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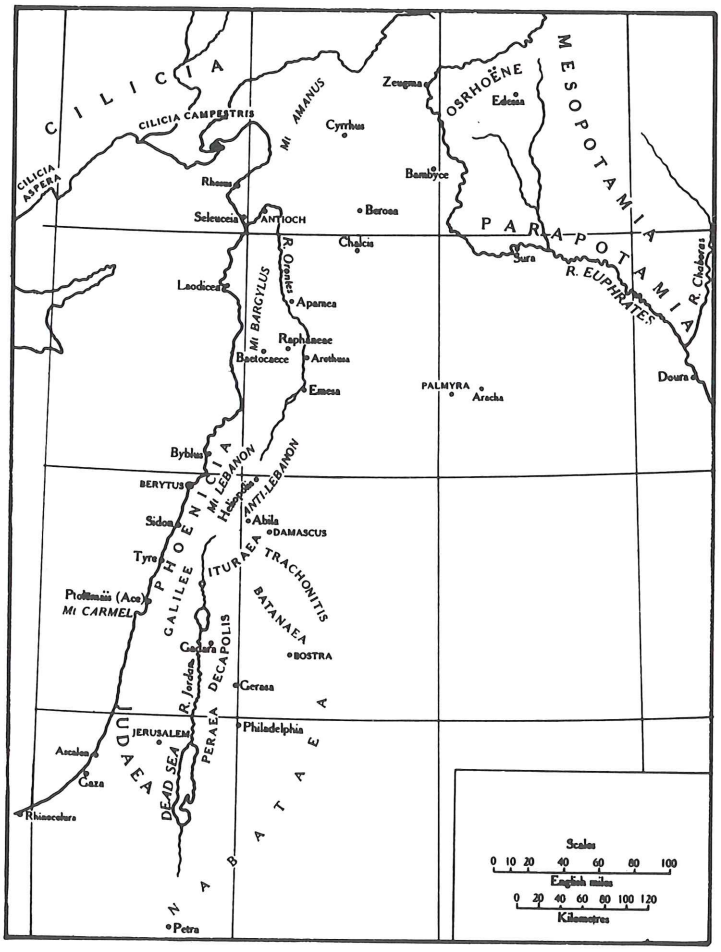
Urbanization of Palestine and Jordan in Hellenistic and Roman Times

This study consists of two main parts, both necessary for any inquiry into the problem of urbanization of Greater Syria in general, and for urban arrangements in Palestine and Jordan in particular, during the Hellenistic and Roman times. Part 1 bears on the character of urban forms of the Ptolemies, the Seleucids and the Romans in the area, in an attempt to contrast urban arrangements in Palestine and Jordan during the days of Ptolemaic control with the situation during the Seleucid and the succeeding Roman domination. Part 2 is on the urban arrangement of the city of Gerasa, modern Jerash, as it provides a valuable surviving example of an urban center in Palestine and Jordan belonging to the Hellenistic-Roman period. Our aim, therefore, is to present new material on the urbanization of this region during that period, as derived from the new evidence on the urban form of Gerasa, revealed through the result of three seasons of excavations at the site during the years 1975, '76 and '78; incorporated with our personal observations and notes on its general layout. The new evidence offers an opportunity for a re-evaluation of conclusions maintained on the problem, as well as to perceive, fairly local modifications to the schemes which were introduced into the area; and the way in which they were applied and adapted according to native concepts and cultural aspects. We hope that we have helped throw more light on such matter in an important era of the long history of this territory, and by so doing that we have furthered the study of classical archaeology of the Near East in, at least, one of its significant aspects.

Part 1

The study of classical town planning has produced various illuminating discussions which are expressive testimonies that this matter has been and still is controversial and important. Yet the towns in Palestine and Jordan belonging to Hellenistic and Roman times have received little attention. Furthermore, there has been a tendency to regard the architectural activity and town arrangement in this territory as part of the same architectural and urban development in the rest of the Graeca-Roman world, and was simply a phenomenon introduced into the area along with other classical institutions.

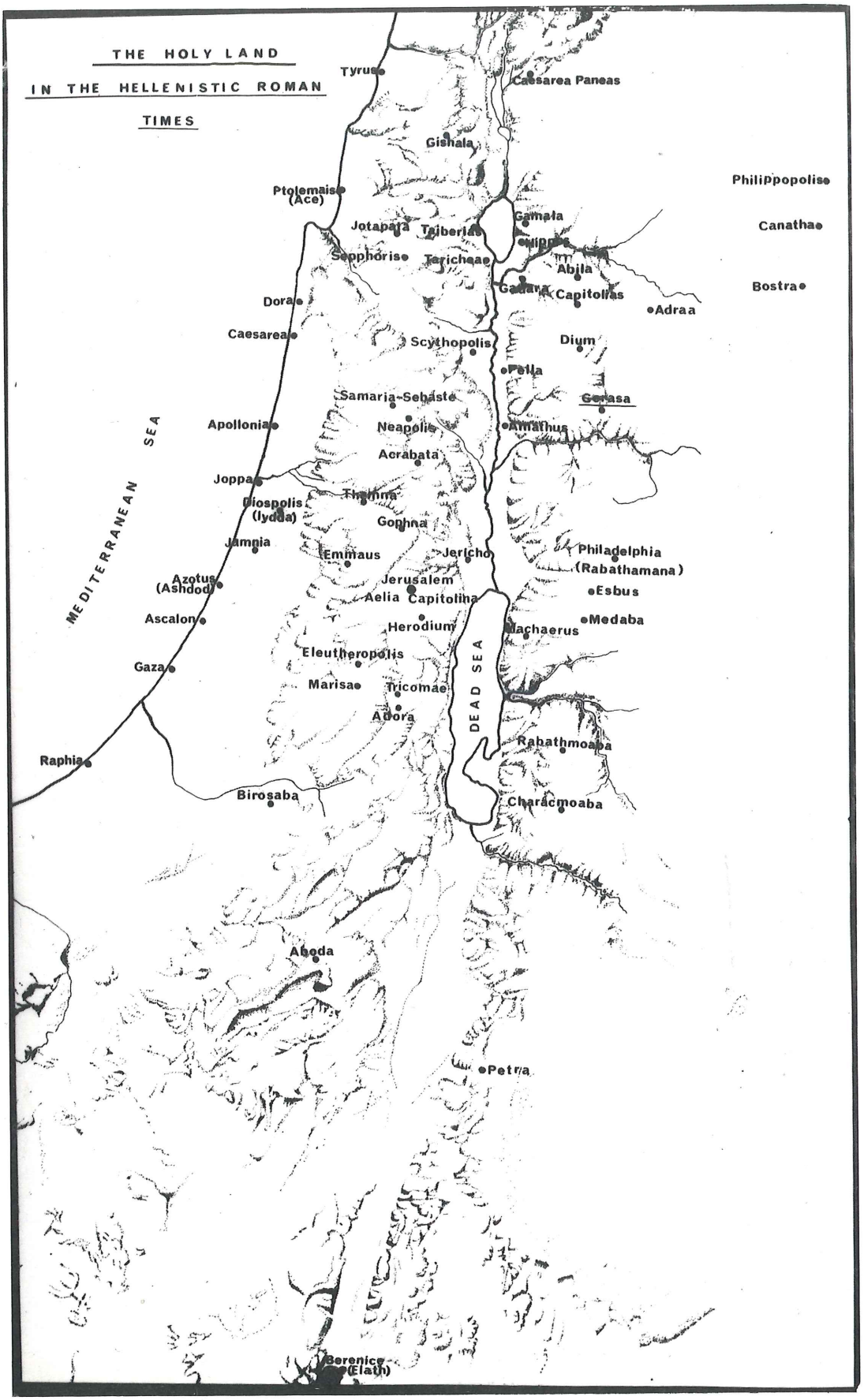
1.



This biased view overlooks the relative influence and importance of traditional and native tendencies on the total design (for the history, geography and the people, see Smith 1932; Avi-Yonah 1966; Aharoni 1967; Jones 1971).

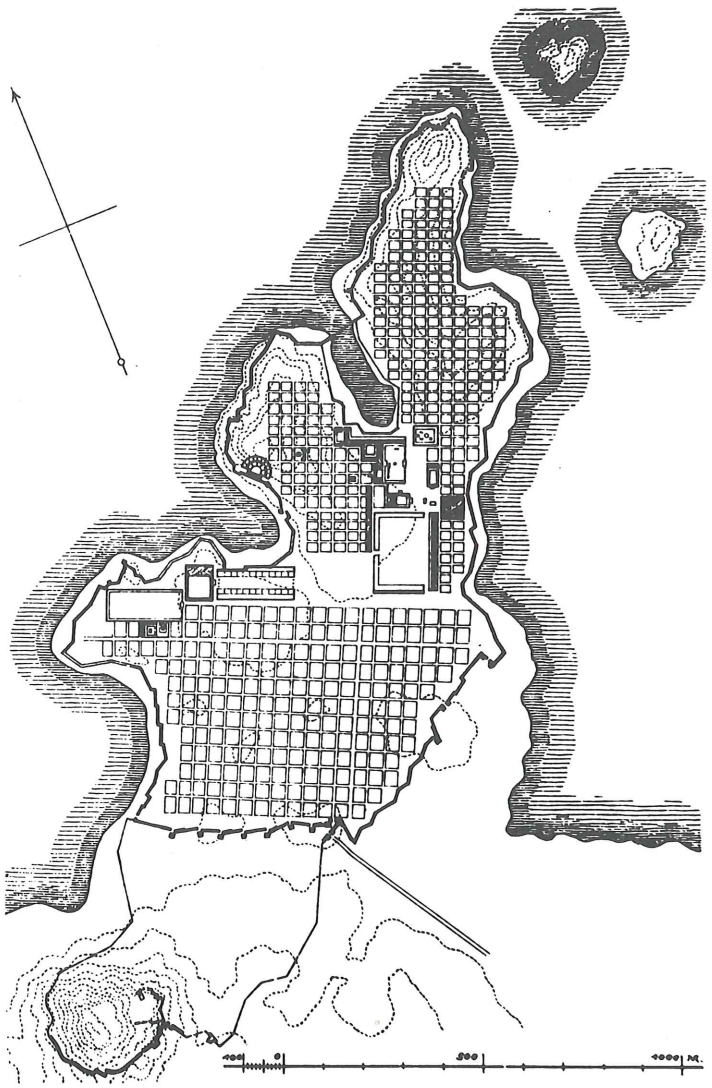
To a degree this is understandable. No doubt, Alexander's invasion of the Orient in 332 BC, did bring the Near East and the Mediterranean West into direct contact. The advent of the Greeks marks the entrance of a new cultural phenomenon

2. The Holy Land in the Hellenistic Roman Times.

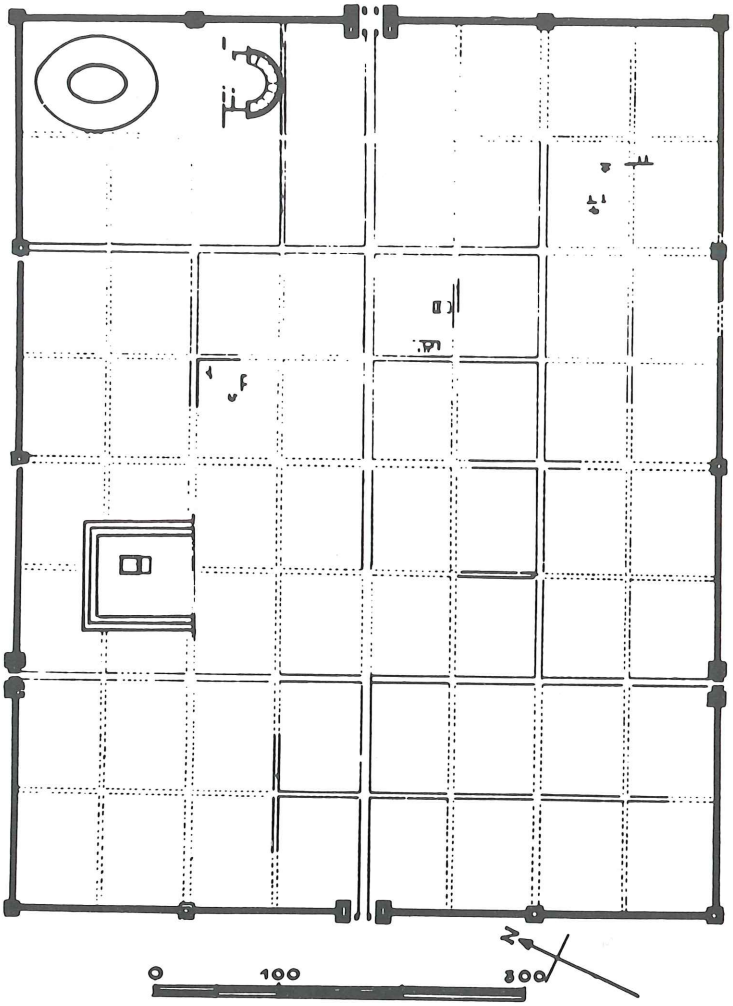


that had a stimulating and significant effect upon the cultural development of both East and West. The transformation of Greater Syria which took place around the turn of the fourth century BC, was not limited to political, social and economic changes; a profound change in its urban forms occured as well. Cities built or rebuilt (FIGS 1 and 2) from that time until the end of the Roman period (AD 324) in this territory (for discussion and listing of new or rebuilt cities in the Near East see: Jones 1940: 27–50, 1971: 236–56; Lauffrey 1958: 7–26), were organized in whole or in part in response to contemporary patterns and architectural aspects, while by that time systematic planning was recognized as a 'New Fashion' (Aristotle, Politics: 7.10.4. For discussion on the development of regular planning, see in particular: Haverfield 1913; von GerKan 1924; Lavedan 1926; Sauvaget 1941; Boëthius 1948, 1960, 1970; Martin 1951, 1956; Wycherley 1962; Kriesis 1965; Ward-Perkins 1974; Castagnoli 1971). But the nature and character of these cities was, in fact, a multiform rather than a uniform development, with two definable sources behind it. The *one* source is Western Mediterranean, the *other* is Eastern Oriental, as well as the distinctive indigenous local cultural concepts. Contemporary patterns were adapted to those aspects which were inspired by traditional characteristics, and required by local necessities and utiliterian concepts. Outwardly, its physical aspect corresponds to the general principles developed in the Mediterranean West, but its essence and nature are Oriental. Urban arrangements in Syria during that period exhibit in many ways the interaction of the various elements of which the new culture was composed and show the development of the tradition which was shaped by these elements. Consequently, any consideration of urban arrangements in Syria has to be looked upon as part of the major development of Hellenistic culture, a Hellenistic harvest, in its varied aspects. Therefore, the point is not the 'ready-made' patterns (FIGS 3a and 3b) introduced to the area, rather it is the way in which they were

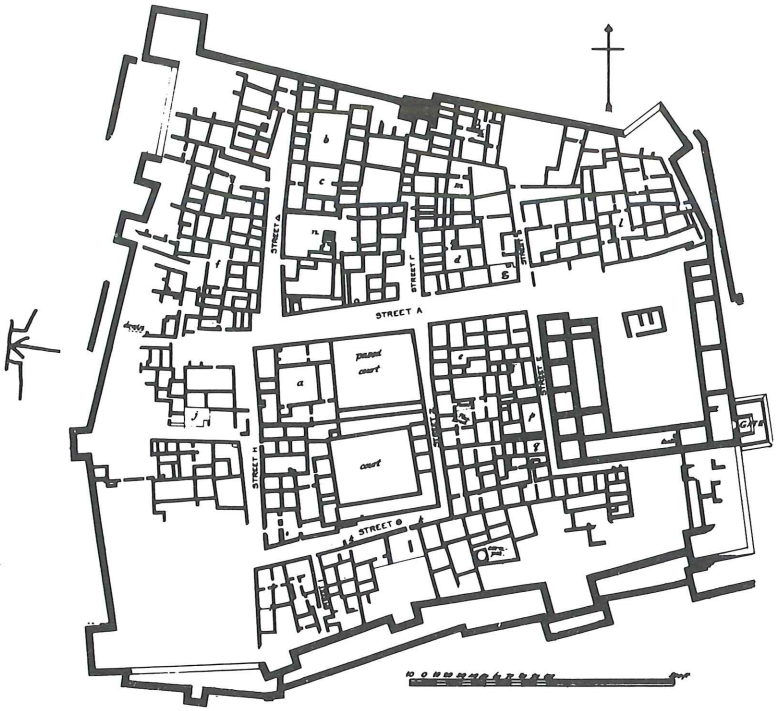
3a.



3b.



4a.


STREET A
STREET B
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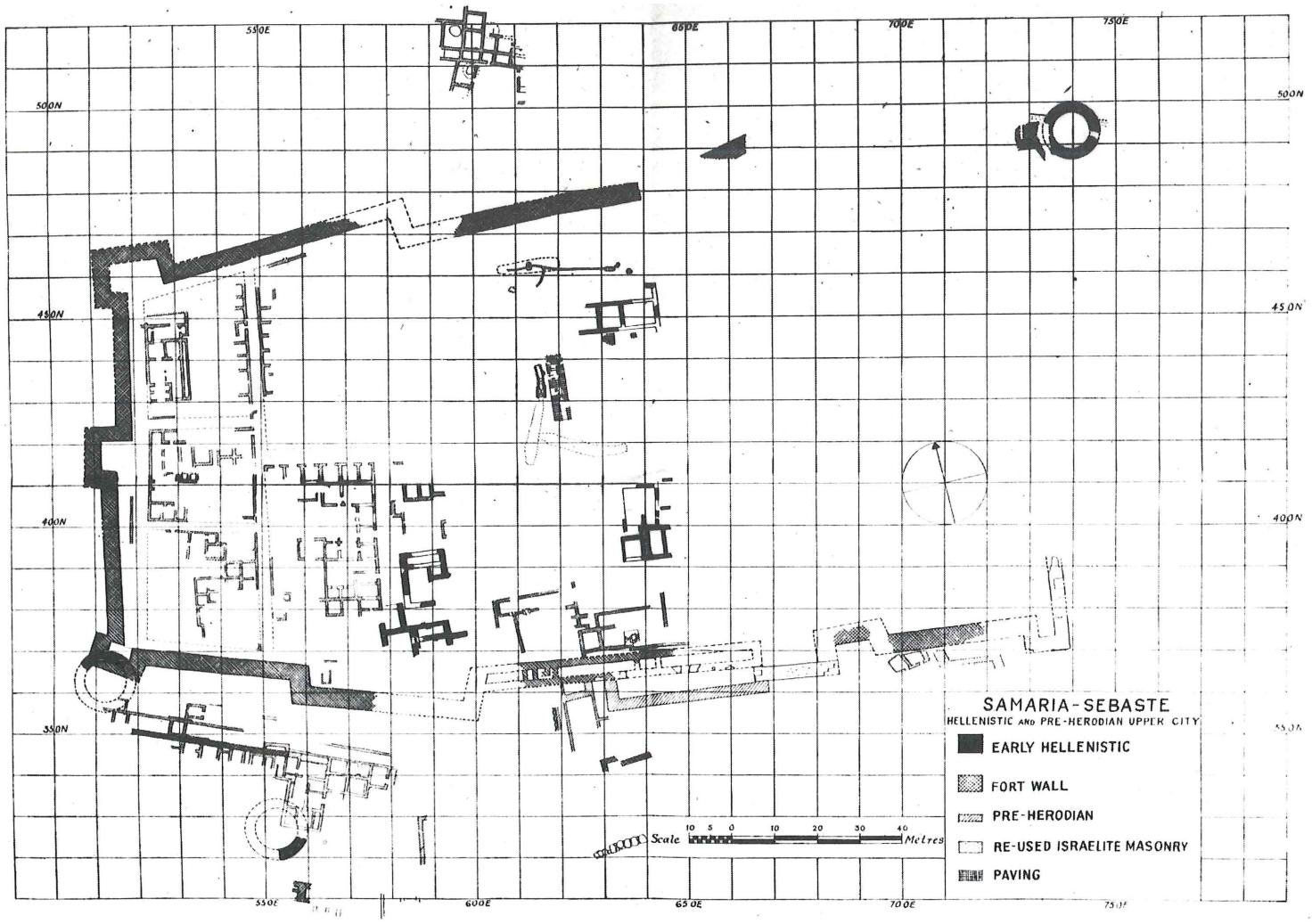
STREET F
STREET G
STREET H
Gate
Court
Court

4b.


550E
600E
650E
700E
750E
500N
450N
400N
350N
SAMARIA-SEBASTE
HELLENISTIC AND PRE-HERODIAN UPPER CITY
EARLY HELLENISTIC
FORT WALL
PRE-HERODIAN
RE-USED ISRAELITE MASONRY
PAVING
Scale
10 5 0 10 20 30 40
Metres

applied and adapted according to the traditional and characteristic elements of the Syrian town, and the disposition of structural elements in the scheme. From this concept, within the regular form—as a unifying element—of the Syrian city there were contrasting tendencies with Graeco-Roman typical arrangements. Here it is enough to state the fact that religious tendencies, manifest in all Oriental material culture from its beginning, reveal themselves in sharp contrast to the principles of the Graeco-Roman life. These tendencies guided the way in which foreign cultural aspects were accepted in Syria, giving the whole a distinctive and varied style. This contrast becomes apparent when comparing, for instance, Syrian temples related to the Graeco-Roman period with those of any other Graeco-Roman temples outside the region (Nelson 1944: 44–53; Oppenheim 1944: 54–63; Filson 1944: 77–88; Wright, G. E. 1944: 66–88; Wright, G. R. 1959: 8–16). Leo A. Oppenheim emphasizes the importance of the religious concept in the orient, in contrast to the Greeks pointing out that it was possible for them to replace their oldest sanctuaries in the acropolis by new temples in the lower city, while: 'This was not possible in the ancient Near East where the numinous presence of the deity is so precisely located that the sanctuaries cling forever to the same spot,' (1965: 131).

After the battle of Ipsus in 301 BC, the establishment of the Seleucid and Ptolemaic Kingdoms in Syria and Egypt brought significant changes upon the urban development of Greater Syria. But the processes of such development were not equally shared in its different parts. The Ptolemies controlled the great commercial harbours of the eastern Mediterranean at the Egyptian and Syrian coasts. All major commercial arteries from the Persian Gulf and the Arabian Peninsula passing through central and southern Syria, headed towards these centres. In order to retain complete monopoly over maritime commerce, it was necessary for the Ptolemies to keep control of the inland caravan trade routes (for discussion, see Bowresock 1971: 219–42, also Rostovtezeff 1932; Seyrig 1968: 57–63). Apparently, therefore, these were the decisive factors that shaped urban life in Palestine and Jordan during Ptolemaic control rather than any policy of urbanization carried out by the Seleucids in whose empire Syria, north and south, formed an integral part. These were the factors that characterized Ptolemaic existence in Syria and promoted the policy of establishing fortresses and garrison posts in Palestine and Jordan (for the different Seleucid and Ptolemaic policies and institutions, see: Bevan 1902; Bikerman 1938; Jones 1971: 240ff.; Hadas 1972: 24–28). Thus the Ptolemies were less active than were the Seleucids in carrying out an urbanizing policy.

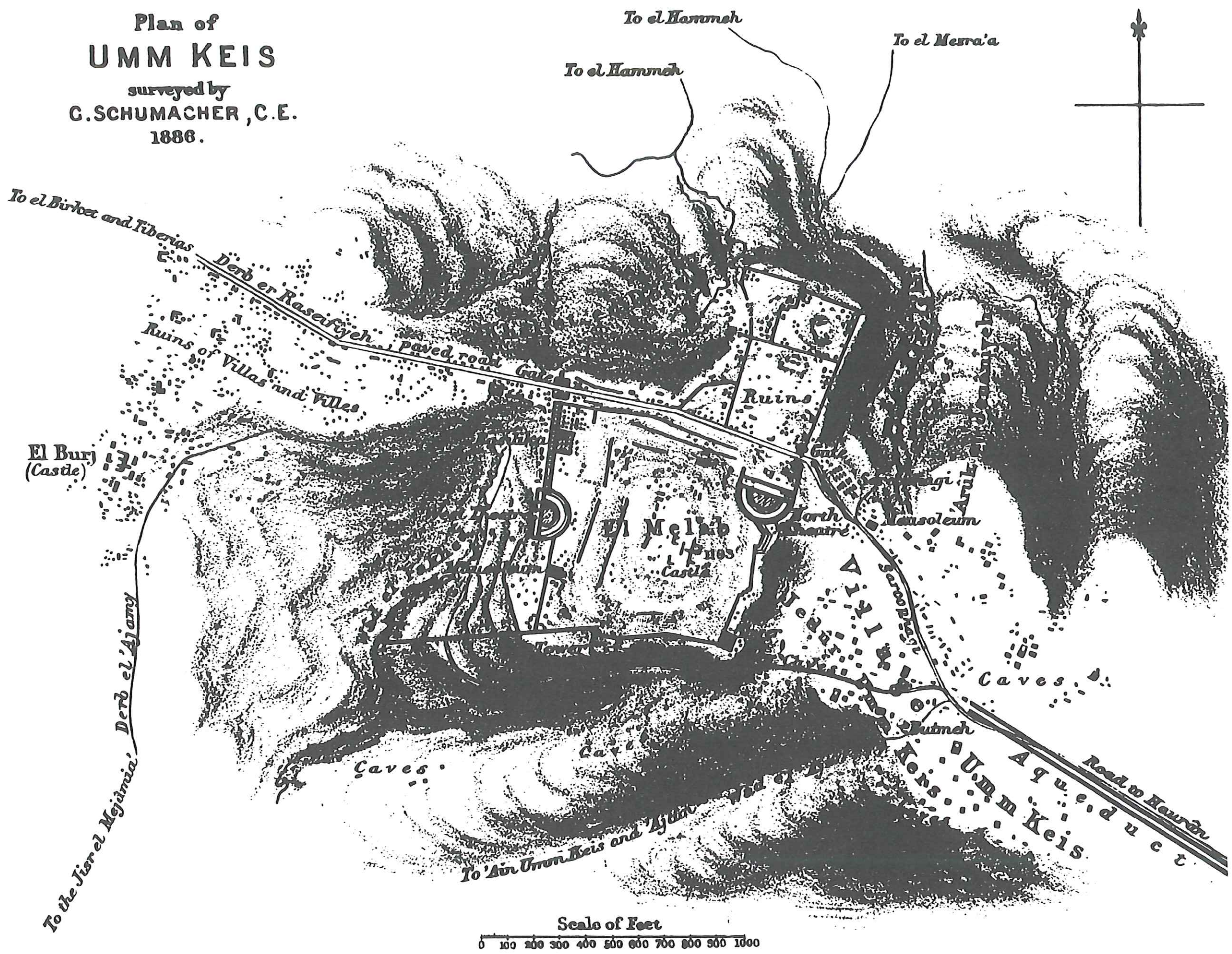
Ptolemaic urban forms in their part of Syria constitute characteristic features of their own, distinguishing themselves from those of the Seleucids (compare FIG. 4 with FIGS 4–6). A thorough study of the various Hellenistic plans of sites and architectural remains in Palestine and Jordan, which initially belonged to the Ptolemaic period, would bring to view common characteristic features which are in contrast with those of the Seleucid urban forms. (Among these sites are: Marisa, Samaria, Scythopolis, the Acropolis at Philadelphia, Rabbath Moab, Gerasa, Gadara, Hippum, Capitolias and Abila. Among the Seleucid sites are: Antioch, Laodicea, Apamea, Beroea, Dura-Europus, Damascus.) These features, as listed below, no doubt reflect natural military fortresses and garrison posts rather than the types of organized urban centres.

1) Urban arrangement is often confined to a limited area—acropolis or citadel—generally holding full command of the surroundings and communicating roads.
2) The scheme consists of a simple street system dominated by a main street bisecting the area and a limited number of minor streets on either side, at no corresponding points or at right angles, subdividing the area into a number of elongated strips. A few minor streets roughly parallel to the main axis are, sometimes, provided to divide some blocks as needed. In other words, a formal system of major and minor streets with corresponding blocks of strict symmetry or regularity is completely absent.
3) The absence of squares of agorai within the enclosure. Transverse walls are sometimes employed to seclude certain areas.
4) The fortifications form geometrical lines running around the summit with meander-like towers which are generally few and limited to the corners. A major structure usually forms part of the fortification system. Stretches of retaining or double walls are usually employed on the exterior. As a rule, it seems only one gate gives admission into the enclosure and this usually consists of a small passage-like entrance.
5) A striking aspect is the use of paving in the streets and lanes, as well as the careful attention to drainage, channeling and water reservoirs.

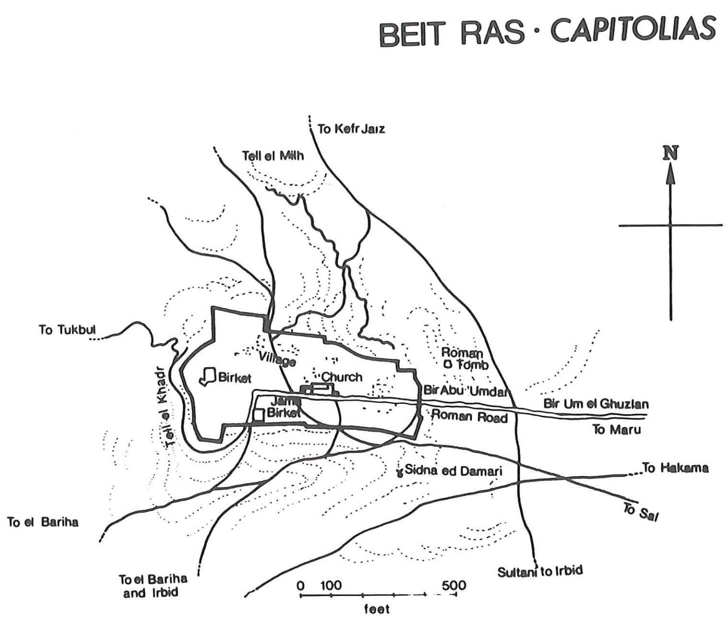
On the other hand, a glance at the plans of Seleucid urban forms (FIG. 7a and b) clearly reflects characteristic features of their own. At the outset of the period, urban development in the Seleucid part of Syria—i.e. north Syria—was the result of a succession of decisions undertaken by members of the Seleucid dynasty following a preconceived policy (Sauvaget 1941: 34–36), and within general specifications which sought to create organized urban centres, or to reorganize native towns for the same purpose. Those preconceived forms were practiced to achieve certain functional and practical efficiencies in the urban centres. The resulting forms provided for some functions similar to those of almost any Greek city, as well as those of the native town. The schemes of those centres integrate complex functional interrelationships of inherited local concepts and imposed foreign ones.

Further more, the layout of the Sleucid scheme is characterized by tendencies distinguishing it from contemporary patterns outside the region. These tendencies showing in the total design which is patterned by a central axis or several

5a.


Plan of
UMM KEIS
surveyed by
C. SCHUMACHER, C.E.
1886.
To el Hammeh
To el Hammeh
To el Mesra'a
To el Birket and Tiberias
Derb er Raseifyeh paved road
Ruins of Villas and Villes
El Burj
(Castle)
Ruins
El Melkh
Mausoleum
Caves
Cave
Caves
Umm Keis
Aqueduct
Road to Hauran
To the Jisr el Mejâmia' Derb el 'Ajamy
To 'Ain Umm Keis and 'Ajlun
Scale of Feet
0 100 200 300 400 500 600 700 800 900 1000

5b.


BEIT RAS · CAPITOLIAS
To Kefr Jaiz
Tell el Milh
N
To Tukbul
Village
Birket
Church
Jami
Birket
Tell el Khadr
Roman Tomb
Bir Abu 'Umdan
Roman Road
Bir Um el Ghuzlan
To Maru
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To Hakama
To Sal
To el Bariha
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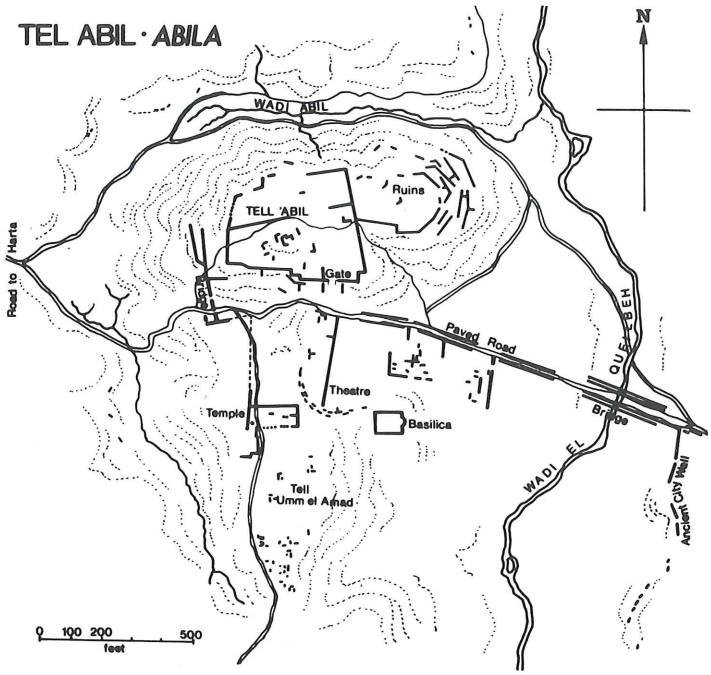
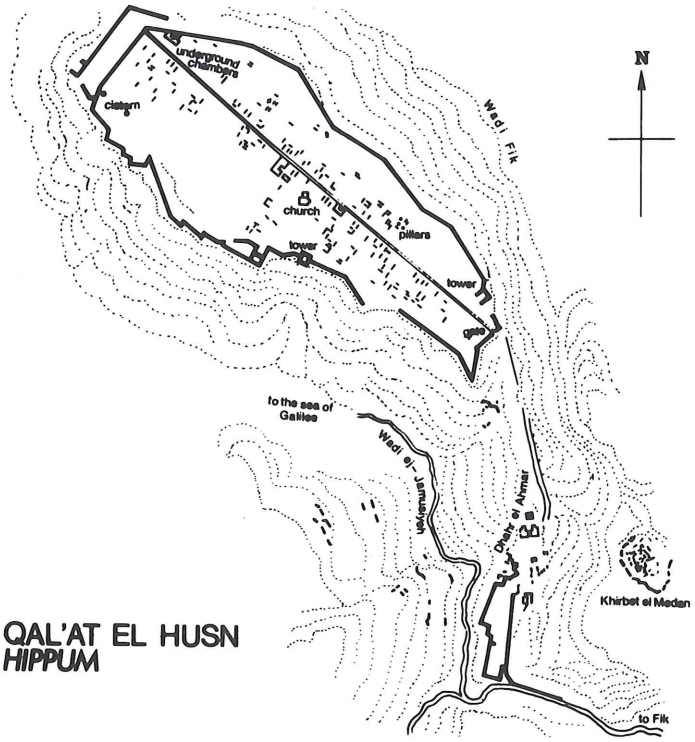
Sultani to Irbid
0 100 500
feet

6a.



6b.

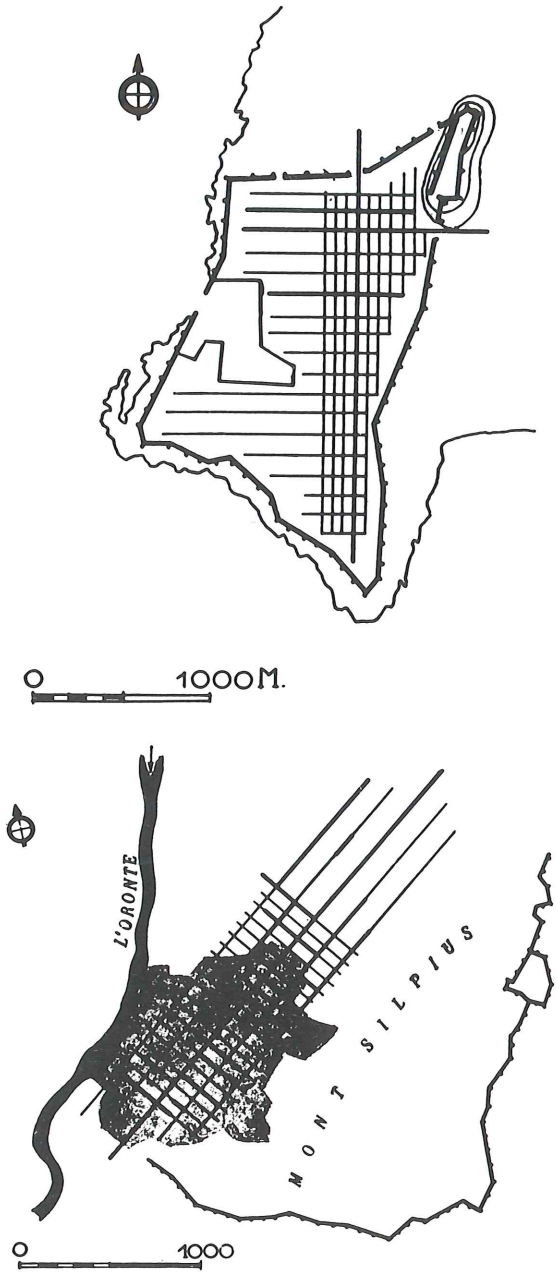


parallel axes usually running east–west, or nearly so, crossed by a number of north–south streets, a few of which are wider than the others. The resulting pattern is characterized by elongated blocks with their short sides generally along the major east–west axis or axes. In other words, the lengthwise axis, which is usually more continuous and wider, establishes longitudinal strips which are then subdivided into blocks.

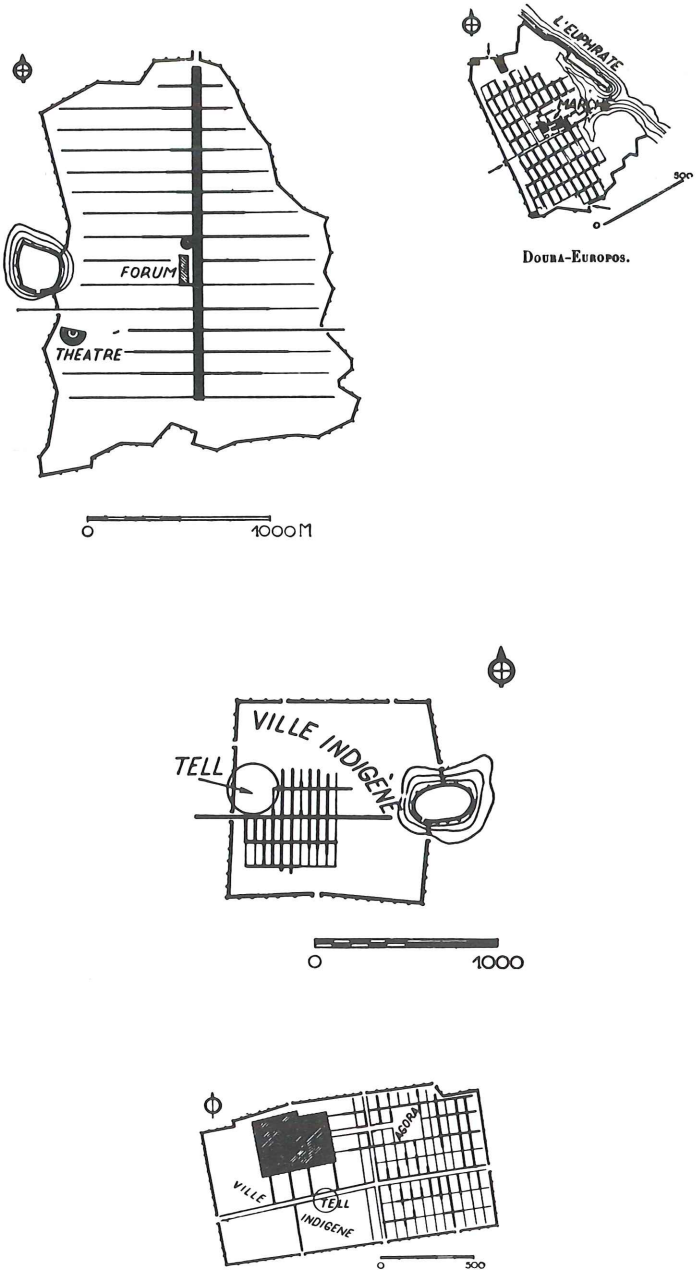
However, the Seleucid scheme is based on a distinction between major and minor thoroughfares. This pattern, in fact, is a successful combination of the axial system, which has an oriental legacy behind it (Boethius 1948: 4–5), and the grid pattern. Therefore, the idea of a main street—a processional way—as the base element in the urban arrangement within the regular pattern, forms a distinctive feature in the design of the Seleucid planning. This special emphasis on a main street, which is largely in the oriental tradition, is exhibited in the arrangements of Syrian towns throughout the Graeco-Roman period. At any rate, the general characteristics of the Seleucid urban form, as listed below, reveal themselves in sharp contrast to those of the Ptolemies.

1) The scheme emphasizes the concept of a master plan that controls future expansion without a focus to the plan. It is based on a thoroughfare, generally running east–west or nearly so, forming the major axis of the plan. Parallel to it, on either side, one or more major arteries and a number of ordinary streets of equal width and at equal distances divide the area into longitudinal east–west strips. Those are intersected at right angles by a number of north–south streets, some of which may be wider than the others but are not prominent in comparison with the major east–west axes. F. Castagnoli (1971: 32–34) recognizes such a scheme as patterned by avenues (Plataea), intersected by a number of narrow streets (Stenopoi).
2) The resulting blocks are usually rectangular of equal dimensions throughout the city, giving a standardized length to width ratio of 2 to 1. As a rule the short axes of the blocks are parallel to the main east–west axes. Such block subdivision and orientation has been referred to by Catagnoli as *per strigas* 'Analgous to the system known to Roman surveyors', (1971: 14; cf. Boethius 1960: 46–47).
3) There is no central focal street intersection. Squares and public buildings are related to the blocks as part of the grid rather than the streets.
4) The formal element of geometric regularity is dominant and, though the agora is generally near the centre, it is not dominant in the sense that other things are formally related to it as subordinates.
5) The street system has no relation to the fortification walls although both are one predetermined concept. The main gates always open onto the major east–west axis which generally stresses the natural flow of the traffic, suggesting a lateral relation.
6) The fortification walls follow the strategic contours of the terrain. They surround the city very loosely without any relation to the street system. Usually more than one gate give access to the enclosure. As a rule, towers are numerous and set at equal distances in the wall.
7) A citadel or acropolis usually holds a dominant spot in the fortification system.

7a.



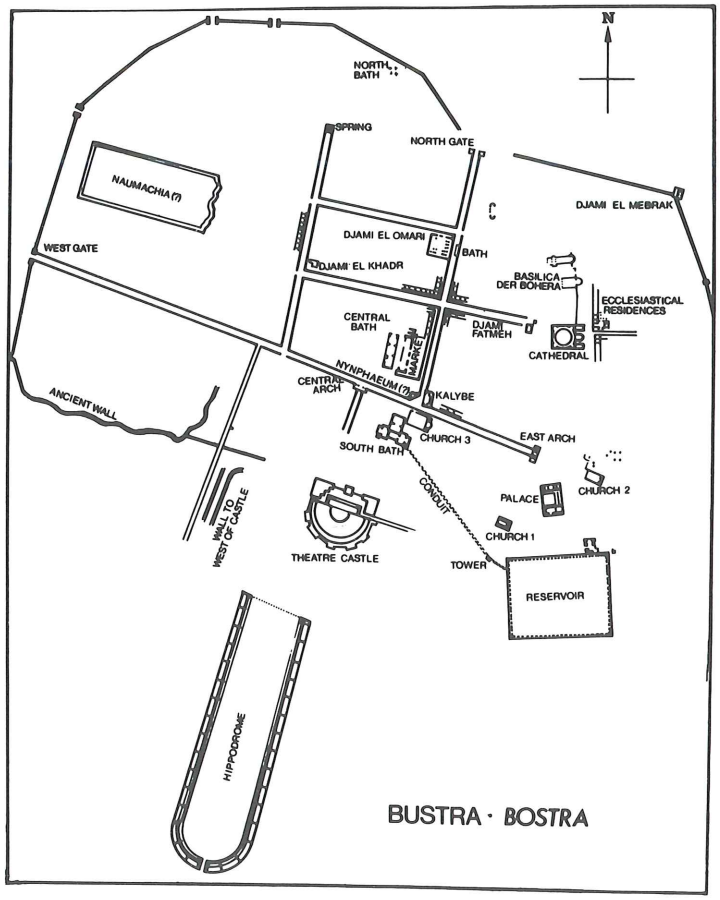
7b.



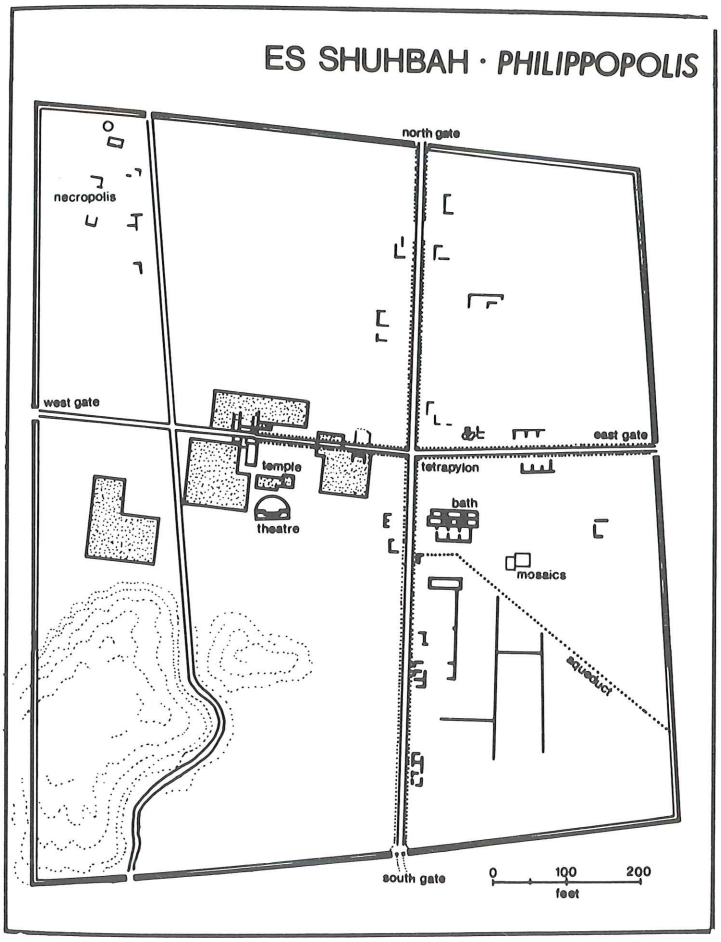
Political changes, however, that followed the battle of Panium (220 BC), had an important impact upon Palestine and Jordan. The most obvious evidence of this is the introduction of the Seleucid urbanization policy into this territory, and by the turn of the second century BC, local kings and dependencies had adopted the trend. Hence, a distinctive Hellenistic sub-type or form emerged. This sub-type is best illustrated in the enlarged or reorganized earlier plans like those of Antioch, and in the forms of the newly arranged urban centres of local kings and dependencies as at Philadelphia, Petra, Gerasa, Samaria and Palmyra. It is important to point out that the basic Hellenistic forms of the urbanized centres in Syria persisted through the subsequent period, however, they were modified later by the Romans (Sauvaget 1934: 81–82, 107, 112; Castagnoli 1971: 90; Ward-Perkins 1974: 31). This is illustrated in the plans of Antioch, Damascus, Gerasa, Samaria, Philadelphia and others where there are no traces of the Roman 'insulae' with their shops on the ground floor as we see them in new Roman foundations such as Bostra and Philippopolis (FIG. 8a and b). In other words, the Syrian system lacks the insulae 'which is a typical aspect of Roman street arrangement' (Wycherley 1951: 232–33; cf. Boethins 1948: 9–10, 15–17).

At the beginning of the Roman period the transformation

8a.



8b.

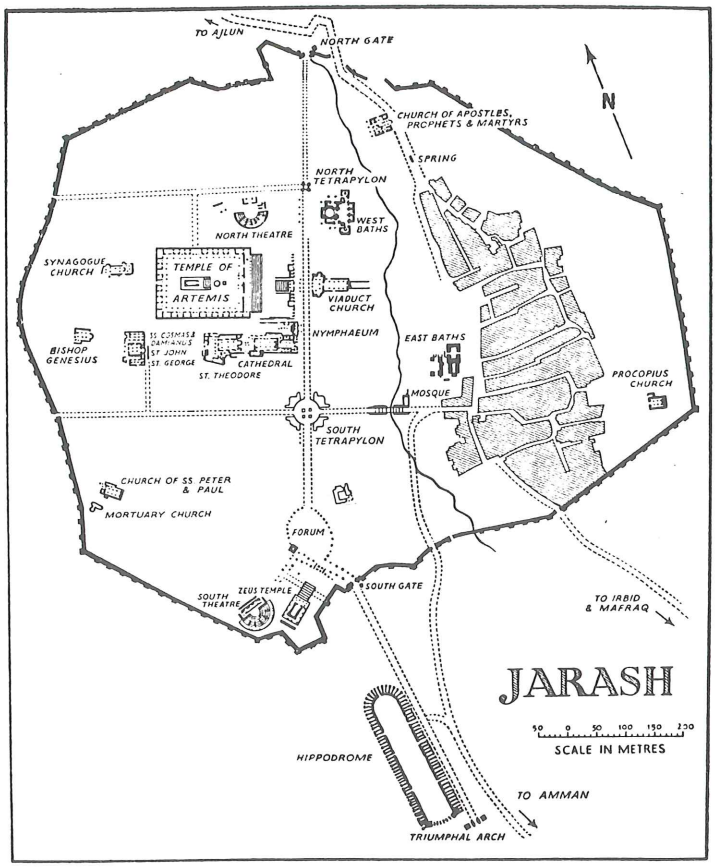


of the Hellenistic Seleucid pattern to a distinctive Syrian type has been accomplished. The character of the new type is neither simply the Greek geometrical nor the typically Roman axial. It is based on an axis or axes with rectangular subdivision but the major axis is often broken and is treated monumentally—colonnades, arches and tetrapylae—and related primarily to religious centres which themselves assumed monumental settings.

In the Roman period, Syrian city arrangement was, in fact, little influenced by the Roman concepts, and exhibits a differentiated local style. Native planners retained Hellenistic Seleucid principles of planning even until the second and third centuries AD. Axial intersection of crossing major streets—cardo and decumanus—which was introduced by the Romans, was employed here but in a fashion more in keeping with the Hellenistic and Oriental principles as seen in the plan of Gerasa (FIGS 9 and 10). (For contrasting tendencies between Greek and Roman urban schemes, and for the development of axiality in Roman planning, see: von Gerkan 1924: 144–146, 148, 159–160; Boethius 1948: 5–6, 9–10, 15–17, 1960; Wycherley 1951: 232–233, 1962: 32; Brown 1951: 108; Castagnoli 1971: 81.) Thus, the use of colonnades and porticoes with shops behind them reflect a Hellenistic Greek tradition, namely the *stoai*, coming to the East before it was established in Italy and before Roman intrusion into the area. These colonnaded streets became a distinctive Syrian style, and were the actual centres of civic life and commercial activity rather than 'agorai' or 'fora'. The separation between residential and commercial quarters is in agreement with the Hellenistic Greek and Oriental concepts. One can perceive such a concept in the later oriental concept of the 'Suq' or 'Bazar'. This relationship, in fact, is obviously indicated in the development of the agora at Dura-Europos (Brown 1944). Furthermore, the breaking of the course of long avenues by a slight bend or closing vistas by arches or tetrapla are further characteristic aspects of Syrian towns.

Thus, Roman influence seems to appear as a secondary intrusion, chiefly effective in monumental structures and technique. With the expansion of Roman imperial influence towards the East, by the turn of the first century BC, during the Pax Romana, an era of building began. Hence, city arrangement in Syria is characterized by the importance of the practical informal consideration. Apart from the use of a consistant system based on the concept of avenues 'plataea' and streets 'stenopoi', which we saw in Hellenistic arrangements, there were contrasting tendencies with a formal rigid

9. Jarash



practice. These tendencies are apparent in the axiality and the preference for architectural units symmetrically arranged along a central axis. This aspect is in agreement with Roman concept rather than with the Greeks who avoided symmetrical and monumental architecture (von Gerkan 1924: 144–146, 159–160). This tendency is clearly illustrated in the plan and disposition of architectural elements of Gerasa, Philadelphia, Petra, Palmyra, Bostra, as well as in the modified Hellenistic plans of Antioch, Damascus, Apamea and others.

In this period, the sacrifice of geometrical rigidity was paralleled with a definite adaptation to the natural flow of the site contours, achieving naturalistic and scenographic effects. Wide axial streets crossing at right angles, or nearly so, bubdivided by minor streets without any rigid application of the grid. This decrease in the emphasis of the grid itself is substituted by more interest in the orientation towards a focus, mainly temples which is, in fact, a revival if a typically oriental aspect. Here, the religious centres took on monumental settings and constituted an important element in the urban scheme, where major thoroughfares oriented with traffic towards them. Water channeling supplies and sewage disposal systems constituted further important elements in Syrian city planning.

Part 2

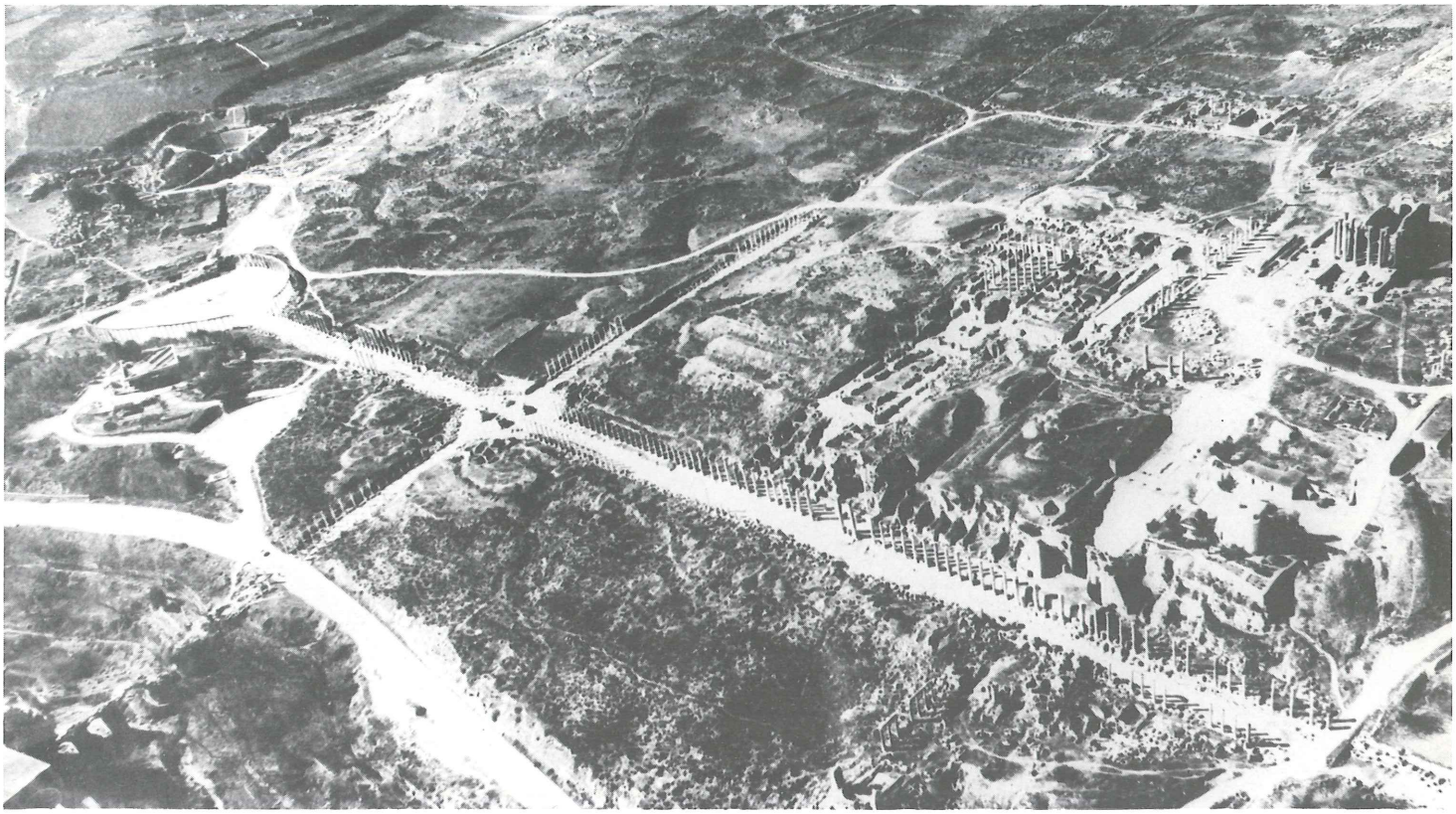
In terms of our objectives to clarify urban forms in Palestine and Jordan during the Hellenistic and Roman times, Gerasa seemed to exhibit extraordinary potentials that help us perceive the situation clearly. The topography of the city, certainly, presents a remarkably picturesque landscape that one would not think suitable for regular planning (FIG. 8). Yet the planners of Gerasa were able to employ a regular scheme for the layout of the city on the one hand, and exploited the natural features of the site on the other, maintaining the basic characteristics of the patterns common in Hellenistic Syria, but with less formality and in a more natural way. The prominent feature in the plan of Gerasa (FIGS 9 and 10), is a colonnaded avenue more than 800 metres long, and about 12 metres wide running along the major north east–south west axis from the North Gate to an oval shaped colonnaded plaza ('Forum?') a short distance within the South Gate. This minor thoroughfare is intersected, almost at right angles, by two colonnaded avenues of lesser width, 8 metres, and about 400 metres apart. This is what was generally known about the scheme of Gerasa.

Systematic archaeological investigations at Gerasa, initiated by the American School of Oriental Research during the years 1928–34 (Kraeling 1938), were primarily centred on architectural features of public and religious significance. Although the Kraeling Expedition was able to identify a few side streets measuring about 6 metres in width, none of them have been explored (Kraeling 1938: 15 'As a matter of fact it is only the cardo of which we have a clear conception'). With such partiality, none of the city blocks have been excavated and not a plan of a single dwelling has been revealed. Thus the plan of Gerasa drawn up by the Kraeling expedition displays only a partial aspect of its general layout and the disposition of various elements in its scheme. Therefore, little can be said about the layout of the city and less of its domestic and civil structures, and nothing about the private life of the town. Consequently, a detailed plan of Gerasa is lacking; meanwhile, its occupational history has remained rather obscure.

The work of the three seasons at Gerasa was part of a long-term joint project of the Department of Antiquities of Jordan and the Department of Archaeology at the University of Jordan aimed to achieve two main purposes. The first, is to trace the urban arrangement of Gerasa through all phases of its history, and second, to determine the statigraphic history of the town. Accordingly, the expedition conceived its primary efforts should be directed upon the south-west sector of the city (FIGS 9 and 11). This sector is fairly well defined by two major arteries—cardo and decumanus—religious and public structures—the Zeus temple and South theatre—and colonnaded oval plaza-Forum? The topography of this area makes its choice for a large residential sector evident. Its architectural features reflect no monumental significance. The area is strewn with well dressed and roughly shaped stones. Remains of walls which are still visible in the area would seem to agree with all the physical aspects and architectural concepts of domestic structures of a large residential quarter.

Because of the large size of the determined area of excava-

10.



tions, it was decided to centre our work upon three major spots: Areas A, B, C (FIG. 12). The general distribution of these areas was determined by taking into consideration certain important features, observations and finds made during the initial study of the site, which seemed to conform with our objectives. The exact location of Area A was based on features that postulated a side street intersecting the decuminus. Areas B and C are almost contiguous. The reason for their division is that each is located at two corresponding points in the western colonnade of the colonnaded oval plaza where they were given wider intercolumniation than the rest of the columns which were equally spaced. This exception at these points was also emphasized by a slight rise in the height of the architraves. This feature probably marked the places where side streets, coming down from the west entered the plaza. Area D was also determined by important features that postulate the existence of an important structure bounded by two side streets. Here there are four colossal columns with the first and fourth having a bracket at three-fourths of their heights. At either side of these columns are six smaller ones. Therefore, investigation at this spot has been in an effort to determine the nature of the area behind these columns as well as to excavate a small portion along the carda to demonstrate the function of this main avenue as a commercial centre by revealing the row of shops or other structures of commercial or public significance bounding it. In the third season our attention was drawn to Area E, between the colonnaded oval plaza and the South Gate in an effort to determine the nature of this area and how the plaza was approached from the South Gate.

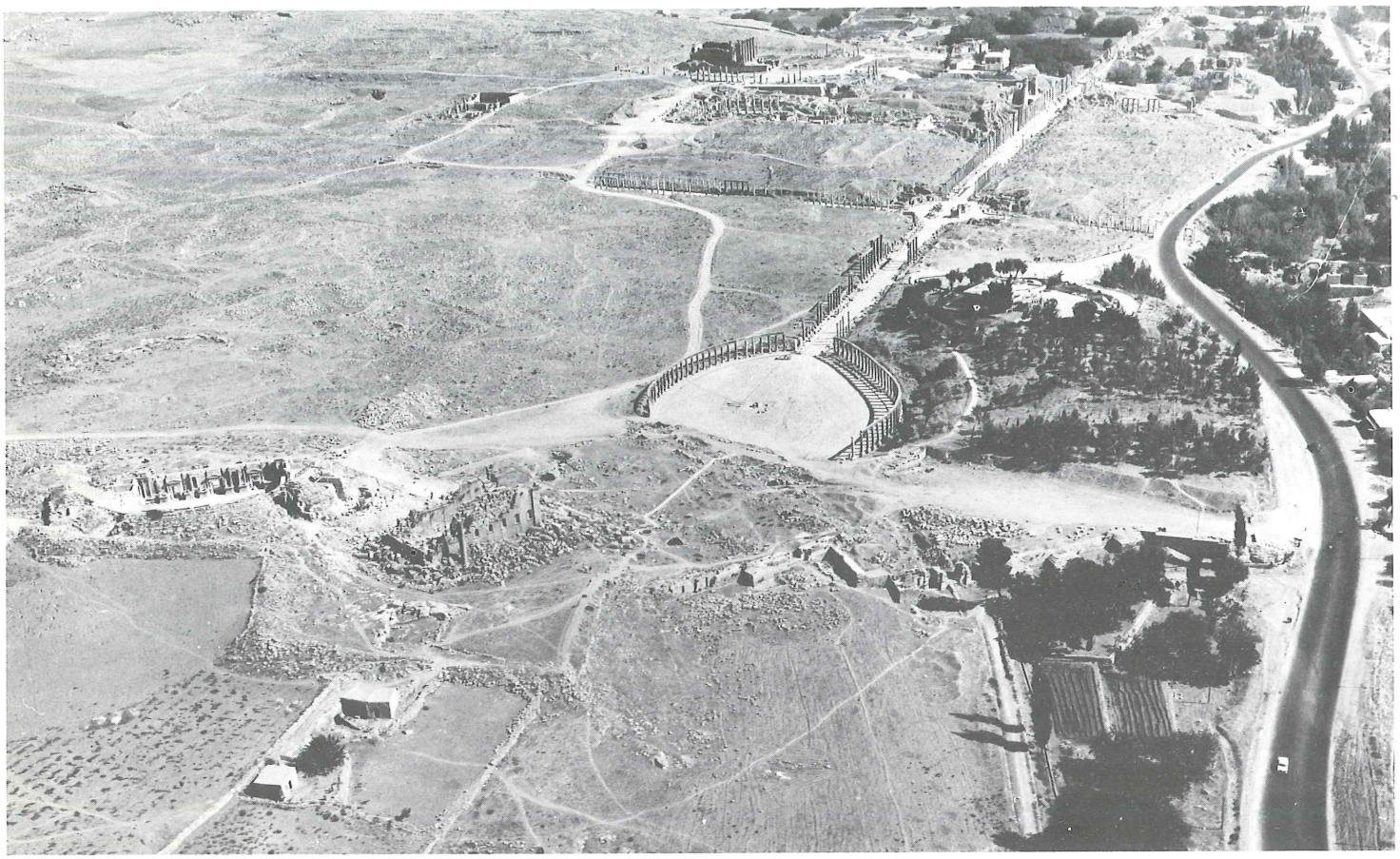
During the three seasons 22 trenches, measuring 5×7 metres, were opened in areas A, B, C and D (4 in A, 6 in B, 4 in C and 8 in D) only one long trench measuring 30×5 metres was opened in Area E. Stratified deposits which have been removed vary from area to area, but in general they vary from 3–5 metres. Bedrock was reached in two areas: A: 1, 2, 3 and D.2. The result in all areas have in some respects exceeded expectations, and it will be sometime before thorough study of much of the evidence and the material collected can be completed. Accordingly we shall not attempt to give a detailed account of the result of the excavations, rather it is our intention to give an account of the architectural evidence that bears on the objectives of our study reached by the end of the third season. The result of the investigations in question may be most conveniently described in terms of the several areas of study.

Area A

Excavations in this area were carried out in two seasons only, 1975–6. Four trenches, measuring 7×5 metres, were opened and bedrock was reached in portions of three of them (A: 1, 2, 3). This was in an attempt to establish the sequence of habitation in this part of the city to bedrock.

In terms of the occupational history, four strata (Hellenis-

11.



tic, Roman, Byzantine and Umayyad) were distinguished in the three squares that were excavated to bedrock (FIG. 13). The result showed that this area had been occupied from the second century BC until the end of the Umayyad period (end of the eighth century AD).

This conclusion was indicated by ceramic and coins readings, as well as other domestic objects. The earliest evidence of occupation in this area so far collected dates back to the second century BC. This date is suggested by two pieces of coins belonging to John Hercanus (135–104 BC), and of second century BC Hellenistic pottery sherds. If this be the correct interpretation, the fact that the coins came to light in stratified layers in this area, may indicate that Hellenistic occupation included this area and was not concentrated only in the 'Forum' area as suggested by Kraeling (1938: 27–28, 30; idem: 1941: 11).

In terms of the architectural history in this area, it very quickly became evident from the beginning of the work, that the architectural remains uncovered formed parts of private structures bounding a side street (FIG. 14a and b). By the end of the second season, however, it appeared that this area was related to two city blocks of well aligned series of structures bounding a side street of about 6.35 metres wide, each with a doorway opening onto the street. Although none of these structures has been fully excavated and their nature must remain tentative until further excavation, yet the limited evidence of architectural remains discovered, as well as a substantial number of coins, objects and tools does make it possible to suggest that these structures were used for habitation during a good part of the city's occupation. The foundations of the exterior walls of these structures along the street were reached in three trenches (A: 1, 2 3). The ruins of these walls showed evidences of reconstructions, additions and repairs reflecting a history of long duration and severe destruction. In spite of this fact, the orientation of their lines—axes—were almost exactly the same from the time they were first built until the final abandonment of Gerasa at the end of the Umayyad period. The evidence from the ruins of the exterior walls of these structures reflected at least two destructions before a final one. This result (Area A.1) suggests that three main building phases can be distinguished in the ruins of these buildings (FIG. 12b and c). These phases as attested by domestic remains can roughly be assigned to: Roman, Byzantine and Umayyad.

It appeared that a hard concrete paved floor, varying from 0.20–0.30 metres thick stretches over the entire width and length of the whole area (FIG. 11a and b) bounded by the parallel walls of buildings. To determine the nature and full

extent of this pavement, a trial trench, measuring 5 × 2 metres, was made at the line of the decumanus, distance of about 9 metres to the north from our trenches. Here, it appeared that this pavement continued in a gentle slope to meet the line of the decumanus. This result strengthened the suggestion that Area A presents a portion of a side street of concrete pavement intersecting at almost right angles the course of the south decumanus.

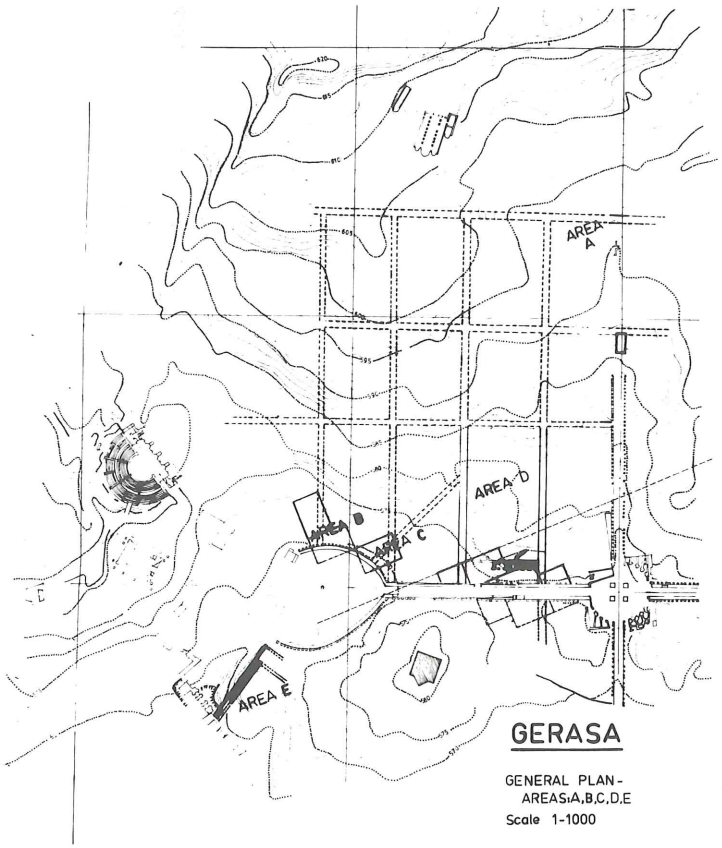
A cut through this concrete pavement revealed no less than four paved levels of the same nature, varying from 0.10–0.15 metres thick. These pavements were separated by occupation debris and varied from 0.05–0.10 metres thick. Ceramic and numismatic readings for deposits that covered the upper one and between the lower ones down to bedrock attested that they all uniformly belong successively to: Islamic Umayyad, Byzantine, Roman and late Hellenistic periods. This result, however, indicated that the original side street followed this line from late Hellenistic until Umayyad times.

Information concerning the use of drainage of waste water has been gained from this area. Excavations have shown that the structures bounding the street were provided with a network of sewage systems connected with a main drain in the middle of the street (FIG. 14a and b), which is in turn connected with the main network of the town's sewage which runs in the decumanus.

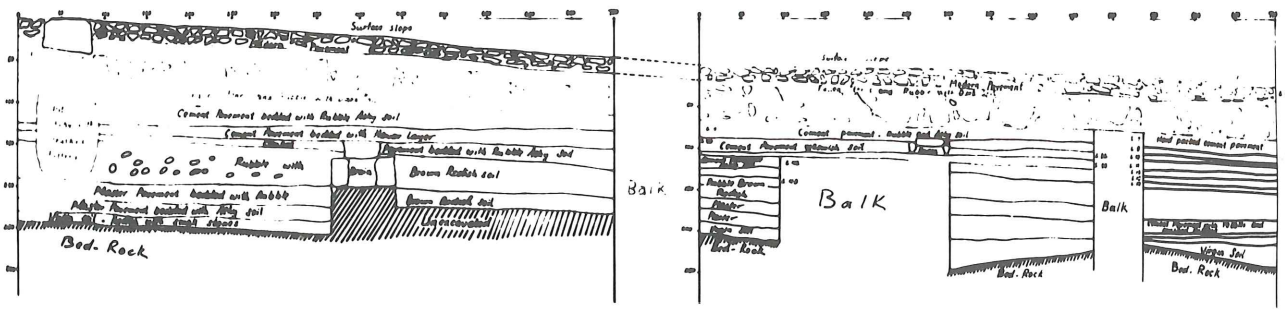
Areas B and C

In terms of the occupational levels revealed in these two Areas it appeared that they were basically the same as those distinguished in Area A. In other words they uniformly belong successively to Umayyad, Byzantine, Roman and Hellenistic habitations and as far as the architectural remains are concerned, though their nature is basically the same as in Area A, their character is somewhat different. In squares B.1–4 excavations revealed two structures of a domestic nature opening onto a street separated by a small trapizoidal shaped alley (FIG. 15a and b) about 2.5 metres wide at the street side and 1.8 metres at the end. The evidence showed repairs and additions reflecting a long history of occupation. This was also attested by occupational debris. Within the area in front of these structures there was a network of water and drainage channels. Pottery water pipes were also found in this area. Significant discoveries were brought to light in this area (B.5, 6) that bear on the architectural history of the colonnaded oval plaza, and the way in which the South Theatre was approached (FIG. 16a and b). Behind the columns of the west portico and at a level of about 0.20 metre below its stone pavement a floor level was revealed of the same nature found in the street in Area A. Patches of irregular stone pavement were also found. About 0.30 metre below this concrete pavement a part of a staircase was discovered of which four steps still exist (FIG. 16b). This staircase took a south west orientation rather than a western direction. Furthermore, the lower steps were used in the construction of a well built sewage line running from the west to the east toward the main drainage system in the oval plaza. Just before it entered the plaza, below the stone pavement of the portico, it joined

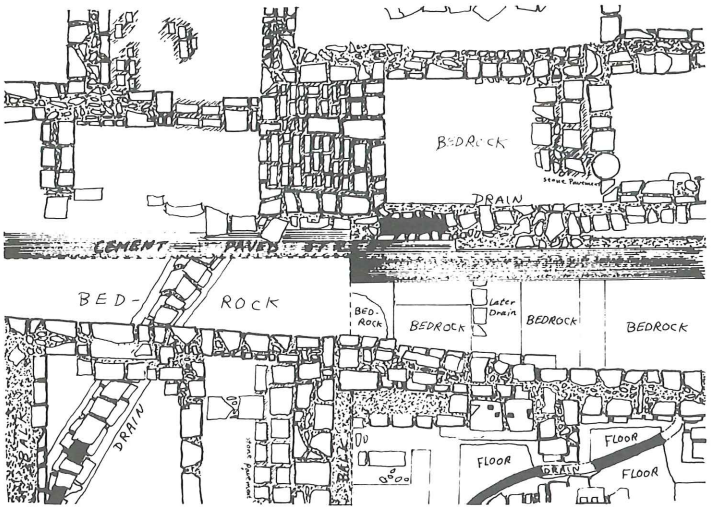
12.



13.

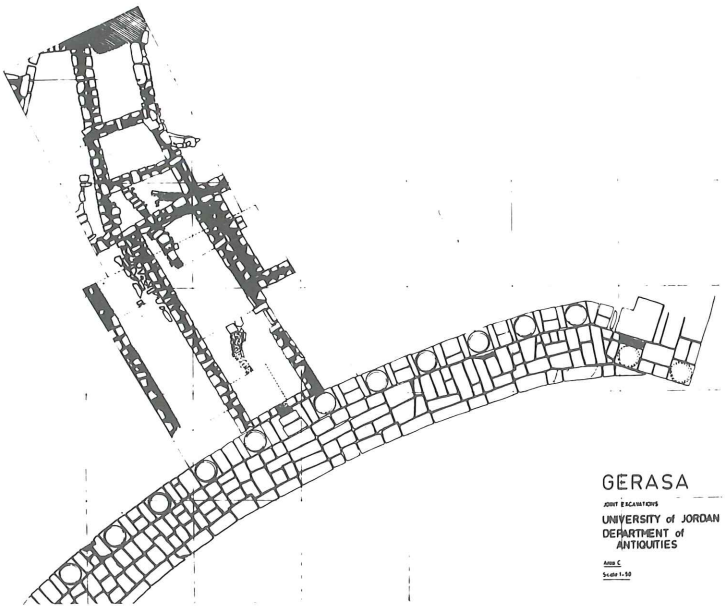


14a.

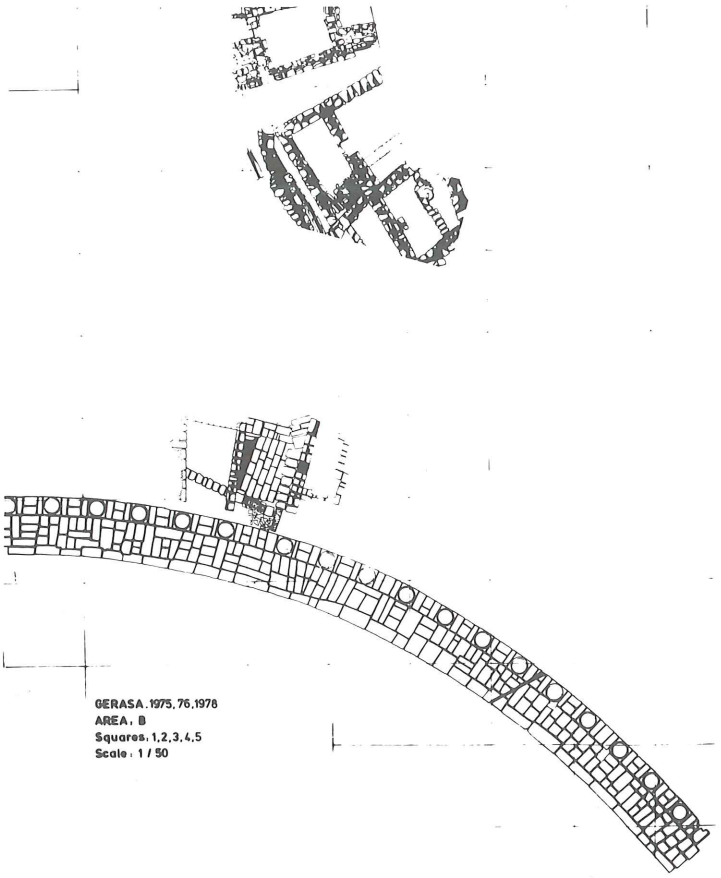


14b.

15a.



15b.



another sewage line which ran from southwest to northeast. The construction of this second line destroyed the eastern side of the staircase. Pottery sherds found in the soil layer above the staircase form a deposit that is homogeneously late Hellenistic-Early Roman (first century BC). The result, however showed that this staircase antedates the construction of the plaza by a considerable period of time (Knaeling 1938: 157, 'belongs to the first century AD').

Excavations in Area C provided similar information on the occupational and architectural history of the site. Here too, were found both concrete pavement and drainage system, coins, artifacts and good groups of pottery sherds ranging from late Hellenistic to Umayyad periods. The nature and character of the complex of walls which were discovered in this area are still unclear, needing further excavations to obtain more evidence to permit a definite interpretation. The

16a.

16b.

ruins of walls, however, show evidence of reconstructions and additions which indicate a long duration (FIG. 17a and b).

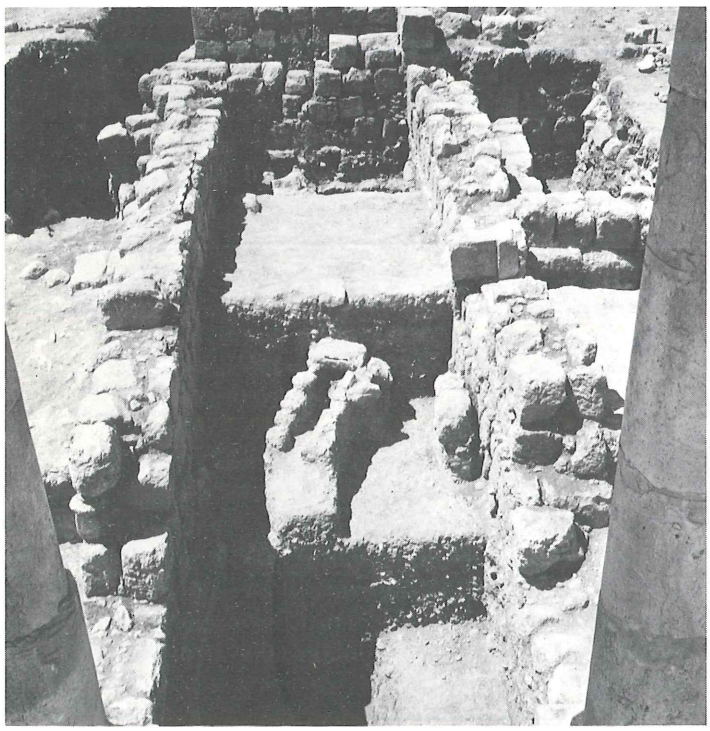
Excavations in Areas B, C, however, have shown, quite clearly, that wider intercolumniations at the two corresponding points in the western colonnade of the oval plaza marked places where side streets coming down the hill from the west, entered the plaza.

Area D

The most important discovery in all areas was unearthed here in Area D. Excavations revealed at a distance of 7.50 metres west of the columns of the cardo and parallel to it half of the facade of a huge complex. The structure (FIG. 18a and b) seemed to stretch along the whole width of a city block, measuring about 50 metres in width. It also appeared that this complex bounded from the north and south by side streets, of about 5 metres in width, intersected the cardo at right angles. Preliminary investigation at the other side of the cardo, opposite the line of the north side street revealed a portion of its eastern course. This portion of the facade comprised four shop-openings, in total a length of about 19.50 metres, and a central monumental triple-gate about 10.50 metres wide and recessed 5 metres deep from the line of the facade. Two

17a.

17b.



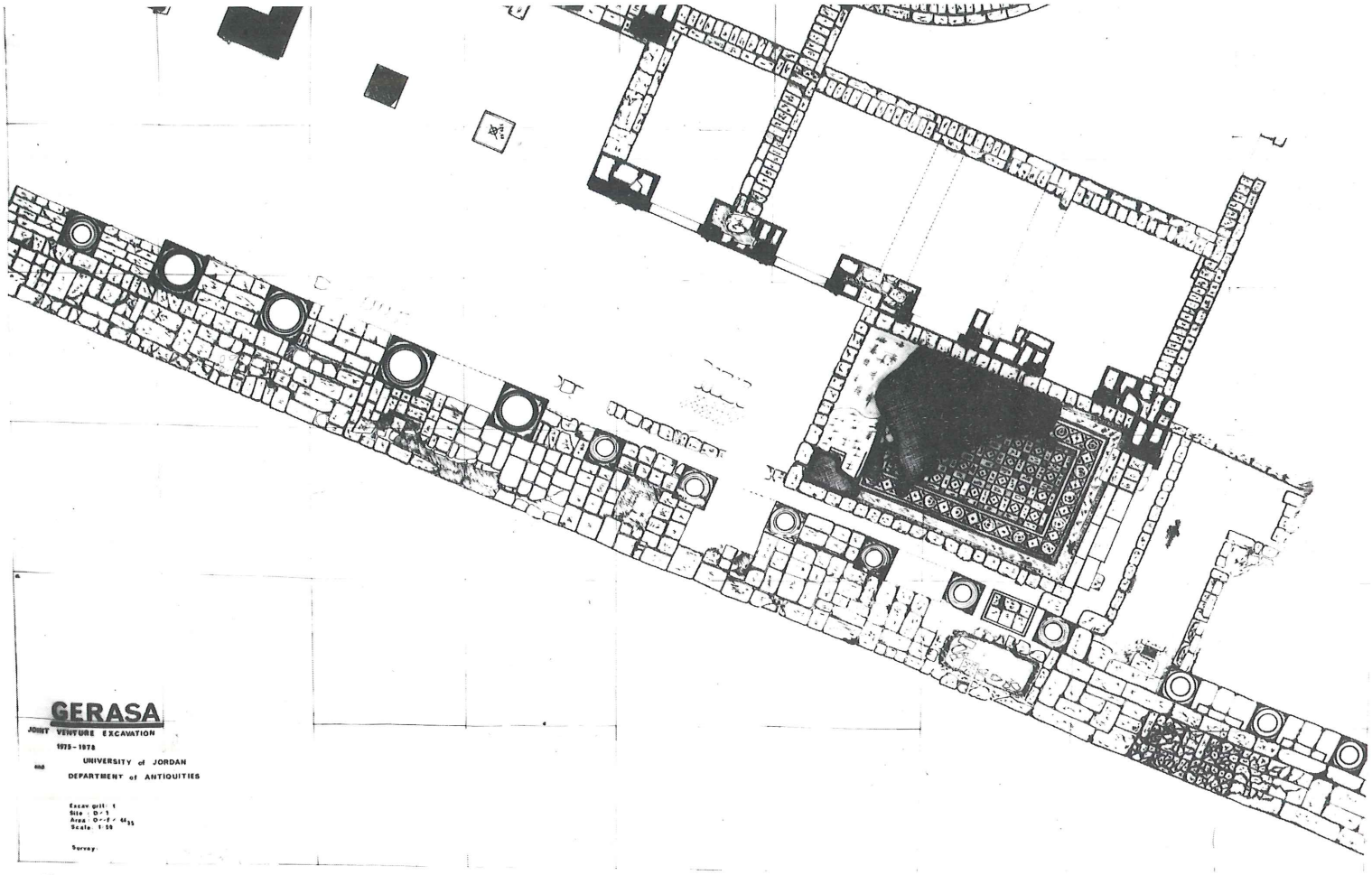
columns 4 metres apart, were set on the line of the facade corresponding to the door-jambs of the central opening of the gate. The ruins of the facade are preserved almost up to the door lintels (FIGS 18, 19b and 20). The paved stone floor of the building was reached at a depth averaging between 4 to 5 metres below the original ground surface at the beginning of work. Below the stone pavement of the side opening of the central gate a drain ran down below eastward toward the main drainage system in the cardo (FIG. 19). This fact indicates a large open area inside the building. Furthermore, a segment (8 metres long) of a curved wall inside the building was discovered. This evidence suggests a large curved side wall, an oval shape or circular space within the structure (FIGS 18a, 18b and 20a). The approach of this complex from behind the portico of the cardo was through a stone pavement and a short flight of steps. The area between the two northern shops and the columns of the cardo was paved with mosaics forming geometrical designs (FIG. 18a and b). Within the middle of the street which bounds the building from the north, ran a drain towards the east to connect with the main drain in the cardo (FIG. 18a).

In search of the occupational and architectural history of the areas, a trial trench, 2 × 1.50 metres, was made in square D.2 between the facade of the building and the columns of the cardo. Digging was carried out to bedrock. It revealed a striking occupational history, not only in this particular area but in the whole enclosure of Gerasa. Here some Iron Age I and II (*c.* 1200–550 BC) debris, i.e. pottery sherds, directly over bedrock is followed by construction of a Hellenistic stone wall (*c.* Late second early first century BC) running parallel to the line of the cardo, north–south. This date was indicated by pottery readings and construction technique. The ruins of the wall consists of four courses varying in height between 0.35–0.40 metres. Each course consists of two rows of stones, *c.* 0.30–0.40 metres thick joined together with mud and small stones. This was entirely disturbed by the first century AD overall planning of the city. The evidence thus obtained made it possible, for the first time, to postulate Iron Age occupation within the walled area of Gerasa.

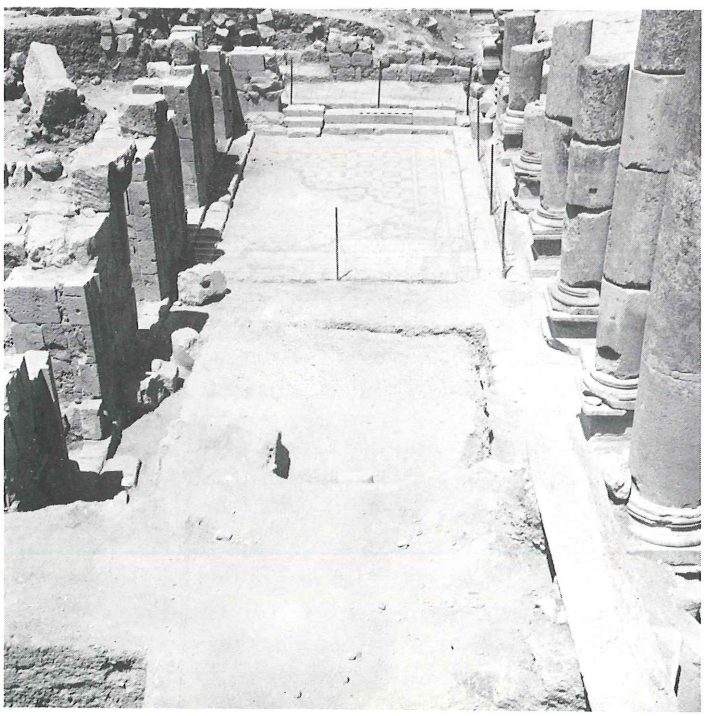
Since this complex is symmetrical, the exposure of the facade permits a tentative reconstruction of the whole building front elevation. Preliminary investigation along the axis line of the facade strengthened this attempt. Investigations showed that the facade of the building extended the south side of the central triple-gate of the complex in equal length to its extension to the north (19.50 metres), with four shop-openings piercing it too. In other words, the whole facade of this huge complex measures about 49 metres long with a monumental triple-gate bounded on each side by four shops. The interior of this complex is still obscured by the limits of the third season excavation. Meanwhile it was possible to secure a complete vertical view of the stratigraphy of the area.

No firm evidence has yet been revealed for the dating of this building. But the architectural affinities and technique of its facade as well as its monumental entrance and the Oriental-ized Corinthian order involved along with other monumental structures in the city, reflect precisely the period seen at the Artemis temple and other contemporary buildings in the town, i.e. of the first century AD. This tentative dating does

18a.



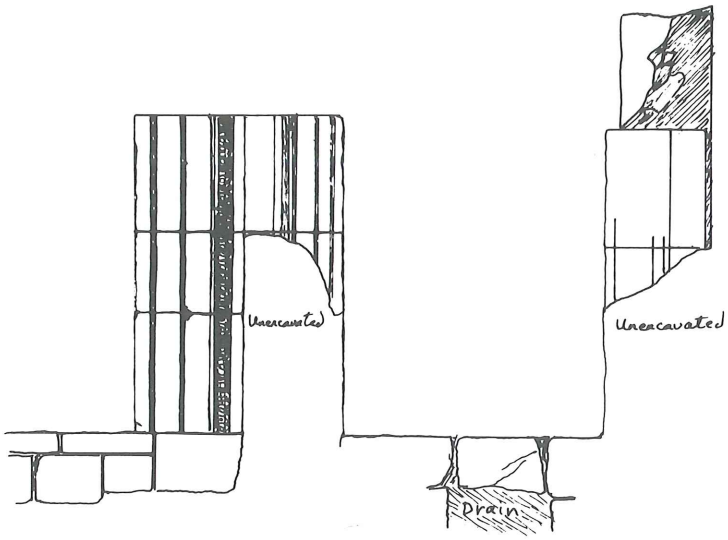
18b.



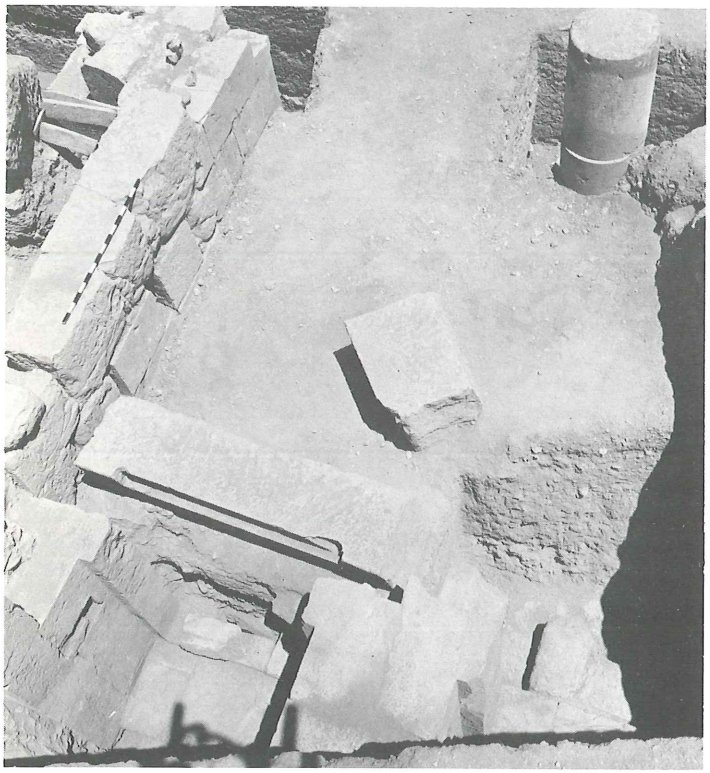
not conflict with the stratigraphic or architectural data thus far collected. However, the discussion of the history of this complex is better withheld until the excavations can be presented as a whole in connection with further investigations of the area.

In terms of specific occupation of the structure, the conclusion is that it represents a public building, i.e. Forum, Basilica or council house likewise tentative. The plan and its location in particular permits such a conclusion. Its public nature is also indicated by the nature of the objects and artifacts thus far collected. The most interesting material was a large quantity of iron lumps and cores, metal objects, i.e. hammers, sickles, knives, hooks, chains, nails etc., as well as a considerable amount of coins dating from Roman times to the Umayyad period. The presence of these remains and other objects indicate the suggestion of a definite industrial and commercial use of the area. This suggestion is strengthened by the fact that three of the cardo columns in front of the building were inscribed with phrases refering 'to potters and retail dealers', and 'They may indicate the person or body who plied their trade under the columns' (Jones 1928: 191). Furthermore, the continuing use of the structure and the area particularly in Late Byzantine and Umayyad period, as indi-

19a.



19b.



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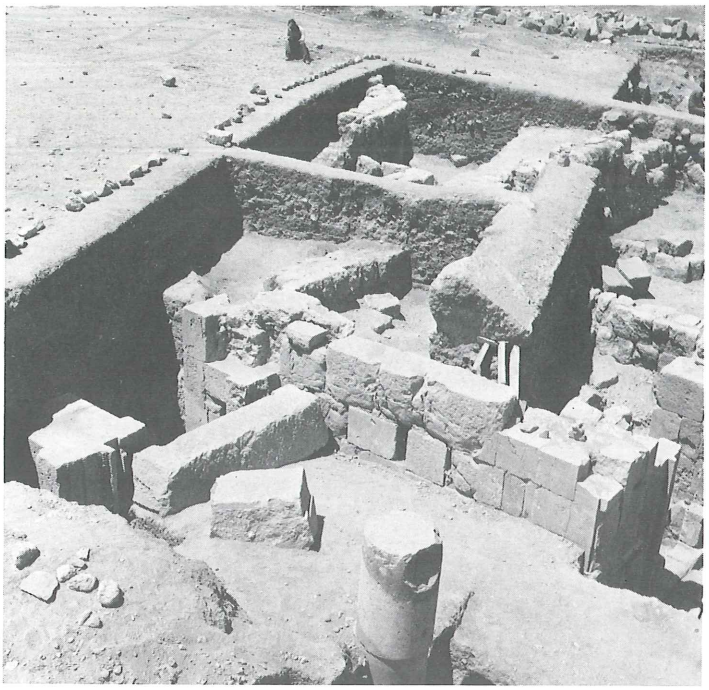


cated by data collected from the thick layers of ashes which were separated by howar layers, would reflect traces of its original function that made the Byzantine and Umayyads consider it a place fit for business and as an industrial area.

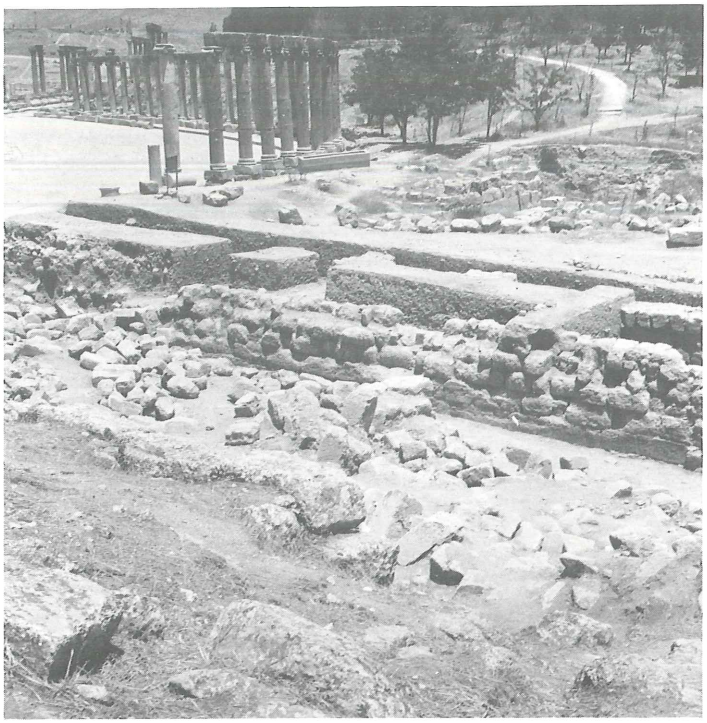
The evidence of a sizable drain (FIG. 19a and b), *c.* 0.60 metres wide and 0.90 metres deep, running out of the structure towards the main drain in the cardo, no doubt indicates the existence of a spacious open inner court within the structure. The worn-out thresholds of the shops and the central gate of the complex reflects heavy traffic and a use of long duration. These elements incorporated with the above mentioned evidence indicate a structure of special public and commercial function. Therefore, we may not be going too far in suggesting that we may have been revealing the real Forum of Gerasa.

Area E

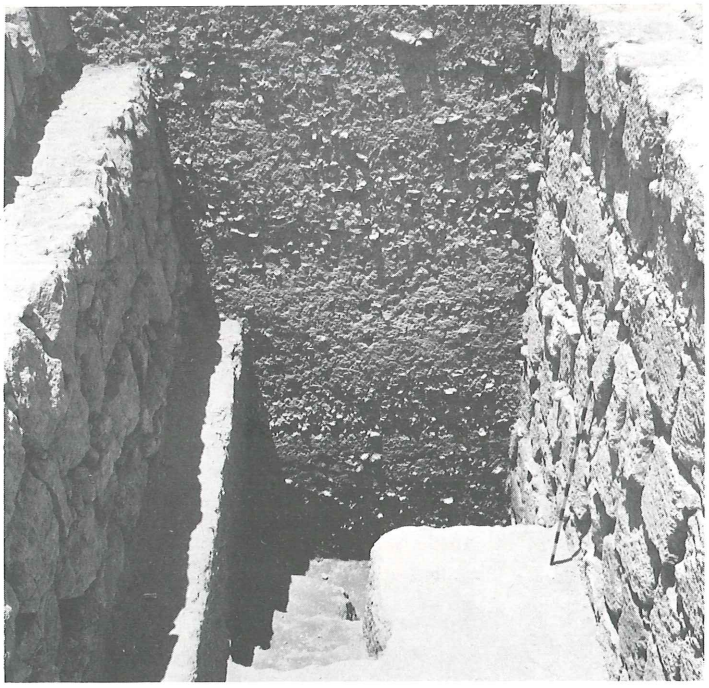
Excavations in this area revealed two sets of north–south walls (FIG. 22), 3 metres apart. The nature of the eastern inner wall is still obscure, while the western wall which evidence showed went through more than two constructional phases, bound the eastern limits of the approach between the South Gate and the Colonnaded Plaza.

The evidence revealed in this area, however, indicated the suggestion that the approach to the Plaza from the South Gate was through a wide platformed staircase. This is bounded at the west by the lower vault of the temenos of Zeus Temple and by a parallel wall at the east running from the city wall, a little distance from the east minor entrance of the Southgate, to the Plaza. Traces of the stone pavement of the staircase are still in situ bonded with the eastern boundary wall. The evidence of platforms for grading the sloped approach is evident in the courses of the eastern wall. This evidence, however, would seem to support the idea that the approach from the South Gate to the Plaza was of two natures. The one for pedestrians was by a staircase corresponding with the central and minor eastern entrances of the Gate; the other for vehicles was by a sloped paved road through the minor western entrance. This idea is strengthened by the fact that

21a



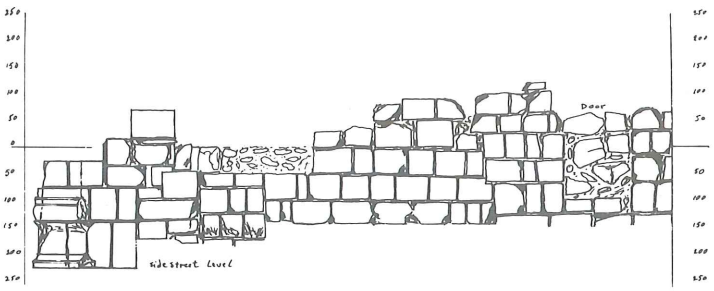
21b.



wheel marks are visible on the threshold of that minor western entrance only.

In terms of the stratigraphic history of the area, excavations revealed just below the surface level stratified layers of Early Roman and Hellenistic remains. Digging in this area reached a depth of 5 metres without reaching bedrock. Lower levels

22.



produced pottery sherds and pottery lamps of typical Hellenistic second century and first century date. The good collection of pottery sherds and lamps from this area present, for the first time, the occupational history of Gerasa fairly well back to the second century BC.

It seems to be time now to sum up our new evidence. Results of considerable importance, which bear on the plan of Gerasa, stemmed from two main discoveries. First, the exposure of private dwellings (Areas: A, B, C) bounding side streets of 5 to 6 metres in width and second, what appears to be a free-standing structure of public and commercial nature covering the width and, presumably, the length of one city block (Area D). The two side streets which bound the structure measure about 5 metres wide. Through our investigation in the site we were able to identify a few other minor streets 5 metres wide, opening on to the South Decumanus. This evidence shows a fixed gauge for the street width existed in the plan of Gerasa. Some other streets were given extra width and this is only used where those minor streets are skirting a major area as that between the Artemis Temple and the Nymphaeum.

As a result of this information we seem to be able to recognize in the plan of Gerasa that side streets, though varying slightly in width, connect and intersect at right angles with each other and with main streets, or open on to an open space. We are also able to recognize in the plan of Gerasa the measurements of the blocks. The results have made it almost certain that the connection and intersection of side streets with each other and with the main avenue formed rectangular blocks measuring about 120×50 metres, a length to width ratio of 2 to 1. The short axes along the longitudinal major axis is in conformity with the per-strigas pattern. Accordingly a tentative partial reconstruction of the city plan is suggested as shown in FIG. 9. Excavations have shown great interest in drainage and sewage provisions as well as water supply and channeling. Houses, public buildings, major and minor streets were all provided with a careful and ingenious network of water and drainage systems.

Here we come to the crucial question of our inquiry. How does the plan of Gerasa show itself to be different from other Hellenistic-Roman urban centres? In some ways Gerasa

merely provides further illustration of methods of planning and building known from other Hellenistic-Roman Syrian sites, but in others it is different or even unique. The answer, as we see it, lies in a rational analysis of the total design.

At Gerasa we can see particularly well how the planners did not impose anything violently on the site, rather turning the natural features to account. The line of the city walls and gates do not constitute a decisive element in the layout. The form of the wall is not a frame of fixed shape, but a girdle loosely flung around. The regular arrangement of the layout of the city is carried out uniformly for the most part, but not with uncompromising rigidity. The size of the blocks varied by concessions which were made to the contours. The main streets and public buildings were laid out on the western side of the stream. The two hills which dominate this area were chosen as sites for the principal religious centres. From the north and south, the approach to the centre of the city via the main street points directly towards these centres. Thus these religious structures were visible along the greater part of the main thoroughfare. The oblique position of Zeus temple facing the northeast is a genuine effect as it brings the two sides of its peristyle into view. This in itself reflects a superior skill of the designers. On the other hill stood the Temple of Artemis, the patron goddess of Gerasa. It is surrounded by a spacious double colonnaded court and approached by a monumental staircase through a great propylaea. The whole complex is approached from below, east of the stream by a colonnaded processional way. This emphasis on religious centres, which presents an obvious departure from normal Hellenistic or Roman schemes is also indicated by the layout of the two cross streets—north and south decumani—. A glance at the plan of the city clearly shows that those two main cross streets intended to define a religious sector and to emphasize focal points. This has been accomplished in a different way than the axial system. Here, the basic characteristics of intersecting major arteries were adapted to the layout of the city with a threefold function. Apart from defining an area of basic importance and providing a direct approach to it and to other focal points in the town, they on the one hand orient an organized scheme and on the other reflect and serve traffic and commercial routes bisecting to the north and west. Besides more obvious departure from the normal Hellenistic or Roman schemes one might mention that the north decumanus was made slightly oblique to skirt the colonnaded plaza in front of the north Theatre.

Convenience and common-sense prevailed in the layout of Gerasa rather than academic principles. The planners were ingenious in their use of space. This is apparent in the north decumanus which was not carried out beyond the Western Baths. This was substituted by the processional approach to the Artemis Temple and by the south decumanus which they carried down, across the stream, to the eastern part of the city. Furthermore, side streets seemed to be economized. This economy was naturally substituted by making them rather slightly wider, averaging between 5–6.50 metres. Major arteries were also made wider simply to achieve subtle architectural effect and as wide as were needed, for the simple reason that they were busier streets, leading to commercial highways.

Something is still lacking in our conception of the disposition of major structural elements in the plan of Gerasa if we are still unable to determine the place of the civic centre. Concerning the interpretation advanced for the use of the colonnaded oval plaza, the Forum (Burckhardt 1822: 256; cf. Kraeling 1938: 153–158), one, in fact, would hesitate to conceive the idea of placing such a public centre in this restricted spot. Perhaps it is more conceivable being taken as related to the whole complex of the Zeus Temple temenos. Therefore, one has to look elsewhere for a more adequate centre, more proportional to the needs of the expanded and commercially flourished town, and more conveniently placed. The Graeco-Roman practice of providing a town with a market place was simply to leave a number of city blocks or a space in a suitable place. The area was usually tangential to one of the main streets without completely shutting it. In fact such a space seems to have been appropriated in Gerasa, along the west side of the Cardo between the South Tetrapylon and the Colonnaded Plaza. This area was suitable in size, shape and position for a public centre. Our preliminary results, as noted above, proved that this area has received a kind of a monumental architectural treatment. The site was not inconveniently distant from other areas or gates. The line of the principal avenue of the city runs tangentially down the eastern side of the area. On this account the building of which the remains of its facade have been revealed may have been the market place of Gerasa. If we are to trust our evidence, we certainly are locating the Forum of the city. Accordingly our conception of the plan of Gerasa becomes more clear.

By the new evidence, incorporated with our observations and analysis of the plan of Gerasa, it becomes fairly clear how highly distinguished the city was. It illustrates an interesting regional variation of the type of a city. It is different from most Hellenistic or Roman cities in that it is not an entirely Hellenistic scheme neither Roman, but a new type. We believe as Antioch set the fashion for the Seleucid and later Roman north Syrian town, Gerasa set the fashion in the region of south Syria in which the plans of all urban centres in the region are unmistakable products.

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