

**The Smithsonian Institution
Regents of the University of Michigan**

Three Seasons of Excavations at Qaşr al-Ḥayr Sharqi

Author(s): Oleg Grabar

Source: *Ars Orientalis*, Vol. 8 (1970), pp. 65-85

Published by: Freer Gallery of Art, The Smithsonian Institution and Department of the History of Art, University of Michigan

Stable URL: <http://www.jstor.org/stable/4629253>

Accessed: 14/12/2009 06:44

Your use of the JSTOR archive indicates your acceptance of JSTOR's Terms and Conditions of Use, available at <http://www.jstor.org/page/info/about/policies/terms.jsp>. JSTOR's Terms and Conditions of Use provides, in part, that unless you have obtained prior permission, you may not download an entire issue of a journal or multiple copies of articles, and you may use content in the JSTOR archive only for your personal, non-commercial use.

Please contact the publisher regarding any further use of this work. Publisher contact information may be obtained at <http://www.jstor.org/action/showPublisher?publisherCode=si>.

Each copy of any part of a JSTOR transmission must contain the same copyright notice that appears on the screen or printed page of such transmission.

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



*The Smithsonian Institution and Regents of the University of Michigan are collaborating with JSTOR to digitize, preserve and extend access to *Ars Orientalis*.*

<http://www.jstor.org>

THREE SEASONS OF EXCAVATIONS AT QAŞR AL-ḤAYR SHARQI

BY OLEG GRABAR *

IN 1964 THE KELSEY MUSEUM AT THE UNIVERSITY of Michigan undertook the sponsorship of an excavation at Qaşr al-Ḥayr Sharqi in the Syrian desert.¹ The first season took place in September and October 1964. It was followed by a larger expedition in April, May and June 1966. In 1968 political circumstances made only a short trip possible during the month of June, while a fairly extensive season took place in April, May and June 1969. Altogether nearly seven months were spent at the site, and while the job is still not completed, we thought it appropriate at this stage to put together a report on the work done. This is not a coherent preliminary report, since such reports have regularly been published in the *Annales Archéologiques de Syrie* since 1965. Nor is it a detailed study of some specific aspect of the site, which has been done for the ancient name of Qaşr al-Ḥayr in the *Revue des Etudes Islamiques*,

* Professor of Fine Arts, Harvard University.

¹ A summary of what had been known about Qaşr al-Ḥayr before excavations will be found in K. A. C. Creswell, *Early Muslim Architecture*, vol. 1, Oxford, 1969, pp. 522 ff. Additional remarks of major importance were made by H. Segrig, "Les Jardins de Kasr el-Heir," and "Retour aux Jardins de Kasr el Heir," *Syria*, vols. 12 (1931) and 15 (1934). The first contemporary publications of the site are by A. Gabriel, "Kasr el-Heir," *Syria*, vol. 8 (1927), and A. Musil, *Palmyrena*, New York, 1927. The most important hypotheses about the site were made by J. Sauvaget, "Remarques sur les monuments omeyyades," *Journal Asiatique*, vol. 231 (1939) and (posthumously) "Châteaux Umayyades de Syrie," *Revue des Etudes Islamiques*, vol. 35 (1967).

or for the problem of the population of the site, a study which will appear in the centennial volume of the mid-West branch of the American Oriental Society. Finally, it is not a final statement about the work done so far, for many documents have not yet been properly analyzed or understood, and much comparative work has to be completed before definitive conclusions and coherent hypotheses can be presented to the public. My intention in the following pages is rather to present *some* of the highlights of the discoveries which have been made and to discuss *some* of the problems which have been raised. There are several reasons which appear to me to justify an article of this sort. One is that, while final publications are indeed supposed to bring up all these points, they take a long time and by then both the authors and the eventual public may have lost interest in the site. Another reason is that every excavation brings to light new documents which modify, confirm, or otherwise correct whatever the prevalent body of factual information and of interpretations may be, and there is something slightly improper in withholding too long such information; art historians and archaeologists are particularly guilty of this sort of secretiveness, and unpublished documents and ideas outnumber by far what is available and known, to the detriment both of science and of morality. Finally and much more egoistically, the excavation of Qaşr al-Ḥayr, like most excavations, has brought to light many documents and many problems which are be-

yond the competence of the excavators. By making some, at least, of these public before preparing the completion of the work itself, the hope is expressed that they will lead to comments and discussions, thereby making the eventual final publication not merely the expression of a single group's views and interpretations but a truly useful summary of scholarly knowledge. For more than any other humanistic endeavour, archaeology is a collective enterprise and its results should reflect the collective effort of the academic community.

At the outset it is a particular pleasure for me to thank three separate groups without whom the excavations would not have been possible. The first one is the Syrian Service des Antiquités, whose successive Directors from Dr. S. Abdul-Haq to Dr. A. Darkal, whose director of excavations, M. Adnan Bounni, and whose Palmyra officials, especially MM. Khalid al-Asa'ad and Ali Taha, have smoothed our work in Syria in truly admirable fashion. The second group are the financial sponsors without whom our work would have been obviously impossible. In addition to the Kelsey Museum, these have been the Center for Near Eastern and North African Studies and the Horace H. Rackham School of Graduate Studies, all at the University of Michigan, the Roy Neuberger and Laird-Norton Foundations, and, since 1969, an anonymous grant at Harvard University. The third group is the staff assembled over the years. While special recognition should be given to Dr. William Trousdale, Assistant Director of the expedition, and to M. Selcuk Batur, our architect, who participated in all campaigns, all of the following have made contributions to the daily work and to the interpretations of finds which are as

numerous as they are difficult to assign to any one individual: Professor Doğan Kuban; Mrs. Ülkü Bates and Mrs. Renata Holod-Tretiak; Misses Linda Rhodes and Hayat Salam; MM. Fred Anderegg, Adil Ayyash, Douglas Braidwood, Robert Hamilton, Neil MacKenzie, and Peter Pick. Even though there is only one signatory to this report and even though, in the usual manner, he bears all the responsibility for the work done and for the judgements expressed, much of what follows is the result of collective discussions; and the author's debt to the members of his staff is immense.

I. THE SITE AND ITS PROBLEMS

The site of Qaşr al-Ḥayr Sharqī belongs at first glance to a well-known series of ruins which are found in the desert proper or on the edges of the desert and of the "sown" from the Euphrates to the gulf of Aqabah, but it is distinguishable from most others by its extraordinary size. A wall, nearly sixteen kilometers in length, outlines a strange polygonal area (*fig. 1*). Most of the wall is only barely visible above ground (*fig. 2*), but at its southernmost end it has been preserved and contains a series of openings in a brick and stone masonry (*fig. 3*). Although there has been some debate about the function of these openings, the most likely hypothesis—fully confirmed by our excavation of 1969—was that these were sluices for the evacuation of water after the potentially ruinous flash floods of the desert in the spring. The elaborate quality of this mechanism for the control of an obviously dangerous but still only occasional occurrence suggests, on the one hand, that there was a major agricultural purpose to the site and, on the other, that it was de-

veloped at a time when considerable means could be devoted to the agricultural potential of this area.

The natural rain water whose control was effected by the sluices at the south end of the enclosure was not the only source of water supply for Qaşr al-Ḥayr. An impressive underground canalization (*fig. 4*) with regular openings every thirty meters brought water from al-Qawm, nearly thirty kilometers to the northwest. For one of the paradoxes of Qaşr al-Ḥayr is that it is without permanent source of water in spite of the good quality of its soil, whereas at both al-Qawm and the closer (fourteen kilometers) Tayyibeh (*fig. 5*), where the terrain is salty and less suitable for constant agriculture (even modern gardens have to be moved at frequent intervals of time because the soil loses its fertility), water is plentiful. The conclusion to draw from this point is that, while confirming the fact of a large investment made by whoever developed the site, it also indicates a remarkable awareness of local hydrographic conditions.

Most of the vast area surrounded by Qaşr al-Ḥayr's outer enclosure appears barren of any significant construction and the few traces which do exist seem to be either remains of minor and limited occupations (very few sherds are found on the surface) or parts of the site's irrigation system. But at the northern end of the enclosure—where it is almost impossible from air photographs to decide how the outer walls met—the terrain is literally covered with traces of occupation (*fig. 6*). The most impressive ones, still wonderfully preserved, are the two celebrated enclosures. One, 70 by 70 meters, has a massive facade with stone, brick, and stucco decoration (*fig. 7*). Inside vaults are

still standing in part (*fig. 8*); together with bonds visible in the walls they made it possible for Creswell and Gabriel to imagine a building with a hypothetical central courtyard and 28 vaulted halls perpendicular to the outer wall (with some exceptions in the corners, *fig. 9*). A second storey seemed assured by the bonds in the walls and by the preserved northeastern and northwestern corners.

The large enclosure is 160 by 160 meters. It has four axial gates and two supplementary ones on the east side facing the small enclosure. In spite of certain similarities between the masonries of the two enclosures, the striking feature of the large enclosure's walls is the variety of masonries found in them, suggesting several periods of activity. Inside, if we except a late archway made up of re-used materials, all that was known before excavations is that there was a mosque with a high axial nave in the southeastern corner (*fig. 10*) whose plan could be guessed and that a brick vaulted cistern occupied the middle of the enclosure. When related to the size of the building, this evidence seemed to indicate that the enclosure was in fact a town with a history of several centuries (because of the repairs), and in this fashion a further coordinate appeared in our hypothetical understanding of Qaşr al-Ḥayr. It was an urban entity.

This urban interpretation of the enclosure was further strengthened by an inscription seen in 1808 by the French consul Rousseau and now disappeared which stated that a town (*madīnah*) had been built here by order of Hishām in 729–30 A.D.² Since

² The inscription is quoted and discussed by almost every one of the authors mentioned in the

the style of the small enclosure otherwise fitted with the Umayyad period,³ the conclusion reached by Gabriel, Creswell, and Sauvaget was that we were in the presence of an Umayyad city (the large enclosure) next to which stood a royal palace (the small enclosure). The peculiar position of the mosque in the corner of the city rather than in its center as supposedly required by early Islamic practice was explained by the presence of the royal palace, and the explanation appeared strengthened by the existence of a small door (*fig. 11*) leading directly from the sanctuary out of the city to the "palace." City and palace were in turn, as Sauvaget had demonstrated, set in a large and artificially developed area for agriculture.

All writers emphasized the importance of the Umayyad period and toned down—at times even ignored—the archaeological evidence of repairs and reconstructions. But, regardless of the possible implications of this point, the fact of an urban center from early Islamic times, the very moment of the massive urbanization of the Arab world, gave to the site of Qaṣr al-Ḥayr a unique significance. The reasons for the existence of a city there could easily be guessed by a look at the map (*fig. 5*), for Qaṣr al-Ḥayr is at the foot of one of the very few passes across the mountain chain which crosses the northern part of the Syrian desert. Thus, in addition to its agricultural

previous note. Its full text is most easily accessible in *Répertoire Chronologique d'Epigraphie Arabe*, Cairo, 1931 ff., no. 28.

³ Although ultimately probably acceptable, the argument is a bit dangerous, since it is in fact the façade of Qaṣr al-Ḥayr which created the standard by which other, less well-preserved façades have been reconstructed.

potential, Qaṣr al-Ḥayr had also commercial and strategic possibilities which would explain its urban features. Furthermore, by being located at the edge of the true desert, the site probably played a part in the relationship between settled and nomadic groups, thus appearing to be involved in all facets of Near Eastern life.

While these anthropological and geographic coordinates of Qaṣr al-Ḥayr had been mentioned, at least in part, by previous writers on the site and became gradually more real to us as we spent months working there, it would not be fair to say that they were the main reasons for our decision to excavate there. The latter were mostly historical and art historical. For external pre-excavation information clearly indicated that the main period of construction of Qaṣr al-Ḥayr was the Umayyad period. The unusual artistic wealth of this formative moment in Islamic art had already been made abundantly clear by such great secular monuments as Khirbat al-Mafjar, Mshatta, and Qaṣr al-Ḥayr Gharbi,⁴ not to speak of the religious monuments of Jerusalem and Damascus.⁵ Recently excavations had been carried out at Jabal Says,⁶ but, except for sadly unfinished excavations at

⁴ R. W. Hamilton, *Khirbat al-Mafjar*, Oxford, 1957; D. Schlumberger, "Qaṣr al-Ḥayr al-Gharbi," *Syria*, vol. 20 (1939).

⁵ In addition to the descriptions and interpretations found in Creswell's volumes, see O. Grabar, "The Umayyad Dome of the Rock," *Ars Orientalis*, vol. 3 (1959) and "La Mosquée de Damas et les origines de la mosquée," *Synthronon*, Paris, 1968. For a masterful summary, J. Sauvaget, *La Mosquée omeyyade de Médine*, Paris, 1947.

⁶ K. Brisch, "Das omeyyadische Schloss in Usaïs," *Mitteilungen des d. Arch. Instituts, Abteilung Kairo*, vols. 19–20 (1963 and 1965).

Ruṣāfah,⁷ all these monuments were in western Syria; and except for the religious ones, all of them had ceased to exist with their original function as soon as the Umayyad dynasty collapsed. Aside from the fact that what purported to be a royal foundation could be expected to yield the wealth of sculptures, paintings, and mosaics found in several Umayyad buildings in Syria and Palestine, its location further east near the large early Islamic settlements of the Euphrates valley led us to believe that we might be able to capture another aspect of Umayyad art, the Mesopotamian aspect. Only the incompletely published excavations of Wāsiṭ and Kūfah⁸ illustrated so far the Umayyad art of Iraq, whereas the Jazīrah was almost unknown. Yet, as Creswell had already indicated, the remains of Qaṣr al-Ḥayr aboveground exhibited an unusual number of features which seemed closer to Iraq than to Syria. It seemed, therefore, that a further investigation into a link between the richest provinces of early Islam could be quite profitable. Finally the existence among the ruins of the two enclosures—and especially of the larger one—of a large number of classical and Palmyrene sculpted fragments,⁹ capitals and mouldings for the most part, indicated that the ancient world was present in the background of Qaṣr al-Ḥayr. Many earlier writers had

⁷ K. Otto-Dorn, "Grabung in Umayyadischen Rusafah," *Ars Orientalis*, vol. 2 (1957).

⁸ F. Safar, *Wāsiṭ*, Cairo, 1945; Muhammad 'Ali Mustafa, "Al-Tangīb fi al-Kūfah," *Sumer*, vol. 7 (1956); see also *Sumer*, vol. 16, (1965) and O. Grabar, "Al-Mushatta, Baghdad, and Wāsiṭ," *The World of Islam*, eds. J. Kritzeck and R. B. Winder, London, 1959.

⁹ D. Schlumberger, "Les formes anciennes des chapiteaux corinthiens en Syrie," *Syria*, vol. 14 (1933).

even identified the site with a Roman post on the *limes*,¹⁰ and, while the visible architectural remains could not without further investigation support the identification, it appeared that perhaps some new evidence could be gathered about the complex ways in which ancient sites were transformed into Islamic ones.

To sum up, then, a wide variety of crucial questions posed by the history, the anthropology, the material culture, and the art of early Islamic times seemed to find possible answers at Qaṣr al-Ḥayr Sharqi. None of us, of course, believed either that all the answers would be found or that Qaṣr al-Ḥayr was a key site for all these questions. Yet the fact that it partook, however insignificantly, provincially, and remotely, in a vast number of different aspects of Islamic life seemed justification enough to undertake its archaeological exploration.

II. THE EXCAVATIONS

Excavations were carried out in three places: the small enclosure, the large enclosure, and the outer enclosure. Each of the areas excavated posed its own of problems and yielded different kinds of evidence. This is why they will be described separately under four separate headings: method, results, chronology, problems. At the same time it is obvious enough that the evidence from the three areas has to be correlated and therefore in a fourth part I have attempted to do so by discussing those separate aspects of the site which cut across single excavations units: comparative chro-

¹⁰ R. Dussaud, *Topographie historique de la Syrie antique et Médiévale*, Paris, 1927, pp. 258 ff.

nology and history, functions, and finds. In this fashion I trust that the reader will be able to separate clearly what is assured information from interpretation and hypothesis.

A. *The Small Enclosure*

1. Method

As we began our excavations in 1964 our main effort was concentrated on the small enclosure, which we believed to be a royal Umayyad palace. Our objectives were first to record photographically and in drawings what was visible above ground, and then to begin a systematic uncovering of the enclosure by starting near the entrance and at the farthest end from the place through which debris could be evacuated (room 20 on *fig. 12*). The work was begun with a single 10 × 10 meter trench on the west side in order to acquire a datum point and a preliminary stratigraphic sequence (*fig. 13*). As will be shown in detail presently, one of the most important conclusions drawn from the 1964 excavation was that the small enclosure was never finished and soon rebuilt. Equally important, however, were the facts that it was well stratified (*figs. 14 and 15*) and seemed to provide important series of ceramics. Since the areas which had been excavated in 1964 had been much disturbed by antique robbers and by various restoration jobs, a large undisturbed area was chosen in the southwestern part of the enclosure, and the main objective of the 1966 excavation was the establishment of ceramic series, while at the same time uncovering more of the porticoed court and more of the halls in that part of the building. The purpose of

the 1969 excavation was primarily that of confirming conclusions reached in 1966 by working in a hitherto untouched area, the southern part of the enclosure. While it can well be argued that the enclosure should be excavated in its entirety, such an excavation cannot be carried out without a concomitant work of restoration, which is beyond our means and competence. Furthermore, it seemed to us that the conclusions we had reached about the function of the building and about its archaeological history were sufficiently definitive to make a systematic uncovering of the whole building *archaeologically unnecessary*. The information likely to appear would be redundant and of little relevance to further hypotheses and conclusions. At the same time, now that ceramic sequences have been properly determined, we must investigate further whether the architectural and functional hypotheses we are proposing are themselves confirmed elsewhere in the building.

2. Results

At first glance the results of our work in the small enclosure confirm what had been assumed by Gabriel and Creswell. The building consisted of an outer shell of heavy masonry whose several repairs were almost always an imitation of the original work (*fig. 16*). In its center there was a handsomely paved courtyard surrounded by a portico for which we have two corner pieces (one of which, the southwestern one, has been beautifully preserved to a height of four courses) and 11 column bases (*fig. 17*). The distance between supports averages 3.25 meters with a wider (4.00 meters) interval on the axis of the building. Most of the bases and all the columns were brought from older buildings.

The most interesting aspect of the portico were the capitals, of which seven were discovered in a fairly good state of preservation. Only one of them (*fig. 18*) was entirely in stone. All the others had a very damaged stone surface which was then covered with a new face of stucco (*fig. 19*). The stucco was applied once the capital had already been put over the column. The conclusion to draw from this evidence is that capitals were used in a building which had been weathered and therefore came from some earlier construction in the region.¹¹ No traces were found of arch stones or of bricks which could have formed an arch. Since the comparatively good state of preservation of most of the capitals indicates that they were protected by some sort of roofing, we are compelled to conclude that there was a wooden roof over the portico. Since most of the upper floors were never completed, there is no clear indication of what, if anything, was planned over the portico. But the discovery in the southern and western parts of the enclosure of a number of smaller and narrower columns than those of the portico suggests that a second storey colonnade may have been intended.

The excavation of rooms posed a large number of technical problems. The debris was difficult to remove because of large sections of fallen vaults and walls, while the

bad state of the masonry under still standing vaults often made excavations dangerous. Inasmuch as the total excavation of the entrance and of room 20 as well as the partial excavation of rooms 1, 22, 23, 24, 25, 26, 27 and 28 (*fig. 20*) did not yield any significant information about the decoration or function of the rooms, it did not seem necessary or worthwhile to clear most of them in their entirety.

All rooms except the corner ones appear to have been of the same type. A door covered with a brick arch led into halls which were about 18.00 by 9.50 meters in size; a door in the middle of the side walls led from one room to the other, thereby providing internal means of communication around the whole building. Except for a rather simple moulding at a height of 2.65–2.90 meters, there was no decoration in any of the rooms, and the only original feature which suggests a distinctive function to any of the excavated rooms is a plaster-lined small brick tank or cistern in room 25. But there is some uncertainty as to what this function was. All the halls were covered with brick vaults whose height reached at their apex 6.30 meters; except in rooms 1 and 28 it was 6.65 meters. Stone and bricks were superbly fitted with each other, indicating a technical mastery of both media of construction; but the basic module for the height of the building was the stone course of 33 cm. Furthermore, even though this conclusion raises one or two problems whose discussion must be reserved for the final publication, it appears to us that the brick vaults as well as the brick curtain wall and cupolas on top of the walls are of the same time as the rest of the building and not later additions or completions, as we first thought.

¹¹ There is an alternate possible conclusion, to wit that the stucco was applied at some second stage of the construction after the original capitals had been damaged in an unfinished construction. In the light of what follows, this explanation cannot be dismissed outright, although I do not believe it to be correct. A full discussion of the arguments for or against one hypothesis or the other must be postponed until our final publication.

To this scheme of repetitious single tunnel-like halls there are exceptions in the entrance and in the corners. In the entrance there was found, first of all, a *mibrab*-like niche on the south side (*fig. 21*) which, in spite of some problems, should be considered as contemporary with the construction of the building and for which at the moment no sensible explanation exists other than that the entrance was used as an oratory at appropriate times. I shall return later to the hypotheses which can be drawn from this interpretation. In addition the entrance is also provided with a water channel (*fig. 22*) which was used to bring water into the building.

The southwestern and northeastern corners of the building contained one single room (2 and 27) of inordinate length. Their halls were vaulted like all other rooms, and since no trace of windows exists, they must have been remarkably dark and gloomy cellar-like units. The other two corners had much more peculiar arrangements. A small corner-room with, at least in the southeastern corner, a curious brick-decorated niche (*fig. 23*) was subdivided in elevation into two parts by a stone and mortar floor supported by brackets bonded with the outer wall (*fig. 24*). The upper half was a sort of loft which could be reached only through a narrow and low passageway made in the outer wall. No clear evidence exists at the moment as to how this passageway was reached from neighboring rooms. While all sorts of facetious or romantic explanations can indeed be given to this loft, the only sensible one seems to me to consider it as some kind of storage place.

The interior of the small enclosure was meant to have a second floor. Yet it is our

conclusion that most of this second floor was never completed. Furthermore it is our conclusion that even what *was* completed on the first floor (in contrast to the lavish character of the façade) was not completed on the scale which had originally been planned. The full argumentation for these conclusions which are closely related to each other would take too long for the scope of this report and is reserved for our final publication, inasmuch as further excavations may bring still additional information to light. I will, therefore, limit myself to some arguments only.

First, except in the southeastern and northeastern corners, no trace of upper storey construction either *in situ* or in most of the debris (for one exception see below) has remained, and the beam-holes which are visible here and there on the inner face of the outer wall are much too irregular to be part of a completed building. It is much more likely that they are remains of partial and probably rather primitive shed-like covers. The only archaeologically definable exception lies in the fallen masonries discovered on the southern side of the enclosure (*fig. 25*) whose height can be reconstructed and corresponds to the height of the outer wall (12.21 meters). This was part of the inner wall of the enclosure between the porticoes and the rooms. But it is only on the south side that this wall was found, and one would have to conclude either that only the southern side had a second storey or, as seems preferable, that only this inner wall was finished. Even though the wall had been completed, there is no evidence that the upper rooms were; for, even if we agree that they were covered with a wooden ceiling, the traces for wooden beams are not found consistently

on the south wall, and the excavations did not bring to light any trace of the transverse walls which had to have existed.

A second argument lies in the character of the portico. I have mentioned the fact that the portico had a flat wooden roof. At the same time it is more than likely that it was meant to have arches, not only because such arches are typical of the whole tradition of porticoes in the architecture of the Near East but also because the projected height of the portico with semi-circular arches corresponds to the height of the standing vaults. It is clear that a portico which would have reached the apex of the room's vaults would have made a more harmonious architectural composition than one which cut across the vault. Furthermore the only evidence found so far for stairs was found in the porticoes and is later than the first period of construction. In any event the portico's roof could not have been used to enter into the upper floor if it was about 1.50 meters lower than the floor itself; the standing vaults themselves make it impossible to consider that there were stairs in the rooms.

The last argument I would like to bring up at this stage is that of the wall between room 1 and the entrance (*fig. 26*). It is obvious that the wall was redone or completed at some later time than that of its original conception. Although the point cannot be proved definitely, it is more likely that we are dealing with a completion rather than with a rebuilding, for not one single course of stones from an earlier construction was left. If so, it would be absolutely clear that the building was unfinished. But, even if we only have a major repair, the fact that it could have been made indicates that there was no second storey above it

and that the portico in front had some simple flat ceiling.

To sum up, the original small enclosure was a curious building with a superb façade, a handsomely completed outer shell, a series of twenty-eight tunnel-like vaulted halls facing (with exceptions in the corners) a porticoed court. But this impressive composition not only was not finished according to its original plan but that which was in fact finished did not have the dimensions and quality of what had been planned.

3. Chronology

The evidence discussed so far poses a major chronological problem. For, while we can assume a first period for the outer shell, for the conception and plan of the interior, and for some parts of the completion (colonnade, vaults, southeastern and northeastern corners), we cannot *prima facie* decide whether there was an interruption in time between the first and more grandiose aspects of the building and its completion, or whether a continuous time is involved during which funds or labor or both were suddenly lacking. We tend to the latter interpretation at the moment largely because no evidence was found of major changes in plan at the beginning and because the stucco of the capitals appeared undamaged.

Thus, for the time being, we may consider the completed building as belonging to one period, and an Umayyad date for this completion can be secured for the following reasons: the typology of the façade, the consistent use of re-used materials and the style of the capitals which are relatable for instance to those of al-Muwaqqar.¹² To

¹² R. W. Hamilton, "Some eighth-century capitals from al-Muwaqqar," *Quarterly of the De-*

this original construction a number of modifications were made over the decades: blocking of the doors into room 27, building of a mud-brick stairway in the portico and of mud-brick walls between columns, installation of fireplaces and ovens on the original floor, removal of floor slabs in the courtyard for various pits, and so forth. These changes broke up the original unity of the building but still used its floors. Their precise date cannot be given, and it is likely that they were not all of the same time. But the rather consistent ceramic evidence from the last 25 cms. of debris provides a definite date for the abandonment of this original time of occupation. The presence, among other series, of Samarra-type luster ware (*figs. 27 and 28*) suggests the latter part of the ninth century or the early tenth.

Then it would appear that the small enclosure was almost totally abandoned for an undefined period of time since almost 1 meter of debris was accumulated. At some moment late in that period—and quite possibly under the impact of an earthquake—whatever walls were standing and the columns collapsed. Over the debris a new series of occupations were found. Plaster and at times (although rarely) stone floors were built, but while a few plans of primitive constructions can be mapped out, the elevation of buildings is impossible to determine since most of them were probably in mud or rubble and earth. While this occupation utilized whatever was still standing of the original building (for instance the vaults), it tended to develop mostly in the emptier courtyard and over the fallen ruins of the portico. Large ce-

ramic series (*fig. 29*) allow us to date this succession of temporary settlements from the early twelfth century to the early fourteenth.

Thus for the small enclosure we can determine first an Umayyad period of planning and partial construction. This Umayyad period probably merged with a long period of use and transformations which lasted until the early tenth century. Then after an interruption a series of settlements of the Ayyubid and early Mamluk periods are clearly visible.

4. Problems

Outside of a large number of comparatively minor problems of interpreting various details brought forth by the excavations, the central question is that of the function of the building, especially in its original form. It has in the past been considered to have been a princely palace. But strong arguments, it seems to me, militate against this interpretation. The first argument is an argument *a silentio*: the almost total lack of architectural decoration such as paintings, mosaics, or stucco sculpture. While admittedly this absence can in part be explained by the unfinished state of the building and while decorative designs are found on the upper part of the façade, still some evidence of floor or wall decoration would have been expected of a palace. This is especially likely if the building is of Hishām's time, for even a building like al-Walīd's castle at Jabal Says had more decoration than Qaṣr al-Ḥayr, and the very limited amount of work carried out at Ruṣāfah brought to light both sculptures and paintings.

A second argument lies in the internal arrangement of the building which consist-

ed of long, high, and dark vaulted halls without light and without apparent differentiation in size or in kind. And, when a differentiation does occur, as in room 25 or in the corners, it suggests very practical storage purposes. It is true, of course, that, as Sauvaget had pointed out, it is often on the second floor that the main official rooms were to be found in Umayyad palaces.¹³ But there also at Qaṣr al-Ḥayr it seems almost impossible to determine any differentiation between halls which could be explained in terms of royal or princely use. Finally, one should mention the entrance hall which is really a passageway opening directly and without doors into the portico and which has none of the benches or other features for waiting found in most palaces.¹⁴

If it is not a palace, then what could it be? Formally, it is possible to compare what we know of the small enclosure with the Tunisian *ribāt* of a slightly later period, and the reverse comparison has been made often enough.¹⁵ The problem is, of course, that of assuming the existence of the *ribāt*'s function in Syria in the Umayyad period. A more satisfactory alternative would be to consider our enclosure as a *khān*. Functionally nothing in what is known of the building would make this impossible. On the contrary, the character of the entrance, the long halls, the absence of decoration,

even the possible use of the entrance as an oratory, these and many other features seem to fit. Moreover the later transformations of the original buildings would confirm its later use as a *caravanserai*. The difficulty here is formal, since the only certain early *khān*, the one at Qaṣr al-Ḥayr al-Gharbi, is a far more primitive construction.¹⁶ And yet if one considers the later development of the *khān*, the monumental proportions it often took, and the obvious commercial importance of the site, could one not interpret our enclosure as the first preserved instance of this monumental architecture of trade which was so characteristic of mediaeval Islam?¹⁷

The answer to this question cannot be given without further archaeological explorations and textual investigations. At the same time the shift of direction we are proposing in attempting to understand the small enclosure of Qaṣr al-Ḥayr may prove of some value in suggesting new directions for research. It might for instance be an argument to consider the still unsolved Qaṣr Kharaneh¹⁸ as a *caravanserai* as well. But in a larger sense, by implying that a comparatively small number of architectural forms was used for a fairly large number of functions, this interpretation opens up interesting perspectives to the art historian whose further development must be left for some other occasion.

¹³ Partial list and further references in J. Sauvaget, *La Mosquée Omeyyade de Médine*, Paris, 1947, pp. 124 ff.

¹⁴ Even Jabal Says, which is the simplest of the Umayyad castles, has an entrance complex which could be used to filter incoming people rather than invite them in, as at Qaṣr al-Ḥayr; Brisch in *MDAI*, Kairo, vol. 20, fig. 1.

¹⁵ A. Lézine, *Le Ribat de Sousse*, Tunis, 1956.

¹⁶ D. Schlumberger, *Syria*, vol. 20, p. 120.

¹⁷ See some very perceptive notes on this subject in U. Monneret de Villard, *Introduzione allo Studio dell'Archeologia Islamica*, Venice-Rome, 1966, pp. 162 ff.

¹⁸ Best publication in A. Janssen and R. Savignac, *Mission Archéologique en Arabie III Les Châteaux Arabes*, Paris, 1922.

B. *The Large Enclosure*

1. Method

At the outset, in 1964, our objectives in the large enclosure were limited to the establishment of the exact plan of the mosque in its southeastern corner and to a few stratigraphic soundings. While testing what proved to be the incorrect guess made by Creswell about the size of the mosque's courtyard, we discovered the first elements of an industrial establishment and a number of other urban features which made us realize that the large enclosure was likely to bring particularly significant data for the history of the site and of the area. As a result in 1966 much of our effort was directed toward the southeastern quarter of the enclosure. Since outside of the mosque and of the gates in the outer wall we had no definable starting point for investigation, the method used was that of a series of 5x5 meter trenches at regular intervals from each other. Eventually some of these trenches were united up to the point where we felt that a building or some other unit were as understandable as they were likely to be. Except when compelled to do so by the problems of the site, we did not attempt to uncover in its entirety any part of the enclosure. Thus our work of 1966 clarified most of the mosque and of the area west of the mosque, but major excavations had to be carried out in 1968 and 1969 to the north of the mosque. By the end of the 1969 season we felt that we had acquired whatever archaeological information can be obtained from the southeastern quarter of the enclosure, although, as will be seen presently, the correct interpretation to be given to this information is still a matter for discussion.

Then in 1969 we began the investigation of the northwestern quarter. Since some technical problems had arisen in 1966 with 5 by 5 meter trenches over large (50 by 50 meters) areas of loose soil, we began with 10 by 10 meter trenches and eventually enlarged some of them or united them with diagonal trenches. The job there is still not finished, and it is not before the season of work planned for 1970 that we should have truly usable results. For this reason I shall only report in this article on such results from the northwestern quarter as seem reasonably assured or which otherwise confirm conclusions derived from the southeastern quarter.

For reasons which will appear presently, the large enclosure does not show a stratigraphic structure of superimposed floors and layers comparable to the small enclosures. Nor does it have as many standing elements which would pose restoration problems. The main difficulties of excavating the large enclosure are, first and foremost, the size of the area with the concomitant difficulty of evacuating debris, and, second, the poor state of preservation of most of the remains. As a result, it is necessary to excavate selectively, and the finds are often quite difficult to interpret.

2. Results

At this stage of our understanding of the complicated and much damaged evidence which came from the large enclosure, the simplest way of summarizing the results reached so far is to outline what appeared to have been the main master-plan for the enclosure. We believe that it was a master-plan for two main reasons. One is that all over the enclosure the first major constructions are identifiable by the use of

the same kind of masonry; it consists of large cut stones with rubble and mortar between them and occasional stretches (*fig. 30*). In most instances this masonry has only remained to the height of a single course, and considerable evidence exists to suggest that it rarely was higher than that. The second reason is that what appears to have been created by this masonry reflects a coherent and organized conception of the shape and of the function of the enclosure (*fig. 31*), as though a single purpose and a single effort were involved.

In this conception the central part of the enclosure was a large open space covered with a handsome stone pavement and surrounded by a portico. Corner pieces for this portico were found both in the southeastern and northwestern (*fig. 32*) corners. Elsewhere were found columns, bases, at times brick piers (*fig. 33*) and even one stucco covered capital similar to the capitals of the small enclosure. In the center of this open space there was a large cistern with a brick vault.

A series of four axial streets connected with the four main gates divided the enclosure into four quarters. In the southeastern one the corner was occupied by a large mosque whose hypostyle plan (*fig. 34*) is quite typical of early Islamic mosques. Its courtyard was provided with a large bell-shaped and brick-vaulted cistern fed by canals from the outside (through a small door, *fig. 35*) and from the open space in the center of the enclosure. Two other doors appear in the mosque. One led into the central area portico, the other one to a passageway which separated the mosque from a large building to the West. The latter had a double entrance toward the central area and two smaller doors toward the

north-south street. It was organized around a central courtyard with a portico; on the east and west sides of the portico a series of single rooms were found which usually communicated with each other; on the south side there was a more complex unit consisting of a large central hall with narrower halls on either side (*fig. 36*). I shall return in a moment to further constructional details of this building. What matters at this stage is that next to the mosque there was planned a large single building with numerous entrances suggesting a public or semi-public character. Its only more private features are a rather curious small basin and a channel for the evacuation of water found in the southeastern corner of the building (*fig. 37*). We propose to identify the function of the building as that of an administrative center, and we may have here an example of the smaller type of *dār al-‘imārah*, these "government houses" which symbolized the presence of an official representative of the central authority.

To the north of the mosque there appears first a bath, narrowly squeezed between two stone walls and so damaged as to preclude a complete reconstruction. Beyond the bath two press-rooms were found (*fig. 38*), one of which was sufficiently well-preserved to be reconstructed in its entirety, with a press-stone set in the floor, two jars, and a tank. These presses were used for the second pressing, while the first and rougher work was accomplished with an enormous stone of basalt (*fig. 39*) in a much damaged architectural context. Although the matter cannot be proved as yet, it seems most likely that olives were pressed in these presses, and that the whole compound served as a place for the manufacture of olive oil. The size of the presses does not suggest a major

manufacturing center producing oil for export but rather for local consumption only.¹⁹

The last unit found north of the mosque was a large (12 by 7 by 6 meters) cistern divided into two parts by a median wall (*fig. 40*). There is some uncertainty as to how this cistern was filled since—as will be discussed below—parts of this area were completely redone at a later time. In all likelihood water came through the northwestern corner of the cistern where a very damaged spout was found, but this matter cannot be settled with any degree of certainty.

Whereas the mosque and the bath communicated with the central open area, the presses and the cistern could be reached only through the main East-West street. It was an elaborate artery whose most impressive feature was that a canalization with occasional pipe openings (*fig. 41*) had been built nearly 40 centimeters under the street level. While we are still uncertain about the relationship between this channel and the center of the city, it is probable that in ways to be still investigated it communicated with a large channel found between the two enclosures. Although both its origins and ultimate use are equally unclear, an even more impressive system of water adduction with an elaborate system of pipes (*fig. 42*) in addition to a channel was found in 1969 in the north-south street and could be traced almost fifty meters beyond the north gate.

¹⁹ The evidence for this is mostly comparative, since to date neither analyses of remains from the sunken jars nor a study of the gardens have confirmed the presence of olive oil or of olive trees. It may be added, however, that no better interpretation seems available.

The still unfinished excavation of the northwest quarter has brought to light from the first master plan of the large enclosure a group of parallel long halls with few entries, but the area as a whole—insofar as we know it—was so damaged in later years as to make an understanding of its original function very problematic. The most likely possibility is that we are dealing with storage areas, and I shall provide later possible explanation for its existence.

In spite of this temporary uncertainty about the northwestern quarter and about the exact ways in which waters were distributed through the numerous channels and pipes which have been uncovered, it begins to be possible to define the main functions which had been conceived for Qaṣr al-Ḥayr. It was not so much an entity for living as for a number of official or public activities: praying, administration, bathing, manufacturing of oil, storage. Even if we assume that the other half of the city was for living—an assumption which is partly denied by a large sounding made in the northeastern quarter—it remains fairly clear that an inordinate amount of space was taken by other needs than those of private life. Formally the four gates, the central open area, the axial streets and any number of other features bear all the earmarks of a standardized plan issued from classical architecture.

The most important result of the excavations, however, is that none of the features we have described, except the water channels and probably the outer walls, was completed on quite the same scale and with the same technical means as had originally been planned. The matter can most clearly be seen in Building A, where many walls

were finished in mud-brick instead of stone and where modifications were brought in to the original plan with baked brick piers (*fig. 43*). Similar techniques and means of construction were found in the presses and in the porticoes of the *meydān*. It is probably also at this time of completion that the north and west gates were totally blocked with a heavy masonry. The completion—with alterations—of the enclosure's constructions was accompanied by the covering of the walls of Building A with stucco, some part of which (on the soffits of arches and vaults and on the sides of doors, *fig. 44*) was decorated. Altogether over two thousand fragments of carved stucco have been discovered (*fig. 45*), all of which illustrate only vegetal and geometric designs. None of them show the decorative exuberance and the variety of the Umayyad stuccoes from Khirbat al-Mafjar or Qaṣr al-Ḥayr Gharbi; they are rather to be related to the stuccoes found by the Syrian Department of Antiquities in the early Abbasid houses and palaces of Raqqah and thus provide us with a tentative date for the completion of the enclosure's buildings. Their use in early Abbasid times is confirmed by the discovery of an early luster ceramic in such areas as were destroyed and not re-occupied. But, just as in the small enclosure, it is impossible, for the time being, to say whether there was an interruption between the time of planning and the time of completion or whether there was a continuous effort over many decades with considerable variations in the funds and technical means available. It should be added that considerable additional documents exist from the time of completion of the building, such as stained-glass windows, roof-beams, tiles, and the like.

3. Chronology

As was mentioned before, the large enclosure does not provide a clear stratigraphic structure comparable to that of the small enclosure, and its history has to be reconstituted on the basis of a rather complex relationship between the original plan and later developments and changes brought to it. Since, with the exceptions of one area in the southern part of Building A, of a dump in the northwestern quarter, and of very late settlements of minor significance, the same original floors continued to be used for centuries, ceramic or other finds can only be used to date the latest periods of occupation. With this evidence we have been able to establish the following chronology for the large enclosures. The major effort for the planning of the enclosure can justifiably be put in the Umayyad period, since we have an inscription to that effect. The only point we may add is that there is some evidence to suggest that some constructions had begun before Hishām's main work. The latter, however, was not finished until the early Abbasid period; this conclusion rests entirely on the two arguments that the inscription was found re-used in the mosque²⁰ and that the stuccoes are of the same date as Raqqah's stuccoes. Since we only have Rousseau's word for the place where the inscription was found and since the evidence for the early Abbasid date of the stuccoes has never been published, the conclusion is not fool-proof. What is, on the other hand, certain is that the first establishment continued to exist with only minor repairs through the ninth

²⁰ Although not mentioned by most writers, this conclusion has already been reached by Gabriel in *Syria*, vol. 13 (1933), p. 319.

century. The reason we know this is that ninth-century ceramics or broken fragments of ceramics with paintings and inscriptions (*fig. 46*) which could only be early Islamic were found in the dumps or in such areas as were not used later.

At a certain moment in time this establishment declined and was in part destroyed by a fire which is particularly evident in the administrative Building A. Some of the outer walls were destroyed or collapsed, the presses and the bath were abandoned, and the cistern at the southeast was filled with dirt. This disaster or series of disasters may not have eliminated life completely from Qaṣr al-Ḥayr's large enclosure, but its activities certainly declined for a while. Shortly thereafter there occurred a re-birth of activities. While a few areas were converted into dumps (*fig. 47*), the rest was cleaned up. The outer walls were once again put up, and new buildings, adapted for the most part to earlier ones (*fig. 48*), were erected all over the enclosure. Older stones were cut anew or re-used. Most of these buildings were small houses, but on the eastern side of the enclosure a rather elaborate tank for water was built (*fig. 49*) into which a channel high above ground and made entirely of re-used materials brought water (*fig. 50*). This new lease on life at Qaṣr al-Ḥayr lasted for some period of time, for it is possible to distinguish a number of changes and modifications in the masonries of the buildings. Altogether, however, they were in almost all instances rather mediocre affairs and with few exceptions—especially in the northwestern area—the new city must have looked like a *bidonville* of re-used and ill-fitted stone masonry with ubiquitous plastered water storage areas and underground pits. As to the time of this

city, its beginnings cannot be dated archaeologically; but its end can be placed around 1300 since the main ceramic series are of the twelfth, thirteenth, and early fourteenth centuries (*figs. 51 a, b*). Beyond that the enclosure was used only for temporary shelters, some of which are still standing and one of which has an early fifteenth century date.²¹

4. Problems

Aside from a large number of unsolved problems of detail, there are two major questions raised by the excavation of the large enclosure. The first one is that of the interpretation to be given to the functions of the enclosure during the two main periods of its active existence. The southeastern quarter had originally the fairly obvious diversified function of an early Islamic city: industry for local purposes, bathing, praying, and administration. The difficulty lies in explaining the storage areas of the northwestern quarter. One possibility is that these were arsenals, i.e. places where arms and other military supplies were kept.²² We shall see later that there are a number of other arguments drawn from a general consideration of the site which may serve to confirm this hypothesis, but it must be realized that it is only a hypothesis so far. As to the second period of occupation, its purposes are much more difficult to understand. Since the only clear things about it are that it existed and that the walls were rebuilt, we may suggest that it was primarily of military and commercial importance and that it was only very little involved in major

²¹ A. Musil, *Palmyrena*, p. 77.

²² This explanation was suggested to me by Professor Jacob Lassner.

urban or economic developments beyond the barest necessities of life in the steppe. It should be added, however, that the area itself was known in the twelfth and early thirteenth century for its mineral and stone deposits used in the manufacture of glass in Aleppo, and it is possible that some operation related to this industrial activity took place at Qaṣr al-Hayr.

The second question about the enclosure is that of the exact relationship between the relative chronology we have provided and an absolute chronology. The uncertainties in the scheme given above are two. One is at the very beginning of the sequence, before the large effort we are attributing to Hishām. It is conceivable that this effort was preceded by some first constructions, although none of them could be as early as the many re-used stones from Roman and Palmyrene times. A solution must then be found for the origin of the latter. The other uncertainty lies in the time of the abandonment of the first city. Thus far we have put it in the tenth century, but it must be admitted that we do not have any clear and incontrovertible archaeological evidence for this. It is mostly non-archaeological documents pertaining to the history of the area which have led to the suggested date.

C. *The Outer Enclosure*

In 1969 a number of soundings and clearings were made in the large outer enclosure in order to clarify such points as seemed to us essential for an understanding of the site. In view of the enormous size of the area involved, the impossibility of obtaining new air photographs of the whole

area compelled us to limit this work to easily identifiable problems.

We were thus able to trace the way in which the main water channel from al-Qawm entered into the enclosure, followed the northwestern and western outer wall, then turned into the circumscribed area and disappeared near its southernmost extremity. The remarkable feature about this canal is the extraordinary quality of its construction with several courses of stone imbedded in heavy mortar and covered with stone slabs (*fig. 52*). A rough calculation indicates that the cut stones needed for this one single canal were more numerous than the stones needed for the walls and buildings of both enclosures.

A second series of investigations were carried out along the outer walls themselves. There, outside of the establishment of the exact techniques used for the construction of the walls, two discoveries are of particular importance. One of these concerns the existence on the eastern side of the wall of a series of long (about 35 meters) walls set parallel to each other and at an angle from the wall (*fig. 53*). Our suggestion is that these were deflecting walls protecting the outer enclosure's walls, which were largely built of mud-brick, from torrential rains and floods. The other discovery concerns parts of the walls themselves. It will be recalled that at the southern end of these walls (*fig. 3*) there were sluices used, according to the best hypothesis, to rid the site from flash floods. It turns out that at the northern end of the enclosure a 270 meters long segment of the outer wall cutting across the large *wādi suq* was similarly composed of sluices (*fig. 54*), this time protecting the area from sudden torrents in the *wādi*. No archaeological evidence such as

inscriptions, coins, or ceramics was found to provide a date either for the completion of this work or for the time of its abandonment. But the fantastic means involved in the building of the walls, of the canals, and of the sluices suggest that they all belong to the Umayyad period, the main period of construction in the large and small enclosures. Similarly, the decay and eventual abandonment of the system must be related to the chronology established for the large enclosure.

Further minor investigations in the immediate vicinity of the large enclosure were less fruitful except in the negative way of showing that many of the traces of walls visible on the ground belong to late constructions, probably nomadic sheds or sheep pens. The only interesting feature is that at some late date the two enclosures were united by two walls transforming them into a single unit; at that time a small oratory (*fig. 55*) was built, and it is possible that the tower between the two enclosures dates from such a time when most of the buildings were already in ruins. It was probably used for optical signals.²³

In the outer enclosure the main problems still to be resolved through further investigation are the purpose of a small number of buildings which seem to be more than simple sheds and the ways by which the canalization bringing water into the whole enclosure connected with the many channels we have found in the small and especially in the large enclosures. Whether these problems can be solved without precise air photographs or without technical means beyond our possibilities of the moment is still a moot question.

²³ J. Sauvaget, *La Poste à Chevaux*, Paris, 1941, p. 92.

III. CONCLUSIONS AND HYPOTHESES

The excavations carried out so far have been sufficiently extensive to provide us with a fairly clear idea of the development of Qaṣr al-Ḥayr over the centuries and with the functions it served. Chronologically the small and large enclosures coincide with a major imperially conceived plan from the Umayyad period, a completion in early Abbasid times, a decadence in the tenth century perhaps to be related to the Carpathian incursions and to the nomadization of Syria and of the Jazirah at the time, a revival in the eleventh century, a definitive abandonment in the early fourteenth century, and finally with a number of temporary later occupations in later centuries. As I have tried to indicate in another article,²⁴ this sequence corresponds to what is known of the site al-'Urḍ from the tenth century onwards, and one may suggest that the earlier name of Qaṣr al-Ḥayr was the Zaytūnah of Hishām. Although the latter is only a hypothesis, it is a return to the first half of the great complex explanation of the site proposed by Sauvaget and later disowned by him.²⁵

More complex is the matter of interpreting the functions of Qaṣr al-Ḥayr, and the following is but a hypothetical scheme of what presently available evidence suggests. On a site which could have been fertile if irrigated, which had strategic and commercial possibilities, and which was not too far removed from some classical or Palmy-

²⁴ O. Grabar, "Le nom ancien de Qaṣr al-Ḥayr," *Revue des Etudes Islamiques* (forthcoming).

²⁵ J. Sauvaget, *Journal Asiatique*, pp. 1 ff.; "Notes de topographie omeyyade," *Syria*, vol. 24 (1946).



FIG. 1.—Air view of the area of Qasr al-Hayr.
Courtesy, Institut Français de Beirut.

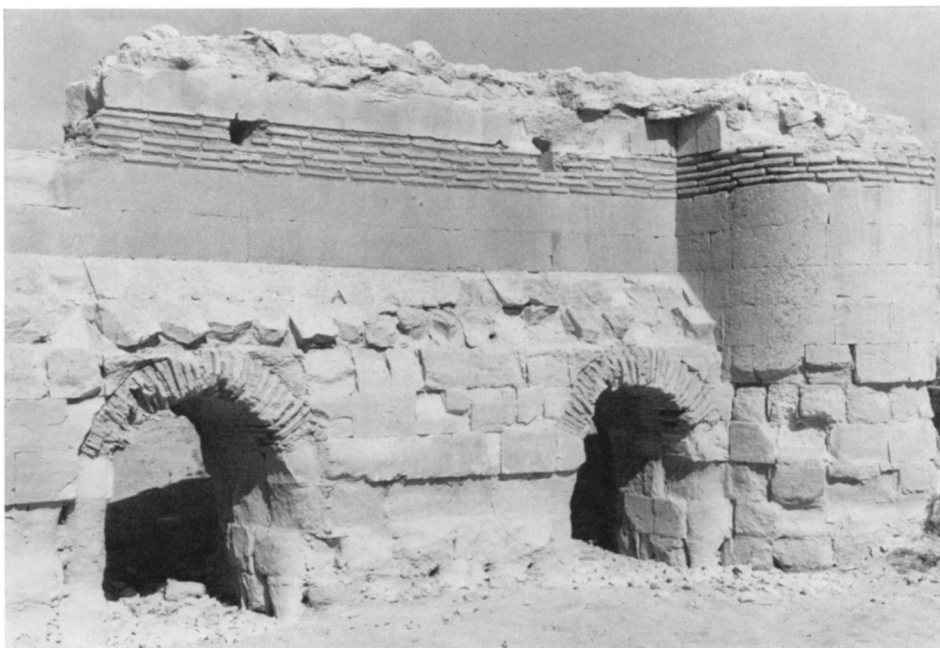


FIG. 2.—Wall of outer enclosure.

FIG. 3.— Sluices at southern end of outer enclosure.



FIG. 4.—Opening into canal beyond the two enclosures.



FIG. 6.—Air view of northern end of the site. Courtesy, Institut Français de Beirut.

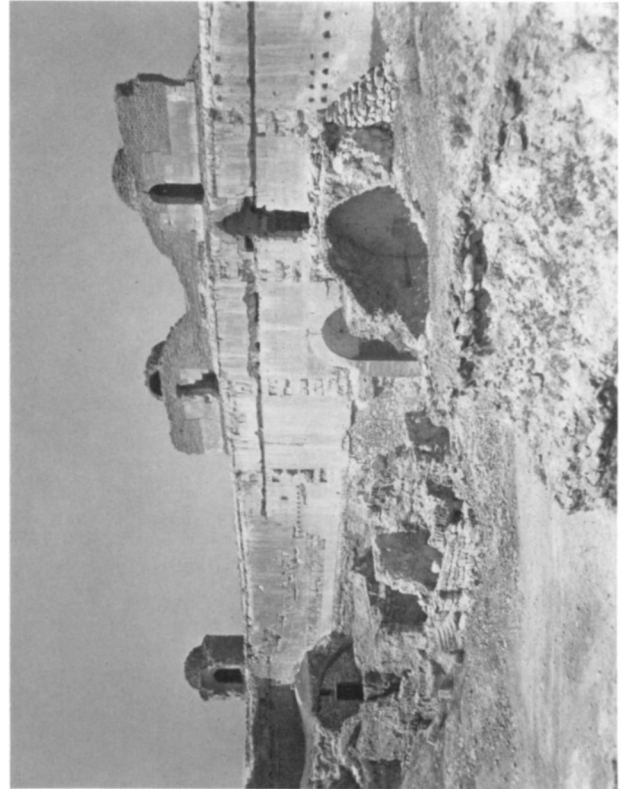


FIG. 8.—Vaults inside the small enclosure.

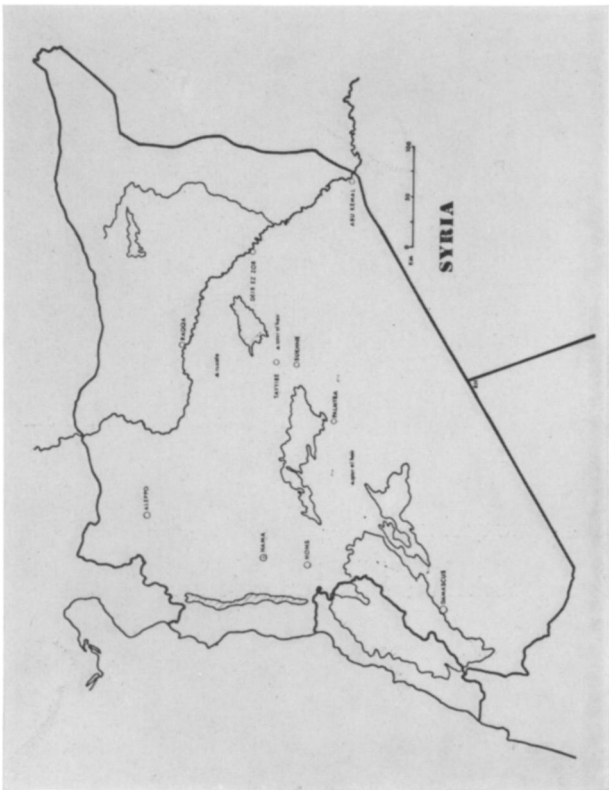


FIG. 5.—Sketch map of Syria.

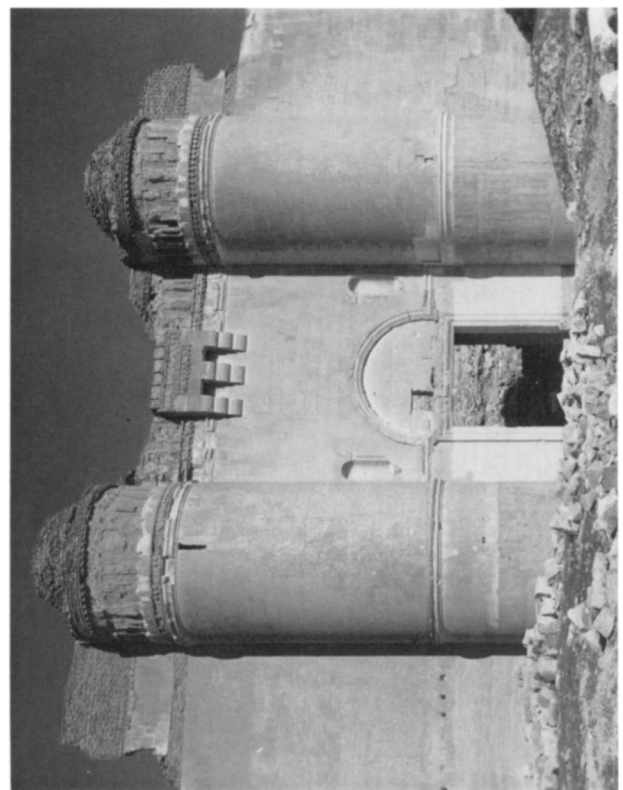


FIG. 7.—Façade of small enclosure.

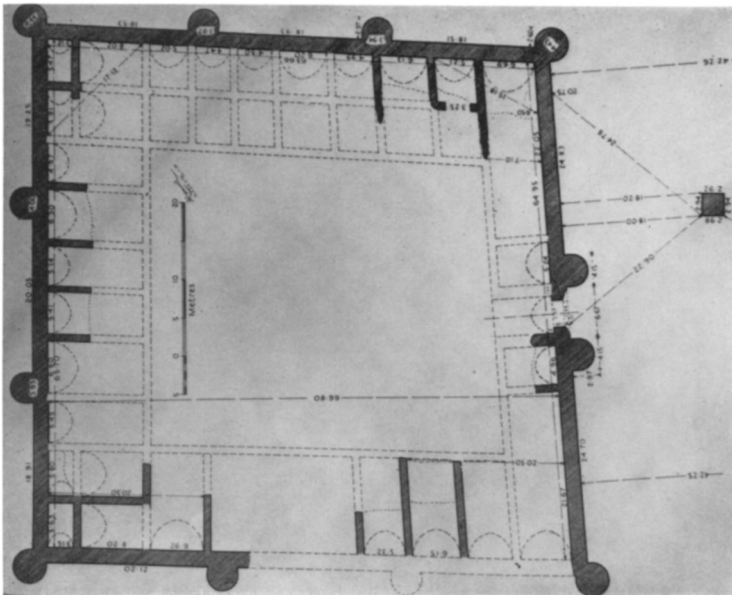


FIG. 9.—Conjectural plan of small enclosure before excavations (after Creswell).

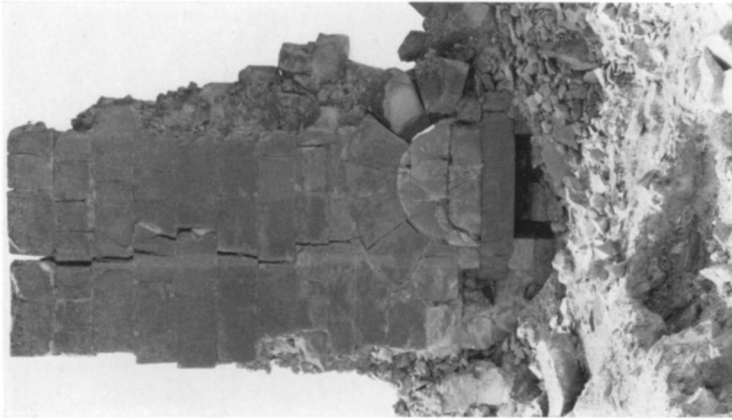


FIG. 11.—Door from the mosque to the east.

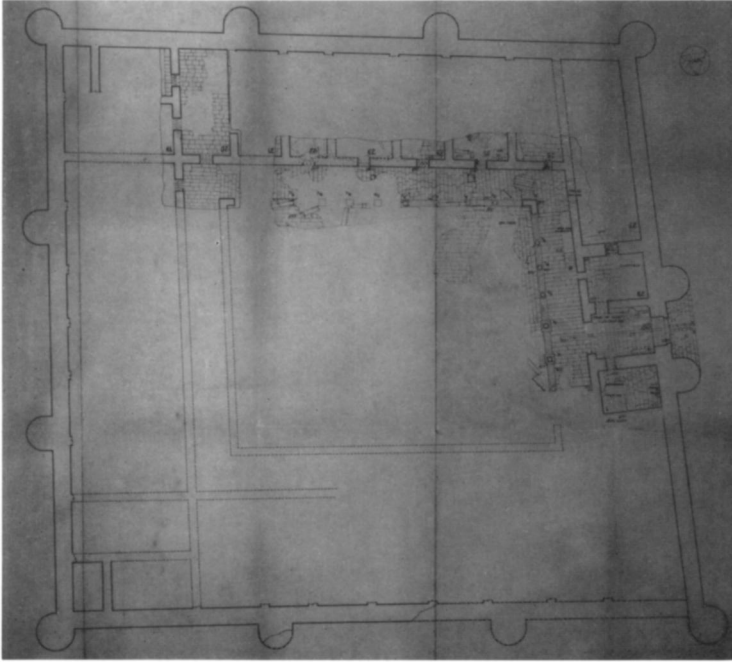


FIG. 12.—Plan of excavated part of the small enclosure.

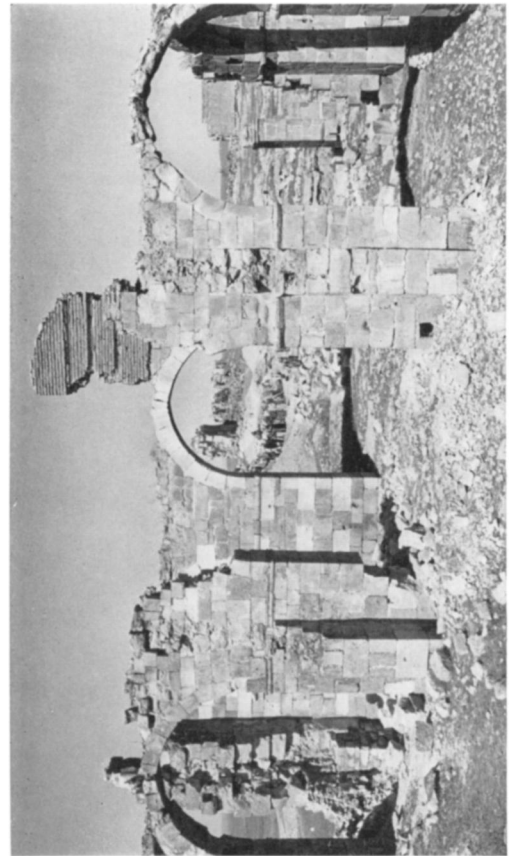


FIG. 10.—Piers in mosque before excavations.

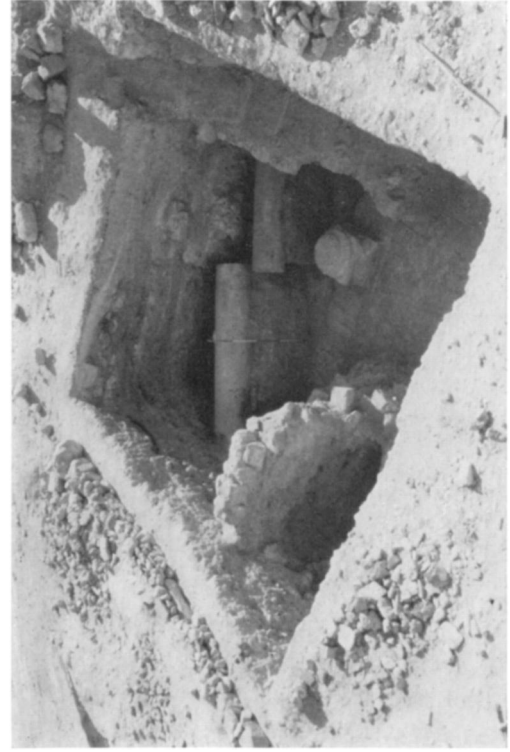


FIG. 13.—First trench in the small enclosure.

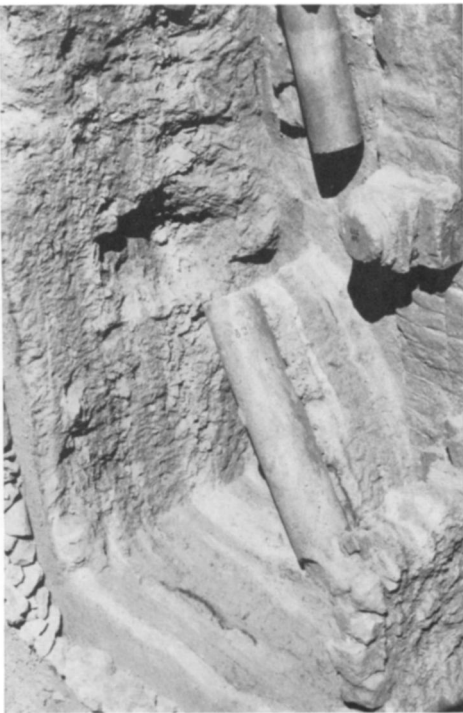


FIG. 14.—Side of west trench in the small enclosure.

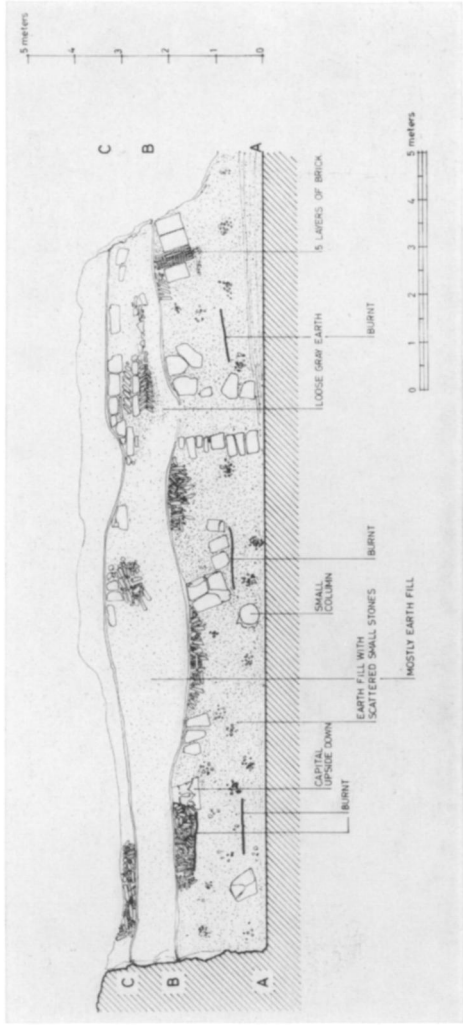


FIG. 15.—Section of west trench in the small enclosure.

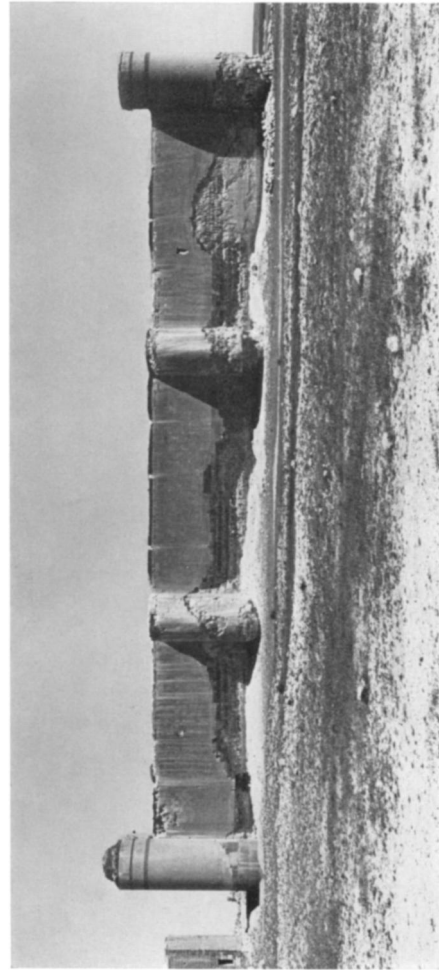


FIG. 16.—Small enclosure from the south.



FIG. 17.—General view of the excavated part in the small enclosure.



FIG. 18.—Capital B-1 in the small enclosure.



FIG. 19.—Capital B-12 in the small enclosure.



FIG. 22.—Entrance into small enclosure.



FIG. 20.—Room 20 after excavation.

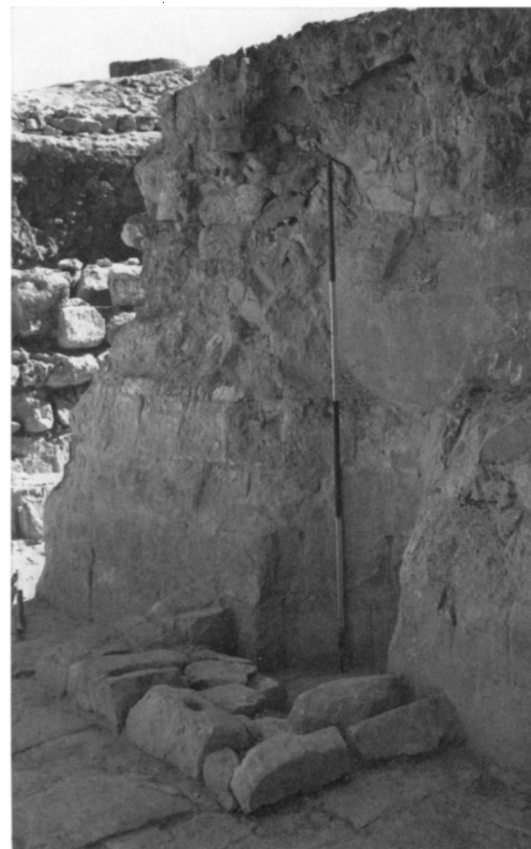


FIG. 21.—Niche in entrance of small enclosure.

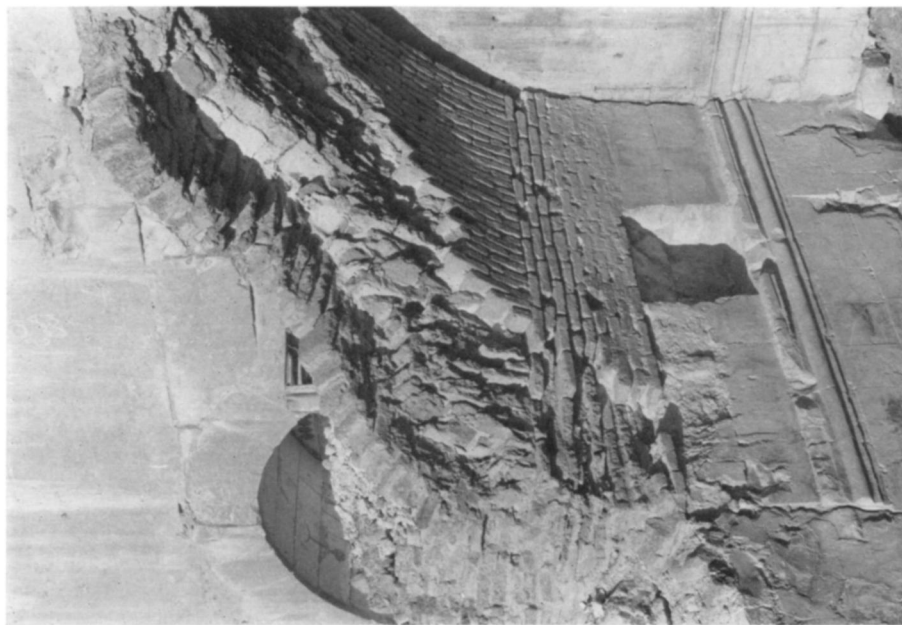


FIG. 26.—Wall between room 1 and entrance.

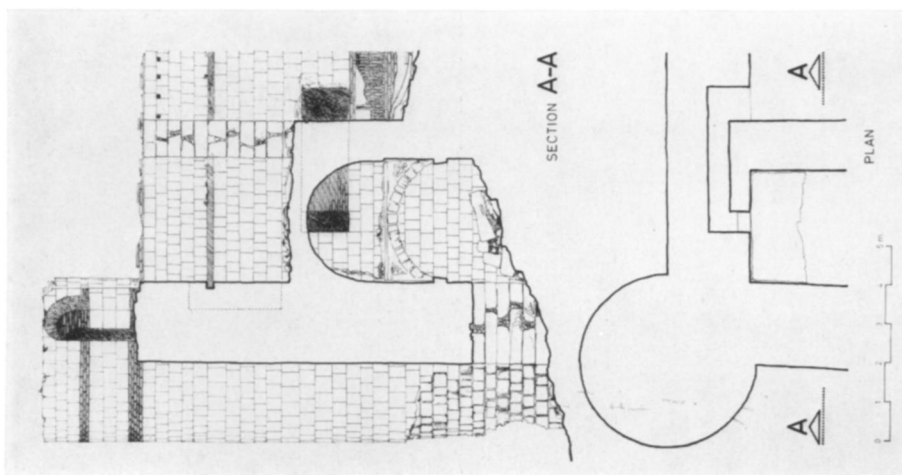


FIG. 24.—Elevation of southeastern corner of small enclosure.



FIG. 23.—Brick decoration in room 17.



FIG. 25.—Fallen masonry in the southern end of the small enclosure.

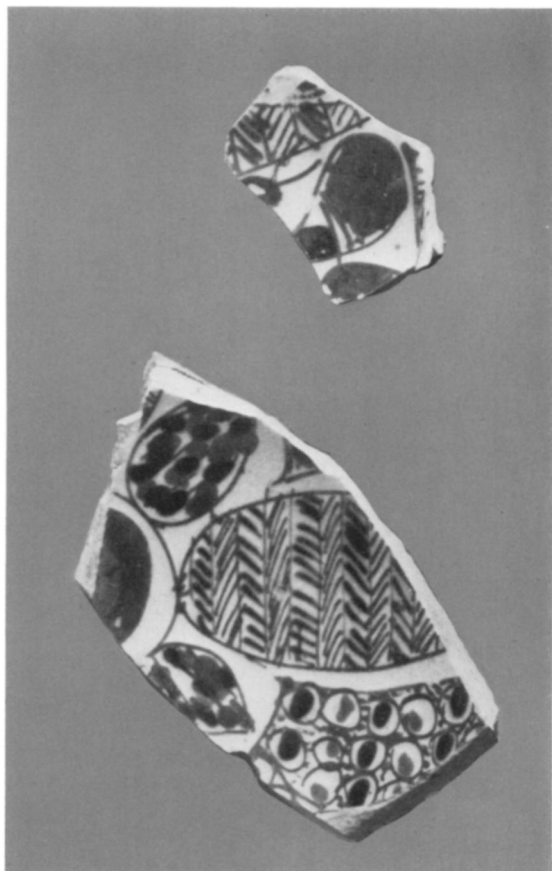


FIG. 28.—Luster ware from floor level of small enclosure.



FIG. 30.—Typical main masonry in large enclosure.



FIG. 27.—Luster ware from floor level of small enclosure.

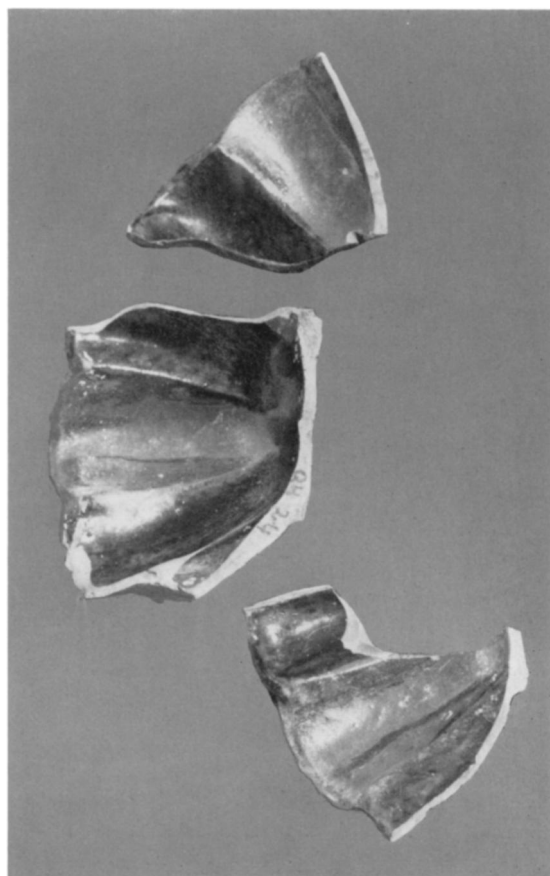


FIG. 29.—Ceramics from the upper levels of small enclosure.

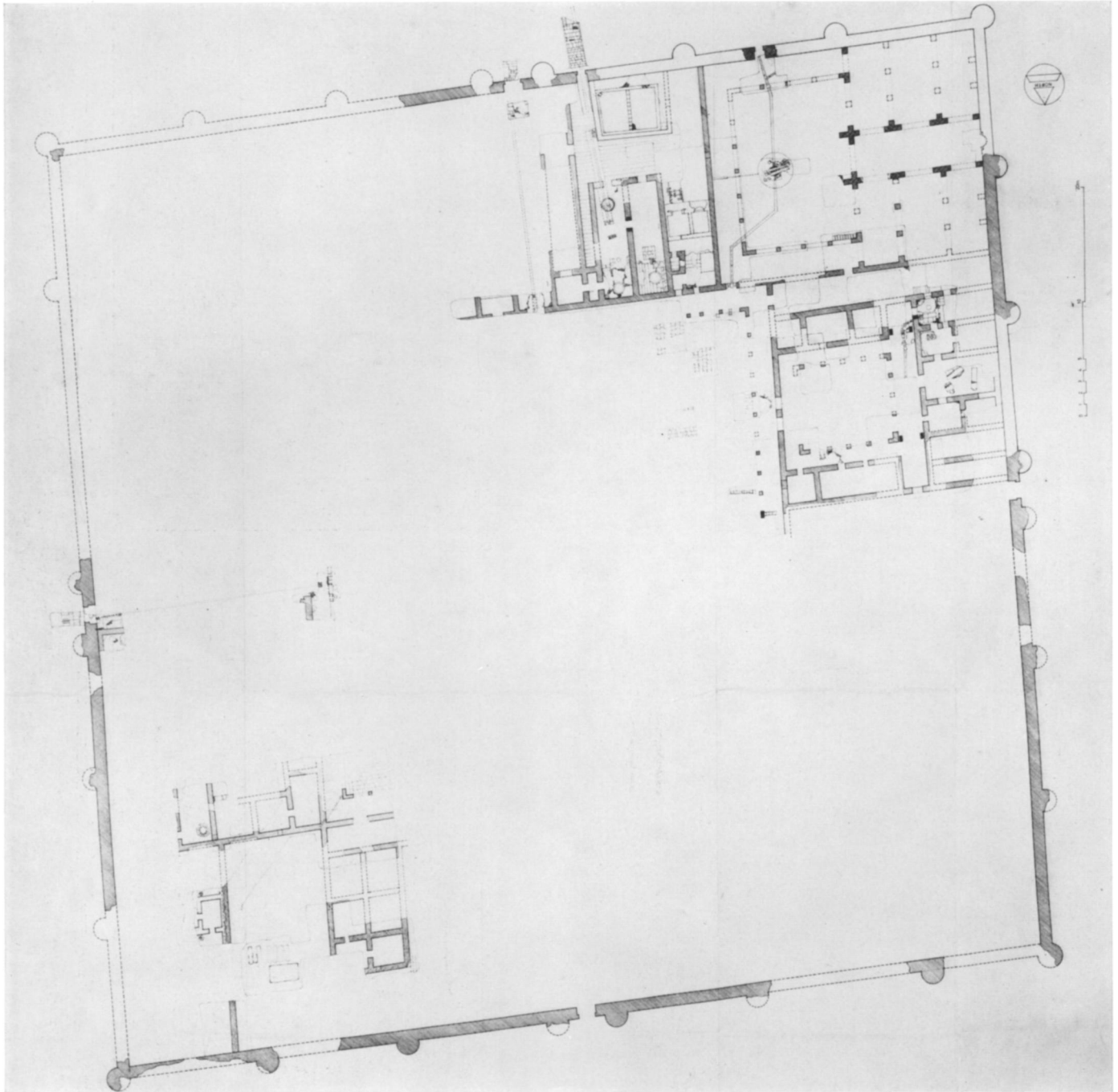


FIG. 31.—Sketch plan of the excavated area in the large enclosure.

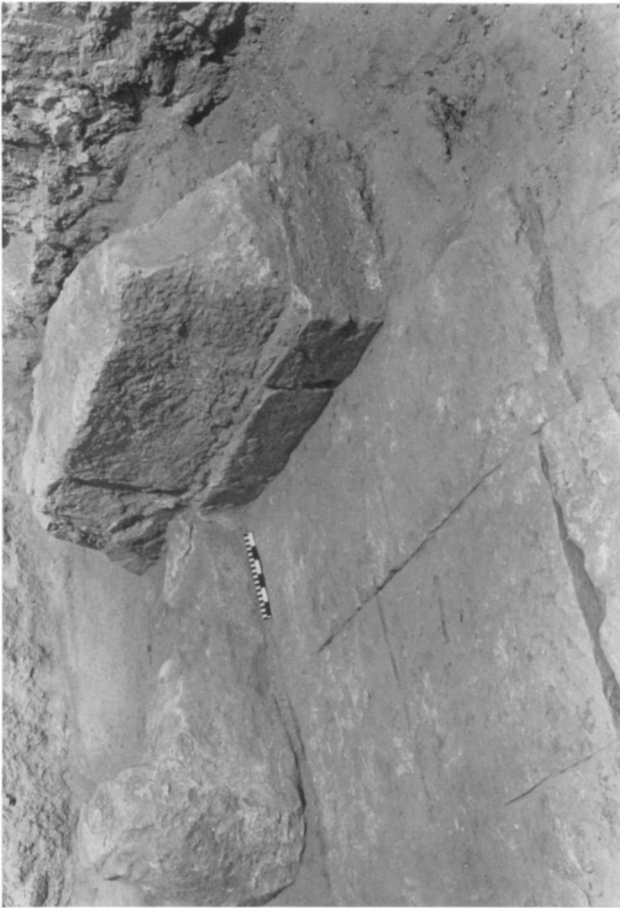


FIG. 32.—Northwestern corner pier of portico around central *meydan*.

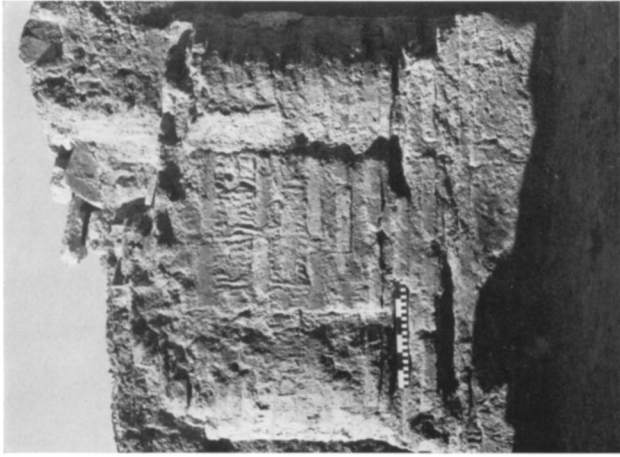


FIG. 33.—Brick pier in portico.

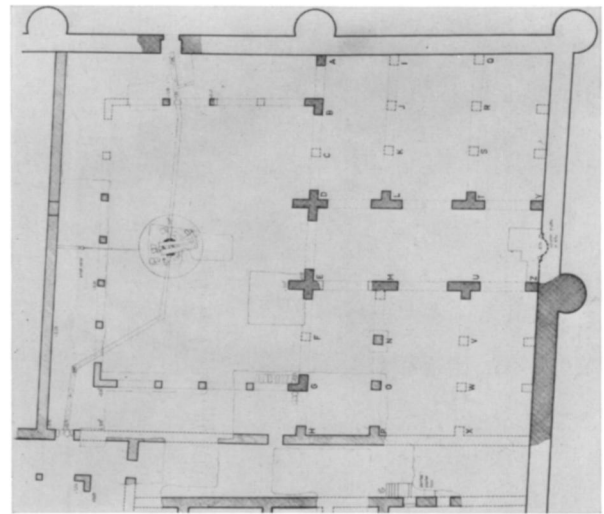


FIG. 34.—Plan of mosque.



FIG. 35.—Small canal in eastern door of the mosque.

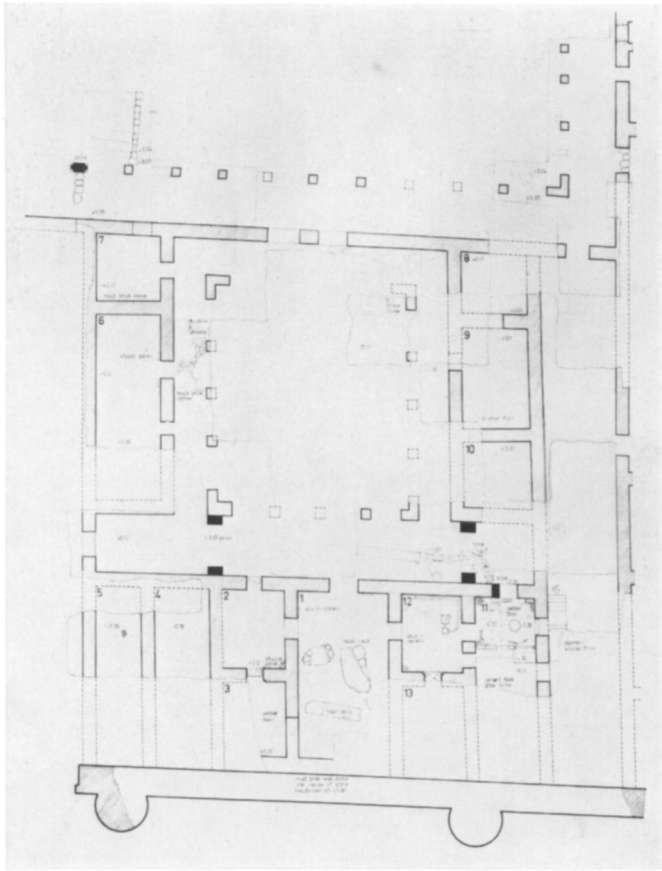


FIG. 36.—Plan of building A.



FIG. 37.—Basin and channel in building A.



FIG. 38.—Press rooms.



FIG. 39.—Basalt press stone.



FIG. 40.—Cistern in the area of the press rooms.



FIG. 41.—Channel and opening in main east-west street.



FIG. 42.—Pipes and channel in north-south street.



FIG. 43.—Brick piers in building A.



FIG. 44.—Decorated stucco panels from Building A.



FIG. 46.—Broken ceramic fragment with painting and inscription.

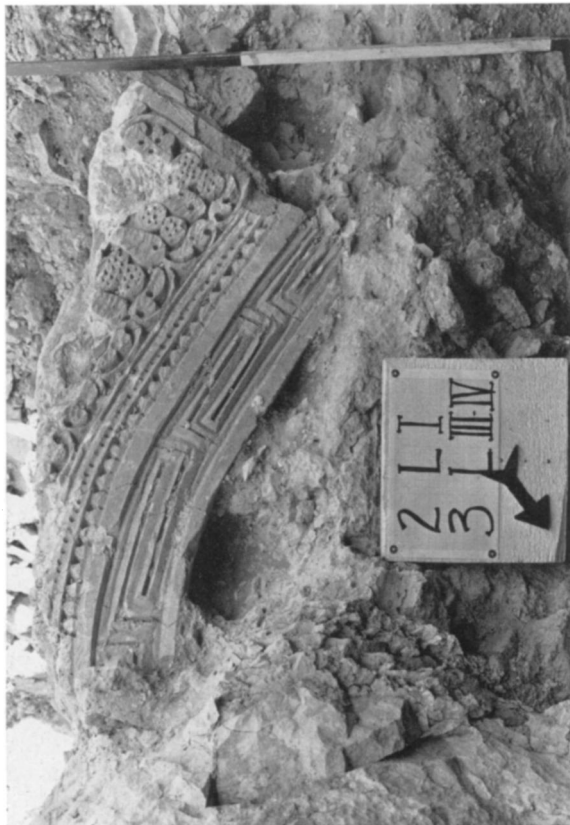


FIG. 45.—Fragments of stucco from Building A.



FIG. 48.—Later building in large enclosure.

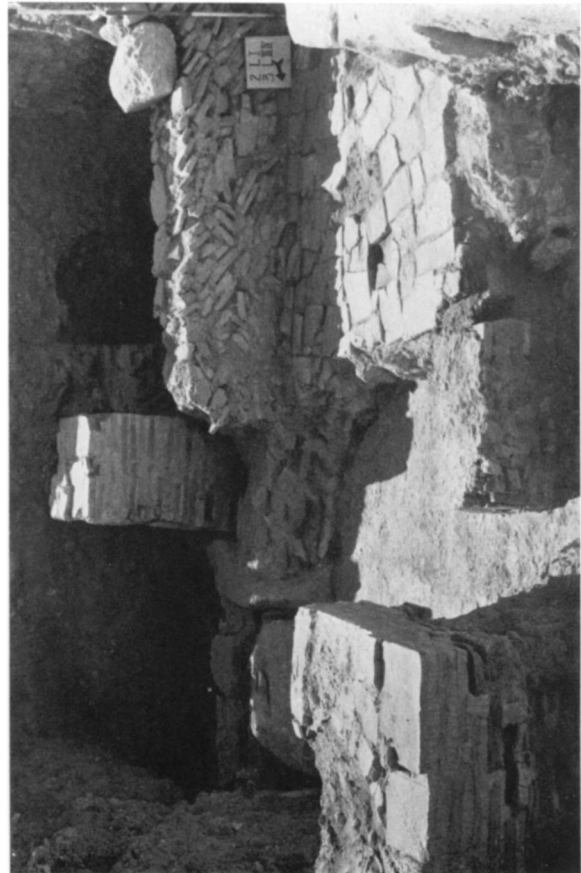


FIG. 47.—Side of trench in Building A.

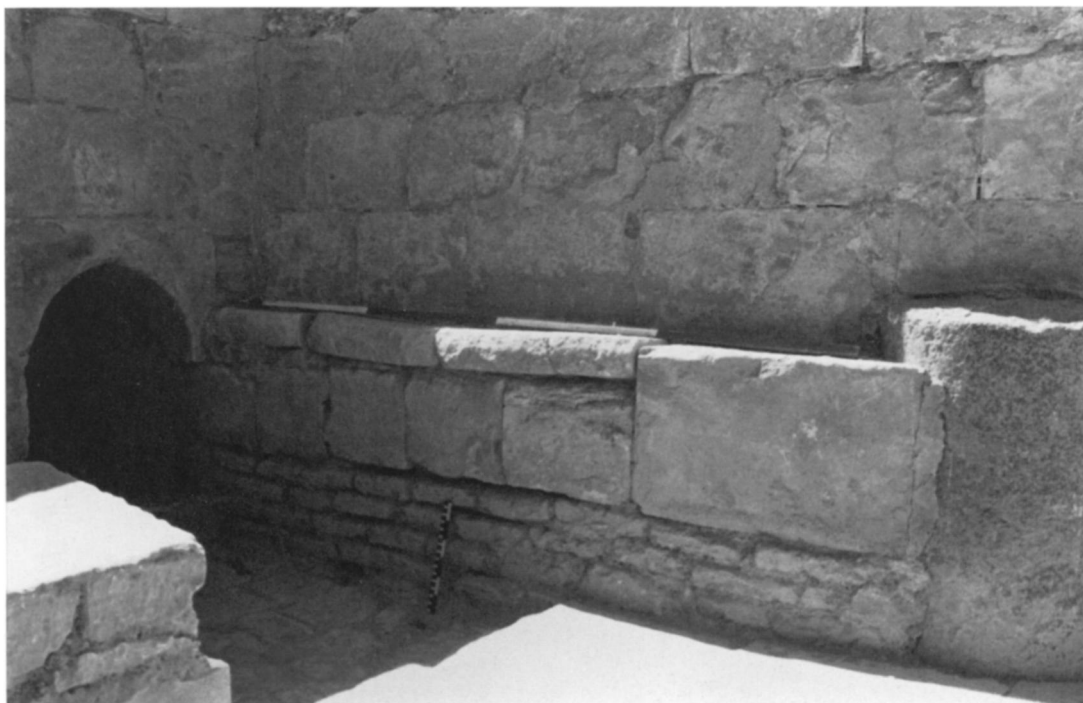


FIG. 49.—Tank to the east of the large enclosure.



FIG. 50.—Later water channel in large enclosure.

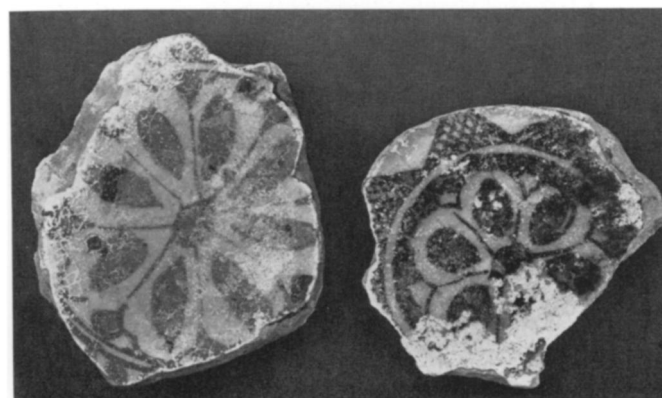
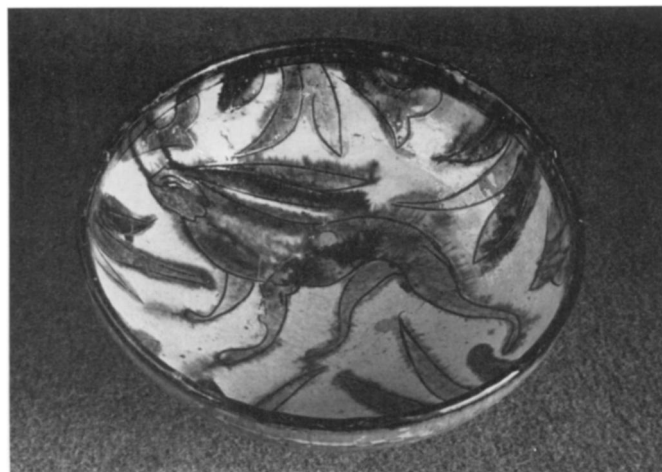


FIG. 51a and b.—Ceramic fragments from later occupation periods in large enclosure.

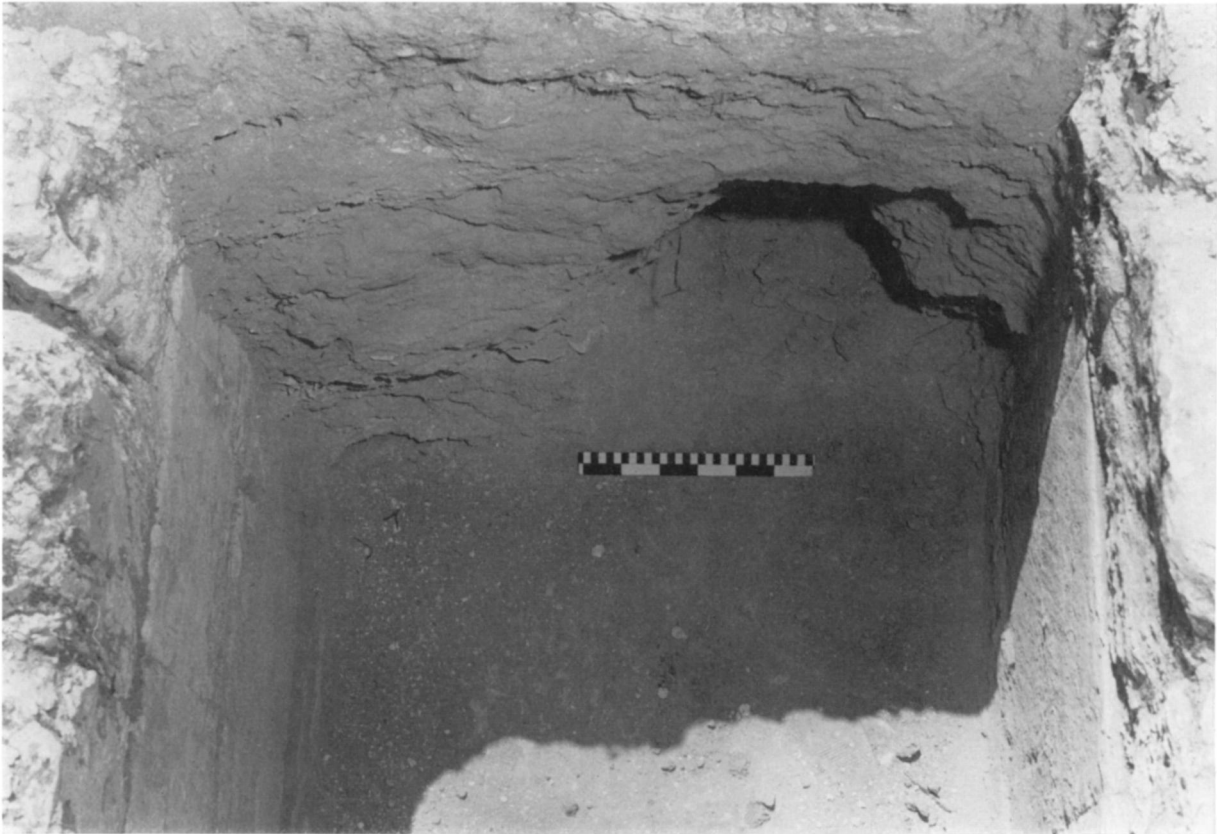


FIG. 52.—Canalization in outer enclosure.



FIG. 55.—Oratory between the two enclosures.



FIG. 53.—Deflecting walls in outer enclosure.

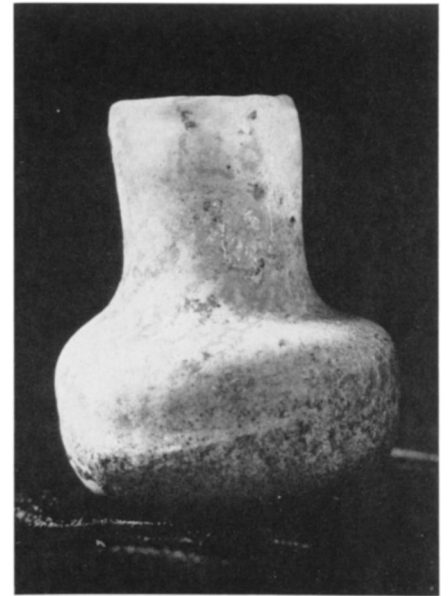


FIG. 57.—Complete glass juglet.



FIG. 54.—Northern sluices in outer enclosure.



FIG. 56.—Complete ceramic piece from the 13th century.

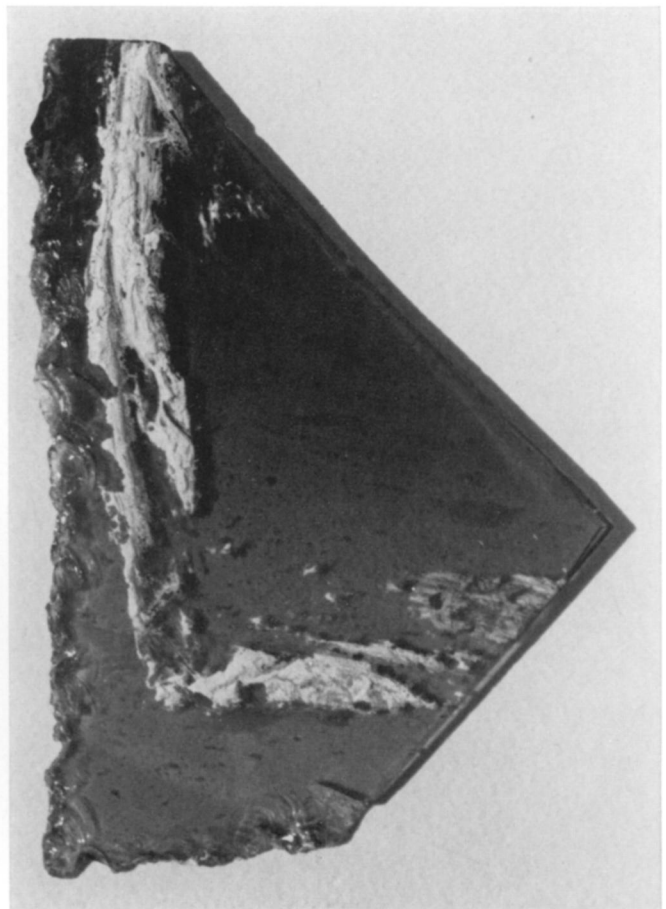
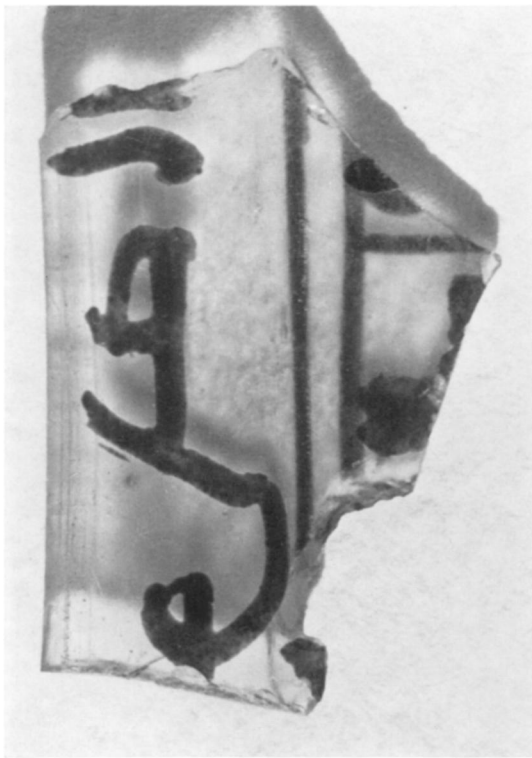


Fig. 58 a, b, c and d. - Glass fragments from the large enclosure.

rene center, the Umayyads created the infrastructure for agriculture (canals, protective walls against animals and marauders, protection against natural floods), for a primarily administrative center (mosque, Building A) with supporting minor industry (presses for olive oil), for trade (the small enclosure), and for storage (the large halls of the northwestern quarter). This infrastructure was not finished until the early Abbasid period, and the separation of time between beginning and completion has been confirmed in striking manner by Carbon 14 evidence. Using one wood sample from the original wall of the small enclosure and another from a burned ceiling beam from Building A, the analysis showed a difference of some 75 years.²⁶

The reasons for the creation of this entity are several. The Umayyads themselves had a major pre-occupation with the settlement of Muslim Arabs and of impoverished Christian Arabs from Western Syria. Qaşr al-Ḥayr could be considered as one such settlement with the further functions of collecting taxes and administering tribes. Then both Umayyads and Abbasids had created a new agriculturally rich and strategically or commercially essential Jazirah, and Qaşr al-Ḥayr could be interpreted as part of the kind of expansion into less hospitable areas which characterizes any development of a new geographical entity. Then also there was another aspect to agriculture than planting of foodstuffs. In an age without carts the main mode of trans-

portation for trade and for the army consisted in animals, camels, donkeys, horses. The whole area of Qaşr al-Ḥayr, like most of northern Palmyrene,²⁷ is an ideal grazing area, and thus we may also imagine that the site was built as a military base in which animals were raised and equipment kept during peace time. In time of war animals and equipment would have been brought to some point on the Euphrates, Raqqah for instance, for the caliphal armies moving toward Anatolia. We know far too little about the military organization of Islamic armies in the early Middle Ages to make this suggestion more than a hypothesis, but it is interesting to note that much of our archaeologically gathered evidence would thus find an explanation. This is particularly true of the apparent absence of living areas. A military, administrative, and commercial center with supporting agriculture would require only a minimal permanent population, while the larger numbers required at harvest time or whenever animals or equipment were to be moved stayed for only short periods of time and probably lived in tents.

Such are the hypotheses which present themselves about the first Qaşr al-Ḥayr after three seasons of work. Obviously they are still tentative and require considerable elaboration; but they do indicate, it seems to me, that both the location and the archaeology of an impressive set of ruins in the Syrian steppe lead to a wide variety of questions of considerable historical importance.

We can be briefer on the second major moment of Qaşr al-Ḥayr's activity. It corresponded to the feudal period of Syria and

²⁶ The analyses were made by the Physics Department at the University of Michigan. I am very grateful to Professor James Griffin of the Anthropology Department at the University of Michigan for having supervised all arrangements pertaining to these analyses.

²⁷ D. Schlumberger, *La Palmyrène du Nord-Ouest*, Paris, 1951, pp. 129 ff.

of the Jazirah and in ways which are still to be investigated partook of the new growth of these provinces from the early twelfth century onward. Functionally it appears that military and commercial pre-occupation predominated, but since water was still plentiful, it is not excluded that some of the more complex functions of early times were still continued, although on a more limited scale. Architecturally, however, there is no doubt that this second city was a crude creation without most of the amenities of earlier times.

IV. FINDS

While the main emphasis of our report so far has consisted of descriptions of buildings, of discussions of chronologies, and of hypotheses about functions, we have also mentioned that some of our dates and interpretations have been based on various finds: ceramic sequences in some instances and stucco decoration found *in situ* in other instances. It may be worthwhile at the end of this account to say a few words about finds in general.

Outside of a fairly large number of bronze objects of utilitarian character (which include one comparatively rare mirror type), of occasional fragments of wooden or bone objects, and of numerous tiles, pipes and other parts of architectural construction, the most important finds belong to three groups: architectural decoration, ceramics, glass.

Architectural decoration throughout is of two kinds: sculpted stonework, almost all of which belongs to pre-Islamic monuments from the Palmyrene and therefore whose study is beyond our immediate con-

cern, and stucco sculpture, almost all of which belongs to the Umayyad or early Abbasid periods (*figs. 44 and 45*). Only a small number of fragments can be given a precise architectural setting. To the art historian the interest of these fragments is two-fold. On the one hand, the comparative paucity of designs found in some 3500 fragments (about 30 to 35 types) illustrates the kind of taste and models available in a provincial center of the middle of the eighth century, between the exuberance of the Umayyad estates of Western Syria and the classical standardization of Samarra's ornament in the ninth century. On the other hand these stuccoes, together with Raqqa's, may serve to define a Jazirah school of decoration, and it will be necessary to decide eventually whether this was merely a provincial offshoot of Syria or Iraq or an independent school altogether. In addition many fragments of painted stuccoes were found, but, outside of providing a range of colors, these are quite useless for the definition of designs.

The analysis of the ceramics from Qaṣr al-Ḥayr posed a large number of problems since it was only in the small enclosure that any sort of clear stratigraphy was available and since almost total anarchy reigns in the description of mediaeval Islamic pottery. The emphasis of our work so far has been in organizing and classifying glazed series, for unglazed types seem to have been comparatively consistent throughout the Middle Ages. Inasmuch as only a small number of complete objects of major quality was found (*fig. 56*), our main objective was to provide a typological definition of the main glazed types found at Qaṣr al-Ḥayr without, initially, being overly concerned with precise dates. Thus some twenty-five types

have been identified, the frequency of their occurrence recorded, and their physical and decorative characteristics defined. The following preliminary conclusions have been reached so far. First, almost none of the major types was manufactured on the site itself, and most of them were brought in from the east, primarily from the Jazirah, at least until the middle of the thirteenth century. Second, while certain types such as polychrome or monochrome luster painted fragments (*figs. 27–29*) are fairly well-dated, it seems to us that the life span of some of the earlier luster series should be extended beyond the limits usually assigned to them. Furthermore, we tend to conclude that most mediaeval glazed types continued over the whole of the Middle Ages and that what varied was the frequency of different types and the variations of their quality. Our third preliminary conclusion is that each type exhibited a surprisingly large number of quality differences. By a careful analysis of these variants we may be able to determine an essential aspect of the material culture of the time, the ranges of taste and technique which existed at any one time and were available at any one place. Since most of the types are related in technique or decoration to expensive series created in larger centers, we may also be able to define the degree of impact any one of these series may have had or to conclude that they were less exclusive than has hitherto been believed.

Although often relatable to ceramics in the kinds of problems they posed, glass

fragments posed additional ones because there have been fewer attempts to properly catalogue fragments found in previous expeditions or to publish archaeologically provided holdings in museums. We hope to be able to do this with Qaṣr al-Ḥayr's glass, for in addition to a fairly sizeable number of fragments or even of complete objects found all over the site (*fig. 57*), the 1969 excavations brought to light several hundred fragments in a dump of materials from the first main period of occupation of Qaṣr al-Ḥayr (*fig. 58 a–d*). The study of this stratified material, which has only begun, should provide important information for the history of common glass.

Finally it should be pointed out that a number of graffiti were found ranging from the early Islamic period to the thirteenth century, and these may be of some interest in the history of the Arabic script. The more surprising feature of the excavation has been the lack of coins. Most of the ones which were found are very damaged bronze coins; only one or two have readable information, and none can be used for stratigraphic or historical purposes. This absence can be explained, it seems to me, by the fact that, whatever fluctuations its history may have had, Qaṣr al-Ḥayr was never completely destroyed. It was eventually abandoned; its last inhabitants packed their belongings and left, letting the buildings, the plants, and the broken sherds fade away in the sun before being covered with sand and earth by the violent winds of what slowly became a desert.