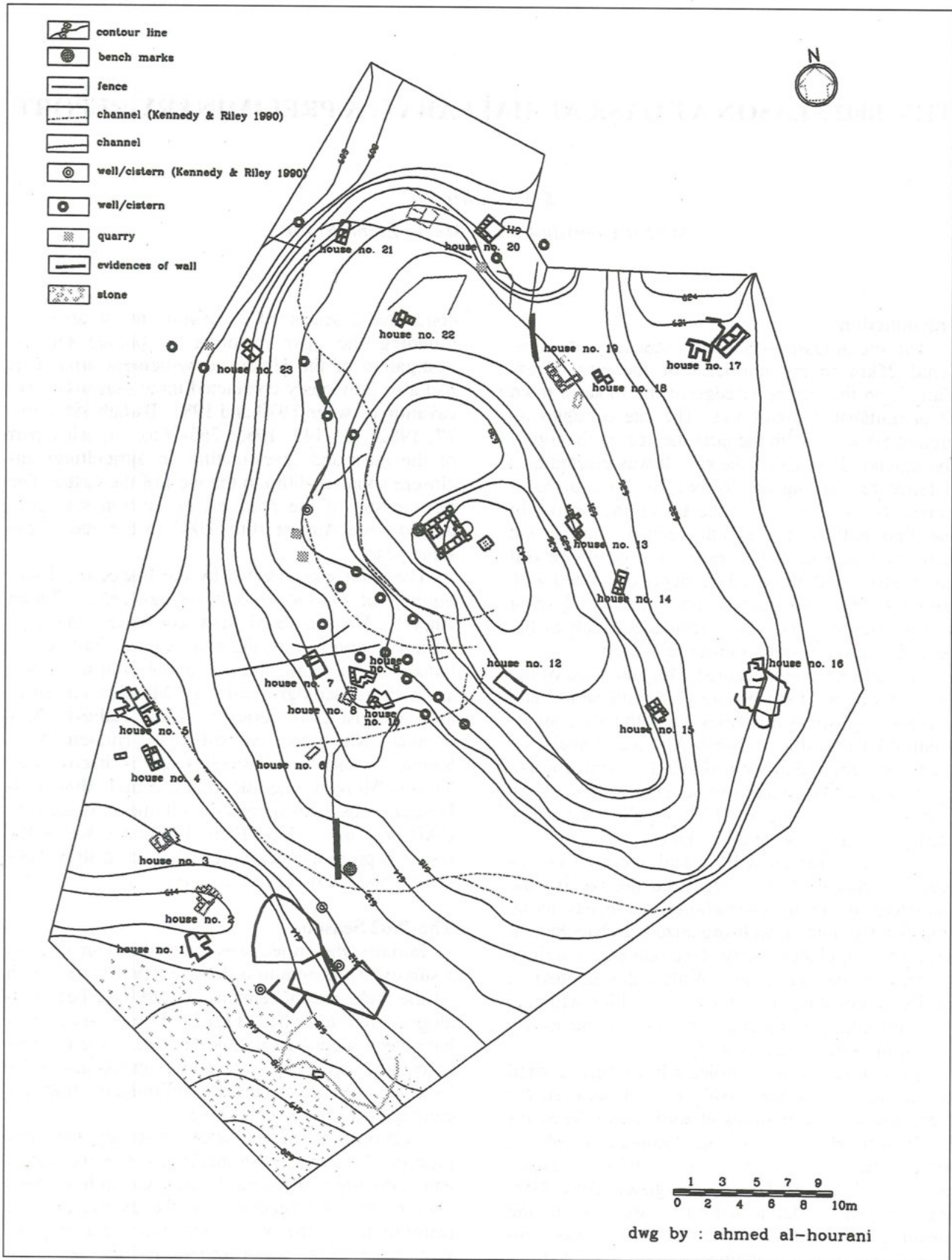
conducted a season of excavation in the area surrounding the *qaşr* in order to pursue the investigation of the Umayyad settlement around. It had also previously conducted three seasons of excavation between 1979 and 1981 (Bisheh 1980: 69-77; 1982: 133-143; 1985: 263-265), exposing part of the *qaşr* and investigating an agricultural enclosure situated 400m to the west of the castle. The first season of the renewed excavation was conducted from August 10th, 2002 to the end of the same year.

The team was directed by the Inspector of Antiquities of the Governorate of az-Zarqā', Romel Ghryeb. Nisreen Bani Issa conducted the preliminary survey, with the assistance of Tawfiq Al-hunaiti at the total-station; Ahmad Shurma served as chief archaeologist and Najd Mazahra served as archaeologist and ceramist. Lina Hallasa, Mohammad Khawalde, Ahmad Lash, Hussein Naif, Samia as-Saifee collaborates as archaeologists. Younes Momani was the architect and Ahmad al-Hourani was responsible for all the drawings by CAD programs. Maria Elena Ronza worked at the research project concerning the water-distribution-system and the quarrying activity.

The 2002 Season

Initially, the project was focused on carrying out a survey of the area in order to prepare a map with all the architectural remains, which have been catalogued and described (Fig. 1). Twenty-six houses have been identified and numbered, while the reservoir and the water system of channels and wells have all been investigated. Additionally, four ancient quarries have been found.

According to the results of the survey, the work proceeded in three main directions: the excavation and restoration of several houses, which have been chosen for their peculiarities; the excavation and restoration of the water reservoir and the investigation of the water system and the quarrying activity in the area.



1. Topographical map with architectural remains and water system.

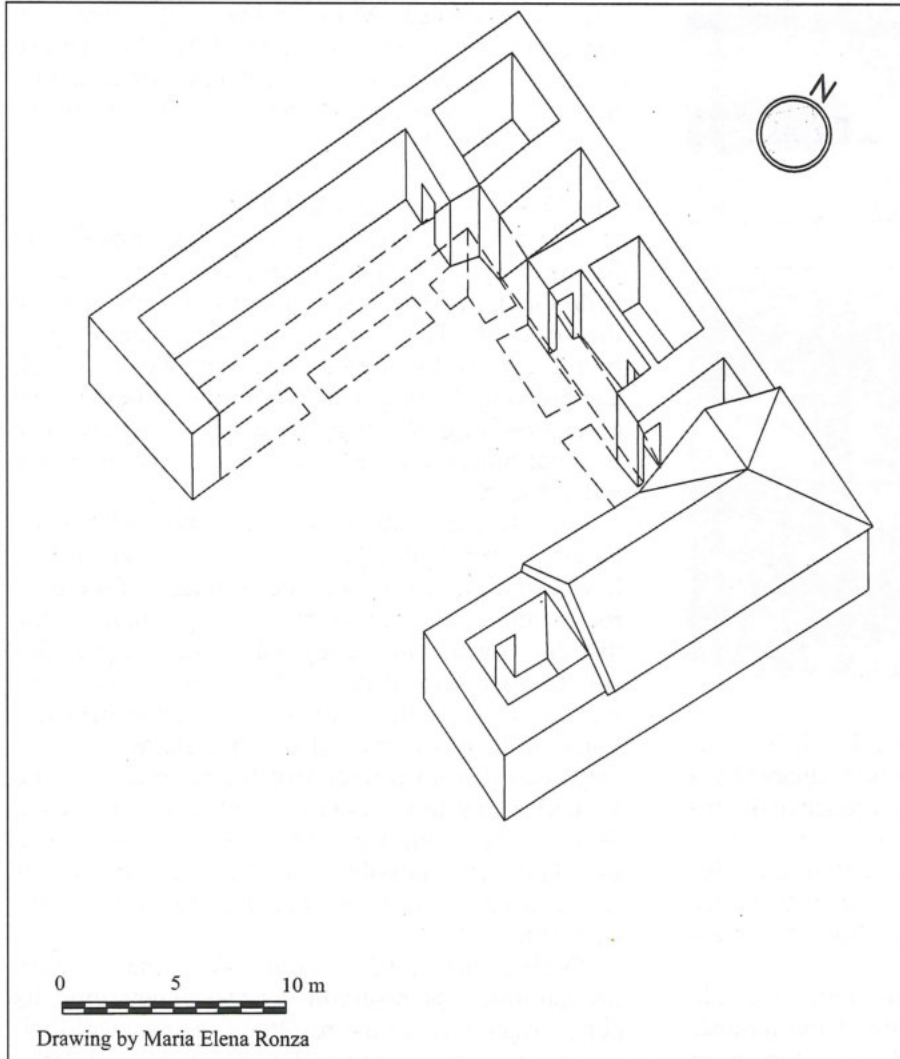
The Umayyad Houses

The first aim of the 2002 season was the excavation of several houses in order to investigate the typology and the morphological structure of the Umayyad settlement. Similar architectural features and typology characterise all of the houses. Each house consists of a group of rooms surrounding an open courtyard (Fig. 2). They appear to have to have undergone transformations with time, since evidence of enlargements have been observed. The building material is stone of different kinds, which mainly includes limestone and reused basalt blocks. The stones are undressed and a coating was used in order to hide the irregular surfaces of the walls and reinforce the structures. The houses have been built directly on bedrock. They appear as spontaneous architectures, which grew in the shadow of the *qaşr*. The comparison between the very fine architecture of the *qaşr* and the mosque, which belong to the same period, is clear evidence of this.

These houses were probably residences of servants working in the *qaşr*. The analysis of pottery confirmed that the houses belong to the Umayyad period and they have been built in a limited period of time. The residential function of the structures is proved by the type of vessels, which were reserved to domestic purposes, like cooking pots, jars, bowls, casseroles, storage jars, etc. The inhabitants of the area depended on agriculture (Bisheh 1985: 263-265), as evidenced by stone and basalt objects for grinding and processing seeds and vegetables.

The settlement is featured by two main residential typologies that are featured in the settlement:

- a) Residential complexes, such as no.1 and no. 3. These are featured by several houses, with each residential unit consisting of several rooms around a central hall (Fig. 3).
- b) Isolated houses, such as no.6, no.8 and no.19. House no. 6 (Fig. 4) is the only one among the twenty-six identified houses that was different



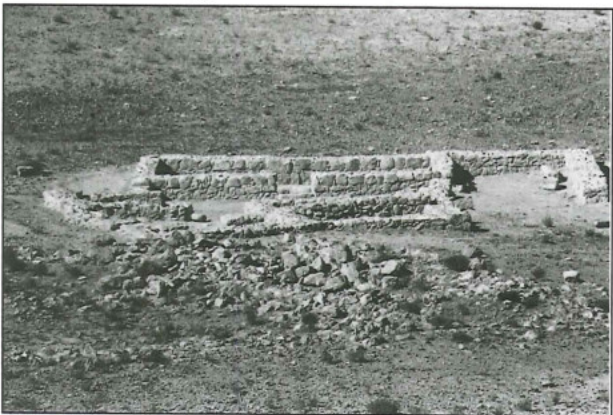
2. Typological reconstruction of house no. 19.



3. General view of houses no. 1 and no. 3.



4. House no. 6 during restoration.



5. House no. 8 after the restoration.

in form and was the smallest in size. It is a rectangular structure divided into two squares by a wall in the middle. It has one entrance and a total area of 60m². House no. 8 is in a bad condition as many of the walls have collapsed (Fig. 5). It consists of eight rooms, four of them are rectangular and large in size, while the others are smaller and square shaped.

House no. 19 is located on the northwest side of the *qaṣr*, at the opposite side of the mound, at the entrance of the site. The structure is in

good condition and features rubble core walls made of dressed and undressed blocks, with a wall thickness of about 90cm. Two plastered floor surfaces have been uncovered. The house was probably roof tiled, since roof tiles have been found all around and inside the structure. An open courtyard surrounded by several rooms, with two lateral wings which characterize the plan of the building. The heart of the house with the fireplace and the daily functions represents the central part, facing southwest and consisting of four rooms. The wings seem to be connected to the courtyard rather than directly to the heart of the house. The southeast wing features a huge room without any evidence of internal partition that might have been used as a storage room or as a recovery for animals.

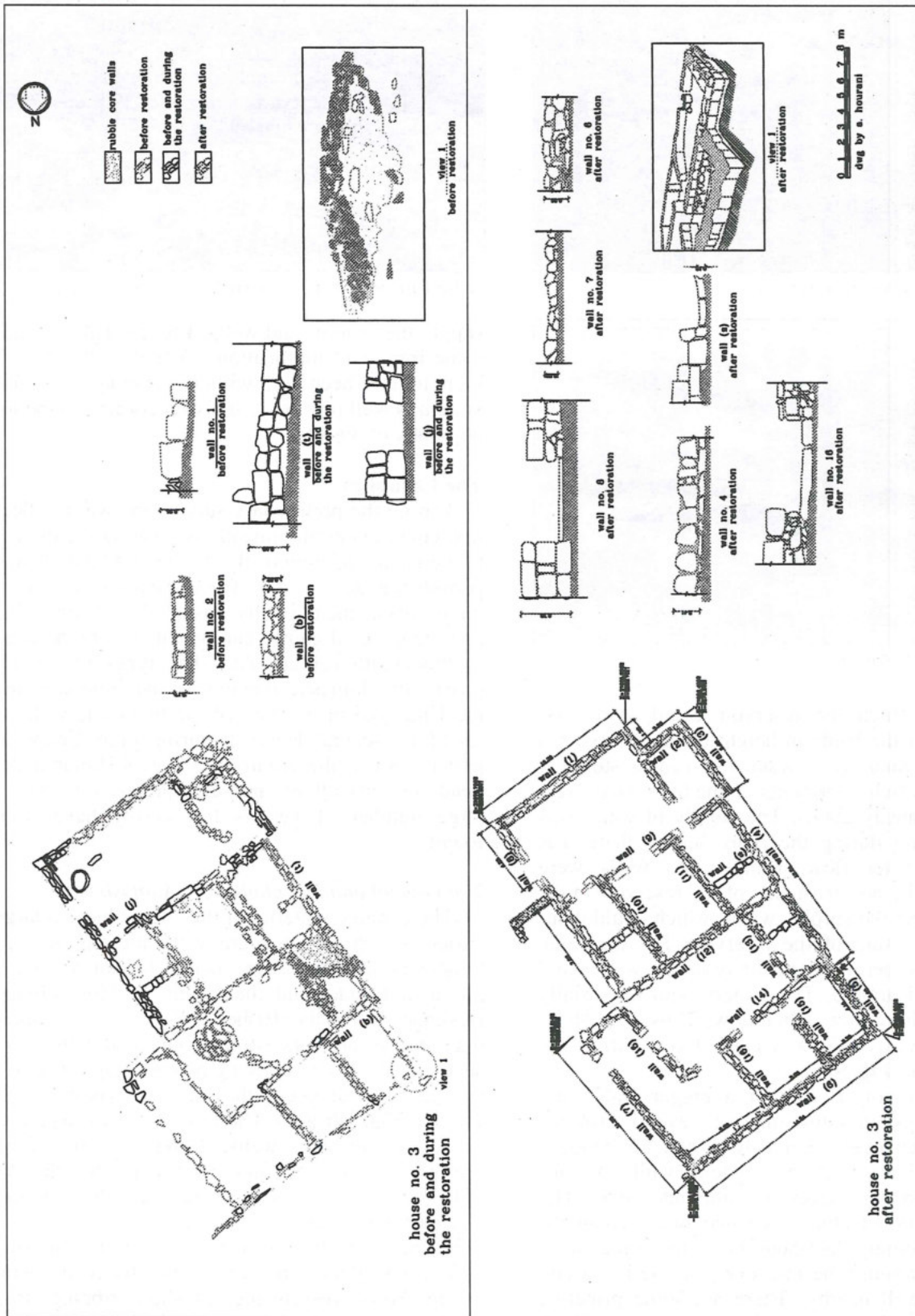
Excavation and consolidation took place during the same season in order to preserve the houses. Once the excavation was completed, all the structures, which were in a bad state of preservation, have been consolidated. Most of the walls were preserved to the second or the third building course without any additions. The technique of construction and the type of building material were maintained (Figs. 6, 7).

The Water System and Reservoir

The reservoir has an area of 2059.905m² and has an irregular shape. It was partly carved out of bedrock. Different types of masonry characterize the structure. The structure is mainly made up of rubble core walls of local limestone blocks, which has probably been quarried from the same site; the core consisting of small stones and concrete. The external blocks are well dressed and have different sizes (Fig. 8).

The structure stands directly on bedrock, sealed together with hydraulic mortar. The same mortar has been used also to seal the breakage of the bedrock itself. Some blocks present a peculiar profile that they are able to occupy only a specific place inside the structure of the wall. In some parts, a single faced wall abuts directly against the bedrock. Some of the blocks have decorative elements: probably reused from former structures, since they are located in the lower courses, and this would have been covered with water when the reservoir was in use. Thus, it is possible that the reservoir was restored or partially reconstructed along the time (Bishesh 1980: 70).

During the 2002 season, six squares were opened inside the reservoir in order to determine its depth. According to the results of the excavation, it was possible to determine the approximate quantity



6. The restoration project of the houses no. 3.



7. House no. 3 after the restoration.



8. The west wall of the reservoir.

of water, which the reservoir could store. Assuming that the medium height of the reservoir is 2.50m, the quantity of water that can be stored is 8107m³, which represents a medium sized reservoir (Kennedy 2000). The supply of water was irregular and during the rainy season there was abundant water flow. Hence, two wells were carved on the northeast side of the reservoir in order to collect the surplus water, which could damage the structure of the reservoir. For the same purpose, the perimeter of the reservoir was bound by earth all around. The eastern wall is partially collapsed due to the water flow. Thus, consolidation and anastylosis was carried out during the 2002 season (Fig. 9).

The reservoir is part of a bigger water distribution system consisting of several cisterns, wells and channels. Kennedy (1990: 75) made a first investigation of this system, while the adjournment of his survey was attempted here. The water system is featured by a network of channels, which apparently distribute the water to the entire settlement around the hill; every house has a cistern or a well nearby. There are some principal bigger channels and secondary small ones, which



9. The eastern wall of the reservoir during the restoration.

supply the cisterns and wells (Fig. 1). This fact has some important implications. Although the houses seem to have been built without planning, the water system is well planned and also according to the topography of the site.

The Ceramics

During the preliminary survey, the wash collection consisted predominantly of material belonging to the Umayyad period; Byzantine and Late Roman periods are attested, too. The excavation confirmed the results of the previous season (Bisheh 1980: 71) and the material gained can be dated from the third to the eighth century AD. The types of vessels proved the domestic function of the structures and the Umayyad occupation of the houses is well attested by several layers featuring pure Umayyad pottery. Since the environment at al-Ḥallābāt depends on agriculture and subsequently on rains, a large number of vessels for storing have been found.

Typological and Morphological Analysis

The ceramic material of the site includes a large variety of shapes that are well attested in contemporary sites in Jordan, such as Mount Nebo, the 'Ammān Citadel and the Forum of Philadelphia, Heshbon and Pella (Bisheh 1980: 72). The dominant forms are jars, storage jars and tableware, such as vats, bowls, cooking pots and jugs. The following is a catalogue of the dominant types:

1. **Vats (Fig. 10: a-b):** The most common type is a big vat with thick walls. It presents a thickened rim, a flat base and flaring sides. The handles are loop or strap. The ware is greyish with small tiny limestone, quartz and chert inclusions; fairly levigated and well fired. It is wheel-made. The surface is slightly burnished, externally coated with slip. Some vessels present slight ribbing or a wavy band below the rim, which is decorated

- with thumb impressions in a wavy style.
2. **Bowls (Fig. 10: c-h)**
 - Deep bowls, large in size, with flattened rim, flat base, and vertical loop handle. The ware is reddish-yellow with small limestone and chert grits; well fired. It is wheel-made. The vessels are plain.
 - Medium and small bowls with simple flat top or splayed or rounded rim, flat or ring base and straight or carinated sides. The ware is creamy or pink, well levigated and coated by a creamy or pink slip. The vessels present a dark red painted decoration on the internal or external surfaces, representing spirals or vertical wavy lines.
 - Grey fabric bowls with dark grey slip. They have a flat top rim, sometimes externally decorated by a wavy line of thumb impressions. The ware is smooth and well levigated. They present a combed wavy incised band below the rim. Some vessels present white painted decoration.
 3. **Cooking Pots and Casseroles (Fig. 10: i-m):** Most of the cooking pots have globular shape with shallow ribbing. The rim is simple rounded and commonly they present loop or strap handles attached vertically from the rim to the shoulders. The bases are omphalos, rounded and flat. All the cooking pots are plain. The ware is mostly dark grey, while some brown fabric is also attested (Fig. 10: i-j). The casseroles are well represented in the site. They present a flat top rim, flat or rounded base, and twisted or high horizontal loop handles (Fig. 10: k-l). Lids were used especially for the cooking pots. They present rounded or conical shape with flat or bevelled rim. The ware is grey or reddish (Fig. 10: m).
 4. **Jars (Fig. 10: n-r):** The attested forms of jars belong to the Umayyad period. They present a flat top or a smooth grooved rim; sometimes there is a ridge under the neck. The bases are of two types: low ring and omphalos. Simple or grooved handles attached from the rim to the shoulders. The fabric varies in colour from red to light red, pink and grey. The vessels are simply decorated with brown or dark red painted motives, such as stars, wavy or vertical lines, and dots. Some of them present comb incisions of wavy or straight bands on the external surface. Ribbing is poorly represented on jars.
 5. **Storage Jars (Fig. 10: s-t):** A large amount of sherds of storage jars (hole mouth or collar rim) have been found. All the storage jars are featured by a heavy fine finished ware. The rim is

thickened, the bases are pointed or flat, grooved or heavy loop handles are attested. The fabric varies from pink to light red, grey and dark grey, and presents small stone and tiny chert inclusions. The outer surface is creamy. The vessels present incised bands on the external surface.

Conclusions

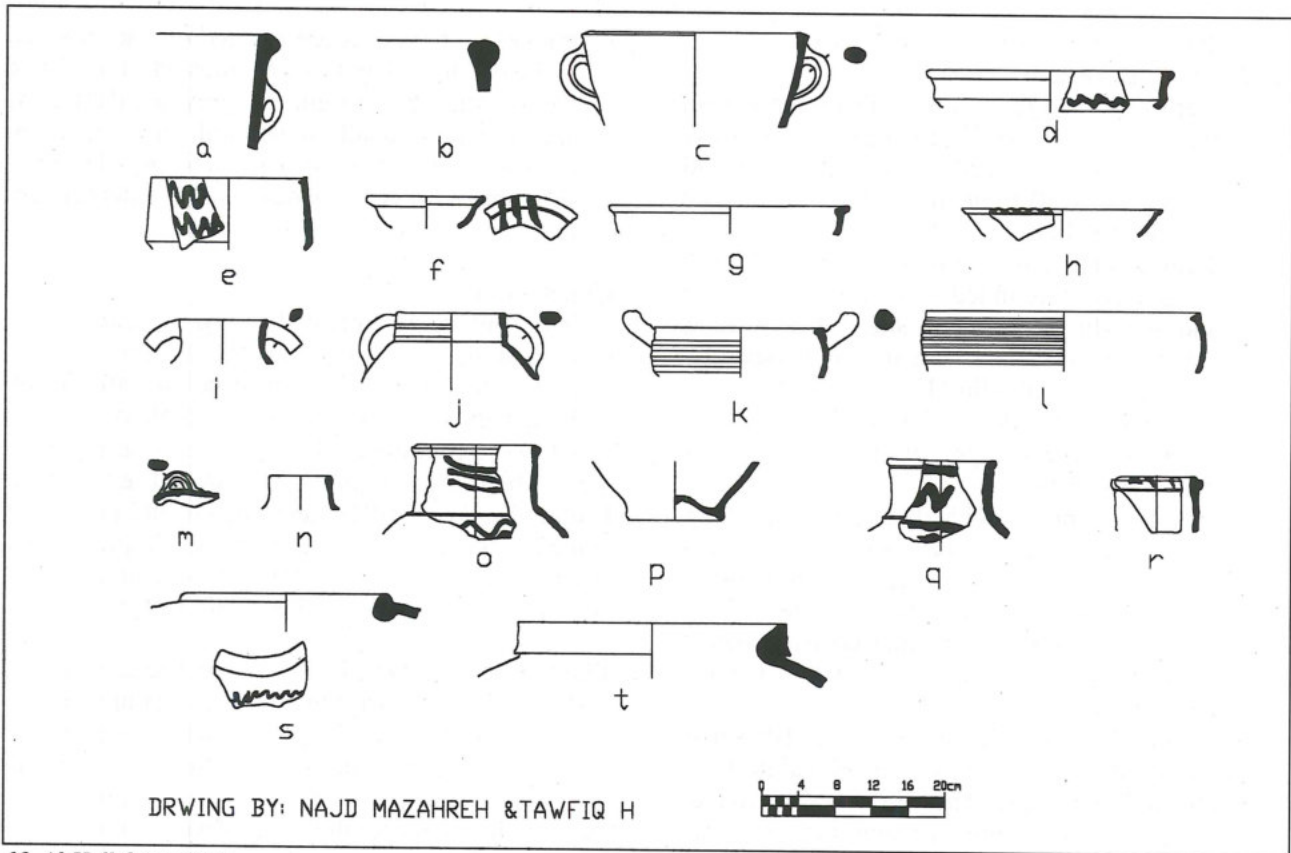
The settlement around the *qaşr* is featured by two building typologies: isolated houses and residential complexes. All of the structures are mostly built of undressed stone and have rubble core walls, which were plastered. The area was a large settlement where the servants of the *qaşr* used to live. Each house has a *ṭābūn*, and objects and pottery of domestic daily use were found. A complex water system used to supply water to the houses and a system of wells used to collect train water.

The Quarrying Activity (by Maria Elena Ronza)

Evidence of quarrying activities feature the entire area of Qaşr al-Ḥallābāt. Four underground quarries have been identified around the hill and evidence of surface quarrying are also present on the top, just beyond the *qaşr*. Two of the underground quarries are located on the northwestern side of the *qaşr* and in one of them a standing pilaster supports the ceiling. The pilaster measures about 1 x 1m and is built of roughly dressed basalt and limestone blocks (Fig. 11). It was probably a cistern reused as quarry in a later period, as proved by the remains of a deep completely plastered basin in a corner.

The other two identified quarries are situated on the western slope. The southernmost one presents evidence of channelling; the northernmost quarry has been closed by the collapse of the ceiling and so it is inaccessible. The reservoir itself probably served as a quarry with its walls built with stones originally from it. The most important feature of the site (concerning the quarrying activity) is the big number of quarried blocks spread all over the area around the reservoir (Fig. 12).

A survey of those blocks proved that they are oriented according to two directions: some of them are oriented north/south, while others have a north-east/southwest orientation. They are organized to form areas where all the blocks follow the same orientation. Each one of those areas can be divided into smaller partitions according to the size of the blocks. The blocks are, in fact, also organized according to their size, and, even if they are mostly in a bad state of preservation, it is possible to recognize that they fit in the Roman system of meas-



10. Al-Hallābāt pottery.

- a. Vat, House 8, Square 2, Locus 2-Diam: UD, thickened rim, vertical loop handle, deep wavy combing on exterior, dark grey slip (2,5 YR 4/1), grey core, Umayyad.
- b. Vat, House 6, Trench 1, Locus 1-Diam: 52cm, thickened rim, grey core, dark grey slip, Umayyad.
- c. Bowl, Survey-Diam: 25cm, flat top rim, vertical loop handle, tiny limestone inclusions, wheel made, light red ware (2,5 YR 7/6), light red slip (2,5 YR 6/6), Umayyad.
- d. Bowl, House 3, Trench 3, Locus 1-Diam: 27cm, flat top rim, straight sided, carinated body, creamy slip on both interior and exterior, wheel-made, well levigated, reddish brown wavy painted decoration on interior and over the rim, Umayyad.
- e. Bowl, House 3, Square 4, Locus 1-Diam: 17cm, flat top rim, wheel made, creamy slip, reddish brown painted decoration in a wavy design, Umayyad.
- f. Bowl, House 8, Survey-Diam: 13cm, splayed rim, wheel made, pink ware, weak red vertical painted lines on interior, Umayyad.
- g. Bowl, House 3, Trench 1, Locus 1-Diam: 26cm, flat everted rim, wheel made, very pale brown ware, slip coating, Umayyad.
- h. Bowl, House 19, Room 3, Locus 2-Diam: 22cm, flat top rim, wavy thumb impressions on the exterior of the rim, grey ware, and dark grey throughout white vertical painted lines over the rim, Umayyad.
- i. Cooking pot, House 1, Room m, Locus 2-Diam: 9cm, globular body, simple rounded rim, vertical loop handle attached to the rim and the shoulders, wheel-made, dark grey ware (2,5 Y 4/1), shallow ribbing on exterior, Umayyad.
- j. Cooking pot, House 3, Locus 1-Diam: 11cm, ribbed globular body, slightly everted rim, vertical strap handle, wheel made, dark grey ware, very dark grey throughout (2,5 Y 3/1), Umayyad.
- k. Casserole, House 6, Locus 1-Diam: 18cm, open form, flat top rim, horizontal grooved handle, wheel made, ribbed body, coarse surface, brown ware (7,5YR 5/4), dark grey core, Umayyad.
- l. Casserole, House 1, Square 12, Locus 4-Diam: 30cm, open form, flat top rim, coarse surface, yellowish red ware (5YR 5/6), dark grey core, Umayyad.
- m. Lid of cooking pot, House 1, Room G, Locus 1-Concentric ribbing around the handle, wheel made, steam hole, reddish ware, dark reddish grey throughout (2,5 YR 4/1), Umayyad.
- n. Jar, House 3, Square 3, Locus 6-Diam: 9.5cm, rounded rim, vertical neck, dark grey core, reddish brown ware on the interior (2,5YR 5/4), dark grey slip on exterior, Umayyad.
- o. Jar, House 8, Locus 7-Diam: 14cm, shallow grooved external rim, raised ridge line under the rim, wheel made, white ware, wavy brown painted decoration (7,5 YR 4/4) over a creamy slip, Umayyad.
- p. Jar, House 8, Square 7, Locus 5-omphalos base (diam: 10cm), flaring sided, wheel-made, light red ware (2,5 YR 7/6), pink slip on exterior (2,5 YR 8/4), Umayyad.
- q. Jar, House 1, Room M, Locus 2-Diam: 12cm, simple everted rounded rim, grooved lines under the rim, sharp ridge on the junction point between the rim and the body, pink ware (7,5YR 7/4), very pale brown slip, weak red painting (10R 3/3), wavy and horizontal lines on exterior, dark grey core, Umayyad.
- r. Jar, House 1, Room E, Locus 3-Diam: 10cm, shallow grooved rim, vertical high neck, reddish-yellow ware (5YR 7/6), very pale brown throughout, red painting above the rim, Umayyad.
- s. Storage jar, House 19, Room 1, Locus 3-Diam: 23cm, hole mouth rim, thick walls, light red ware (2,5YR 7/6), very pale brown throughout, wavy incised lines on exterior, Umayyad.
- t. Storage jar, House 19, Room 1-Diam: 28cm, thickened rim, grey core, light red ware, very pale brown throughout, Umayyad.



11. The underground quarry northwest of the qaşr.



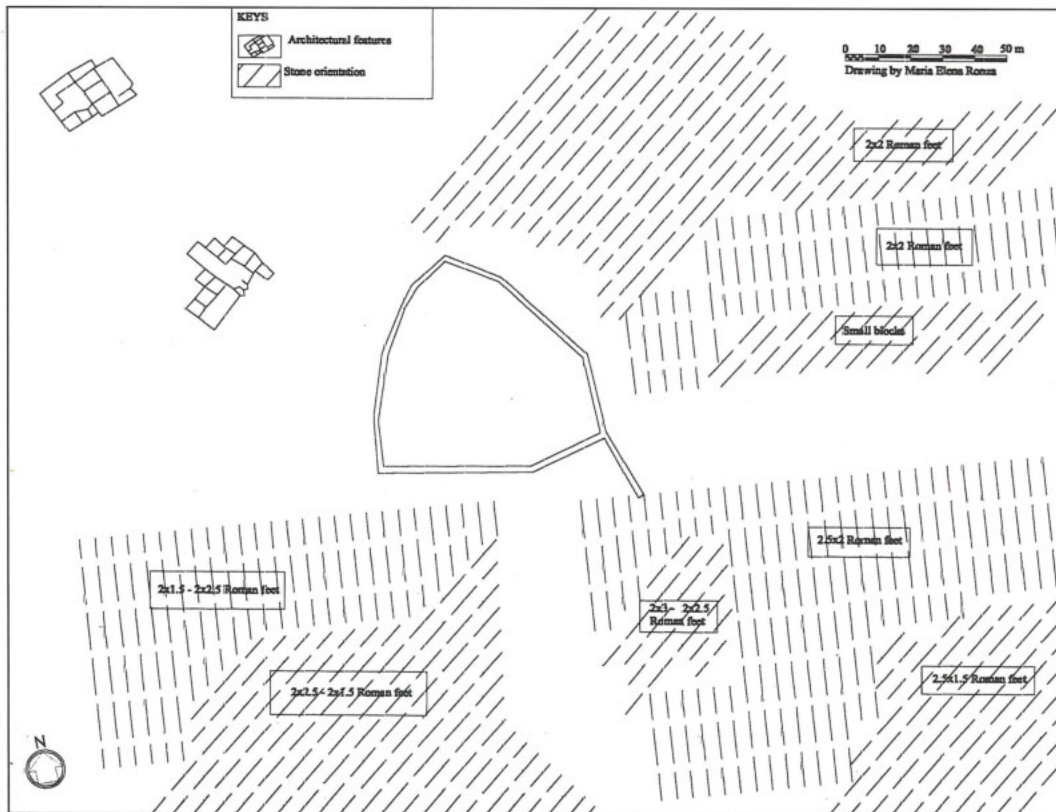
12. The quarried blocks around the reservoir.

urement. The unit of measurement is the Roman foot (29.6cm) (Fig. 13). These characteristics prove that the blocks were artificially arranged. Most of them present traces of the detaching channel.

Conclusions

Vitruvius (*De Architectura* 2.7.5) said: "...if we wish our work to be finished without flaws. Let the stone be taken from the quarry two years before building is to begin, and not in winter but in summer. Then let it lie exposed in an open place. Such stone as has been damaged by the two years of exposure should be used in the foundations. The rest, which remains unhurt, has passed the test of nature and will endure in those parts of the building which are above ground. This precaution should be observed, not only with dimension stone, but also with the rubble which is to be used in the walls" (Morgan 1914: 50). Thus, the blocks under study had been quarried and then exposed for maturing. Subsequently, for some reason, they were abandoned *in situ*. One explanation can be the sudden interruption of the quarrying activity in the area. However, this theory is not completely satisfactory, since all the blocks are badly weathered, which is unusual for Roman quarrying (Singer *et al.* 1965: 31-32).

Therefore, the blocks were quarried and organized for maturing in an open space. The ones



13. The arrangement of the blocks around the reservoir according to orientation and dimension (sketch).

which passed the test served as building material; the rest were simply abandoned since, according to Vitruvius, they should be used in the foundations, but in the site of al-Ḥallābāt most of the structures are standing directly on the bedrock. They were not moved since the cost of haulage was high during the Roman period and also almost-finished architectural pieces (such as columns, capitals, etc.) have been often found abandoned in the quarry site for economic reasons (Vanhone 1996: 30; Wachter 1990: 594).

Acknowledgements

The Ministry of Planning financially supported the project. Many thanks to all the persons and institutions which collaborated to the success of the project. A special thanks goes to the General Director of the Department of Antiquities of Jordan, Dr. Fawwaz al-Khraysheh. The assistance in pottery reading of Mr. Adeb Abu Shmeis is greatly appreciated.

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