Town Planning and Architecture in Provincia Arabia

The cities along the Via Traiana Nova in the 1st–3rd centuries C.E.

Arthur Segal

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GENERAL EDITORS

A.R. Hands, B.Sc., M.A., D.Phil.
D.R. Walker, M.A.

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CONTENTS

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1.	Provincia Arabia and the Via Traiana Nova.	A. Segal.
2.	Amman, city centre. View from Acropolis. Photographs from the early 30s.	The Israel Dept. of Antiquities.
3.	Philadelphia (Amman), city plan.	J. Burckhardt, Travels in Syria and the Holy Land, London, 1889, p.25.
4.	Philadelphia (Amman), city plan.	C.R. Conder, The Survey of Eastern Palestine London, 1889, p. 25.
5.	Philadelphia (Amman), city plan.	H.C. Butler, PUAES, Div. II, P.I. Ammonitis, Pl. I.
6.	Amman, city centre, aerial photograph,	The Israel Dept. of Antiquities.
7.	Amman, city centre (scale 1:1000)	The Israel Dept. of Antiquities.
8.	Philadelphia, the sanctuary on the Acropolis	Butler, ill. 26.
9.	Philadelphia, the sanctuary on the Acropolis, note the colonnades exposed by the Italian excavators.	A. Segal.
10.	Philadelphia, the Temple on the Acropolis	Butler, ill. 24.
11.	Philadelphia, the Temple on the Acropolis as exposed by the Italian excavators	The Israel Dept. of Antiquities
12.	Philadelphia, fragment of architrave found among the debris on the Acropolis	Butler, ill. 27
13.	Philadelphia, the Propylaea at the base of	Butler, ill. 28
14.	Philadelphia, section of the Main Street	Butler, ill. 30
15.	Amman, the theatre before the reconstruction	The Israel of Antiquities
16.	Amman, the theatre and the section of the Forum as reconstructed in early 60's.	Author's collection
17.	Amman, a section of the portico that surrounded the Forum. Photograph from the early 70's.	Author's collection
18.	Philadelphia, the threatre and the odeon	Conder, p. 36.
19.	Philadelphia, the theatre	Butler, pl. IV

20.	Philadelphia, the theatre	F. Fakhouri, "Das Theater von Amman in Jordanianien", AA 1975(3), p. 380, fig.2.
21.	Gadara, the Acropolis, note the two theatres	G. Schumacher, Northern Ajlun-within the Decapolis, London 1890 p. 46, fig. 1.
22.	Gadara, schematic plan of the Acropolis	U. Wagner-Lux, "Bericht uberdie Oberflaechen-forschung in Gadara in Jordanien im Jahre 1975", ZDPV 94 (1978), plan 1, pp. 135-144.
23.	Gadara, the Acropolis, aerial view	The Israel Dept. of Antiquities
24.	Philadelphia, the odeon	Butler, 111. 34.
25.	Philadelphia, the nymphaeon	Conder, p. 40.
26.	Philadelphia, the mymphaeon	Butler, 111. 38
27.	Philadelphia, the nymphaeon, proposed reconstruction	Butler, pl. V
28.	Amman, the back wall of the nymphaeon Photograph from early 30's	The Israel Dept. of Antiquities
29.	Philadelphia, section of the vault that once the Amman River in the vicinity of the Forum	Butler, 111. 39
30.	Amman, the "West Tomb"; a. a photograph from the end of XIX cent. b. fragment of dome c. the plan	Conder, p. 44
31.	Petra, the nymphaeon	W. Bachmann, Petra, Berlin, 1921, fig. 28
32.	Miletos, the nymphaeon	G. Kleiner, Die Ruinen von Milet, Berlin, 1968, fig. 85
33.	Gerasa (Jerash), aerial photograph	H. Hoermann, JDAI 44 (1929), Pl. I.
34.	Side, the nymphaeon	A. Mansel, Die Ruinen von Side, Berlin, 1963, fig. 37

35.	Gerasa (Jerash), aerial photograph	A. Mansel, Die Ruinen von Milet, Berlin 1968, fig. 37.
36.	Gerasa (Jerash), the eastern part of the city, aerial photograph from early 30's	The Israel Dept. of Antiquities
37.	Gerasa (Jerash), the northern part of the city, aerial photograph from early 30's	The Israel Dept. of Antiquities
38.	Gerasa (Jerash), the north-western part of the city. Aerial photograph from early 30's	The Israel Dept. of Antiquities
39.	Gerasa, city plan	Burckhardt, p. 264
40.	Gerasa, city plan	M. Rey, Voyage Dans Le Haouran, Paris 1858 (Atlas), Pl.XVI
41.	Gerasa, city plan	G. Schumacher, "Dscherasch", ZDPV 25 (1902), Pl. VI
42.	Gerasa, city plan	C.H. Kraeling, Gerasa New Haven,1938, Pl.I
43.	Gerasa, city plan	A. Segal
44.	Gerasa, the Temple of Zeus and the oval plaza	The Israel Dept. of Antiquities
45.	Gerasa, the oval plaza, view from the north	The Israel Dept. of Antiquities
46.	Gerasa, the circular plaza and the south tetrapylon	The Israel Dept. of Antiquities
47.	Gerasa, the Temple of Zeus, view from the south-east	The Israel Dept. of Antiquities
48.	Gerasa, the Temple of Zeus	Kraeling, Gerasa, Plan XXVI
49.	Gerasa, the south theatre, photograph from early 30's	The Israel Dept. of Antiquities
50.	Gerasa, the south theatre	Schumacher, fig. 14
51.	Gerasa, the south theatre, photograph from early 70's	author's collection
52.	Gerasa, the nymphaeon, view from the east	The Israel Dept. of Antiquities
53.	Gerasa, section of the main north-south street and the nymphaeon, view from north-east	The Israel Dept. of Antiquities

54.	Gerasa, the nymphaeon	Kraeling, *Gerasa* Plan XXVIII
55.	Gerasa, the nymphaeon, fragment of the upper part of the central niche	The Israel Dept. of Antiquities
56.	Gerasa, the north-west part of the city, view from the north, both north and south theatres are clearly visible	The Israel Dept. of Antiquities
57.	Gerasa, section of the portico that surrounded the plaza in front of the north theatre	The Israel Dept. of Antiquities
58.	Gerasa, the north theatre and its plaza	Schumacher, fig. 18
59.	Gerasa, the north tetrapylon	The Israel Dept. of Antiquities
60.	Gerasa, the dome in the West Bath	The Israel Dept. of Antiquities
61.	Gerasa, the West Bath	Kraeling, *Gerasa*, Plan XXVII
62.	Gerasa, the Triumphal Arch view from south	The Israel Dept. of Antiquities
63.	Gerasa, the Triumphal Arch	Kraeling, *Gerasa*, Plan II
64.	Gerasa, the Triumphal Arch, proposed reconstruction	Kraeling, *Gerasa* Plan IV
65.	Gerasa, the hippodrome	Kraeling, *Gerasa*, Plan VI
66.	Gerasa, the south gate	Kraeling, *Gerasa*, Plan XXIII
67.	Gerasa, the circular plaza and the south tetrapylon	The Israel Dept. of Antiquities
68.	Gerasa, the circular plaza and the south tetrapylon	Kraeling, *Gerasa*, Plan XII
69.	Gerasa, south tetrapylon (sections)	Kraeling, *Gerasa*, Plan XIII
70.	Gerasa, south tetrapylon, architectural details	Kraeling, *Gerasa*, Plan XVI
71.	Gerasa, the circular plaza and the south tetrapylon, proposed reconstruction	Kraeling, *Gerasa*, Plan XV

72.	Gerasa, the north gate	Kraeling, Gerasa, Plan XVII
73.	Gerasa, the north gate, proposed reconstruction	Kraeling, Gerasa, Plan XIX
74.	Gerasa, Sanctuary of Artemis, the courtyard	Schumacher, Plan IX
75.	Gerasa, Sanctuary of Artemis	A. Segal
76.	Gerasa, Sanctuary of Artemis, the Propylaea east of the main north-south street	Kraeling, Gerasa, Plan XXXV
77.	Gerasa, Sanctuary of Artemis, the Propylaea west of the main north-south street	TJAB I (1926), Pl. III
78.	Gerasa, Sanctuary of Artemis, the facade of the Propylaea west of the main north-south street, proposed reconstruction	TJAB I (1926), Pl. IV
79.	Gerasa, Sanctuary of Artemis, the Propylaea west of the north-south street view from the east	The Israel Dept. of Antiquities
80.	Gerasa, Temple of Artemis	Kraeling, Gerasa, Pl. XXI
81.	Gerasa, Temple of Artemis, view from west	The Israel Dept. of Antiquities
83.	Kos, Asklepieion	R. Herzog, Kos I (Asklepieion), Berlin, 1932, Pl. 37
84.	Lindos, Sanctuary of Athena	Chr. Blinkenberg, Lindos I, Berlin, 1931, Pl. I
85.	Tivoli, Sanctuary of Hercules	Aufstieg und Niedergang Der Roemische Welt, I, (Vierter Band-Tafeln), Pl. 37
86.	Praeneste, Sanctuary of Fortuna Primigenia	Aufstieg und Niedergang Der Roemischen Welt I (Vierter Band-Tafeln), Pl. 128
87.	Jerusalem, south-west section of the Temple Mount, a model	Author's collection
88.	Palmyra, Sanctuary of Bel, proposed reconstruction	Th. Wiegand, Palmyra, Berlin, 1932, Pl. 86

89.	Palmyra, Sanctuary of Nebo, section of the main colonnade street and the triumphal arch	Th. Wiegand, Palymra, Pl. II
90.	Baalbek (Heliopolis), Sanctuary of Jupiter, proposed reconstruction	A. Bothius, J.B. Ward-Perkins, Etruscan and Roman Architecture, Penguin Books, 1970, fig. 156
91.	Damascus, Sanctuary of Jupiter	C. Watzinger, Damaskus, Berlin, 1921, fig. I
92.	Gerasa, the "Cathedral Precinct", the propylaea	Kraeling, Gerasa, Plan XXIX
93.	Gerasa, the outer gate of the propylaea	Kraeling, Gerasa, fig. 3
94.	Gerasa, the oval plaza, ionic capital from the colonnade that surrounded the plaza	author's collection
95.	Gerasa, northern section of the oval plaza and the beginning of the main north-south street.	Kraeling, Gerasa, Plan XXIV
96.	Gerasa, the open ritual area north of the city (Birketein)	Schumacher, fig. 41
97.	Gerasa, the open ritual area north of the city (Birketein)	Kraeling, Gerasa, fig. 2
98.	Gerasa, the open ritual area north of the city (Birketein), the theatre	Kraeling, Gerasa Plan XXV
99.	Gerasa, the open ritual area north of the city (Birketein), Germanus Tomb, photograph from the end of XIX cent.	Schumacher, fig. 36
100.	Gerasa, the open ritual area north of the city (Birketein), Germanus Tomb photograph from early 30's	The Israel Dept. of Antiquities
101.	The area of Bostra, a map (scale: 1:50000)	The Israel Dept. of Antiquities
102.	Southern Hauran, network of roads in the vicinity of Bostra	H.C. Butler, PUAES, Div. I, Geography and Itinerary, p. 17
103.	Bostra, city plan	J. Porter, Five Years in Damascus, London, 1855, p. 142
104.	Bostra, city plan	Rey, Pl.X

105. Bostra, city plan	A. von Gerkan, Griechische Stadtenlagen, Berlin 1924, fig. 20
106. Bostra, city plan	H.C. Butler, PUAES, Div. II, Part 4, (Bostra), Pl. I
107. Bostra, city plan	A. Segal
108. Bostra, aerial photograph	The Israel Dept. of Antiquities
109. Bostra, aerial photograph, note the network of the main streets, city-wall and the conjectural location of the Legion's Camp	A. Segal
110. Bostra, schematic city plan, note the conjectural location of the Legion's Camp	F.E. Peters, "City Planning in Greco-Roman Syria", DaM I (1983), fig. 5
111. Bostra, schematic city plan, note the conjectural location of the Legion's Camp	R. Brulet, "Estamples de la IIIe Legion Cyrenaique a Bosra" Berytus XXXII (1984) fig. I
112. Bostra, schematic city plan, note	M. Sartre, Bostra - des origines a Islam, Paris, 1985, fig. I
113. Bostra, Nabatean Capital	Butler, ill. 212
114. Bostra, four pillars decorated with engaged columns and Nabateans capitals	Butler, ill. 213
115. Bostra, the West Gate	Butler, ill. 202
116. Bostra, the West Gate	R.E. Brunnow, A. von Domaszewski, P.A. III, fig. 873
117. Bostra, the West Gate, photograph from early 70's	author's collection
118. Bostra, the West Gate, section of the facade	author's collection
119. Bostra, section of the colonnade street	Butler, ill. 206
120. Bostra, facade of the shops along the colonnade street, proposed reconstruction	Butler, ill. 207

121. Bostra, the East Triumphal Arch, section of the facade, photograph from early 70's	Author's collection
122. Bostra, the East Triumphal Arch	Brunnow-Domaszewski, fig. 902
123. Bostra, the East Triumphal Arch	Butler, ill. 216
124. Bostra, the East Triumphal Arch proposed reconstruction	Butler, ill. 127
125. Bostra, the Central Triumphal Arch	Brunnow-Domaszewski, fig. 898
126. Bostra, the Central Triumphal Arch, photographed in 1900	Brunnow-Domaszewski, fig. 897
127. Bostra, the Central Triumphal Arch, proposed reconstruction	Butler, ill. 218
128. Bostra, architectural fragments of the monumental building	Butler, ill. 219
129. Bostra, the Nymphaeon and the "Kalybe"	Butler, ill. 226
130. Bostra, the "Kalybe", section of the architrave and one of the corinthian capitals	Author's collection
131. Bostra, the "Kalybe", a corinthian capital	Author's collection
132. Bostra, the Palace	Butler, ill. 229
133. Bostra, the Palace	Butler, Pl. XI
134. Bostra, the Palace	Butler, Pl. XII
135. Dura-Europos, Palace of the Dux	M. Rostovtzeff, Excavations at Dura-Europos III, fig. 7
136. Kasr Ibn Wardan, the Palace	H.C. Butler, PUAES, Div. II, sec. B. (Kasr Ibn Wardan), ill. 32
137. Bostra, the South Bath	Butler, ill. 230
138. Antioch, Bath "C"	Boethius, Ward-Perkins fig. 164
139. Bostra, North-West Bath	Butler, ill. 233
140. Bostra, North Bath	Butler, ill. 232

141. Bostra, the Basilica	Butler, ill. 238
142. Bostra, the Basilica	Butler, ill. 236
143. Bostra, section of the Forum	Butler, ill. 240
144. Bostra, the Theatre	Brunnow-Domaszewski, Pl. I
145. Bostra, the Theatre and the Medieval Fortress	H. Finsen, Theatre Romain a Bosra, Syria, Einar Munskgaard, 1972, Pl. I.
146. Bostra, the Theatre, skene building and cavea	Finsen, Pl. II
147. Bostra, the Theatre, sections	Finsen, Pl. V
148. Bostra, the Theatre, view of the cavea	Author's collection
149. Rome, the Theatre of Marcellus	E. Nash, Pictorial Dictionary of Ancient Rome, London, 1962, fig. 1211
150. Bostra, "Tholos" Tomb	Butler, ill. 245
151. Pompeii, city plan	A. von Gerkan, fig. 15
152. Ostia, Horrea (granaries) of Hortensius	Boethius, Ward-Perkins, fig. 108.
153. Shuhba, a map (scale I:50000)	The Israel Dept. of Antiquities
154. Philippopolis, city plan	H.C. Butler, PUAES II Architecture and other Arts, fig. 130
155. Philippopolis, city plan	A. Segal
156. Philippopolis, aerial photograph	The Israel Dept. of Antiquities
157. Philippopolis, the Hexastyle Temple	Butler, ill. 131
158. Baalbek (Heliopolis), Temple of Venus	Boethius, Ward-Perkins fig. 157
159. Side, Temple "P"	Mansel, Side, fig. 69
160. Philippopolis, the "Philippaeon"	Butler, fig. 132
161. Philippopolis, the Palace	Butler, fig. 133

162. Philippopolis, the Bath	Butler, fig. 134
163. Philippopolis, the Theatre	Brunnow-Domaszewski, PA III, Pl. IIIA
164. Philippopolis, the Theatre	P. Coupel, E. Frezouls Le Theatre de Philippopolis, Paris, 1956, Pl. XV
165. Philippopolis, cross-vaults in the theatre	P. Coupel, E. Frezouls Pl. IX
166. Philippopolis, the theatre, view of the cavea	Author's collection
167. Philippopolis, one of the podia that formed the Tetrapylon	Brunnow-Domaszewski, fig. I05I
168. Palmyra, the Tetrapylon	Th. Wiegand, Palmyra fig. 24
169. Philippopolis, the South Gate	Butler, ill. 138
170. Philippopolis, the South Gate as preserved in c.1900	Brunnow-Domaszewski,
171. Philippopolis, the smaller southern gate	Butler, ill. 139
172. Turin (Italy), city-plan	F. Castagnoli, Orthogonal, Town-Planning in Antiquity MIT 1971, fig. 48
173. Verona (Italy), city-plan	F. Castagnoli, fig. 49
175. Lucca (Italy), city-plan	J.B. Ward-Perkins, fig. 62
176. Como (Italy), city-plan	J.B. Ward-Perkins, fig. 57

PREFACE

This research was first published in the middle of the 1970's as a doctoral thesis. It reached the eyes of only a small group of readers as it was originally written in Hebrew. In 1975 when it was submitted, only a handful of researchers existed who dealt with the subject and who could therefore constructively criticize the material.

However, during the past few years, there has been a surge of interest in the subject of urbanisation and architecture of Provincia Arabia and it is this renewed trend that has brought me to translate the book into English and thereby expose it to a larger group of historians and archaeologists today studying the Hellenistic-Roman East.

A major obstacle for me, as an Israeli researcher, has been the fact that I have not been permitted to excavate or even visit the sites discussed in the book. But it was precisely this difficulty that forced me to take a wider view of the areas and to search for less conservative solutions to problems existing in the field. I believe that this so-called 'table archaeology', although written thirteen years ago, may still play a meaningful role and contribute to the understanding of this nature and character of the cities of Arabia.

In translating and preparing the manuscript for publication, I completely up-dated the material and have added new illustrations, but I have left the text almost without change.

I am grateful to Dr. Anthony Hands, Editor-in-Chief of B.A.R., whose encouragement and support lead me to prepare this material for publication. My thanks are also due to Marion Richardson for her skillful translation of the book from Hebrew to English.

Dr. A. Segal
Haifa, 1988

INTRODUCTION

The following are the aims which I hope to achieve in this research:

a) A study of the plans of the four cities situated along the Via Traiana Nova: Philadelphia, Gerasa, Bostra and Philippopolis.

b) A description of the urban character of each of these cities.

c) A study of those special urban phenomena which brought about the development of the cities in Arabia. These have been researched within the framework of city-planning in the Classical World on the one hand, and in the Eastern Provinces of the Roman Empire on the other.

The choice of these four cities was not incidental. These were cities originally established during the Hellenistic and Roman periods and which continued to be inhabited also during the 2nd and 3rd cents. C.E. Although their cultural and historical backgrounds differ, their urban characters and city plans were all formed during the first centuries of the common era.

All these cities straddled the important and strategic Via Traiana Nova situated in the East of the Roman Empire. This route was paved between 111-114 C.E. by the first Governor of Provincia Arabia - Claudius Severus - and was in fact a renewal of a major Biblical route. The road begins in Damascus, makes its way to Bostra and continues on to Philadelphia, eventually making its way through Madaba to Eilat. Although it was constructed mainly for military purposes, the Via Traiana Nova also served as an important trade route carrying merchandise from Southern Arabia, Africa and even India to Syria and further north. The cities discussed here flourished and grew wealthy as a direct result of their positions on this strategic and important commercial route.

This study has attempted to describe the subjects of city-planning and urban architecture as expressions of a cultural convergence between the Classical World and the East - a meeting which gave birth to the Hellenistic culture. It is my belief that precisely in this multifaceted subjects of city-planning and architecture the various faces of this culture unification are most clearly expressed.

It becomes clear that the cities of Arabia may be placed within the general framework of the Hellenistic culture, although chronologically their urban character was finally formed during Roman rule in the area. I felt that possibly herein lies the key to understanding the exceptional nature of these cities. Modern research of town-planning in the Ancient World has paid little attention to the cities of Provincia Arabia. Therefore, on writing, I found myself facing an almost new subject. I have attempted to look upon the cities of Arabia as a unique urban phenomenon in their own right and yet simultaneously as an integral part of town-planning in the Classical World.

The study comprises five chapters: the first four deal with the cities and an attempt has been made to clearly describe the urban character of each one. The text includes a limited description of the layout of the city and its most important monuments discovered to date. A more detailed analysis

of the city plan is given at the end of each chapter. The notes, on the other hand, deal with all the material concerning the special urban problems of each city. The fifth chapter, called 'Urban Architecture in Arabia", sums up the various features characterising town-planning and architecture in Arabia and compares them to cities in other parts of the Classical World.

Introduction

Philadelphia, the Biblical city of Rabbath-Ammon today Amman, the capital of the Kingdom of Jordan, is one of the most ancient cities on the east side of the Jordan River (1). In the beginning of the third century B.C., after the Ptolemaic Dynasty took control over the areas of Southern Syria and Palestine, Rabbath Ammon became a Hellenistic city and was named Philadelphia after the ruler Ptolemy the 2nd - Philadelphos (283-246 B.C.) (2). Although the city was actively involved in the events that occurred in this area, namely the Syrian Wars, the appearance of the Nabataeans, the Hasmonean Rebellion and the appearance of the Decapolis cities, few ruins remain today which bear witness to what must have once existed in Philadelphia.

Those remains of the city, which were still seen by explorers in the 19th century and which have largely disappeared over the past few decades, stem mainly from the Roman period.

Conveniently situated on the Via Traiana Nova, Philadelphia was a continuously inhabited city (fig. 1) (3). Although its status as a city declined from the middle of the 3rd cent. C.E. Philadelphia was still of importance during the Ummayad Dynasty and the Middle Ages. Until the middle of the 19th cent. a poor and unimportant Beduin settlement existed in the area and it was only with the emergence of the Circassians in 1880 that the city once again began to develop (4).

From the beginning of the 19th century the ruins of Philadelphia were seen by many reserchers and explorers some of whom recorded them as well as sketched plans of the city. (figs. 2-7). Over the past few decades archaeologists have organized small excavations accompanied also by reconstruction projects mainly in the area of the Acropolis and the Forum (5) but a full-scale excavation has never been carried out.

A General View of the City (figs. 2-7).

The ruins of the ancient city of Amman may be divided into two main areas; the remains found on top of the Acropolis and the remains found in the Lower City - scattered along the length of the two narrow valleys to the south and south-west of the Acropolis. Extensive building took place during the Middle Ages on the Acropolis and as a result those Roman structures that remained were not at all well preserved. Those in the Lower City seemed to have remained in fairly good condition, up until the early part of the 20th century. The ruins on top of the Acropolis include: various fortifications from different periods, the remains of classical temples as well as later structures. In the Lower City one can find: the theatre, odeon, nymphaeon, propylaea, two colonnaded streets, parts of porticos and section of classical structures interphased with buildings of a later date as well as parts of a vault that must have once covered the river. Unfortunately, a large proportion of these structures no longer exist. The street plan of Philadelphia consisted of two main streets - one running south and south-west of the Acropolis but north of the river (today Sil-Amman); and the other running west of the Acropolis, also intersected

by a smaller river (figs.4,5). It was in the valleys created by these two rivers that the town of Philadelphia was established. All the main public buildings were centered in the wider and longer of the 2 valleys and it was from here that the people ascended the Acropolis, the sacred site of the city, entering it through the propylaea. There was no room for further expansion to the south and south-west as here the valleys were bordered by very hilly regions.

THE ACROPOLIS (figs. 5-7) (6)

The Acropolis of Philadelphia was situated on a flat-topped, high mountain, shaped rather like an open Greek letter - "gamma". The mountain, divided into three separate levels is highest in the north-west, somewhat lower in the middle level and even lower in the eastern section (fig. 6). Most of the flattened and low-lying areas were in fact artificially created.

The Acropolis is encompassed by a strong wall. At its highest point, on the north-western terrace, stood a sacred precinct composed of a forecourt and a temple courtyard. This was surrounded by decorative walls as well as porticos (figs. 8-9). Much remains of the north-western walls and it was obviously a building of high quality (7). Remains of other sections of the walls dating to subsequent periods interspersed with later parts of the wall which were constructed above them, ranging from the Roman 'opus quadratum' right through the Middle Ages, can also been seen (8).

On the southern edge of the north-western terrace, and not far from the Acropolis wall, are the clear remains of the Temple. The asymetrical position in which the Temple was situated was intentional and allowed it to be clearly visible from the Lower City. The building faces east (fig. 5) (9). The Temple plan: Prostyle-Tetrastyle. Much of the Temple podium remains, together with the bases of three front columns and the pronaos (figs. 10, 11). The many architectural elements discovered among the ruins of the Temple area fascilitated in the partial reconstruction of this building. An inscription found on the architrave points to the fact that this Temple was built in the days of Marcus Aurelius (10). Although the Temple was excavated in the 1930's by an Italian expedition, to date no plan or reconstruction of the area has been published (11).

The sacred precinct on the north-western section of the Upper Level of the Acropolis is composed of two parts: the forecourt and the temple courtyard (fig. 8). Surrounded by porticos, these courtyards were not symetrically constructed because they followed the lines of the walls surrounding this part of the Acropolis (figs. 5, 6) (12). The temple courtyard is closed in on its northern, southern and western sides by these walls. It would appear that parallel to them, at least on the north and south sides, stood porticos (figs. 8,9). A decorative wall divided the Temple courtyard from the forecourt. This wall is adorned by pilasters topped by Corinthian capitals which in turn were separated by semi-circular niches. Identical decorative walls also stood to the north and south of the forecourt (fig. 8). Behind them were exedras and smaller rooms which were seen in part by Butler and which were later excavated by the Italians (13).

The few architectural details found in the immediate vicinity of the

Temple tell us little about its original design but they do confirm the rich decorative style which obviously adorned it (fig. 12).

THE PROPYLAEA (figs. 5, 13)

This large structure situated at the base of the Acropolis and north of the main colonnaded street, was at first classified by Conder as part of the Forum or as another Temple. Later, however, Butler corrected this decision and clearly identified the building as the Propylaea (14).

The facade of the structure was 25 metres wide and was divided into three square-shaped entrances, the central one higher than the 2 side entrances. Two smaller walls adjoining the main wall formed the antas. Facing the facade was an open, colonnaded area flanked on either side by staircases. Other columns stood between the antas while yet another four stood against the main wall in between the three entrances (fig. 13). The building excelled in its rich decorative style. All the columns had Corinthian capitals, the square entrances were capped by cornices above which were semi-circular niches and alongside them stood flat pilasters. The central wall too was decorated by Corinthian capped pilasters (fig. 13) (15). It appears that the inhabitants of Philadelphia entered the sacred precinct of the Acropolis by passing from the main street on the south side, passed through the propylaea and thereafter ascended the staircases of which nothing remains today.

THE COLONNADED STREETS (Figs. 4,5,14)

Columns lined the entire length of the two main streets of Philadelphia. Conder and Butler still managed to see parts of these streets (figs. 4,5) (16). Today, however, the main highways of the modern city of Amman run parallel to and above the ancient streets of Philadelphia (figs.6-7) (17). These were paved in square slabs of stone and measured 8.40 metres in width while the individual columns with their Corinthian capitals, stood 3 metres apart.

THE THEATRE (figs. 2,5, 15-20) (18)

Not far from the eastern end of the city, in an area where the southern valley reaches its widest point, stood the Theatre (figs. 4-6). The central part of the cavea relied on the natural gradient of the valley and was mainly cut out of the rock. The end sections were constructed and supported by a system of vaults while the actual seats themselves were not carved from the natural rock, as can be seen in Petra, but instead were built of stone (19). By the end of the 19th century the skene and the skenefrons were already found in a state of near complete destruction. Both the cavea summa and cavea media comprised 16 rows of seats divided by 6 scalaria into 7 cunei, while the cavea ima included 13 rows of seats (figs. 19,20). In the centre of the cavea summa stood an exedra (cavea shrine) and at the back was a semi-circular niche flanked on either side by square niches (figs. 19,20) (20).

THE FORUM (figs. 4,5, 15-17).

At a distance of 7 metres from what remains of the skene-building stands a row of 8 Corinthian columns with an architrave (fig. 17) (21). West of the last column in this row stands a double column which formed the corner column for another portico adjoining this one. This additional row of columns does not connect up with the first portico at a right angle, but meets it at an angle of 108. There seems to be no apparent explanation for this strange angle. These columns measured 60 cm in diameter while those of the portico parallel to the skenefrons measured 70 cm (fig. 18). Butler claims that the courtyard encompassed by porticos was the Forum of Roman Philadelphia. In his reconstruction of the city plan he describes the Forum as being surrounded on the east, south and west by porticos (fig. 5). Confirmation of this appeared in the form of an inscription and the remains of these porticos uncovered during conservation work done in the area over the last few years (22). In the north the Forum was bordered by the main colonnaded street which ran north of the river.

THE ODEON (figs. 5,18,24) (24)

The Odeon facing west is situated close to the theatre (fig. 5). However, in contrast to the theatre, the odeon was constructed on a flat surface. On its western side there is a wall with 5 entrances, and the eastern side (the proskenion) is connected to this wall by a vault running along its entire facade (fig. 24). Two towers forming the paraskenia stood on either side of the eastern front. The cavea of the Odeon form two horizontal sections - the upper one (cavea summa) with 7 rows of seats and the lower (cavea ima) with 11 rows. As a result of the destruction in this area it is difficult to pinpoint any further details concerning this structure. Today, nothing remains of the Odeon.

THE NYMPHAEON (figs. 25-28)

Situated on the west side of Philadelphia the nymphaeon looks north. To the south is the Amman river and another, smaller one runs below the Nymphaeon before flowing into the Amman River. On the north and north-west lie the two main colonnaded streets of the city. Numerous public buildings seem to have stood in the vicinity of the Nymphaeon, although few remains were to be seen even at the beginning of the 20th century (figs. 4,5). Despite the fact that Butler found the Nymphaeon partially in ruins, he was still able to reconstruct it from those architectural elements discovered on the site (figs. 26,27). This included a straight, central wall above the river, measuring about 20 metres in height, with a large semi-circular niche measuring 8.40 metres wide and was joined diagonally by another wall also with a small semi-circular niche (fig. 26). The back wall is constructed with margined stones with slight protruberances (fig. 28), while the front of the nymphaeon has flat, well hewn stones. The small river flowed through a wide, vaulted passage built into the bottom part of the structure (fig. 26). It is possible to reconstruct the plan of the Nymphaeon from these remains: a central, straight wall with a large niche was joined on both sides by two diagonal walls which thereafter straightened out, thereby creating the effect of an exedra. There were other niches in the walls (fig. 26) topped by semi-circular domes and divided one from the other by square pilasters. Opposite the main wall stood a colonnaded portico where 6 columns faced the main wall, two face the diagonal walls and three the

other walls. The columns were topped by an architrave with Syrian (broken) entablatures above each niche (fig. 27). The walls of the facade were two floors high, and decorated by statues which stood in the small niches. Facing the main front niche stood a staircase constructed on a series of vaults (figs. 26,27).

The Nymphaeon of Philadelphia counts among the more luxurious nymphaea uncovered so far in ancient Syria, Arabia and among the cities of Asia Minor (26).

THE APSIDAL BUILDING (figs. 4,5)

Although this structure served as a church, its foundations are undoubtedly earlier and reminiscent of the style of building used in the Nymphaeon. The southern wall, the length of which is not known, stands close to the Amman River. It has a niche which is identical in size and character to that of the Nymphaeon. These are definitely the remains of a large public building (27).

THE VAULT OVER THE AMMAN RIVER (figs. 5,29) (28)

This is one of the most impressive structures to be found in the ancient world in this area. Not being able to expand the city further south of the Acropolis, it was decided to incorporate the river in the city, (probably from the Nymphaeon in the west until the Forum in the east), by covering it with a wide vault (10.30 metres) standing on high supporting walls (1.5 metres high) firmly embedded on both sides of the river (fig. 29). Although few sections of the original vault remain today, these are sufficient to give evidence of the strength and immensity of this structure and how well it withstood the strong flowing waters below. The river bed was also paved in stone slabs in yet another attempt to weaken the flow of the waters in high seasons. This fine feat of engineering achieved three things: it enlarged the area available for building, it facilitated movement between the two sides of the river, and it also prevented the river from overflowing during floods (29).

THE TOMBS (fig. 30)

Tens of tombs, some built and some cut out of the natural rock, can be seen on the hills running south and south-west of the city. There are also a few to the north of the Acropolis - which were partly documented by Conder (30).

THE CITY PLAN OF PHILADELPHIA

The city plan of Philadelphia was first and foremostly dictated by nature and only afterwards fashioned by the hands of man. The two narrow valleys running south and south-west of the Acropolis created a flat area suitable for the construction of a city-centre. The two main streets of the town ran adjacent to these valleys, and it seems as though there were no additional streets. While one can not be sure whether the city plan of Philadelphia is Hellenistic or Roman in origin, it is clear that it expresses an attempt to fully exploit the narrow natural area left for urban

expansion. It is also clear however that all the remains known to us (except for a few sections of the Acropolis walls) originated in the 2nd and 3rd cent. C.E.

Roman Philadelphia was probably never protected by a city wall. The difficult topography and terrain made the construction of an efficient means of defence almost impossible. The Acropolis, however, was large and easily defendable, and therefore was probably used as a shelter for most citizens in times of need. This area was mainly used by the Romans for ritual purposes (31) - as can bee seen from the nature of the architectural structures on it, namely the two temples, the huge areas surrounded by colonnaded porticos, the gate and the propylaea at the foot of the Acropolis (fig. 5). The city and the Acropolis were connected by a series of steps on the southern side (fig. 5).

South of the main street, where the vally is at its widest (200 metres wide), lay the city centre. The river cutting across the valley south of the main street was covered by a vault, and this enlarged the area possible for city expansion.

Of the public buildings that existed at the time we are aquainted only with the theatre and the odeon. Between them lay the forum where only the 3 porticos remain today (figs. 5,15,16). While the odeon was free-standing and situated on the eastern side, the theatre in the south, used the natural slope of the hill for its support. One hundred and eighty metres further east the main street ended in a monumental gate, nothing of which remains today, although Conder and Butler mention its existence without giving any description of it. It is also possible that, here on the eastern border, stood the city wall (figs. 4,5). From the remains of columns and structures found west of the theatre and south of the main street, it would appear that there was much public building in this central area. South-west of the propylaea are the remains of a portico and still further west stood the nymphaeon under which ran a small river eventually flowing into the Amman River. The wide stretch of land created where the south and south-western valleys met, allowed for more centralization of public buildings. And indeed, researchers claim that the Khan, the Mosque, the Church and the markets all stand on the ruins of much earlier structures (figs. 4,5). This was also the crossroads of the city's 2 main streets. North-east of this meeting point stood the Bath (figs. 4,5) which was found in such ruins that no attempt was ever made by archaeologists to even describe it. Colonnades ran along the entire length of the 2 main streets.

The area encompassed by Philadelphia was not large. Together the two valleys only measured 173,000 sq. metres. Add to this the expanse of the Acropolis which was also large enough to have been used for a certain amount of public and even private building, and one reaches a city area of 276,000 sq. metres (32). As most of this was taken up by public and ritual structures the question must be asked - where did the inhabitants live? Where did they construct their private homes? The answer seems to be that although the slopes of the valleys on the south and south-west were probably too steep for the planning of any road system, it was definitely possible that homes were built on or cut out of the rock faces as was done in Nabataean Petra or Byzantine Avdat (33). To date none of the caves scattered among the homes of Amman today have been properly investigated and nothing remains of the ruins that could once have been seen on the slopes of the hills.

This might be a possible solution to the questions posed above, but it still does not give us any idea as to the size of the population living permanently in the city of Philadelphia. There would also seem to be a contradiction between the size and splendour of the public structures (theatre, odeon, nymphaeon etc) and the size of the city itself with what appears to be a small number of inhabitants (34). The centre of the modern city of Amman today lies exactly over the centre of Roman Philadelphia (compare figs. 5,6,7) and the northern, southern and south-western slopes are covered by dense private structures, with no clear road network. Similarly inhabited are the hills bordering the valley of Sil-Amman on the south side (figs. 6,7,16) and the eastern terrace of the Acropolis. The building housing the Jordanian Department of Antiquities was constructed in the 1960's on the middle terrace (fig. 6).

The main traffic line of modern Amman runs exactly where the main colonnaded street of Philadelphia once lay. Named "Shera'a el Hashemi" and running south of the Acropolis, this street houses the important public buildings of modern day Amman: the municipality (west of the theatre), the "Philadelphia" Hotel (north of the theatre), and a central city square which stands on the area of the ancient Roman Forum. The remains of the colonnaded porticos have been incorporated into this square (figs. 6,16). To the west of the municipality, in the area close to the nymphaeon, is Amman's central bus station (fig. 7). Philadelphia's second main street is today covered by the other main road of Amman called "Shera'a el Melech Feisal" along which are the various foreign embassies, major banks as well as government ministeries (fig. 7). The city's markets lie south-west of the meeting point of the 2 main streets and in the north-western corner stands the city's largest mosque - "El Husseini" on the remains of an earlier structure. It is very possible that the trade area of ancient Philadelphia was also centered in this narrow section of the valley (figs. 5-7).

The specific topography of the area created the division of ancient Philadelphia as well as that of modern Amman into distinct functional areas: the administrative, public and cultural centre on the east side of the city; the ritual structures on the Acropolis; and the trading centre on the western side. The city plan, even today, conforms to the lines of the valleys in which it lies. Little remains of the ancient city itself except for the theatre and small sections of the porticos around the forum. All the other ancient buildings have disappeared and the colonnaded streets are buried deep underneath the modern asphalt. The Amman River now runs through large concrete water pipes (fig. 7), and a glance at the city plans of Amman shows exactly how much the new city clings to the ancient lines of Philadelphia of the 2nd and 3rd cent. B.C. (fig. 7) - a city plan dictated by the physical conditions around it and not by traditional urban planning of the period.

NOTES

1. Rabat Amman is mentioned in various Biblical sources as well as in Hellenistic and Roman sources where it is called Philadelphia or Amman. see: P. Thomsen, Loca Sancta, Halle, 1907, p. 113.

2A. With reference to the city's history, see:
M. Avi-Yonah, The Holy Land from the Persian Period to the Arab Conquest, Baker Books, Michigan, 1966, p. 177.
E. Honigman, RE, s.v. Philadelphia, colls. 2094-2096.
A.H.M. Jones, The Cities of the Eastern Roman Provinces, Oxford, 1937, pp. 241-242, 260-261.
V. Tscherikower, Die Hellenistischen Stadtegrundungen von Alexander dem Grossen bis auf die Romerzeit, Leipzig, 1927, p. 77.
H. Bietenhart, "Die Dekapolis von Pompeius bis Traian", Z.D.P.V. 79 (1963), pp. 24-51.
G.W. Bowersock, "A Report on Arabia Provincia", J.R.S. LXI (1971), pp. 219-242, plates XIV-XV.
J.P. Rey-Coquais, "Philadelphie de Coelesyrie", ADAJ 25 (1981), pp. 25-31.

2B. With reference to the numismatic findings see:
G.F. Hill, Catalogue of the Greek Coins of Arabia, Mesopotamia and Persia, London, 1922. (Philadelphia), p. XXXIX, pp. 37-41, plate VI 1-3.
A. Spijkerman, The Coins of the Decapolis and Provincia Arabia, Franciscan Printing Press, Jerusalem, 1978 (Philadelphia, pp. 242-257).

2C. With reference to the epigraphical findings see:
E. Littman, Publications of the Princeton University Archaeological Expedition to Syria. 1904-1905, 1909, Div.III, Greek and Latin Inscriptions Sect. A, Southern Syria: Part I, Ammonitis (Amman), pp. 8-15.
W.H.P. Hatch, "Ten Unpublished Greek Inscriptions from Amman", A.A.S.O.R. VII (1926) pp. 100-102.
A. Alt, "Inschriftlisched zu den Aren von Scythopolis und Philadelphia", Z.D.P.V. 55 (1932), pp. 128-134.
F.M. Abel, "Inscription Grecque d'Amman", R.B. XLV (1936), pp. 233-235.
P. Lemaire, "Inscription Monumentale a'Amman", R.B. XLV (1936), pp. 542-543.
B. Oded, "The Amman Theatre Inscription", R. St.O 44 (1969), pp. 187-189.
F. Zayadine, "A Greek Inscription from the Forum of Amman - Philadelphia, A.D. 189", A.D.A.J. (XIV), 1969, pp. 34-35.
D. Schlumberger, "Une Nouvelle Inscription d'Amman-Philadelphia", SYRIA 48 (1971), pp. 385-389, figs. 1-3.

2D. With reference to the history of Amman during the last centuries:
G.L. Harding, The Antiquities of Jordan, London, 1959, pp. 61-70.

3. With reference to the Via Traiana Nova, see:
H.C. Butler, "Trajan's road from Bosra to the Red Sea. The section between Bosra and Amman", P.U.A.E.S., Div. III, Sect. A, Part 2 (Appendix).
R.E. Brunnow, A.v. Domaszewski, Die Trajansstrasse von Amman nach Bosra. Provincia Arabia II, Strassburg, 1905, pp. 221-227.
D. Magie, "Milestones Found on Trajan's Road Between Bosra and Amman", P.U.A.E.S., Div. III, Sect. A, Part 2 (Appendix).
A. Alt, "Zur Romischen Strasse von Philadelphia Nach Esbus", P.J. 32 (1936), pp. 110-112.

4. See note 2D, see also chapter 5, note 36.

5. U.J. Seetzen, Reisen Durch Syrien, Palaestina, Phoenicien, die Transjordan-Lander, Arabia Petraea und Unter-Aegypten I, p. 396 ff.
J.L. Buckhardt, Travels in Palestine, London, 1821, pp. 67-79.
L. de Laborde, Voyage de La Syrie, Paris, 1837, p. 99 ff.
A.E. Northey, "Expedition to the East of Jordan", P.E.F. 4-6 (1871-73), pp. 57-72.
G. Robinson, East of Jordan, London, 1881, pp. 264-267, 398-403.
C.R. Conder, The Survey of Eastern Palestine I, London, 1889, pp. 19-64.
R.E. Brunnow, A.v. Domaszewski, Provincia Arabia II, Strassburg, 1905, pp. 216-220.
H.C. Butler, P.U.A.E.S., Div. II, Ancient Architecture in Syria.
Sect. A, Southern Syria.
Part I, Ammonitis (Amman), pp. 34-62.

No extensive archaeological excavations were ever held in Philadelphia. However, from the 1920's small excavations took place and between 1927-1934 an Italian expedition headed by Bartoccini completed much work on the Acropolis, see:
R. Bartoccini, "Ricerche e scoperte della missione italiana in Amman". Bolletino Dell'associazione Internazionale Per Gli Studi Mediterranei 1 (1930), pp. 15-17, Pl. IV.
R. Bartoccini, "Scavi ad Amman della Missione Archeologia Italiana Associazione Internazionale Studi Mediterranei", Bolletino 2 (1932), pp. 16-23, Pls. I-IV.
R. Bartoccini, "Scavi ad Amman della Missione Archeologica Italiana, Associazione Internazionale Studi Mediterranei", Bolletino 3-4 (1933-1934), pp. 10-15, Pls. III-XII.

The Italian excavations focused on two areas: a) The southern temple situated on the upper terrace close to the southern wall. b) The front courtyard situated in the north-west end of the same terrace which, for some unclear reason, the excavators termed "the Agora". The Italians never refer to Butler and Conder in their publications, neither do they present any possible plan of the city. Since these excavations, both the British and the Jordanians have conducted a few 'salvage' excavations on the Acropolis and in the city itself. See:
L. Harding, "A Nabatean Tomb at Amman", Q.D.A.P. XII, (1945-1946), pp. 58-62.
L. Harding, "Excavations on the Citadel, Amman", A.D.A.J. XIV, 1951, pp. 7-16.
S. Kh. Tell, "Notes on the Archaeology of Amman", A.D.A.J. XIV, (1969), pp. 28-33.
F. Zayadine, "Excavations on the Upper Citadel of Amman", A.D.A.J. XXII, (1977-1978), pp. 20-56.
C.M. Bennett, A.E. Northedge, "Excavations at the Citadel, Amman, 1976, Second Preliminary Report", A.D.A.J. XXII, (1977-1978), pp. 172-179.
A. Northedge, "Survey of the Terrace Area at Amman Citadel", Levant XII, (1980), pp. 135-154, Pls. XX-XXIV.
A. Northedge, "The Fortifications of Qala' at Amman (Amman Citadel)", A.D.A.J. XXVII, (1982), pp. 437-459.

6. C.R. Conder, pp. 29-34.
H.C. Butler, pp. 36-38.
A. Hadidi, "The Roman Town Plan of Amman", in P. Moorey, P. Parr (eds), Archaeology in the Levant, Warminster, 1978, pp. 210-222.

7. Butler claims that the quality of building of certain sections of the Acropolis wall in Philadelphia is identical to that of the supporting walls at A'arak el Amir, and that these sections could belong to the Hellenistic Period (2nd cent. B.C.), see:
H.C. Butler, pp. 37-38, iII.23.
The Italians also point out these earlier sections to the wall, see:
R. Bartoccini, op. cit. B.A.S.M. 1, (1930), p. 15.
Identical parts were also discovered beneath the foundations of the southern temple, see:
R. Bartoccini, B.A.S.M. 2 (1932), p. 16, Pl. I, Fig. 2.

8. H.C. Butler, p. 38.

9. C.R. Conder, pp. 31-33.
H.C. Butler, pp. 38-41, iIIs. 24, 25.
It appears that the southern temple was constructed close to an open area which served continuously as a ritual place even during the Bronze Age. Both the Greeks and the Romans preserved the sanctity of this specific area. The numismatic finds also confirm the religious traditions surrounding the Tyrian God, Melkart, identified with Heracles (see note 2B). According to an inscription found in the area the last ritual structure to be occupied was build by Marcus Aurelius (see note 10). The Hellenistic foundations are clearly visible beneath the Roman temple (see note 7). The Italian expedition did not attempt an independent reconstruction plan of the city, they were satisfied with the publication of photographs alone, see:
R. Bartoccini, B.A.S.M. 2 (1932), pp. 16, 21, Pls. II-IV.
(See fig. 11 showing the temple after the completion of the Italian excavations).

10. E. Littman, P.U.A.E.S.,
Div. III Greek and Latin Inscriptions,
Sect. A. Southern Syria,
Part I, Ammonitis, Inscr. 4, pp. 10-11.

11. Butler emphasises that the southern temple is similar to the Temple of Zeus at Gerasa and from epigraphical sources it now is clear that both temples were constructed during the reign of Marcus Aurelius. See:
C.H. Kraeling (ed.), Gerasa, p. 54, Pl. XXVI, (inscr. 11, p. 380).
R. Bartoccini, B.A.S.M. 2 (1932), pp. 16, 21, Pls. I-IV.
See also Chapter Two, discussion about the Temple of Zeus, p. 23.

12. Despite the bad state of preservation of the ruins on the Acropolis, it seems that these 2 courtyards comprised a sacred precinct similar to the kind found in Gerasa, Palmyra and Damascus. a) With reference to the precinct in Gerasa, see:
C.S. Fisher, Gerasa, (The Temple of Artemis), pp. 125-138, plan I.
See also discussion concerning the Sanctuary of Artemis in Chapter Two, notes 55-57, fig. 75, pp. 26-29.
b) With reference to the Jupiter precinct in Damascus, see:
C. Watzinger, K. Watzinger, Damascus, die Antike Stadt, Berlin, 1921, pp. 3-42, Fig. 1.
J. Sauvaget, "Le plan antique de Damas", SYRIA XXVI (1949), pp. 314-358, Fig. 1 (see iII. 80).
c) With reference to the Bel Sanctuary at Palmyra, see:
Th. Wiegand, Palmyra, Ergebnisse der Expeditionen von 1902 und 1917, Berlin, 1932, pp. 127-150, Fig. 68.

D. Schlumberger, "Le Developement urban de Palmyra", BERYTUS (2) 1935, pp. 149-162.
M. Gawlikowski, Le Temple Palmyrenien, Warszawa, 1973, pp. 20-25, 53-80. (see II. 78).

13. The Italian expedition uncovered a row of columns leading from the entrance to the front courtyard and thereafter to the entrance of the temple courtyard. This divided the former into 2 sections. As mentioned, no plan was offered by the Italians and therefore an attempt has been made here to incorporate the information gleaned from photographs into the plans produced by Butler. (Compare figs. 8 and 9), see:
R. Bartoccini, B.A.S.M. 3-4 (1933-1934), Pl. 7.

14. C.R. Conder, pp. 37-38, see iII on page 37 and photograph on page 32. Butler based his reconstruction of the structure on this photograph.
H.C. Butler, pp. 43-46, iII. 28.

15. Butler emphasizes the similarity between the plans and decoration of the propylaea of Philadelphia and that of the Temple of Artemis in Gerasa. See:
G. Horsfield, "Jerash - Annual Report on Works of Conservation 1925-1926", T.J.A.B. 1926, Pls. III-IV.
C.S. Fisher, Gerasa, The Temple of Artemis. (Propylaea West of the Cardo), pp. 129-131.
Epigraphical finds date the propylaea of Gerasa to the year 150 A.D., see:
C.B. Welles, Gerasa, Inscriptions (inscr. no. 60), pp. 402-403.
There is a definite possibility that the propylaea at Philadelphia were also constructed during the middle of the 2nd cent. A.D.

16. C.R. Conder, p. 38.
H.C. Butler, pp. 46-47, iII. 30.

17. See concluding discussion concerning the city plan of Philadelphia, pp. 9-11.

18. C.R. Conder, pp. 35-36.
R.E. Brunnow, A.V. Domaszewski, P.A. II, fig. 841.
H.C. Butler, pp. 47-50, iIIs. 31-33, Pl. IV.
Based on archaeological finds and their similarity to other such structures in Syria, Judaea and Arabia, the French scholar, Frezoules, dates the theatre and the odeon of Philadelphia to the second half of the 2nd cent. C.E., see:
E. Frezoules, "Recherches sur les Theatres de L'Orient Syrien", SYRIA XXVI (1959), p. 225.
(See also note 22.)

19. Ph. C. Hammond, "The Excavations at the Main Theatre at Petra, B.A.S.O.R. 174 (1964), pp. 59-66.

20. Excavated and reconstructed during the 1960's, the theatre is today an integral part of the main city square. See:
S. Kh. Tell, "Note on Archaeology of Amman", A.D.A.J. XIV (1969), pp. 28-33.
F. Fakharani, "Das Theater von Amman im Jordanien", A.A. 1975 (3), pp. 377-403 [See also figs. 19,20].
It would appear that the structure discovered in the centre of the upper section of the cavea had ritual purposes and is known as Cavea Shrine. Other such constructions have been uncovered at the theatre of Pompeius in

Rome, the Timgad theatre and the Nikopolis theatre in Asia Minor. See:
J. Hanson, Roman Theatre - Temples, Princeton, 1959, pp. 59-77, Figs. 16,27,,36.

21. C.R. Conder, pp. 35-36.
R.E. Brunnow, A.V. Domaszewski, Fig. 841.
H.C. Butler, p. 50, Pl. IV.
Although Conder and Butler only saw 8 columns, more were uncovered during later excavations. (See fig. 15).

22. F. Zayadine, "A Greek Inscription from the Forum of Amman - Philadelphia A.D. 189", A.D.A.J. XIV (1969), pp. 34-35, Pl. XXII.
D. Schlumberger, "Une Nouvelle Inscription D'Amman - Philadelphie", SYRIA XLVIII (1971), pp. 385-389, Figs. 1-3.
This is a monumental, Greek inscription dated to 189 C.E., which mentions the construction of the "tristoon" in the town. This refers to the 3 sided porticos surrounding the forum. (A forum was usually encompassed by 4 porticos, but in this case it seems that the colonnaded main street in the north served as the fourth portico). The inscription is important evidence in the chronology of the urban development of Philadelphia.

23. It was common practice in Roman architecture to place the theatre and the odeon in close proximity to one another. One example for this can be seen in Pompei.
A.N. Modona, Gli Edifici Teatrali Greci e Romani, Firenze, 1961, pp. 88-96, Fig. 48.
Another example is in Orange, (Arausio), France:
M. Bieber, The History of the Greek and Roman Theatre, Princeton, 1961, p. 201, Figs. 678-679, notes 20-21.
In the Roman East the two theatres of Gadara that have not yet been excavated also fit into this category - one points north, the other west and both stand on the Acropolis. (See figs. 21,22,23). See:
G. Schumacher, Northern Ajlun - within the Decapolis, London, 1890, p. 46, fig. 1.
V. Wagner-Lux, E.W. Krueger, "Bericht uber die Oberflachenforschung in Gadara (Umm-Qes) in Jordanien im Jahre 1974", Z.D.P.V. 94, (1978), pp. 135-144, plan I, Pls. 11-17.

24. C.R. Conder, pp. 36-37.
H.C. Butler, pp. 50-54, iIIs. 34-35.
A.N. Modona, op. cit. (Parte III, L'Odei), pp. 205-214.
M. Bieber, op. cit. (Odea), pp. 220-222.

25. C.R. Conder, pp. 39-41. (See fig. on p. 40).
Although Conder published a plan of the nymphaeon, both he as well as Brunnow and Domaszewski believed it to be a Roman Baths (see fig. 25).
R.E. Brunnow, A.V. Domaszewski, Fig. 838.
H.C. Butler, pp. 54-59, figs. 36-38, Pl. V.

26. The Nymphaeon of Philadelphia was probably more splendid even than those found in Petra, Bostra and Gerasa. Its design is reminiscent of the plans of nymphaea in Asia Minor including that of Aspendus, Side and Miletus. See:
With ref. to Petra, (see fig. 31):
W. Bachmann, C. Watzinger, Th. Wiegand, Petra, Berlin, 1921, pp. 34-35, Fig. 28.
With ref. to the nymphaeon at Bostra (see fig. 129):

H.C. Butler, P.U.A.E.S., Ancient Architecture in Syria, Part 4, Bosra, pp. 251-252, fig. 226.
With ref. to Gerasa (see figs. 52-55):
C.H. Kraeling, Gerasa, New Haven, 1938, pp. 21-22, Pl. VIa, plan XXVIII.
With ref. to Miletus (see fig. 32):
G. Kleiner, Die Ruinen von Milet, Berlin, 1968, pp. 114-118, Figs. 85-86.
With ref. to Aspendus (see fig. 33):
H. Hormann, "Die Nymphaum zu Aspendos", J.D.A.I. 44 (1929), pp. 263-274, Figs. 1-8, Pl. I.
With ref. to Side (see fig. 34):
A.M. Mansel. Die Ruinen von Side, Berlin, 1963, pp. 53-76, Figs. 35-37.
With ref. to the position of the nymphaea within the landscape of Provincia Arabia, see chapter 5, p. 106.

27. C.R. Conder, p. 55.
H.C. Butler, p. 59.

28. H.C. Butler, pp. 59-60, fig. 39.

29. In Petra, a similar but smaller engineering feat was accomplished. There too a river cut the city lengthwise into two, and the city was left with little room in which to expand. See:
W. Bachmann, op. cit., pp. 65-66, Fig. , Pl. I.
Yet another example of this kind of Roman engineering may be seen in the "Lower City" of Pergamon where there is a sanctuary (called Kizil Avlu) constructed over the river and at a definite angle to it. Two huge vaults were built alongside each other over the river, measuring 180 metres long and 10 metres high. This structure can be dated to the 2nd century A.D.
G.E. Bean, Aegean Turkey, London, 1967, pp. 81-82, Fig. 11, Pl. 12.
Even the historical sources of the period bear witness to more of these astonishing examples of engineering. Pliny the Younger informs the Emperor Traian that the citizens of Amastris need financial aid to construct a vault over the river flowing near the forum. See:
Pliny Letters II, W. Heineman, London, 1947, XCVIII.

30. C.R. Conder, pp. 41-52.
The "Western Tomb" is perhaps the most interesting one described by Conder. This is a Roman mausoleum consisting of a rectangular room standing on a podium (see fig.30) with a vaulted passageway. The facade was topped by an architrave and the corners of the walls were decorated with pilasters. The actual room itself had a domed ceiling part of which was recorded by Conder. Luckily, Conder also photographed the mausoleum, because 25 years later, when Butler arrived on the site, it had already been dismantled.

31. The work done by the Italian expedition shows that the Acropolis had been used as a sacred precinct since 2nd cent. B.C.

32.

The area of the Acropolis	-	103,000 sq. m.
The south valley region	-	143,000 sq. m.
The south-west valley region	-	30,000 sq. m.
Total area of the city	-	276,000 sq. m.

It appears that certain sections of the Acropolis were used in the 3rd and 4th centuries C.E. for public and private building. The plan of the Roman house, not far from the Southern Temple and only partly excavated, shows

that, unlike the other buildings around it, this was not a religious structure. See:
G.L. Harding, "Excavations on the Citadel, Amman", A.D.A.J. I (1951), pp. 7-16, Fig.1.

33a. With ref. to Petra, see:
G. and A. Horsfield, "Sela-Petra the Rock of Edom and Nabatene", Q.D.A.P. VII, (1938), pp. 1-42, Pls. I-LXXIV.

33b. With ref. to Byzantine Avdat, see:
A. Negev, "Avdat, A Caravan Halt in the Negev", ARCHAEOLOGY 14 (1961), pp. 122-130.

34. The city plan of Philadelphia, published by Butler (fig.5), shows scattered ruins bordering the city on the south and south-west sides. These have never been excavated. The reason for the extreme contrast between the rich public structures and what seems to have been a remarkably small number of permanent residents, possibly lies in the basic character of Roman Philadelphia. During the 2nd and 3rd cents. C.E. the city was a religious, cultural and trade centre for a much wider population that that which it housed permanently.

CHAPTER II

GERASA

Introduction

Gerasa, nestling in the valley of the Chrysorchoas River, is today the modern town of Jerash. Spreading over the eastern side of the ancient city it has preserved the old Semitic name (figs. 35-36) (1). The city, lying 34 km north of Philadelphia (Amman), on the Via Traiana Nova, was established as a 'polis' during the Hellenistic period, and is probably situated above a more ancient Semitic settlement. It was perhaps first settled by the Macedonians, but the exact date for its foundation has not yet been established (3). Together with many other towns in Syria and Palestine, Gerasa was called Antioch during the Saleucid rule (4). During the rise to power of the Hasmoneans and the Nabataeans, Gerasa continued to exist as a Greek city, even though for a short period it fell under Hasmonean rule. The Nabataean influence in the town was also extensive and is seen even after their political decline (5).

With the rise of Rome in the East, Gerasa was proclaimed a 'free city' and was included within the framework of the Decapolis. In the year 106, with the establishment of the Provincia Arabia, Gerasa found itself a part of these changing times and after the extensive development of the area, (including new streets and fortifications) the city flourished. Most of its magnificent buildings were constructed during this period which reaching a climax in the second half of the 2nd cent. C.E. (6), and even continuing into the first quarter of the 3rd cent. However, from the middle of this period onwards, Gerasa entered a decline which came as a result of economic problems and a security crisis within the Roman Empire. Much less construction took place during the latter part of the 3rd cent. and it was only in the second half of the 4th cent. and into the 5th cent. that the city once again became an important centre - this time for Christianity (7). However, the Persian and Arab invasions of the 7th cent. brought about the abandonment of the city during the 8th cent. and Gerasa is mentioned in sources from the Middle Ages as a city that has been uninhabited for a long time (8). In 1878, the Circassian refugees settled on the eastern side of the city.

Today, Jerash numbers about 80,000 inhabitants and is an important agricultural and trade centre for the northern regions of the Kingdom of Jordan.

Travellers and inquisitive visitors started visiting the ruined city from the early days of the 19th cent., but it was not until 1920 that an organised study was initiated and the monumental structures of the city were cleared of rubble and began to appear on the surface. In 1928 the British School of Archaeology in conjunction with Yale University began excavating and continued to do so until 1934. (In 1930 the American School for Eastern Studies took over from the British School of Archaeology). The following archaeologists headed the expeditions which worked in the area at different times: Crowfoot, Fisher, Glick and Harding and the results of these excavations were published in 1938 (9). Work was continued again between 1937-1940, mainly in the oval plaza in the south of the city. Since the 1960's much restoration and excavation has been done by the Jordanian Department of Antiquities together with foreign teams, particularly from Italy. Yet, despite all the work done over the years, most of the city has not been uncovered, especially on the eastern side

where the modern town of Jerash lies (10).

A General View of the City (figs. 35-38).

Ancient Gerasa lay 570 metres above sea level, within the valley created by the Chrysorchoas River which in turn cuts through the city running north to south. Together with a rich spring called 'Ein Kerawan" situated in the north-east, the city was always provided with an abundant water supply. There was also much fertile and agriculturally viable soil within the close environs of the town.

The city was encompassed by a strong wall. About 460 metres south of these walls stood the Triumphal Arch while the Hippodrome stood more to the north. The city wall has been preserved along its entire length and this is especially evident from aerial photographs (fig. 35) (11). The wall encompassed an area of 847,000 sq. metres and was well built with recesses and projections at various intervals, well cut stones with wide margins and slight protruberances in the middle. The wall is 3 metres wide and every 17-22 metres a square tower protrudes about 6 metres from the line of the wall (fig. 42) (12). East of the south and north gates there are breaks in the wall through which the river waters freely flow. Only four city gates are known to us today: two main gates - one in the north and one in the south and two secondary gates on the western side. There were probably also gates along the eastern side of the city, but none of these has yet been discovered (figs. 35,43) (13).

The city is divided by the river into two sections, one larger than the other. In an attempt to prevent flooding during periods of heavy rains, strong supporting walls were constructed on both river banks (fig. 42) (14). The eastern bank is somewhat lower and rises gently westwards while the west bank has steep sides with terraces that climb up towards the west. Almost all the public buildings, except for a public bath, were situated on the west bank of the river. The two banks were connected by a number of bridges - the southern one has been preserved in its entirety (figs. 42-43) (15). The first long and narrow terrace on the western bank ends in the south on a high hill where the Sanctuary of Zeus and the Southern Theatre of Gerasa were situated (figs. 42-43) (16). The main street of the city crosses this terrace in a straight line running from north to south and meets two other main streets running east to west at right angles - one on the southern end of the terrace and one at its northern end (figs. 35,42,43). These streets were paved with stone slabs and lined by colonnades. The crossroads of the main streets were marked by Tetrapyla (figs. 42,43). The east-west main street on the southern end of the city crosses the river over a bridge measuring 73 metres long, which comprised 3 barrel vaults still to be seen today (17).

There were a number of public open areas in the city - an oval plaza in the south, fairly close to the gate (figs. 42,43) (18); another circular plaza at the crossroads of the north-south and east-west main streets (fig. 35) (19); and a third square-shaped one on the north side of the city (figs. 42,48) (20).

Only a small number of buildings have been uncovered in Gerasa and three streets and three squares have been cleaned. The following description will first deal with those structures researched but not excavated and thereafter a more detailed study will be offered on the

excavated structures. Finally, we will discuss the city plan of Gerasa.

The Sanctuary of Zeus (figs. 44-48).

Situated in the south of Gerasa, on a high hill and close to the Southern Theatre, this area served as a religious centre for the city from its earliest days. Huge supporting walls with barrel vaults, stood below a built up area consisting of two terraces connected to each other by a flight of stairs. On the upper terrace was an open courtyard, originally surrounded by porticos, in the centre of which stood the Temple (figs. 45-47) (21). The Temple of Zeus is well preserved, was constructed on the foundations of an earlier building of which nothing remains and was built between 161-166 C.E. (figs. 46,47) (22). It is a peripteral structure and stood on a podium which measured 28 x 41 metres with eight columns in the front and twelve along the length of the temple. An inscription discovered on the architrave dates the structure (23). The building stood about 15 metres high but together with the podium rose to about 20 metres. The walls of the cella and its facade had semi-circular niches (figs. 46,48). The antas were 4.5 metres in diameter and this allowed for the construction of a staircase inside the left anta, the right (being the same in diameter) preserved the symetry of the structure. The stairs wound spirally around a large square pillar (fig. 48) and opened out into a passageway leading to the interior of the cella. A similar stairwell can be seen at the Temple of Artemis (fig. 80) (24). In both these temples there is obvious concern on behalf of the architects to facilitate the use of the stairs. This specific architectural element probably originates in Nabataean structures (25).

The South Theatre (figs. 49-51) (26).

This theatre is situated on the north-west side of the hill and has been well preserved. The cavea is composed of two horizontal sections: the lower (cavea ima) 14 rows, divided into 4 cunei and the upper (cavea summa) 15 rows divided into 8 cunei. Sections of the skene, the proskenion and the skenefrons remained and these have been well preserved today (figs. 51). The proskenion was decorated by both semi-circular and square niches, while it is likely that small statues stood in the four round niches on ground level (27). The skenefrons had three entrances (Regia and Hospitalia) and stood at least two floors high.

The Nymphaeon (figs. 52-55) (28).

South of the Temple of Artemis and near the main north-south street stood the nymphaeon (fig. 43). The facade measured 24 metres long and in its centre was a semi-circular niche measuring 11 metres in diameter. On either side smaller but similar niches could be seen. The structure must have stood about 3 storeys high and was richly decorated. Between the front of the building and the street stood a stone pool which received water from pipes hidden in the building. The nymphaeon was entered by ascending 4 steps through a portico comprising 4 larger and then 4 smaller columns (54).

The North Theatre (fig. 56-58) (29).

Situated alongside the main street going east-west in the northern part of the city (fig. 43, 56), this theatre faced a large, square courtyard bordered by porticos (fig. 57). It is a much smaller theatre than the one in the south, but has neither been excavated nor cleaned up and there are still huge piles of earth above most sections of the structure.

The West Bath (figs. 60-61) (31).

The building was entered from the north-south street through two small entrance halls (fig. 61 E.E.), which then lead into a larger hall (F). Here the ceiling was supported by 3 large arches that stretched the entire width of the room which probably served as a frigidarium. To the east of the latter were three small rooms (A, A, A) used as apodyteria. West of the frigidarium one moved into a large square hall (15 metres x 15) with a large square and vaulted niche in its western wall (C). The entire room was originally covered by a stone dome which collapsed over the years; it served as a caldarium and had an exit from here to the outside, to the peristyle with its porticos (P). On the east of the peristyle stood another two wings of the bathrooms each comprising one square dome roofed room (fig. 60). It is not yet clear what use was made of these rooms. East of the river, on the edge of the modern city, are the remains of what was the East Bath. This appears to have been a much larger and more complex structure than the one described above (fig. 42) (32).

From inscriptions uncovered in the city, it seems that there were many more public buildings in Gerasa which have not yet been uncovered. The following description of some of the monuments excavated provides us with a chance to study the nature of the architecture in Gerasa more closely.

The Triumphal Arch (figs. 62-64) (34).

The inscription carved on the Triumphal Arch describes its construction in the years 129-130 C.E. in honour of the Emperor Hadrian (35). The arch stands on the main approach to the city about 460 metres away from the south gate (fig. 43). The square base of the structure measures 37.45 long and 9.25 wide. The original length of the base was in fact 25.25 metres but later 2 additional pavilions measuring 12.2 metres, were added to the arch (figs. 62, 63). It comprises 3 vaulted passageways - the central and largest one measuring 5.71 metres in width and is 10.80 metres high. The other 2 side entrances measure 2.66 metres wide and 5.20 metres high (fig. 63). The southern and northern facades of the arch are mainly identical in their architectural detail and ornamentation. Four engaged columns with floral designs stand on high pedestals alongside both facades. Above the smaller passageways are semi-circular niches decorated with small columns supporting an architrave and gable. The reconstruction of the Triumphal Arch was facilitated by the discovery of all its architectural elements within its immediate surroundings (fig. 64). All the columns, both small and large, were decorated by Corinthian capitals; the bases are Attic in style; the architrave, frieze and cornice all have a rich floral design. Above them are the gable and "attic", the latter divided into two horizontal sections by a decorated cornice.

The three vaults of the passageways are constructed according to the

barrel like style already seen in other vaults in the city. The two smaller passageways were originally closed by wooden gates while the main entrance could be closed by a more complicated apparatus and it seems as if the door was lowered from above (36). It is possible that these gates were added to the Triumphal Arch at some period when it was decided to enlarge the city area of Gerasa and change the arch into a proper city gate. Researchers believe too that the addition of the 2 smaller pavilions (37) also point to this fact although their construction is of an inferior nature (38).

The Hippodrome (fig. 65) (39).

The hippodrome is situated close to the road leading from the Triumphal Arch to the southern gate of Gerasa. The internal length of the structure was 250 metres and it was 50 metres wide. Externally, including the outside walls, it measured 261 metres and 76 metres wide. This is a relatively small hippodrome (40) compared to similar structures of the period. The seats were constructed upon a system of vaults (fig. 65) (41). There seem to have been 16 rows of seats. The main entrance was on the north side in the centre of the semi-circular section (fig. 65), and the passageway was probably covered by a barrel-like vault for its entire length (42).

It is not possible to date this building with any certainty. Miller feels it stems from the end of the 2nd cent. C.E. or the early 3rd cent. (43), while Horsfield believes it to be as early as the 1st cent. C.E. (44).

The South Gate (fig. 66) (45).

The south gate was not well preserved and could not be completely reconstructed. However, it was very similar in design to the Triumphal Arch and had a main entrance measuring 4.20 metres wide with 2 side entrances each measuring 2.32 metres wide. Here too side pavilions were constructed, although these were not later additions, but were built together with the gateway (46). Similarly the southern and northern facades were decorated as in the Arch: four engaged columns with Corinthian capitals stood on high bases. All the corners of the three entrances are decorated by flat pilasters with Corinthian capitals.

Although there are similarities both in the plans and in the architectural decoration of the Triumphal Arch and the South Gate, they differ in the daintiness of ornamentation used. The Arch seems to have been based in design on the Gate which was probably constructed in the first quarter of the 2nd cent. C.E. (47). As on the northern side of the city this gateway stands on the foundations of an earlier gate which had only one entrance. (48).

The South Tetrapylon (figs. 67-71) (49).

The Tetrapylon stands at the junction of the main north-south street and the southern east-west street (figs. 42,43), and it was encompassed by a large circular plaza measuring 43.60 metres in diameter (figs. 67,68).

The structure is made up of 4 podia each standing 6 metres apart.

They are positioned so that the way between them is identical to the position of the roads (fig. 68). The podia are square structures, 4.10 metres long and 3.30 metres high. All the corners are decorated by pilasters, creating a slightly hollow effect in the centre. In this section is a semi-circular niche decorated by small pilasters on both sides and with a cornice on top (fig. 70). At the four corners of each base stood four smaller podia supporting 4 columns which in turn supported the upper structure (fig. 71) (50).

The Tetrapylon stands in the centre of this circular plaza, paved in stone slabs which are not uniform in shape or design as they were probably changed over the centuries. The plaza is bordered by special 'edging stones'. Beneath the centre of this area is the junction of two main water channels draining water from the north-south and southern east-west streets (fig. 69). The facade of the buildings surrounding the circular plaza were composed of large piers that created recesses and protruberances. The former served as the entrances to shops which were made up of a few rooms each and which stood at least 2 floors high. The archaeological finds in these rooms point mainly to the 3rd and 4th cents. C.E. In each section of the circular facade between the two main streets were four piers and three recesses (fig. 68), each one supporting two columns. Together with the colonnades of the two main streets this lent an architectural uniformity to the circular plaza (fig. 71). This junction probably served initially as an ordinary crossroad, (as can be seen on the north side of the city, (figs. 42,43,51) and only later was turned into a circular plaza in which the tetrapylon stood in a central position. The change probably took place in the 3rd cent C.E. making this town plaza a very interesting feature in the urban architecture of Provincia Arabia (52).

The North Gate (figs. 72,73) (53).

As in the case of the South Gate, this gate also stands upon the foundations of an earlier city gate. The inscription uncovered stipulates that the gate was built in the year 115 C.E. under the auspices of Claudius Severus who was the legatus of the Emperor Traian, and who re-built the road from Pella to Gerasa (54). The gate has one vaulted passageway - 5.40 metres wide and 9.15 metres high - and two towers on each side rising to a height of two floors (fig. 73). Both the northern and southern facades are similarly ornamented with semi-circular niches on each floor flanked by pilasters with Corinthian capitals and decorative arches above them. On both sides of the niches are engaged columns which rise to a height of two floors, and are topped by an architrave, frieze and pediment. Above the Corinthian capitals is a simple attic (fig. 73). An attempt was made to angle the northern gate in such a way that the main north-south street would connect up satisfactorily with the road from Pella and as a result the two side towers were not evenly constructed (fig. 72) (55).

The Sanctuary of Artemis (figs. 74-82) (56).

The Artemis Sanctuary is one of the most impressive sanctuaries in the entire classical world despite the fact that it is not the largest in size (57). This was the urban centre of the city and the greatest building enterprise in Gerasa (figs. 43,75) (58). From epigraphical sources it is clear that it took 30 years to complete its construction, between 150-180 C.E. (59). Only few sections have been excavated and partial plans were

drawn up by Schumacher of the temple and its courtyard (fig. 74). The investigators of Gerasa were satisfied to uncover portions of the Propylaea and the Temple of Artemis. Recently an Italian expedition has published their findings of work completed in the area over the last ten years (60). The sanctuary is composed of the following sections:

a) The Propylaea complex east of the north-south main street which also includes the "Processional Way" (Via Sacra).

b) The Propylaea complex on the west of the north-south main street.

c) The forecourt.

d) The temple courtyard.

e) The Temple of Artemis.

A: The Propylaea Complex East of the North-South Main Street (figs. 75-76)

The Processional Way started about 500 metres away from the Temple (figs. 42, 43), in what was clearly the residential area of the city, and crossed the river over a bridge of which only the foundations remain today (figs. 42, 43). The "Processional Way" and the bridge were built on the axis of the temple and the entire compound (figs. 43, 75). It was 11 metres wide and ascended to the west where it ended in an apsis which was part of the Byzantine Church (fig. 76). Originally a gate with three passageways and four piers stood here, faced by the columns. The main vaulted passageway was 3.2 metres wide and the side passageways each measured 1.8 metres in width. Two inscriptions ascribed to the original structure were uncovered among the ruins of the "Propylaea Church" (61). A colonnaded street ran from the triple gate westward, (fig. 76). At the end of the "Processional Way" was an exedra (figs. 75, 76) whose shape was formed on the north and south by angled walls with central semi-circular niches. A 19 metres wide gate in the exedra, with 4 or 6 columns inside it, opened westwards in the direction of the north-south street (fig. 76).

B: The Propylaea Complex West of the North-South Main Street theg. 75)

The level of the land rises steeply west of the main north-south street but after a while eases off slightly into a slight gradient (fig. 42). Parallel to the main road and opposite this gradient stood a high supporting wall (14 metres high) running 120 metres in length along the entire width of the sanctuary (figs. 42, 75) (62). On its northern and southern corners stood two towers. The wall is broken in the middle by the flight of stairs leading from the street to the forecourt. Shops were located both on the north and south sides of these stairs in the strip of land lying between the wall and the street. Each section held seven shops and had a central exedra which opened out to the street (figs. 75, 79). The shops were two floors high and were separated from the street by the western colonnade. All these elements created an impressive uniform effect broken only by the flight of stairs of the Propylaea.

The first striking effect of this structure is the portico of very large columns that face the stairs taking the place of the smaller columns of the western colonnade along the main north-south street (figs. 77,79).

This portico is 20 metres wide. The columns on the far sides stood 4 metres before the antas of the walls on either side of the staircase. The 2 internal columns stood opposite 2 other columns which in turn were placed opposite the piers of the gate themselves (fig. 77).

The facade of the Propylaea was 2 metres in diameter and had 3 square entrances alongside of which stood large columns (figs. 78, 79) (63). The central passageway measured 5 metres in width and 9 metres high, the two side passageways stood 3.8 metres wide. Above the latter were square niches decorated by pilasters and colonettes supporting the architrave, frieze and pediment. The facade was crowned by a pediment - part of which survived the years thus allowing for its reconstruction (figs. 78, 79) (64). Much of the inscription, once engraved on this pediment, was found, allowing researchers to date this structure (65). The building excelled in its rich decoration.

C: The Forecourt

A wide staircase (19.35 metres wide), on the western side of the gate is bordered in the north and south by smooth walls, and ascends to the courtyard in front of the Temple (fig. 75) (66). In the east the courtyard is defined by the stairs of the Prophylea, in the west by the wide staircase leading to the Temple and in the north and south it is closed in by walls (fig. 75). Most of this area is still covered by mounds of earth and it is not possible to know what it really looked like.

D: The Temple Courtyard (fig. 75)

The flights of stairs leading from the forecourt to the Temple courtyard comprised 3 sections, each of 9 steps (figs. 75, 74) (67). A portico stood between the stairs and the Temple courtyard measuring over 100 metres wide and 11 metres deep. In the north and south this portico was defined by two pavilion-like structures resembling exedras (fig. 75). A decorative wall with three entrances stood between the portico and the courtyard.

The Temple Courtyard measurements were as follows: length - 161 metres, width - 121 metres. The portico surrounded the courtyard on all four sides with 36 columns in the north and south and 26 on the east and west sides. There was a space of 3.8 metres between each column, they were 0.89 metres thick and 7.56 metres high and were placed on bases which in turn stood on stylobates. The portico stood 14.2 metres away from the courtyard walls and the space created was taken up by rooms and exedras, (except on the eastern side) (fig. 75) which opened up onto the courtyard. The rooms were arranged in an identical manner to the shops and exedras on the western side of the main street ie. on either side of the flight of stairs (figs. 75, 79) (68).

E: The Temple of Artemis (figs. 80-82) (69)

The Temple stands in a square measuring 124 metres long and 88 metres wide, surrounded by porticos. The area in front of it is double that at the back. All the columns of the facade, except for one, have survived the centuries (figs. 81-82), as have the podium and large parts of the cella.

The Temple of Artemis stands on the podium which measures 40 metres long, 22.6 metres wide and 4.32 metres high. This podium in turn is supported by a series of barrel-like vaults beneath it (fig. 80) (70). The flight of stairs before the temple comprises two sections, each of seven steps. The stone used in the construction of the walls was not brought from any quarry near Gerasa. The temple itself is Peripteral Hexastyle with eleven columns along the length of the building and 6 in the front. Yet another six columns were added in order to create a feeling of more depth in the temple front between the facade and the antas. The Corinthian topped columns (figs. 81-82) standing in the facade measure 13.21 in height and 1.5 in diameter and are based on low podia (fig. 80).

The cella stands 24.15 metres long, 13.37 metres wide, the north and south walls are 1.75 metres thick, the wall of the adyton 2.77 metres in diameter and the entrance wall is 3.3 metres in diameter. The northern and southern walls are decorated along their entire length by flat engaged pilasters as are parts of the western wall on either side of the adyton. Two square niches can be found on either side of the entrance and on the southern side of the entrance is a stairwell in which circular stairs wind themselves around a square pier (fig. 80) (71). In the centre of the western wall of the cella is an arched, square niche and it is presumed that a statue of Artemis stood here. All the temple walls are of a high structural standard.

Although only small sections of the sanctuary area have been uncovered it would seem that the Sanctuary of Artemis may be included in the list of magnificent ritual structures of the same period that decorated such cities as Jerusalem, Palmyra, Damascus and Baalbek (Heliopolis) (72) and that drew thousands of worshippers to them. This gave these cities a strong economic basis and in turn appropriate political status. From this we see that Gerasa was somewhat more than a mere provincial town on the distant borders of the Roman Empire (73).

The "Cathedral Precinct" (figs. 42, 43, 92, 93)(74)

These structures, far more modest in size and design to the Sanctuary of Artemis, lie south of the nymphaeon and close to the north-south street. Beneath them lie the remains of an earlier ritual structure. The flight of stairs leading inside to the area of shops originated with the earlier structure and remained almost unchanged (fig. 92). It was very similar in design to that of the Sanctuary of Artemis (fig. 92). In a passageway between the shops was the square gate where a pair of columns stood between two pilasters (fig. 92, 93). Close by but on the west side of the gate were four columns surrounded by a square shaped open area. Further west of this small square was a flight of stairs consisting of 4 sections leading to yet another square area (75). These stairs similar in design to those in the Sanctuary of Artemis were flanked on either side by flat walls.

The remains of the earlier structure beneath the Cathedral may be dated to the 1st cent C.E. (76), but little more can be said concerning their shape, style or size.

The Oval Plaza (figs. 42-45, 94-95) (77).

Burckhardt was the first to call this area the 'Forum' (78), although subsequent excavators have been in two minds as to whether this is in fact its correct name. The area has not been properly excavated, only cleared of the huge piles of earth above it (79). The plaza 90 metres along its length and is 80 metres broad and lies in a natural fall of the land between the Sanctuary of Zeus in the south and the "Camp Hill" in the north (44). Much of the portico surrounding the square has survived, with its Ionic columns supporting an architrave. There were two reasons for the particular shape of the plaza: firstly, the natural drop of the land and secondly the desire of the architects to connect the southern end of the main north-south street with the entrance to the Sanctuary of Zeus as well as to join the main north-south street to a short street which in turn lead to the South Gate of the city (figs, 42-44). The columns surrounding the square also fallowed this short street for its entire length. Stone slabs covered the square sided by 0.22 metre wide pavements. The foundations holding the stylobate of the collonade excell in their particularly strong work and reach a depth of 8 metres. They probably also served as supporting walls for huge piles of earth that were placed at specific intervals in order to create a flat surface for the plaza (80).

A gate stands at the point where the north-south street and the oval plaza meet (fig, 94). A small excavation in this area brought to light two pairs of piers and it would seen that the gate had three entrances - a wide one above the road and two narrower ones above the pavements (81). The gate itself, as can be seen from remains in the immediate vicinity, was Corinthian in design unlike the Ionic design of the portico (fig, 95). Because of this, the archaeologists believe it to be of a later date than the plaza (82), but as no large excavations have been completed in this area it is impossible to clearly date the oval plaza (83). Its shape is unusual but was obviously chosen for the reasons mentioned above (84).

The remains of other buildings found around the plaza, its proximity to the South Gate as well as to the Sanctuary of Zeus all point to the fact that it probably served as a commercial centre in the city.

The Open Ritual Aarea North of the City (figs, 96-100 (85).

One thousand two hundred metres north of the city of Gerasa stood an open ritual complex which included a large pool, the ruins of temples, a theatre and tombs. The epigraphical material uncovered here bears witness to the notorious Maiumas festivals that were held in this area. These festivals are also mentioned in the ancient sources(86).

It would appear that this site was chosen for its natural beauty - surrounded as it is by wooded forests and blessed with a never ending supply of water the year round. The "Processional Way" leading from Gerasa' s North Gate ended at the gate that probably divided the pool from the theatre (figs, 96,97). The road then moved on to the foot of the theatre and ended near the "Tomb of Germanus" (figs 99, 100). The rectangular pool served as a water reservoir, measured 43.5 x 88.5 metres and was divided into two sections by a massive wall that cut across it about 18 metres from the southern edge. An aqueduct led from the pool southwards (fig. 97).

To the west of the pool stood a theatre, this one much smaller than the

North Theatre of Gerasa. The cavea rested on the natural slope of the hillside and numbered 14 rows, although it is possible that an upper cavea existed, built on substructures of vaults. Nothing of this upper cavea remains today (fig. 98) (87). An inscription found in the area relates this structure to the end of the 2nd cent. or early 3rd cent. C.E. (88). Little remains today of the "Tomb of Germanus" but we may learn a little about its architectural nature from a photograph published by Schumacher (figs. 99, 100).

This open ritual complex of Gerasa is one of the few of its kind discovered in Arabia, Syria and Palestine, and it is therefore not surprising that investigators have compared it to similar precincts such as Daphne in Antioch on the River Orontes (89). The very fact that the Maiumas festivals were held here and even mentioned in the ancient sources goes to show how important a role was played by this city during this period.

The City Plan of Gerasa

The very limited excavations held at Gerasa and their only partial publication make it difficult to clearly pinpoint the different stages in the urban development of the city. Despite the large amount of epigraphic material, which allows for the dating of almost every large structure in the city, the excavators made no attempt to come to grips with the city's plan. Even the excavations held after the publication of the report did not add any information to clarify this picture. In our attempt to draw up a city plan for Gerasa we have thoroughly reviewed all existing reports and material available as well as studied aerial photographs of the area. (figs, 35-38) (90).

The researchers of Gerasa believe that the city plan was formed in the 2nd half of the 1st cent. C.E. (91) and is an example of a typical "Roman adaptation of the Hippodamian city plan" similar in design to Palmyra, Bostra and Philippopolis (92). Although the dating of the city appears to be correct, based on finds in the field, it seems surprising that Gerasa should be compared in its city plan to those mentioned above (93). The epigraphical evidence allows us to clearly follow the urban development of the city(94). The basic city plan was determined in the latter part of the 1st cent. C.E. (figs. 42,43) and served as a framework for further development and growth. During this period little major changes were introduced and the extent of the walls and the network of streets remained the same.

The basic city plan had to take into consideration a few structures that already existed in the area such as the Sanctuary of Zeus (95). From epigraphical evidence it is clear that the earliest buildings developed in the town (thanks to donations from various citizens) were the South Theatre and new structural additions to the Sanctuary of Zeus (96), as well as certain structures that have not yet beem properly excavated such as the temple in the vicinity of the Cathedral (97). In the year 74 C. E. a temple honouring the goddess Hera was built, but has not yet been found (98). The large proportion of inscriptions describing the donations of the citizens of Gerasa to the construction of these ritual structures points to the wealth that must have existed in the city already during the 1st cent. C.E.(99). An important step forward for the city was the construction of the North Gate in the year 115 C.E..(100). In the winter months of 129-130 C.E. the Triumphal Arch was erected in honour of the Emperor Hadrian's visit, along

the road leading to Philadelphia (101). It is possible that the construction of this arch was part of a grander plan to extend the city borders further south - a plan that was never carried out (102). A short while prior to the building of the arch a new gate, with three entrances, replaced the South Gate (103).

During the reign of Antoninus Pius and Marcus Aurelius building activities in Gerasa reached a climax. Part of the propylaea in the Sanctuary of Artemis was constructed in 150 C.E. (104) as was the propylaea east of the main north-south street (105). The construction of the entire sanctuary took a fairly long time and resulted in other architectural changes being made in its immediate vicinity such as the development of a network of roads (fig. 43), the widening of a part of the main north-south street and the changing of the Ionic capitals on all the columns to Corinthian capitals(106). In the year 163 C.E. a new Temple took the place of the old one in the Sanctuary of Zeus (107) and between 162-166 C.E. the North Theatre was erected (108), In 191 C.E. both the Nymphaeon (109) and, according to Kraeling, the West Baths were built (110). Some of the buildings erected during the 2nd cent, C.E. were still seen by 19th cent. explorers but today are no longer visible and these include the Temple of Nemesis, not far from the North Gate (111) and the Temple of Zeus Epicarpius near the open ritual complex (112). The "Tomb of Germanus" also belongs to the same period, (113) as does the open ritual complex and the water reservoir (114). Little construction took place in the city during the 3rd cent. C.E, and we know of only two definite buildings - the Hippodrome and the East Bath (115). It is possible that the Theatre which stands on the open ritual complex (116) as well as the North Tetrapylon also belong to this period (117).

One of the final urban changes accomplished in Gerasa in the 3rd cent, C.E. was the introduction of the circular plaza with its shops exactly where the north-south and east-west roads met (118). The South Tetrapylon was erected probably in the middle of the 3rd cent, C.E. prior to the establishment of the above square (109).

To complete our picture of the urban development of Gerasa, this review of the monumental structures according to epigraphical dating must be followed by a more exact description of the actual city plan: The river flowing from north to south divided the town in half not only topographically, but also functionally - the eastern side providing housing for the inbabitants and the west side acting as an administrative, religious, cultural and commercial centre for the city (fig. 43). This functional division resulted inevitably in a marked difference in the town planning on both sides. One glance at the maps of the city show that on either side even the street orientation was totally different (fig. 43). It is unusual to find such a sharp distinction between the two sides in Classical town planning. Although such functional differences do exist in other cities, there is always some kind of inter- mingling between the different parts (120). In Gerasa it is quite clear that the deep ravine created by the river facilitated in creating this very obvious functional split of the city.

A. Western Gerasa

Western Gerasa is situated on two terraces running up from the western bank of the river and it is here that the high concentratiom of public and

ritual structures can be found. The main street runs in a north-south direction ("cardo") and cuts through the city almost along its entire length (figs. 35, 42, 43). Two other streets running east-west ("decumani") form junctions with the main street both on the south and on the north sides of the city. The southern junction is about 170 metres away from the oval city plaza and the northern one is 250 metres from the North Gate (figs. 42, 43). Two Tetrapyla mark both crossroads. Excavators have uncovered only sections of these streets (fig. 42) (121), but from the study of aerial photographs we have been able to complete a more exact picture of the road network on this side of the city (figs. 42, 43):

West of the Sanctuary of Artemis the line of a road running north-south may be detected, connecting the east-west streets in the south and in the north. It also seems that this street continued both further north and south passed the two main east-west roads. East of this street are two other roads running parallel to it, connecting the entrances in the northern and southern walls of the Artemis Temple courtyard with the east-west streets on both sides (fig. 43). Yet another two streets can be seen running parallel to and alongside these walls forming a connection between the two main north-south streets on either side of the city (fig, 43). The two main east-west streets continued further east of the main north-south street, crossed the river in a straight parallel line and joined up with the street network of the "Eastern City" (fig. 43). These streets crossed the river over bridges of which only the southern one remains complete today (fig. 42) (122).

Between the latter two roads ran yet another street which has already been named "The Processional Way". This street began on the eastern side of the city and made its way over a bridge to the other site. Only the foundation bases of the bridge remain (123). All three streets connecting the the sides of the city run parallel to each other. The southern one was connected to the circular city plaza surrounded by its shops, the middle road provided the main path to the Sanctuary of Artemis and the northern one connected the residential areas with the cultural and public centre of Gerasa, an area where it may be presumed the Forum was situated (see p. 34).

The street network described above seems to be somewhat poor and undeveloped when one compares it to the actual size of the city area. Further excavations might possibly uncover a more intricate street system. We do not know what the large areas lying between the city wall on the west and the Sanctuary of Artemis were used for. Similarly the entire use of the area to the west of the city plaza is still a mystery (figs. 42,43). This Plaza, because of its very unusual shape, has continued to intrigue investigators over the years (104). The north-south main street left the oval plaza and joined the South City Gate by a short road measuring only 40 metres in length which also ran parallel to the wall of the lower terrace of the Sanctuary of Zeus (figs. 42, 44). The design of this plaza could be called a "planning compromise". The architects, wanting to join the South Gate to the beginning of the main north-south street, found that between these two points lay the Sanctuary of Zeus. The creation of this oval plaza seems to have presented a twofold solution in that they both achieved the desired connection between the South Gate while simultaneously creating a very pleasant and unusually shaped area in front of the entrance to this important ritual area (125). There seems to be no real basis for accepting Rostovtzeff's theory that the plaza was planned as a resting place for passing camel caravans even though the remains of shops in the area do point to a certain trading character of the plaza (fig.94) (126). The excavators

of Gerasa have called this oval plaza the Forum, although they are not satisfied that this was indeed its function within the city (127).

The centre of Gerasa is taken up by the Sanctuary of Artemis which covers 34,000 sq. metres and quite clearly commands the urban focus of the city. A traveller arriving on the east side of the Sanctuary, goes onto the "Processional Way" while still on the eastern side of the city, crosses the river by way of the bridge and enters the propylaea complex to the east of the north-south road. Thereafter he crosses the road and immediately enters, through a portico with huge columns, the western propylaea complex (figs. 74-82). From here he ascends a series of stairs which finally lead him to the temple courtyard (figs. 80-81). The architects of this campound spared no efforts in making this a spectacular and rich structure which was no less impressive than other famous ritual compounds of the period (128),

Along the main north-south street, on its west side, flanking both sides of the flight of stairs of the propylaea were rows of shops (fig, 75) and not far away to the south lay the Nymphaeon. This structure excells for its architectural decoration (figs. 52-55) (129). The "Cathedral Precinct" constructed prior to the Sanctuary of Artemis, but similar in design, lay south of the Nymphaeon (92-93) (130). North of the Sanctuary of Artemis Artemis stood the North Theatre and still further north was a square surrounded by porticos (figs, 56-58). The flat area opposite the theatre has not yet been excavated but from aerial photos this section appears to be defined by straight lines which create a large square measuring about 100 x 100 metres (fig, 56). It seems to us that this area is most suited to be the Forum of Gerasa as it is near to the theatre, the main ritual compound of the city, the West Bath and is situated on one of the major crossroads. The lay of the land, together with its proximity to these important public buildings points to the possibility of it being the Forum, although until excavations are carried out here we will never be able to prove a supposition of this kind (131).

B. Eastern Gerasa

Gerasa, east of the river has never been excavated or investigated because of the Circassian inhabitants living there to this day. Only one structure, the East Bath, has been studied, but so much of it has been dismantled that little can now be seen of the ruins (132). The roads of the present day city move along similar lines to those of the ancient city - at any rate their general orientation has not changed at all (compare figs, 35, 36, 43). Even with the help of aerial photographs it is diffcult to attempt a description of the city plan which was clearly very different to that of the western city.

The north-south main street was parallel to that on the west side and about 150 metres away from the river. All three streets joining the two sides of the city entered this main street: the northern east-west road, the southern east-west road and the "Processional Way" (fig, 43). On the east side lay a network of 3 parallel streets pointing in a north-south direction with 6 roads crossing them running in an east-west direction. All in all, a network of 15 insulae was formed here which cannot be described in any detail from the aerial photographs at our disposal. In fact only a general plan of this part of the city may be tentatively suggested here (133),

The question however may be asked whether despite the differences in town planning, this city enjoyed a united plan originating in the same period or whether the difference in street orientation on the east side points to the existence of an earlier city. If the latter suggestion is correct, then the eastern half of the city may very possibly be a Hellenistic Gerasa. Although there is no evidence from excavations to allow for any firm base to this supposition, it is perfectly reasonable to believe that the Roman Gerasa simply incorporated the eastern Hellenistic Gerasa within its walls, did not change its general layout at all and joined the two sides by the three roads already described above. The precise orientation of the Sanctuary of Zeus somewhat strengthens this belief as this, the most ancient sanctuary in Gerasa, overlooks the eastern city (figs. 35, 43, 44) (134), much the same as the Sanctuary of Bel at Palmyra overlooks the ancient, "clay city" built on the south side, instead of facing the regular street network of the Roman city (135).

Finally we should try to answer the question concerning the nature of Gerasa and the functions that the city fulfilled in the Province of Arabia. Was it indeed a "caravan city" as suggested by Rostovtzeff? Both the epigraphical material uncovered as well as the urban planning can answer some of these questions.

What we see is a large, well planned city, where the public sector is far greater in size than the residential area (137). The enormous construction projects financially supported by the citizens bear witness to the great wealth they had which could not have stemmed merely from agriculture, but must have emerged from international trade. (138). The large public structures - namely the three Theatres, the Hippodrome and the three ritual complexes must surely have served many other people besides the immediate citizens of the city. From the excavations it has become clear that there was a row of shops leading along the length of the main north-south axis from the oval plaza, around the circular plaza and to the Sanctuary of Artemis. This amount of shops definitely served a far greater population than that living permanently on the eastern side of Gerasa. All this points to the fact that Gerasa was a central city in the Province of Arabia, providing religious, cultural, trade and administrative services for a substantial population living in the environs of the City (139). Certainly its position on the Via Traiana Nova from where roads led to the Mediterranean ports turned this city into a major centre for international trade (140).

NOTES

1. I. Benziger R.E., s.v, Gerasa, colls. 1242-1245.
H. Bietenhard, "Die Dekapolis von Pompeius bis Traian", Z.D.P.V. 79 (1963), pp.24-51.
P. Thomsen, Loca Sancta, Halle, 1907, pp.51-52.
G.W. Bowersock, "A Report on Arabia Provincia", J. R. S. LXI (1971), pp. 219-242, Pls. XIV-XV.
M. Avi-Yonah, The Holy Land from the Persian Period to the Arab Conquest. Baker Book House, Michigan, 1966, pp. 175-177.

2. S. Mittmann, "The Romam Road from Gerasa to Adraa", A.D.A.J. XI (1966), pp. 65-87.
P. Thomsen, "Die Romischen Milesteine der Provinzen Syria, Arabia und Palaestina", Z.D.P.V. XL (1917), pp, 59-60 (Bosra - Gerasa). (See also note 100),

3. W. Tscherikower, Die Hellenistichen Stadtegrundungen von Alexander Dem Grossen bis auf Romerzeit, Leipzig, 1927, p.76.
A.H.M. Jones, The Cities of the Eastern Roman Provinces, Oxford, 1937, pp. 238-239, 252, 260-261.

4. There is a detailed review of the history of Gerasa in the introductory chapter to Kraeling's documentation of the excavations, see:
C.H. Kraeling (ed)., Gerasa - City of Decapolis, New Haven, 1938, (The History of Gerasa), pp.27-69.

5. Similar to other cities in this region, Gerasa was also influenced architecturally and culturally by the Nabataean presence, see:
C.H. Kraeling, Gerasa, The History of Gerasa (Nabataean Influence), pp. 36-39.
Temple "C", situated south-west of the vicinity of the Cathedral, is probably Nabataean and has aroused much discussion concerning the date of its construction and the ritual role it fulfilled, see:
C. S. Fisher, C.H. Kraeling, Gerasa, Temple C, pp. 139-148, plan XXII, Pls. XXVIIIc-d, XXIX, XXXa-b.
J.W. Crowfoot, "Recent Work Round the Fountain Court at Jerash", P.E.F. 1931, pp. 143-154, pls. I-IV.
C.C. McCown, "Goddesses of Gerasa", A.A.S.O.R. XIII (1931-1932), pp. 129-164.
idem, "A New Deity in a Jerash Inscription", J.A.O.S. LIV (1934).
R.F. PVincent, "La Dieu Saint Paqeidas a Gerasa", R.B. LXIX (1940), pp. 98-129.
A study of the architecture and structural direction of Temple "C" show that it was constructed prior to the establishmemt of the street network. With reference to the Nabataean epigraphical finds, see:
C.B. Welles, Gerasa, The Inscriptions (Inscription Honouring A Nabatean King), pp. 371-373.
With reference to the Nabatean numismatic finds, see:
A.R. Bellinger, Gerasa, Coins (Nabatean Coins), p. 498.

6. Most of the buildings in Gerasa have been reliably dated. All the epigraphic material, including inscriptions found in the area prior to

excavations, have been recorded by Welles in his report on the excavations, see:
C.B. Welles, Gerasa, The Inscriptions, pp. 355-494.
With reference to new inscriptions uncovered over the last few years, see:
P.L. Gatier, "Inscriptions religieuse de Gerasa", ADAJ 26 (1982), pp. 269-275.
P.L. Gatier, "Nouvelles inscriptions de Gerasa", Syria LXII (1985), pp.297-312.
The numismatic material was also all recorded in a concentrated form in the final report, see:
A.R. Bellinger, Gerasa, Coins, pp. 497-503.
See also:
G.F. Hill, Catalogue of the Greek Coins of Arabia, Mesopotamia and Persia, London, 1922, (Gerasa, p. XXXII, pp,31-32, Pl. V4-6).
A. Spijkerman, The Coins of the Decapolis and Provincia Arabia, Franciscan Printing Press, Jerusalem, 1978 (Gerasa - pp. 156-167).

7. Gerasa's central role in the Christian world of that period can be seen from the number of its important citizens who are mentioned in the literature of that period, see:
C. H. Kraeling, Gerasa, History of Gerasa, pp. 62-67.
The main archaeological finds of the period include 11 churches spread all over the city, see:
J.W. Crowfoot, Gerasa, the Christian Churches, pp. 171-262.
C.S. Fisher, Gerasa, Buildings of the Christian Period. pp.265-294.

8. C.H. Kraeling, Gerasa, The History of Gerasa, pp. 68-69.

9. W.F. Stinespring, Gerasa, The History of Excavations at Jerash, pp. 1-10. This is an exact collection of all the references to the work completed in the city until the year 1937.

10. G.L. Harding, "Recent Work on the Jerash Forum", P.E.Q. 81 (1949), pp. 12-20, Pls. 1-11.
F.S. Ma'ayah, "Recent Archaeological Discoveries in Jordan (Jerash)", A.D.A.J. IV-V (1960), pp. 115-116.
H. Kalayan, "Restoration in Jerash", A.D.A.J. XXII (1977-78), pp. 163-171.
H. Kalayan, "Restoration and clearance in and around the Temple of Artemis compound in Jerash", ADAJ XXV (1981), pp. 331-334.
E. Will, "Remarques preliminaires a de nouvelles fuilles a Djerash", Syria LX (1983), pp. 133-145.
G. Gullini, R. Pierobon, R. Parapetti, M. Piazza, "Gerasa I, Report of the Italian Archaeological Expedition at Jerash, Campaigns 1977-1981", Mesopotamia XVIII-XIX (1983-1984), pp. 1-134, figs. 1-65.
R. Parapetti, "Jerash-Gerasa: Urban environment of Two Antagonistic Towns", in A. Hadidi (ed.), Studies in the History and Archaeology of Jordan II, Amman, 1985, pp. 243-247.

11. Most of the aerial photographs used in this book were taken by the British Air Force during the 1930's and 40's and made available to the author by the Israel Department of Antiquities.

12. C.H. Kraeling, Gerasa, Pl. Ia.

13. G. Schumacher, "Dscherasch", Z.D.P.V. XXV (1902), pp. 111-206, tafel 6. The latter is an all encompassing review of the area conducted prior to the

excavations. As far as the existence of further gates is concerned, even the aerial photographs do not allow us to pinpoint their situations with any certainty.

14. Gerasa, Pl. XXIVa. - See also Ray's drawings.
E.G. Ray, Voyage Dans Le Hauran (Atlas), Paris, 1858, Pls. XIX-XX, XXI.

15. Butler displays an excellent photograph of the southern bridge which has been well preserved, see:
H.C. Butler, F.A. Norris, E.R. Storver, P.U.A.E.S., Geography and Itinerary, P. 9, ill. 11
There was most likely another two bridges:
a) The Processional Bridge leading from the residential quarters on the east side of the city whose remains can be seen looking east, see:
Gerasa, Pl. XXIVa.
b) A bridge which carried the northern east-west street over the river (see fig. 43). Neither the excavators of Gerasa nor Schumacher mention the existence of this bridge which seems to have been totally destroyed.

16. Two further terraces lie west of the first one and, while the transition between the first and second terrace is clearly emphasised that between the second and third is barely noticeable.

17. See note 15, see also:
Gerasa, Pl. IIIa.

18. C.S. Fisher, Gerasa, pp. 153-158, Pl. XXIIa.
See also discussion concerning the oval plaza, p. 30.

19. C.H. Kraeling, Gerasa (The South Tetrapylon), pp. 103-116, Pls. XVIIIa, XIXa. See discussion on the South Tetrapylon, pp. 25-26.

20. G. Schumacher, Dscherasch, pp. 145-150, Figs. 18-19, 22.

21. C.H. Kraeling, Gerasa Pl. XXXIIa.
The orientation of the Zeus Sanctuary towards the street network, its position and the fact that the oval plaza fits along the facade of the lower terrace, all point to the fact that this compound existed at the time the city plan was determined. Epigraphical evidence also shows that the sanctuary was constructed in the Ist cent. C.E. (see: C.B. Welles, inscr. 5-6). The Temple of Zeus stood on the upper terrace which was joined by a flight of steps to the lower terrace. It is similar to many other Hellenistic sanctuaries, such as the Sanctuary of Asklepios on the island of Kos (fig. 83), the Sanctuary of Athena in Lindos (fig. 84), the Sanctuary of Hercules in Tivoli (fig. 85) and the Sanctuary of Fortuna Primigenia in Praeneste (fig. 86).

22. With reference to the Temple of Zeus, yet to be excavated, see:
G. Schumacher, "Dascherasch", pp. 137-141, Figs. 11-12.
C.S. Fisher, Gerasa, Description of the Site, pp. 17-19, Pl. IVb.
Much preservation and restoration has been carried out in the vicinity of the Sanctuary of Zeus over the last few years, see:
J. Seigne, "Le sanctuaire de Zeus a Jerash: elements de chronologie", Syria 62 (1985), pp. 287-295.

23. C.B. Welles, Gerasa, inscr. 11, p. 380.

24. See discussion on the Temple of Artemis, note 70, pp. 28-29.

25. The French scholar Robert Amy was the first to discuss the architectural problems concerning the staircase towers and their function in the temples, see:
R. Amy, "Temple a Escaliers", SYRIA XXVII (1950), pp. 82-136.
He mentions 39 temples in Syria, Lebanon and the Eastern side of the Jordan River where the antas of the facades have been changed to square corner towers. In most cases the flight of stairs was situated in only one of these towers and the other was constructed merely to create a feeling of symmetry. Amy believes these staircase towers to have some connection to a religious ceremony as although they are widespread throughout the Provincia Arabia and bordering areas, they have only been discovered within ritual structures. However, such stairwells may also been seen in theatre and baths of Philippopolis as well as (although not in this region) in the theatre at Aspendos. See:
M. Bieber, The History of Greek and Roman Theater, Princeton, 1961, pp. 208-209, Figs. 700-705, note 36.
In his article on staircase towers in Nabataean architecture, Prof. A. Negev points out that these may be found both in ritual and in private buildings and that they stem from a much earlier date than those mentioned by Amy. From this he concludes that the origin of the staircase towers may well have been in Nabataean architecture where there was an intermingling of Classical and local styles. The Nabataeans were master builders and their influence in architecture spread far and wide over a long period. See:
A. Negev, "The Staircase-Tower in Nabataean Architecture", R.B. LXXX (1973), pp. 364-383.

26. G. Schumacher, "Dscherasch", pp. 141-145, Fig.s 13:17.
C.S. Fisher, Gerasa, pp. 19-20, Pl. Va-b.
Inscriptions nos. 51 and 52 pointed to the construction of the South Theatre of Gerasa during the reign of Domitian. Two more inscriptions uncovered in March 1974 within the grounds of the theatre also mention Domitian and date the theatre to the years 90-92 C.E. See:
A.A.S.O.R., Newsletter, 4 October 1974.

27. In the Greek and Hellenistic traditions theatres were often erected alongside ritual compounds. For example see: The Dionysos Theatre close to the Arcopolis in Athens, the theatre in Delphi and in Pergamon. See:
a. With reference to the Dionysos Theatre in Athens, see:
J. Travlos, Pictorial Dictionary of Ancient Athens, London, 1971, pp. 537-552, Figs. 676-690.
b. With reference to the theatre in Delphi, see:
P. Coste-Messeliere, Ch. Picard, Delphi, Paris, 1943, pp. 317-332, Figs. 25, 198-199.
c. With reference to the theatre at Pergamon, see:
R. Bohn, Pergamon IV, Die Theater-Terrasse (Tafeln), Berlin, 1902, tafeln I, IV, XLV.

28. In 1925-26 the Nymphaeon was partially cleared by Horsfield but a major excavation has never been held on this site, see:
G. Horsfield, "Jerash: Annual Report on Works of Conservation, 1925-1926", T.J.A.B., 1926, p.2, Pl. I, IIa.
C.S. Fisher, Gerasa, pp. 21-22, plan XXVIII, Pl. VI.
The Gerasa Nymphaeon belongs to a large group of similar structures found in almost all the cities of Syria and Arabia. With reference to the nymphaeon at Bostra see chapter 3, p.55; with reference to the nymphaeon at

Philadelphia see chapter 1, pps. 8-9; note 26 is a short comparison of the nymphaea in Syria, Arabia and Asia Minor.

29. G. Schumacher, "Dacherasch", pp. 145-150.
C.S. Fisher, Gerasa, pp. 22-23, Pl. IIc.
An inscription found close to the site of the North Theatre dates the building to the period of Marcus Aurelius (inscription no. 65, p. 415). The site on which the two theatres were erected conform to the urban planning of their periods. The earlier of the two, the South Theatre, erected in the days of the Emperor Domitian (see note 26) was situated close to the ritual compound thus connecting it to the Hellenistic traditions (see note 27). The North Theatre, erected in the second half of the 2nd century C.E. stands close to what must have been the city's Forum (see p. 34). Roman tradition connected the theatre more with entertainment centres and therefore many city plans of this period show the theatre either alongside the Forum or situated further away from the city centre near the hippodrome or amphitheatre. In towns like Timgad, Augusta-Raurika (Switzerland), Ostia or Palmyra the theatres stand next to the Forum, see:
J.B. Ward-Perkins, Cities of Ancient Greece and Italy; Planning in Classical Antiquity, New York, 1974.
F. Castagnoli, Orthogonal Town Planning in Antiquity, M.I.T., 1971.
This is also the case in some of the cities in the Provincia Arabia such as Philadelphia and Philippopolis (see figs. 5, 155). In Bostra the Theatre and the Hippodrome are close to one another and situated outside of the city walls (fig. 107). An interesting example demonstrating the Roman concept of the theatre as an entertainment structure may be seen in Aizanoi where the Hippodrome and the Theatre have been constructed as a united complex. See:
M. Bieber, op. cit., p. 220, Figs. 743-744, note 62.
Th. Fyfe, Hellenistic Architecture, Cambridge, 1936, p. 160, Fig. 48.
The Amphitheatre and the Theatre were sometimes incorporated into one building and used for different entertainment purposes. See:
A. N. Modona, Gli Edifici Teatrali Greci e Romani, Firenze, 1961, pp. 217-233.
It is also known that in some theatres the orchestra could be changed into a water pool: See:
G. Traversari, Gli Spectacoli in Aqua nel Teatro Tardo - Antico, Roma, 1960.

30. C.S. Fisher, Gerasa, p. 16.

31. The West Bath has only been partly cleared and no full-scale excavations have ever been held there. See:
G. Schumacher, "Dscherasch", p. 150, Tafel IV.
C.S. Fisher, Gerasa, p. 23, plan XXVII, Pl. VIb.

32. C.S. Fisher, Gerasa, p. 24, Pl. VIIa.

33. Inscription discovered among the mounds of ruins of the city also refer to structures that have not yet been discovered. See:
a) Inscription No. 15, p. 382 mentions the Temple of Serapis.
b) Inscription No. 17, p. 383 mentions the Temple of Paccidas.
c) Inscription No. 74, p. 408-409 mentions a portico the whereabouts of which is unknown.
d) Inscription No. 275, p. 469 mentions yet another portico.
e) Inscription No. 3, p. 374 mentions a Gymnasiarchus and we may therefore presume that a gymnasium also existed somewhere in Gerasa.

34. G. Schumacher, "Dacherasch", pp. 156-159, Figs. 29-32.
A.H. Detweiler, Gerasa, The Triumphal Arch, pp. 73-83, plans II-IV, Pls. VIII-XI.
See also chapter 3, note 28.

35. C.B. Welles, Gerasa, Inscriptions, incr. 58, pp. 401-402.

36. A.H. Detweiler, Gerasa, The Triumphal Arch, p. 81.

37. The additional structures as well as the introduction of an apparatus to close the entrance, would seem to be proof that a plan existed for the expansion of Gerasa, see:
C.H. Kraeling, Gerasa, History of Gerasa, p. 50.
A.H. Detweiler, The Triumphal Arch, p. 81.

38. A.H. Detweiler, op. cit., p. 81.

39. Schumacher believed the Hippodrome to be made up of two sections - a circus ring on the northern side and a Naumachia on the south, see:
G. Schumacher, "Dscherasch", pp. 159-161, Figs. 33-35, tafel VI.
A glance at the aerial photograph of Gerasa (fig. 35), clearly shows why Schumacher reached this division. The northern section of the Hippodrome is indeed an oval shaped arena separated from the southern part of the Hippodrome (compare figs. 41, 42). However, the theory of Miller appears a more likely explanation for this phenomenon. He explains that the northern section was changed by the Persians in the beginning of the 7th century to accomodate their polo games, see:
E.B. Miller, Gerasa, The Hippodrome, pp. 85-100, plans VI-XI, Pls. XII-XVII.

40. Only a few Hippodromes have been discovered in cities in Palestine, Syria and Arabia. The two closest to that in Gerasa are in Caesarea and Bostra. That in Caesarea measures 480 metres long. See:
A. Frova, Scavi di Caesarea Maritima, Milano, 1965, pp. 33-34, Figs. 1, 9.
A. Reifenberg, "Caesarea, A Study in the Decline of the Town", I.E.J. 1 (1950), p. 25.
The hippodrome at Bostra measures about 440 metres in length, see:
H.C. Butler, P.U.A.E.S., Bostra pp. 275-276, plan 1.
Neither of these 2 Hippodromes have ever been excavated and they are known to us only from surveys done in the areas. It is possible that the structure called the stadium in Philippopolis is in fact a small Hippodrome measuring only 200 metres in length. See chapter 4, note 35. The Hippodrome in Antioch is the largest known in Syria - 492 metres long. See:
R. Stillwell (ed.), Antioch on the Orontes I, The Excavations of 1932, 1934, Princeton, 1934, pp. 34-41, Figs. 3-4.
Hippodrome in Gerasa was smaller in comparison to most mentioned here. For an encompassing review of the Hippodrome in Israel, Syria and Arabia, see:
J. H. Humphrey, "Prologomena to the Study of the Hippodrome at Caesarea Maritima" B.A.S.O.R. (1974), pp. 2-45.
A more recent discovery is the Hippodrome in Nablus-Naepolis (Shechem), but details of it have not yet been published.

41. E.B. Miller, Gerasa, The Hippdrome, Pl. XIVb.

42. idem., op. cit., p. 89 (Section E), Pl. IX.

43. Idem., op. cit., pp. 89-100.

44. G. Horsfield, Gerasa, Appended Note on the Hippodrome, pp. 100-102. Kraeling bases his dating of the Hippodrome to the beginning of the 3rd century C.E. on the epigraphical evidence (inscription no. 59, p. 402).

45. A.H. Detweiler, Gerasa, The South Gate, pp. 149-152, plan XXIII, Pls. XXXb-XXXIb.

46. Idem., op. cit., p. 151.

47 Idem., op. cit., pp. 151-152.

48. Idem., op. cit., p. 152.

49. C.H. Kraeling, Gerasa, The South Tetrapylon, pp. 103-115, plans XII-XVI. Pls. XVIII-XXI.

50. The pyramid-shaped structures decorating the upper section of the Tetrapylon were reconstructed by Mr. Merrill and are the results of his imagination, (see fig. 71).

51. C.H. Kraeling, Gerasa, p. 109.

52. There were probably 2 stages in the development of the southern crossroads from an ordinary junction and to an oval city plaza. See also discussion concerning the town plan of Gerasa, pp. 32-34.
With reference to the Tetrapylon itself see discussion in chapter 4 on the Tetrapylon in Philippopolis, p. 82, note 29.
A similar oval plaza was recently uncovered in Antioch. It is also situated at the junction of the main north-south and east-west streets. See:
Y. Lassus, Antioch on the Orontes-V, Princeton, 1972, pp. 13-15, pl. V. note 5, (les Portiques D'Antioche).

53. A.H. Detweiler, Gerasa, The North Gate, pp. 117-123, plans XVII-XX, Pls. XXII-XXIII.

54. C.B. Welles, Gerasa, Inscriptions, inscrs. 56, 57, p. 401.

55. A similar solution, where a gate was constructed to incorporate the connection of 2 street, can also be found in Palmyra. The meeting point of the two sections of the great colonnade was marked by a Triumphal Arch, similarly constructed to the Northern Gate at Gerasa. See:
Th. Wiegand, Palmyra, Berlin, 1932, (Tafeln), tafel II (see fig. 89).

56. G. Schumacher, "Dscherasch", pp. 130-137, Figs. 5-10, tafel 9.
C.S. Fisher, Gerasa, The Temple of Artemis, pp. 125-138, plan XXI, Pls. XXIV-XXXVIIIb.

57. The Sanctuary of Artemis joins a row of similar religious sanctuaries constructed in this region from the late 1st century C.E. to the 2nd century Such as the Temple Mount in Jerusalem, the Bel compound in Palymyra, the Jupiter compound in Damascus and the compound on the Acropolis of Philadelphia. These are all characterised by: a propylaea complex leading to a central, large courtyard which is surrounded by porticos and in the centre of which stands the temple itself. See discussion on compound in Philedelphia - chapter 1, note 12, also note 21 above.

58. The area encompassed by the Artemis compound measures at 34,000 sq. metres, see:
C.S. Fisher, Gerasa, The Temple of Artemis, p. 125.
To compare note:
The Jerusalem Temple Mount - 144,000 sq. metres (fig. 87).
The Bel Sanctuary - 35,000 sq. metres (fig. 88).
The Jupiter Sanctuary - 124,000 sq. metres (fig. 91).
The Philadelphia Sanctuary - 56,000 sq. metres (fig. 8).

59. C.H. Kraeling, Gerasa, pp. 52-53.
It is known from historical sources that the construction of the Temple Mount in Jerusalem took even longer. See:
A. Shalit, Herod the King, the Man and his Work, Bialik Inst., Jerusalem, 1960, pp. 194-206 (Hebrew).
The compoound at Palmyra was built between the years 44 B.C. and 175 C.E., see:
J. Cantineau, "Textes Palmyreniens provenants de la Fuile du Temple de Bel", SYRIA 1931 (XIV), p. 121.
idem., Inventaire des inscriptions de Palmyre, fasc. IX, Damas, 1936 (nr. 1).
idem., "Tadmorea", SYRIA 1933 (XIV), pp. 170-174.
The construction of the Jupiter compound at Baalbek continued from the days of Augustus until the middle of the 3rd century A.D., see:
G.L. Harding, Baalbeck, Beirut, 1963, p. 17.
Th. Wiegand, B. Schulz, H. Winnefeld, Baalbek, Berlin, 1921.

60. R. Parapetti, "The Sanctuary of Artemis at Jerash - an architectural Survey", ADAJ XXIV (1980), pp. 145-149.
H. Kalayan, "A Symmetry and Harmonic Proportions of the Temples of Artemis and Zeus at Jerash; and the origin of Numerals as used in the Enlargment of the South Theatre at Jerash", in A. Hadidi (ed.), Studies in the History and Archaeology of Jordan I, Amman, 1982, pp. 255-260.

61. C.B. Welles, Gerasa, The Inscription, inscrs. 146 (p. 426); 147 (p. 426).

62. This section of the wall is easily seen, see:
Gerasa, Pl. XXIVb.

63. Gerasa, Pls. XXIVb, XXVa.
The propylaea complex in Gerasa is remarkably similar to that in Philadelphia as far as the size and decorations are concerned. See discussion on propylaea in Philadelphia, chapt. 1, note 15, p. 7.

64. G. Horsfield, "Jerash, Annual Report", T.J.A.B. 1 (1926), Pl. IV.

65. C.B. Welles, Gerasa, The Inscription, inscr. 60, pp. 402-403, this inscription dates to 150 C.E.

66. Gerasa, Pl. XXIVb.

67. Gerasa, Pl. XXVIa.

68. A similar arrangement of halls and exedras around the temple courtyard may be seen in other temples mentioned above. See notes 21, 57, 58.

69. G. Schumacher, "Dscherasch", pp. 130-137, Figs. 7-10.
C.S. Fisher, Gerasa, The Temple of Artemis, pp. 133-138, plan XXI, Pls. XXVII - XXVIIIb.

70. The construction of a temple podium on a series of barrel vaults is typically Roman in style. In Rome, in the "Forum Holitorium", there are 3 temples standing close to one another which stand on podia built in this manner, See:
E. Nash, Pictorial Dictionary of Ancient Rome I, London, 1968, pp. 418-423, Figs. 512-515.
It is important to point out the combination of a purely Roman element of construction such as the series of vaults with a local and probably Nabataean form of construction such as the staircase tower in the left anta of the cella (see note 25). This shows the definitely eclectic nature of architecture in Provincia Arabia, see chapter 5, pp. 103-113.

71. See note 25.

72. See notes 21, 57, 58.

73. See concluding discussion concerning the city plan of Gerasa. (Also see chapter 5), pp. 31-35.

74. J.W. Crowfoot, "Recent Work Round the Fountain Court at Jerash", P.E.Q. 64 (1931), pp. 143-154, Pls. I-VI.
idem., Gerasa, The Building Round the Fountain Court, pp. 201-208, Figs. 3-4, plans XXIX - XXXI, Pls. XXXVI - XL.

75. Gerasa, plan XXX.

76. The excavators are of the opinion that these remains are clearly from the 1st century C.E. See:
J.W. Crowfoot, Gerasa, p. 208, Fig. 4.
idem., P.E.Q. 64 (1931), p. 145, Pl. 112.
There is no way of verifying this argument, but if true, it throws much light on the development of the urban plans of the city.

77. G. Schumacher, "Dscherasch", pp. 128-129, Fig. 4.
C.S. Fisher, Gerasa, The "Forum", pp. 153-158, plan XXIV, Pls. XXXII - XXXIII.

78. J.L. Burckhardt, Travels in Syria and the Holy Land, London, 1822, pp. 256, 257 (see also ill. 31).

79. G.L. Harding "Recent Work on the Jerash Forum", P.E.Q. 81 (1949), pp. 12-16, Pls. I-II, XXIII.

80. C.S. Fisher, Gerasa, The "Forum", p. 154.

81. idem., op. cit., pp. 155-156.

82. idem., op. cit., pp. 156-157.

83. The oval city plaza was built some time after the Sanctuary of Zeus. The gate marking the junction of the main north-south street with this plaza is probably later than the Ionic colonnade of the plaza. The architectural decoration of the gate is Corinthian and it was probably constructed at the

time that the capitals of the colonnade running along the street were all changed from Ionic to Corinthian - probably to suit the changes made when the Sanctuary of Artemis was built during the 2nd century C.E.

84. A similar, although much smaller, city oval plaza may be seen close to "Damascus Gate" in Palmyra. Its importance lies mainly in the rich architectural decorations on it, see:
Th. Wiegand, Palmyra, Berlin, 1932, tafel 10.

85. G. Schumacher, "Dscherasch", pp. 165-171, Figs. 39-42.
C.C. McCowan, Gerasa, The Festival Theatre at the Birketein, pp. 159-167, plan XXV, Pls. XXXIIIb - XXXVa.

86. C.B. Welles, Gerasa, Inscriptions, inscr. 279, pp. 470-471.
P. Thomsen, Loca Sancta, Halle, 1907, pp. 51-52.

87. C.C. McCown, Gerasa, p. 164.

88. C.B. Welles, Gerasa, Inscription, inscrs. 197, p. 446; 198, p. 446; 153, p. 428.

89. C.C. McCown, Gerasa, p. 159.
R. Stillwell (ed.), Antioch on the Orontes II, The Excavations 1933-1936, Princeton, 1938.
D. Wilber, The Plateau of Daphne, pp. 49-56.
idem., The Theatre of Daphne, pp. 57-94.

90. See note 11.

91. The excavators of Gerasa were probably correct to rely on an inscription found in the north-western gate of the city (see C.B. Welles inscription 50) which confirms that the city's urban plan was formed in the second half of the 1st century C.E. at the very latest.

92. C.H. Kraeling, Gerasa, p. 41.

93. The following argument referring to the urban character of the city is somewhat surprising:
"With its axial 'cardo' crossed at right angles by 'decumani', it represents the typical Roman adaptation of the Hippodamian city plan found elsewhere in the East, above all at Palmyra and in the later cities of Bostra and Philippoplis".
C.H. Kraeling, Gerasa, The History of Gerasa, p. 41.
All the cities mentioned by Kraeling present different city plans. Philippopolis was established in the middle of the 3rd century C.E. and its plan is definitely not "an adaptation of the Hippodromian city plan". The Roman city of Bostra was built alongside a more ancient Semitic city and its plan was definitely moulded by existing urban structures which were taken into consideration with the development of the city.
Palmyra, on the other hand, grew slowly, stage by stage, over a long period. Thus Kraeling's comparison between Gerasa's city plan and those of the towns mentioned above, is not relevant. Each of these cities has its own individual city plan and a phrase such as "Roman adaptation of Hippodamian city plan" is meaningless in the urban reality of Arabia. See chapter 5.

94. See note 6.

95. C.H. Kraeling, Gerasa, The History of Gerasa, p. 41.
C.B. Welles, Gerasa, The Inscriptions, inscrs. 2-4, 17, 27.
These inscriptions refer to structures not yet found.

96. The Sanctuary of Zeus, inscriptions 5, 6, 7, 8.
The Southern Theatre, inscription 52, see also note 26.

97. Inscription 49, from the year 67/68 C.E.
Inscription 28, from the year 79/80 C.E.
See also discussion on the Cathedral precinct pp. 42-43, notes 74-76.

98. Inscription 17.

99. C.H. Kraeling, Gerasa, The History of Gerasa, pp. 44-45.

100. C.B. Welles, Gerasa inscrs. 56, 57.
The completion of the roads running from Pella to Gerasa and from Gerasa to Philadelphia (during the reign of Hadrian) added much importance to the city now situated on a major intersection of the trade routes in Provincia Arabia. Gerasa was now at the junction between the Via Traiana Nova and the cities along the coastal plain in Palestine - Acre (Ptolemais) and Caesarea (see fig. 1).
M. Avi-Yonah, The Holy Land from the Persian Period to the Arab Conquest, Baker Book House, Michigan, 1966 (The Roman Road System, pp. 181-187, map 24).

101. C.B. Wells, Gerasa, inscr. 58.

102. C.H. Kraeling, Gerasa, p. 50.
See also discussion on South Gate, pp. 35-36.

(Please note 103 missing)

104. C.B. Welles, Gerasa, inscrs. 60, 63.

105. Three inscriptions from the propylaea complex on the east side of the north-south street have been discovered, See:
C.B. Welles, Gerasa, inscrs. 64, 146, 167.

106. These changes were accompanied by inscriptions, all originating in the 2nd century C.E. See inscription: 78, 80-85, 102-104.

107. Inscription 11.

108. Inscription 65.

109. Inscription 69.

110. C.H. Kraeling, Gerasa, p. 54.

111. Inscription 40.

113. Inscription 219.

114. The oldest inscription uncovered so far in the open ritual area to the north of the city is from the days of Geta (209-211 C.E.), see inscription 153.

115. With reference to the East Bath see inscription 16.
It appears that the hippodrome was erected in the 3rd century C.E., although there is a difference of opinion on this matter between Horsfield and Miller. Kraeling's epigraphical evidence would seem however to determine the later date as the more likely of the two. (See inscription 59).

116. C.B. Welles, Gerasa, inscriptions: 153, 197, 198.

117. Idem., op. cit., inscr. 150.

118. C.H. Kraeling, Gerasa, The South Tetrapylon, pp. 103-115, Pl. XII, C.B. Welles, Gerasa, inscrs. 105, 106.

119. See previous note, pp. 114-115, see also p. 104, note 5.

120. Orderly town plans like that of Priene or Miletus are divided into definite functional areas, but these are remarkably close to each other and the movement from one area to another can hardly be noticed See:
G. Kleiner, Die Ruinen von Milet, Berlin, 1968, pp. 48-56, Figs. 14, 27-29, 31, M. Schede, Die Ruinen von Priene, Berlin, 1965, pp. 11-21, Figs. 10-12, plan 1.

121. An aerial photograph (see fig. 35) shows that the western part of the east-west street in the south of the city was cleared as well as an area running from the Tetrapylon to the bridge (see fig. 35). The northern east-west street was not cleared of rubble and the line of the street has been marked by the excavators according to some of the columns which made up the colonnade running the length of the street.

122. See note 15.

123. Gerasa, Pl. XXIVa.

124. Gerasa, History of Excavations, pp. 1-10.
Gerasa, Description of the Site, p. 17.
Gerasa, The Forum, pp. 153-158.

125. The same architectural solution has been used to solve the problem of the angle of the North Gate as was used in the formation of the oval plaza. (See figs. 42, 72). See also discussion concerning the North Gate, p. 26, note 53.

126. M. Rostovtzeff, Caravan Cities, Oxford, 1932, p. 27.

127. Gerasa, pp. 153-158.

128. See discussion on the Sanctuary of Artemis pp. 26-29, notes 57-58.

129. See discussion on the Nymphaeon, p. 23, note 28.

130. See discussion on the "Cathedral Precinct", p. 29, notes 74-76.

131. In Rostovtzeff's opinion this is where the Forum was probably situated, see:
M. Rostovtzeff, op. cit., p. 82.

132. Gerasa, Pl. VIIa.

133. A cautious estimate shows that the residential area of Gerasa spread out over 138,000 sq. metres which is only 17% of the total city area.

134. See p. 23, notes 21-23.

135. With reference to the history of the urban development of Palmyra, see:
D. Schlumberger, "Le Development Urban of Palmyre", BERYTUS 1935 (2), pp. 149-162.
A.v. Gerkan, "Die Stadtmauer von Palmyra", BERYTUS 1935 (2), pp. 25-33.
M. Gawlikowski, Palmyre (Fouilles polonaises) VI: Le Temple Palmyrenien, Warszawa, 1973.
M. Rostovtzeff, op. cit., pp. 55-90.

137. See note 133.

138. See chapter 5, pp. 103-113.

139. The Maiumas Festivals were of obvious importance as they are extensively mentioned both in Pagan and in Christian sources, See:
C.C. McCown, Gerasa, The Festival Theatre at the Birketein, pp. 159-167.

140. See notes 2, 100.

CHAPTER III

BOSTRA

Introduction

During the first centuries of the common era Bostra was the largest city in the area south of Damascus and east of the Jordan River. It has never been abandonned and its population today numbers 15,000 (fig. 108) (1). The city lies at an altitude of 800 metres above sea level and is situated at the eastern end of the great Hauran (Auranitis) plain lying at the foothills of the south-western region of the Hauran (Auranitis) mountains. It is about 160 kms away from Jerusalem and 125 kms away from Damascus (figs. 1, 101). The town is surrounded on the west, north and south by extremely fertile lands and on the east by volcanic hills (fig. 102). Bostra has always been strategically placed on an important crossroad in this area (figs. 101.102). In these early days five major highways led from the city to other important areas: Two moved in a northerly direction - one in a straight line towards Damascus through Ledja, and the other westwards circumventing Ledja but also in the direction of Damascus. The latter thereafter turned towards the coast. A third route went west from Bostra to Der'a (ancient Adraea), Gadara, Scythopolis and eventurally to the coast. The most important route going south was the Via Traiana Nova which moved through Philadelphia to the Red Sea, and was by far the most vital of all the roads within the region ruled by Rome in the East (2). The fifth highway ran in a straight line from Bostra to Saccaea (Salchad) but where it continued thereafter is still unclear (fig. 102). Thus the city presented an important and central point of control for the Romans as far as their rule in the Provincia Arabia was concerned. Added to this, the town was abundantly supplied with water either from natural springs in the immediate vicinity or from estuaries of the mountain rivers (fig. 102) and consequently, agriculture always flourished and the inhabitants never lacked in supplies.

Bostra had been an important centre even prior to Roman rule and after the disintegration of the Seleucid Empire, various other nations fought for its control (3). Although it reached its zenith during Roman rule, when it became the capital for the Provincia Arabia, its importance never waned in later periods. It became a bustling Christian centre and later a flourishing and powerful Moslem city (4).

Visiting researchers visited Bostra from the 19th century onwards (5). Descriptions in this chapter are based mainly on the surveys conducted by Butler, Brunnow and Domaszewski. Bostra has never been properly and systematically researched and only the Theatre and a few other monuments have been scientifically excavated and restored over the last few years (6). Most of the ruins seen today on the surface originate from the Byzantine and Moslem periods and only the minority are Roman. Many of the monuments described by visitors of the 19th century have been covered by more recent Arab structures and are no longer visible. We therefore have to rely on the written accounts and graphic illustrations of these surveyors. On the other hand a study of aerial photographs affords us an interesting view of the city plan and its urban character (fig. 108).

What follows is a description of the general outline of the city, a description of its major monuments known today as well as a more detailed look at the city plan.

A General View of the City

Butler was the first to take exact measurements and to map out a plan of the city (fig. 106). It is this plan which, although somewhat corrected and changed by our theories, has nevertheless provided a basis for the work that follows here (fig. 107). Prior to and naturally after Butler, other plans were produced by investigators, but these are far from exact and often even misleading (figs. 103-105) (7).

Bostra's city outline is irregular. The city planners made an obvious attempt to create a regular street network. However, on coming into contact with an urban reality existing prior to their arrival on the scene, they were forced to plan the street grid differently. Therefore, although the streets run in straight lines, they are not parallel to one another (fig. 109). It appears that the entire town was encompassed by a wall which can be clearly seen running along the western and northern sides. The two main gates to the city on these sides have been well preserved as have three other more minor entrances along the north-western section of the wall. One may presume that there were additional gates and entrances to the town, but these have yet to be uncovered.

Butler managed to follow the lines of a few major colonnaded streets in the town (fig. 106). The main east-west street began at the west gate and ended at the Triumphal Arch which stood at the foot of the Acropolis on the east side of the city. The Acropolis, Bostra's ritual centre, was situated on a raised section in the east (figs. 106-108). The main north-south street ran from the north gate to the crossroads of the east-west street. A street network, although not regular in design, was created by a number of other streets running more or less parallel to these main streets.

A large city reservoir is situated on the south-east side of the city and today still stores a considerable amount of water throughout most of the year. Another reservoir was found still further east, about 300 metres outside of the city limits (fig. 108). The Hippodrome is situated on the south-west side and although only few remains have survived the years, its outline may clearly be seen in the landscape (fig. 108). Yet another depression on the north-west side of the city, clearly artificially created, has been called the "Naumachia" by researchers. Two springs emerge from the bottom of this basin (fig. 106).

Architectural remains surveyed in Bostra include: Sections of the walls, city gates, the south reservoir, parts of the colonnaded streets, the main Triumphal Arch, the east Triumphal Arch, remains of Temples, Nymphaeon, the Kalybe, a Palace, a Bath, Basilica, sections of the Forum, the Theatre and one Mausoleum. A short description of these structures will follow.

The Nabataean Heritage in Bostra.

Roman Bostra is constructed partly alongside and partly above the Nabataean town of the same name. Little remains of the earlier town but, without doubt, its urban reality influenced the design and plan of the Roman city. It is difficult to form a picture of the nature of the Nabataean town which itself stood on an even more ancient Semitic settlement of Bostra, but there does not appear to have bneen any attempt at creating a regular town plan (9). Those structures that remain in the field that may defenitely be

related to the Nabataean period are all connected to sacred buildings. It would be safe to presume, however, that a full scale excavation would reveal other Nabataean monuments. Twenty-two Nabataean inscriptions were uncovered among the ruins of the city (10). East of the Eastern Triumphal Arch stands an engaged column with a particularly large and impressive Nabataean capital. The building that this column belonged to must have been of enormous proportions as the orginal half column itself measured about 10 metres in height (fig. 113). (11). About 100 metres east of this column stood the remains of yet 4 more similar colums (fig. 114). It is virtually impossible, however, to reconstruct the structure that they belonged to as they are all still mainly covered up by earth. They may possibly have been part of a monument gate, in some way connected to the huge column not far away (maybe a propylaea complex), which preceded the sacred precinct of the city (figs. 106, 107) (12).

The City Walls (figs. 106, 108) (13).

Today the city wall can only be clearly seen in certain areas because many of its stones were re-used during the Middle Ages when a fortress was constructed around the theatre. Those sections that remain bear witness to the high standard of building used in the construction of the walls which were 4 metres in diameter with well dressed hewn stones on both sides. The interior was filled with rubble. In some areas the Roman wall stands on the base of a Cyclopic (Polygonal) wall from an earlier date (14). The wall runs in an irregular manner probably as a result of both the topography of the area as well as the physical presence of structes which already existed prior to its construction. In the south and east it is difficult to follow the line of the wall and no real solutions are offered by researchers who seem to be satisfied with their presentation of the walls in a schematic town plans (figs. 103-105). An attempt has been mader here (fig. 107) (15), based on aerial photographs, to follow a possible route taken by these walls.

The City Gates (figs. 115-118) (16).

Today we can see only two major and three minor gates along the western and north-western city walls. The West Gate is the better preserved of the two larger gates and its plan is clearly discernible. It is made up of two square towers inside which stand two large piers supporting a vault above ther entrance way. Both the piers and the towers are decorated by flat pilasters. The vaulted entrance is very high - 10.5 metres. The facades on the east and on the west were "lowered" by means of an arch which in turn supported a stone wall blocking out the gap that remained between arch and vault. Butler believes that the reason for the constructing such a high vault was to ease the weight and help to support the structure rising above the flat roofs of the two towers (fig. 115) (17). The walls on either side of the passageway were adorned with a pair of pilasters in between which was a flat, vaulted niche and above which was a small pediment. In general, the simplicity of the decoration of this gate is quite remarkable - the pilasters have no bases and no capitals and there are few reliefs (figs. 117, 118). Yet the gate excells in its pleasant and solid design.

The measurements of the few remains of the North Gate bear witness to the fact that it was probably very similar in design to the gate described above (18).

The Reservoirs (figs. 106, 108) (19).

The town had two main reservoirs - the southern one situated close to the city, and the eastern one about 300 metres away from the city. The resevoir closest to the city has been well preserved and even today is filled with water most of the year round. There are various opinions concerning the dating of this reservoir. While Porter and Butler (21) believe it to be from the Roman period, Burkhardt claims it to belong to the Arab rule in the area (20). Butler feels that in design it is structurally similar to the city walls. In his survey he also discovered sections of the Roman aqueduct leading from the reservoir to the bath in the south of the city. This would seem to be a strong point in the favour of those dating the reservoir to the Roman period (figs. 106, 108).

The Colonnaded Streets (figs. 106, 109, 119-120) (22).

All Bostra's main streets were lined with colonnades (fig. 106). The streets themselves were about 8 metres wide and had 5.5 metre wide pavements on either side. These were covered by a roof which lay between the beams of the colonnades and the row of buildings alongside the street. It is possible to reconstruct this easily in certain areas where the facades of these buildings have remained intact in their original positions (figs. 119-120). All the colonnades were probably topped by Ionic capitals (23).

The East Triumphal Arch (figs. 121-124) (24).

Standing at the eastern end of the east-west street at the entrance to the Acropolis, this Arch has been well preserved and therefore allows us to reach a fairly accurate reconstruction of its architectural elements (figs. 106, 107). A high and large vaulted passageway as well as two smaller and lower vaulted entrances, stood between two towers (fig. 123-124). The eastern and the western facades were identical in design and decoration. The lower segment was decorated with flat pilasters and engaged columns on all 4 corners of the two towers. In the middle of each facade was a semi-circular niche, decorated on both sides by small pilasters supporting a false arch. On either side of these pilasters were two more engaged columns. All the pilasters as well as engaged columns had Nabataean capitals. The second part of the Arch was less elaborately decorated and included pilasters without bases or capitals in between which were semi-circular and square niches.

The interior of the vaulted passageway was also decorated in a similar fashion to that of the facades with pilasters, engaged columns and a semi-circular niche in the centre.

The upper structure has not been preserved, but we may accept Butler's reconstruction completed after finding architectural remains of this structure alongside the East Triumphal Arch (figs. 121, 124). The Arch was constructed during the first quarter of the 2nd century C.E.

The Central Triumphal Arch (figs. 125-127) (26).

This is yet another well preserved Arch standing near the main east-west street, with its northern facade parallel to it. On going through the main entrance of this arch one passed from the main street to the street leading to the Theatre (figs. 106, 107). There were three vaulted passageways - a central one flanked by two smaller ones. Butler, Brunnow and Domaszewski only saw the original bottom section of this Triumphal Arch. The central vault and the upper structure were re-built after the original had been destroyed. This was probably done at a much later stage and is either Byzantine or Arab (fig. 126). The corners of the four arch pillars were decorated by wide, flat pilasters topped by Corinthian capitals and on the northern facade of the pillars were decorative corbels on which stood little statues (fig. 126). The southern facade did not have these pilasters, and was decorated instead by two engaged columns on either side of the main passageway (fig. 127). While Brunnow and Domaszewski make no attempt to reconstruct this monumental arch, Butler suggests what it might have looked like, and believes it to have been a part of the southern colonnade of the main east-west street (fig. 127) (27).

The Central Triumphal Arch may be dated to the middle of the 2nd century C.E. and joins a row of similar structures built in Syria and Arabia during these years (28).

Remains of the Sacred Buildings (fig. 128) (29).

No Temples have so far been uncovered in Bostra although some remains of structures have been found that were undoubtedly used for ritual purposes. Most of these are situated on the Acropolis which was clearly the sacred area for the city. It is here that we find the two Corinthian Columns situated to the east and about 100 metres away from the East Triumphal Arch. One of these columns decorated by a Corinthian capital still stands in its original position and is impressive because of its height (figs. 106, 128). It is not possible to reconstruct a plan of this building as there is too much later construction on the same area. Sections of Nabataean built walls and statues bear witness to the fact that this was an important and well built structure (fig. 128) (30).

The remains of a church alongside this structure show that the area was considered sacred even during the Byzantine period (fig. 106).

The Nymphaeon (figs. 106, 129) (31).

The Nymphaeon is situated at the junction of the two main streets of the city. The facade with its four columns, stands diagonally to this junction, creating a triangular open area (figs. 106, 129). These columns were incorporated in the colonnades of both streets (fig. 129). They stand on high podia and there is a wider space between the two internal columns than been the outside ones. Butler's reconstruction relied mainly on sketches done by Rey and Laborde (fig. 104). Butler himself only saw the four main columns, all the other walls had already been destroyed (32).

The Kalybe Structure (figs. 106, 129-131) (33).

Opposite the Nymphaeon, at the far end of the main north-south street, stood a building named by Butler as the 'Kalybe'. All that remained of this building were the two end columns of the facade with a gap of 24.60 metres between them, and a section of the south wall (fig. 130). Another structure similar to this one may be seen in Philippopolis (34). The facade columns, as in the case of those in the Nymphaeon, were also incorporated into the street collonades (fig. 129). These two columns are remarkable for their shape as they are particularly narrow and tall, their relation of height to diameter being 13:1. No columns matching these have so far been found in Classical Architecture.

The plan of the Kalybe may be described as an open exedra in the centre of which was a semi-circle niche. This was flanked by diagonal walls, also decorated by niches, behind which stood two rooms. It is possible to reconstruct the positions of another 4-6 columns standing between the two unusually tall end columns of the facade (fig. 129).

The Palace (figs. 106, 132-134) (35).

South-east of the East Triumphal Arch on the Acropolis lies the Palace. Its long axis running north-south this building was 55 metres in length and 33 metres wide. It was built from the local basalt stones, well hewn and dressed, and there is no evidence of any cement having been used in the construction. Rooms were found along the south and north sides of the internal courtyard, while the eastern side was closed in by a smooth and strong wall in which was a very narrow opening. The main entrance to the palace seems to have been on the western side (fig. 132). Opposite the eastern external wall of the building stood a two storey high portico which could be reconstructed from remains scattered in the immediate vicinity (fig. 132) (36).

The main hall of the palace situated on the second floor was entered from the northern side. The room, similar in shape to the "triconchos", lent a monumental atmosphere to the entire structure (figs. 133, 134). Although Butler dates the palace to the first quarter of the 2nd century C.E., we believe it to be of a much later date - probably the 3rd or 4th centuries C.E. (37).

The South Bath (figs. 106, 137) (38).

The dense building from later periods in the area of the bath prevents us from seeing the full extent of this structure which stands opposite the Nymphaeon near the main east-west street and which was approached by way of a special side street (fig. 106).

The building has a T-shaped plan. One entered the bath from the north, through a portico of eight columns and thereafter entering the main hall, used as an Apodyterium through a double vaulted passageway (fig. 137, N). This room is octagonal in shape and its walls were decorated by semi-circular and square niches. A wide vaulted passageway led to the second hall which was also decorated with deep square shaped niches and was probably used as the Tepidarium (fig. 137, O). After this the bather

entered the Frigidarium, an even larger square hall (fig. 137, S). Symmetrically shaped rooms spread out to the west and east of this hall which were used as the Caldaria (fig. 137, T, R) and these in turn were flanked by two additional rooms (fig. 137, U, P).

The bath was clearly a sturdy, well built structure but it offered little in architectural decoration. It probably dates from the end of the second century or early 3rd century C.E. (39).

Three other baths have been discovered in Bostra but because of the few remains uncovered it is not possible to formulate a plan of these buildings (figs. 106, 139, 140), (40).

The Basilica (figs. 106, 141, 142) (41).

Situated in the north-east of the city the Basilica faces east with its apsis (fig. 106, 107). Even though the building was used during the Byzantine period as a church it would appear to have been built in the 3rd century C.E. to serve as a public and not as a religious structure (42). The building was entered via a high vaulted passageway in the western facade, the outside corners were decorated with engaged columns topped by Ionic capitals and the walls measured 1.30 metres thick. The apsis was entered through an arch which supported a wall with four windows. While the bottom half of the apsis was built of stone, the top section, in the shape of a half dome, was made of cement and only covered in stone (43). Light filtered into the main hall through eight windows in the north and south walls. A special colonnaded street connected the Basilica with the street network of the town (figs. 106, 107, 142).

The Forum (figs. 106, 143) (44).

Butler had called the area spreading out to the west of the main north-south street in the centre of the city - the "Marketplace" (fig. 143). Only a small section of this area has been studied and includes a decorative wall which separates the street colonnade from the open area to the west. This wall is smooth on the eastern side but decorated by various shaped niches on its western side. Still further west of this wall is a portico similar to the colonnade running along the main street. Twenty metres away stands a large structure, partially surveyed by Butler, which seems to be a big hall with a large number of piers supporting cross-vaults. This building probably had more than one floor (45) and was possibly only one small section of what might have been a huge urban complex in the centre of Bostra.

The Theatre (figs. 106, 108, 144-148) (46).

This is the only building in Bostra which has been excavated and even reconstructed over the past few years (47). All additional structures from the Middle Ages were removed and only the Medieval walls surrounding the structure were left in position (fig. 145). The moat which was built to protect the fortress which in turn was constructed around the Theatre, destroyed most of the structures surrounding the Theatre (48).

The Theatre seems to have been built on the outskirts of the city as

there was no other area suitable for it within the city walls (figs. 106, 108) (49). The Theatre was constructed on a flat stretch of land. The skenefrons had an attractive design and was particularly well decorated. Its facade originally probably stood four floors high. The first three have been well preserved while only parts of the fourth have survived the centuries. Columns decorated the facade thereby creating an even more impressive atmosphere (fig. 146, 147). The skene building was closed in by two walls (decorated with semi-circular niches) on either sides of the skenefrons and where the corners of these walls joined the skenefrons stood pilasters with Corinthian capitals (fig. 147). A decorative wall (proskenion) separated the orchestra from the elevated pulpitum, comprised semi-circular and square niches. The original floor paving of the orchestra has been preserved in its entirety (fig. 146).

The cavea consists of three horizontal seating blocks separated one from the other by diazoma: the bottom block (cavea ima) with 13 rows, the middle block (cavea media) with 19 rows and the upper block (cavea summa) with 6 rows of seats. Entrances (vomitoria), allowed movement in and out of the Theatre. A portico, only a section of which remains today, ran above and along the top row of seats and completed the design by joining up with the pilasters on either side of the paraskenia (versurae) (fig. 148). The cavea was constructed upon a series of three storeyed substructure vaults. The semi-circular back wall of the theatre, although still partly covered by sections of the Medieval fortress, is reminiscent of the Marcellus Theatre in Rome (fig. 149) (5).

The exact date for the construction of the Theatre is not known. A Nabataean inscription discovered on the site seems to strengthen the theory that it was probably built soon after Bostra became the capital of Provincia Arabia (51).

The Hippodrome (figs. 106, 108).

A modern highway cuts across the northern section of the ancient Hippodrome of Bostra which was situated outside the city walls, south-west of the Theatre (fig. 108). Despite the fact that the grounds within the hippodrome are now divided up into agricultural tracts of land, the shape of the structure is still easily recognizable. A few remains of the seats which were found by Butler still in their original positions, facilitated in the reconstruction of the structure (fig. 106). The outside measurements of the hippodrome are: 440 metres long, 134 metres wide and the internal measurements are: 400 metres long and 97 metres wide. It was probably built to serve the soldiers of the Third Legion who were stationed in Bostra in their thousands (53).

The "Naumachia" (figs. 106, 108) (54).

This was the name given by Rey to the square depression on the north-western side of the city from which two natural springs emerge (fig. 104). Butler accepts and agrees with this theory and adds that in a detailed survey conducted on the east side a few rows of seats were discovered, arranged in a semi-circular fashion as in a theatre. The depression is 200 metres in length, 90 metres wide and 6 metres deep. Even today it is possible to notice that the western side forms a straight line while the eastern is semi-circular (figs. 106, 108).

It seems that this was a natural depression in the terrain and that it was merely adapted to serve as a Water-Theatre. There was never a shortage of water for this purpose. It would also seem reasonable to presume that these springs provided yet another source of water for the city itself. The 'Naumachia" was therefore probably a popular place of entertainment for the soldiers of the Third Legion, for whom Bostra served as a permanent base.

The Necropolis (fig. 150) (55).

Most the tombs which lay along both sides of the main route on the western side of Bostra have been completely destroyed over the years. Only one has remained intact and has often been described in the literature. It is this tomb that allows us but a small insight into the wealth and magnificence of the mausolea constructed in Roman Bostra (56). This tomb is a structure in the form of a tholos built on a low, square podium. The top of the tholos was decorated by a cornice and above it was a conical shaped roof (fig. 150). The cornice itself was decorated with lions heads which were discovered at the foot of the tomb. Inside, it was circular shaped with a stone dome at its peak.

The City Plan of Bostra

The new regular Roman city plan was forced to take into consideration the already existing Nabataean town of Bostra, and reached an "urban compromise" as far as city planning was concerned. The crowded ubran nucleus of the city, bordered on the south by the large southern reservoir, on the east and north by the city wall and on the west by the new Roman city is what is most prominent at first glance (figs. 106, 107, 108). Not wanting to or perhaps not being able to contend with this old town, the Roman planners constructed the new city with its regular street network to the west of the old town (fig. 107). Yet even here because of the existing urban reality, most of the streets did not cross at right angles and were not completely parallel to one another. Despite this above mentioned compromise, the presence of Roman town planning is very definitely noticeable and greatly influenced the city's character.

Historical evidence and inscriptions found in the area provide us with the information that the planning of Bostra was begun a short while after the town was proclaimed the capital of Provincia Arabia in the year 106 C.E. Therefore its construction must have taken place during the first quarter of the 2nd century C.E. (57) and the question now posed is: What was planned as the urban image of this city ? When one compares the plans drawn up by Butler with the more modern aerial photographs it becomes clear that although Butler was very accurate in his reconstruction of Bostra, we are now in possession of more details that may be added to complete his picture. Few of the grand monuments described and recorded by earlier visitors have survived the 20th century and we therefore have to rely on previous information when fitting these into the city plan (58).

The main axis of the Roman city was the east-west main street that ran from the entrance of the traditonal sacred precinct (the Acropolis) in the east to the wall on the western side - about 900 metres away (fig. 106-109) (59). This street commences with the great Triumphal Arch heralding the

entrance to the holy precinct. It was also a powerful architectural element dividing the Old City from the new one (60) and was constructed near to what must have been the Propylaea complex of the old town. From the remains of architectural elements of both these features it is clear that there was considerable Nabataean influence as far as architectural styles are concerned (figs. 106, 121) (61). The street runs in a straight line westwards and ends in a sturdy city gate (figs. 106, 109). The wall on this side rests on a ridge which provided a natural border for the city at this point (fig. 106). (63).

A number of streets running north and south left this main east-west street. About 400 metres to the east of the West Gate a street ran northwards to the fresh water spring (fig. 106) while almost parallel to this and 200 metres away was the main north-south street of the city. The junction of the two main streets was marked by a triangular shaped city square around which stood all the important functional buildings of the city such as the Nymphaeon, the Kalybe and a little further to the south the South Bath (figs. 106, 107) (64). The main north-south street also ran in a straight line from this square and ended in a gate similar to the West Gate (65).

Other street moved in a southerly direction from the main east-west street. Butler only noticed two of these: The first, is about 350 metres from the city's West Gate cuts straight through to one of the few sections of the southern city wall that still stands today (fig. 106). The second joined the main east-west street to the Theatre and was situated about 160 metres away from the first. A Triumphal Arch with three passageways marked its place of junction with the main street (figs. 106, 108).

It is in this area, south of the main street and west of the "Theatre Street", that we have found yet another network of the city's streets. This includes a main street, running parallel to the main east-west street with three other streets meeting it at right angles and connecting it to the main east-west street. Similarly, at least one other street can be seen running parallel to the main east-west street and connecting the "Theatre Street" to the one on the west (fig. 107). This section of Bostra which we have decided to name the "South-West Quarter" is bordered by the city walls on the south and west, on the north by the main east-west street and on the east by the "Theatre Street" and is considered a well and regularly planned part of the city.

North of this area is another quarter which we have termed the "North-West Quarter", where all attempts of planning were influenced by the physical presence of the "Naumachia" (figs. 106, 107) (66). The city wall, constructed upon a natural mountain ridge, defines the borders of this area on the west and north sides running in an irregular line especially in the north where it has an arch-like shape. It is here that the two main city gates are situated (figs. 106, 107). This quarter is delineated on its eastern side by the main north-south street and on the south by the main east-west street.

While Butler did not discern any streets in this section of the city (fig. 106), from aerial photographs we have been able to reconstruct at least a part of the street network that existed here. The natural fall of the earth from which the two natural springs emerged and the depression created therein existed prior to the construction of the "Naumachia". The street network planned at the same time took this structure into

consideration. A road encircled the "Naumachia" and was joined by numerous other streets - two running northwards towards the two small gates in the northern city wall, and two others moving south, connecting the circle road of the "Naumachia" to the main east-west street. Two more streets ran east, parallel to each other, connecting the "Naumachia" to the centre of the city (fig. 107).

The "Central Quarter" of Bostra can be defined by the city wall on the north, and the main streets on the east, west and south sides (fig. 107). This formed the heart of the city and was the centre for all economic and public activities. The Forum was situated in the southern section of this quarter (figs. 106-108) (67) and although Butler only managed to study small parts of this complex, it is clear that it was surrounded by a decorative wall as well as a portico. It encompassed various buildings which as yet have hardly been studied (fig. 106). We can therefore only attempt to define the size and extent of this Forum which seems to have been bordered on the east and south by the two main streets of the city, on the north side by a road running parallel to the main east-west street and on the west (not noticed by Butler) by a road parallel to the main north-south street. What we have therefore described here is a rectangular area measuring 120 metres from north to south and 100 metres east to west.

The remaining regions of the "Central Quarter" flanking the Forum on the north and west sides were probably also built up with public structures of various kinds (fig. 106, 107). Yet another street may be noticed east of the main north-south street which probably formed the western border of the Old town of Bostra. It does not run parallel to the main street, begins at the East Triumphal Arch and moves in a straight line south to the Basilica, thereafter turning in a north-easterly direction. We seem to loose trace of it along the north-eastern city wall (fig. 107).

Lying to the south-west of this street is the unplanned and irregular Old town. A large structure which Butler termed the "Palace" can be seen on the south side and although it probably stand upon the remains of an earlier building, it is dated to the 3rd-4th centuries C.E. (figs. 106, 107) (68). The Acropolis lay to the north of this and it was here that all the ritual structures of the city were centered. Very little remains of the Propylaea which lead to the Acropolis although the East Triumphal Arch seems to have announced the entry into this sacred precinct.

The entire city was encompassed by a wall. Butler traced parts of it in the west, the north-west and the north-east as well as on the southern side (fig. 106). A. von Gerkan has suggested including the southern reservoir and the theatre within the city walls (fig. 105) (69). It seems more likely, however, that these structures, as well as that of the Hippodrome, were in fact outside the fortified limits of the city (fig. 107). A study of the aerial photographs does not bring to light any ruins which could be considered part of a city wall in the region lying further south of the reservoir and the Theatre. Even today, the modern houses of Bostra do not pass the line considered by Butler to have been the southern border of the city (compare figs. 106, 107, 108, 109). We must presume therefore that the town planners of Bostra were not disturbed by the fact that the Theatre stood outside of the city wall although this in itself is a rare phenomenon in Roman town planning and was usually only found in connection with Hipodromes and Amphitheatres. It is unusual to find a Theatre so far removed from the cnetre of the town's activities (70).

A glance at the town plan of Bostra shows us a well planned city placed alongside an ancient and completely unplanned town. There is no evidence of natural urban growth around an already existing nucleus. Instead, it is quite clear that this new city was "produced" almost artificially as a result of a political decision taken by Romans who wanted to create a united character for this capital city of Provincia Arabia.

In a general town planning sense Bostra resembles the city of Pompeii which also developed from an older nucleus. An attempt was made to connect the regular street network of the more modern city of Pomeii with that of the older city in order to produce a more united 'look' to the city. The major difference between Bostra and Pompeii in this respect is that in Pompeii even the street network of the Old City was a regular one, while that of Nabataean Bostra was totally unplanned (fig. 151) (71). It is in this way that Bostra is unique and cannot be compared, as so many scholars have tried to do, with any of the other Roman cities of its period (72). Bostra is an urban creation which answered all the needs of a capital city for Provincia Arabia - it was situated at important crossroads, was blessed both with a plentiful supply of water as well as with fertile and agriculturally viable lands and it was an important and successful centre even before the Roman rule in Arabia (73). The construction of the capital is an example of a Roman city which took into consideration the previous inhabitants of the town who continued to live as an integral part of this new more regular and organized city. The two sections, old and new, were incorporated into one another, forming a complete urban reality (74).

A look at the aerial photographs of 20th century Bostra shows how the city generally clings to the lines of the ancient city - except for a few odd structures which have been built on the west side. The two water reservoirs described in this chapter are still in use today, although the Naumachia has filled up with earth over the years and this is now used for agricultural purposes (fig. 108). Both the east-west and the north-south main streets are still used as highways, while the town is entered from the south on the "Theatre Street" and from the parallel street a little further to the west (figs. 106, 107, 109). Although the borders of the hippodrome are clearly visible, in the north it has been cut by an asphalt road running south of Bostra and the area within it is all agriculturally worked land (fig. 108).

While analysing the town plan of Bostra the question was raised: Where was the camp situated which housed the soldiers of the Third Legion ? It was first presumed, as may be seen in other cities of the period such as Palmyra or Dura Europa, that the camp must have been established within the city walls thereby exploiting one of the open areas not originally set aside specifically for this purpose (75). However, in Bostra the situation seems to have been different. We believe that the construction of the camp was probably planned at the same time as all the other buildings, services and facilities of the city. Because the Theatre and the Hippodrome, which were all planned to provide entertainment for the thousands of soldiers and government workers who would be living in the capital, were constructed outside of the city walls, it was decided that the Legion camp too might in fact be situated in a similar position. A study of the aerial photographs does indeed provide the view of a large, flat square measuring about 400 metres by 400 metres on the north side of the city close to the city walls. Although this area has never been surveyed it seems to us that it could quite possibly have served the purpose of the Third Legion (figs. 108, 109-112) (76).

Bostra was also a great centre for trade in the area, situated as it was on important crossroads. This becomes clear from the large number of buildings which created blocks of both shops and storerooms running along the main streets of the city. It appears that these large areas were part of the original plan and they bring to mind the shopping area in Ostia (fig. 152) (77). The sheer quantity of these shops and storerooms is sufficient to provide us with a clear picture of how successful trade and business must have been in Bostra. This is also confirmed by historical and epigraphical sources.

Butler claims that the remains of Bostra are the most extensive of all those discovered south of Damascus and east of Jordan. The city seems to have encompassed an area of 720,000 sq. metres of which the old town was 205,000 sq. metres - about 28% of the entire city (78).

We have discussed at length the importance of Bostra as a capital city, we have seen its wide and paved streets within a regular street network running alongside colonnades - but one other interesting feature has yet to be mentioned. That concerns the lack of architectural decoration on what are otherwise magnificent buildings. This is particularly noticeable when one compares the decoration of architectural elements in Bostra to that of smaller cities such as Philadelphia and Gerasa, which were undoubtedly also of less administrative and strategic importance (79). Perhpas herein lies one of the answers to this rather strange phenomenon. Although both Gerasa and Bostra were pre-planned cities, the one was totally 'Government sponsored' and constructed over a short period of time, while the other took longer to build and was on the whole finanacially supported by private citizens who took great pride in their city and in the quality of life within it (80). Thus, while Gerasa enjoys far richer architectural adornment the buildings of Bostra are larger and grander but plainer in decoration (81).

A look at the roots of these cities will also bring to light basic dissimilarities which might have influenced these architectural differences. Philadelphia and Gerasa were built upon earlier Hellenistic cities and therefore lie upon a solid bed of democracy and the idea of the 'polis', while Bostra was as Roman addition forced upon a long standing Semitic settlement. The citizens of Gerasa and Philadelphia seem to have expressed a need to cling to certain forms of independence while simultaneously being ruled by governors and administrators of the Provincia. It was through architectural ornamentation that they could fulfill a need to create something of their own - thereby adding importance and status to their cities (82).

NOTES

1a. With reference to the history of Bostra from the 3rd century B.C. to the 4th century C.E. See:
Benziger, R.E.., s.v. 189-191.

1b. With reference to Bostra's status as the capital city of Provincia Arabia, see:
G.A. Smith, Historical Geography of the Holy Land, London, 1869, p. 611.
A.H.M. Jones, The Cities of the Eastern Roman Provinces, Oxford, 1937, p. 293.
G.W. Bowersock, "A Report on Arabia Provincia", J.R.S. LXI (1971), pp. 219-242, Pls. XIV-XV.
S. al Megdad, "Le Role de la Ville de Bosra dans L'histoire de la Jordanie aux Epoques Nabateenne et Romaine", in A. Hadidi (ed.), Studies in the History and Archaeology of Jordan I, Amman, 1982, pp. 267-273.

1c. Historical sources in which Bostra is mentioned, see:
P. Thomsen, Loca Sancta, Halle, 1907, pp. 44-45.

1d. With reference to the numismatic material from Bostra, see:
C.R. Morey, P.U.A.E.S., Division II, Section A, Part 4:
1. Dusare and the Coins Types of Bosra.
2. Catalogues of the Coinage of Bosra.
G.F. Hill, Catalogue of the Greek Coins of Arabia, Mesopotamia and Persia, London, 1922, (Bostra), P. XXIV, pp. 16-26, Pls. III 6-IV 13. A. Spijkerman, The Coins of the Decapolis and Provincia Arabia, Franciscan Printing Press, Jerusalem, 1978, (Bostra, pp. 66:89), A. Kindler, The Coinage of Bostra, Aris & Philips, London, 1983.

1e. With reference to the epigraphical material from Bostra, see:
E. Littmann, D. Magie, D.R. Stuart, P.U.A.E.S., Div. III, Greek and Latine Inscriptions in Syria, Sect. A., Southern Syria, Part 4, Bosra, pp. 225-270.

2. With reference to the road system and trade routes in the vicinity of Bostra, see:
M. Avi-Yonah, The Holy Land from the Persian Period to the Arab Conquest, Baker Books, Michigan, 1966, pp. 171-173, 183, Map 24.
M.P Charlesworth, Trade - Routes and Commerce of the Roman Empire, Hildesheim, 1961.
A.H.M. Jones, op. cit., pp. 229-245.
H.C. Butler, P.U.A.E.S., Div. III, Sect. A, Part 2: Trajan's Road from Bosra to the Red Sea, The Section Between Bosra and Amman.
D. Magie, P.U.A.E.S., Div. III, Sect. A, Part 2: Milestones found on Trajan's Road Between Bosra and Amman.
P. Thomsen, "Die Romischen Meilensteine der Provinzen Syria, Arabia and Palaestina", Z.D.P.V.Z XL, (1917), pp. 1-103).
(Damascus - Bostra: pp. 32-33)
(Bostra - Gerasa: pp. 59-60).
A. Alt, "Der Sudlische Endabschnitt der Romischen Strasse von Bostra nach Aila", Z.D.P.V. 59 (1936), pp. 92-111, Plts. I-III.
M. Dunand, La Voie Romaine du Ledia, Paris, 1930.

3. Nabataean rule in the southern regions of Syria strongly influenced the architecture and ritual life of the city (see note 1d). Many Nabataean

names appear on the inscriptions discovered at Bostra, (see note 1e). For a more general study of the Nabataeans, see:
Ph. C. Hammond, The Nabataeans - Their History, Culture and Archaeology, Lund, 1973, pp. 15-40.
J. Starcky, "Petra el la Nabatiene", S.D.B., Paris, 1966, cols. 886-1017.
A. Negev, "Die Nabataer", ANTIKE WELT, Sonder Nummer, 1975.
G.W. Bowersock, "A Report on Arabia Provincia", J.R.S. LXI (1971), pp. 219-228.
J.M. Dentzer, "Sondages pres de l'Arc Nabateen a Bosra", Berytus XXXII (1984), pp. 163-174.
See Chapter 5, pp. 103-113.

4. Bostra also became an important Christian cente and is mentioned by Christian historians, see:
P. Thomsen, Loca Sancta, pp. 44-45.
Epigraphical (note 1e) and especially archaeological discoveries which included the Cathedral and churches, show the importance of Bostra as a Christian centre, see:
H.C. Butler, P.U.A.E.S., Div. II, Sect. A, Part 4, Bosra, (Ecclesiastical Architecture, pp. 278-288).
R.E. Brunnow, A.v. Domaszewski, Die Provincia Arabia III, (Bosra, pp. 30-34, 38-39).
There was no destruction as a result of the Arab conquest and this did not bring about a decline of the city. On the contrary, the many mosques as well as the large fortress that was built around the Theatre point to the importance of Bostra as a Moslem city. See:
R.E. Brunnow, A.v. Domaszewski, Bosra, pp. 25:29, 30, 39-40, 44-46.
M. Sartre, Bostra - des origines a l'Islam, Institut Francais d'Archeologie du Proche-Orient (T.CXVII), Paris, 1985.

5. U.J. Seetzen, Reisen durch Syrien, Palastina, Phonicien, die Transjordan-Lander, Arabia Petraea und Unter-Aegypten II, Berlin, 1854-55, p. 66ff.
J.L. Burkhardt, Travels in Syria and the Holy Land, London, 1822, p. 226ff.
L. de Laborde, Voyage de la Syrie, Paris, 1837, p. 67ff, Pls. LVII-LVIII.
J.L. Porter, Five Years in Damascus II, London, 1855-1870, p. 142ff.
E.G. Rey, Voyage dans le Hauran at aux bords de la Mer Morte, execute pendant les annes 1857-1858, Paris, (-), p. 177ff, Pls. IV, X-XcXVIII.
M. De Vogue, Syrie Centrale, Architecture Civile et Religieuse I-II, Paris, 1865-1877, pp. 40, 63, Pls. V, XXII, XXIII.
R.E. Brunnow, A.v. Domaszewski, Die Provincia Arabia III, Strassburg, 1909, pp. 1-84.
H.C. Butler, P,.U.A.E.S Div. II, Ancient Architecture in Syria, Sect. A, Southern Syria, Part 4, Bosra, Leyden, 1914, pp. 215-295.

6. With reference to the reconstruction and preservation of the Theatre in Bostra, see:
I.L.N. 8 June, 1963.
H. Finsen, Le Leve du Theatre Romain a Bosra, Syria, Einar Munskgaard, 1972.
With reference to other monuments excavated in Bostra over the past few years, see:
S. Mougdad, Ch. Makowski, "Nymphee de Bosra et ses Abords. Rechereches archeologiques en 1979. Report preliminaire", A.A.S. XXXIII (1983), pp. 35-46.
S. Berthier, "Sondage dans le secteur des Thermes sud a Busra - 1985", Berytus XXXIII, (1985), pp. 103-142.

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Ph. C. Hammond, The Nabataeans - Their History, Culture and Archaeology, Lund, 1973, pp. 15-40.
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A. Negev, "Die Nabataer", ANTIKE WELT, Sonder Nummer, 1975.
G.W. Bowersock, "A Report on Arabia Provincia", J.R.S. LXI (1971), pp. 219-228.
J.M. Dentzer, "Sondages pres de l'Arc Nabateen a Bosra", Berytus XXXII (1984), pp. 163-174.
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H.C. Butler, P.U.A.E.S., Div. II, Sect. A, Part 4, Bosra, (Ecclesiastical Architecture, pp. 278-288).
R.E. Brunnow, A.v. Domaszewski, Die Provincia Arabia III, (Bosra, pp. 30-34, 38-39).
There was no destruction as a result of the Arab conquest and this did not bring about a decline of the city. On the contrary, the many mosques as well as the large fortress that was built around the Theatre point to the importance of Bostra as a Moslem city. See:
R.E. Brunnow, A.v. Domaszewski, Bosra, pp. 25:29, 30, 39-40, 44-46.
M. Sartre, Bostra - des origines a l'Islam, Institut Francais d'Archeologie du Proche-Orient (T.CXVII), Paris, 1985.

5. U.J. Seetzen, Reisen durch Syrien, Palastina, Phonicien, die Transjordan-Lander, Arabia Petraea und Unter-Aegypten II, Berlin, 1854-55, p. 66ff.
J.L. Burkhardt, Travels in Syria and the Holy Land, London, 1822, p. 226ff.
L. de Laborde, Voyage de la Syrie, Paris, 1837, p. 67ff, Pls. LVII-LVIII.
J.L. Porter, Five Years in Damascus II, London, 1855-1870, p. 142ff.
E.G. Rey, Voyage dans le Hauran at aux bords de la Mer Morte, execute pendant les annes 1857-1858, Paris, (-), p. 177ff, Pls. IV, X-XcXVIII.
M. De Vogue, Syrie Centrale, Architecture Civile et Religieuse I-II, Paris, 1865-1877, pp. 40, 63, Pls. V, XXII, XXIII.
R.E. Brunnow, A.v. Domaszewski, Die Provincia Arabia III, Strassburg, 1909, pp. 1-84.
H.C. Butler, P,.U.A.E.S Div. II, Ancient Architecture in Syria, Sect. A, Southern Syria, Part 4, Bosra, Leyden, 1914, pp. 215-295.

6. With reference to the reconstruction and preservation of the Theatre in Bostra, see:
I.L.N. 8 June, 1963.
H. Finsen, Le Leve du Theatre Romain a Bosra, Syria, Einar Munskgaard, 1972.
With reference to other monuments excavated in Bostra over the past few years, see:
S. Mougdad, Ch. Makowski, "Nymphee de Bosra et ses Abords. Rechereches archeologiques en 1979. Report preliminaire", A.A.S. XXXIII (1983), pp. 35-46.
S. Berthier, "Sondage dans le secteur des Thermes sud a Busra - 1985", Berytus XXXIII, (1985), pp. 103-142.

7. Although the plans drawn up by Rey (fig. 104) and Porter (fig. 103) were far from exact, they are of importance and help in the identification of monuments in the city that have since been destroyed.

7a. Von Gerkan's plan of Bostra (fig. 105) completes, to a certain extent, sections that were missing from Butler's plan. However, it is impossible to make out what the basis was for the German scholar's reconstruction of the street network and the lines of the city wall. It is doubtful that he was in the possession of aerial photographs. It is possible that he merely wanted to complete the lines of the streets that Butler had already marked (comp. figs. 105, 106). See also final discussion on the town planning of Bostra, pp. 59-63.
See also:
A. von Gerkan, Griechische Stadteanlagen, Berlin, 1924, Fig. 20, pp. 135, 154-155.

8. Butler names the south-eastern section of the city the "Acropolis" and it is indeed here that the earliest remains of ritual structures have been uncovered. The architectural orientation of these buildings does not fit in with the regular street network of the Roman city running to the west of the "Acropolis".
See final discussion on the town planning of Bostra, pp. 59-63.

9. F.E. Peters is of the opinion that it is possible that the city plan of Bostra was not entirely of Roman origin and that some of the street may have been laid out during the Nabataean rule. He feels that the main colonnaded street (east-west) leading to the Acropolis on which the main ritual Nabataean structures stood, might in fact have been the "Via Sacra". Peters however, cannot base this theory on any evidence in the field. On studying the twon plan of Bostra as we know it today, it is undoubtedly clear that the new city lying to the west of the "Acropolis", was planned as one complete unit. See:
F.E. Peters, "City Planning in Greco-Roman Syria - Some Considerations", DaM I (1983), pp. 269-277.

10. E. Littmann, P.U.A.E.S. Div. IV, Sect. A, Nabatean Inscriptions, (Bosra, pp. 69-91).

11. H.C. Butler, Bosra, (Nabataeans Remains), pp. 236-239, ill. 212.

12. See final discussion on the town planning of Bostra, pp. 59-63.

13. H.C. Butler, (Walls), pp. 225-226.

14. H.C. Butler, p. 225, footnotes 1-3.

15. See final discussion on the town planning of Bostra, pp. 59-63.

16. H.C. Butler (Gates), pp. 226-229, ills. 200-203.
R.E. Brunnow, A.V. Domaszewski, pp. 6-11, Figs. 874-885.
E. Makowiecka, "Les portes Romaines de Syrie", Studia Palmyrenskie I (1966), pp. 20-45.

17. The German researchers have recorded the Gate as they found it with only a few minor additions (fig. 116). Butler, on the other hand, has reconstructed the entire original Gate (fig. 115).

18. H.C. Butler, pp. 229-230, 111. 203.

19. H.C. Butler, pp. 229-230, 111. 204.

20. J.L. Porter, op. cit., p. 187.
J.L. Burkhardt, op. cit. p. 232.

21. H.C. Butler, p. 229.

22. H.C. Butler, (Colonnaded Streets), pp. 230-235, 111s. 205-210.
R.E. Brunnow, A.v. Domaszewski (Haupstrasse), pp. 11-12.

23. H.C. Butler, 111. 210.
Colonnades with Ionic capitals may be found in other sites in Provincia Arabia such as Gerasa (fig. 95) or Philippopolis (chapter 4, pp. 85-86).
See also:
C.H. Kraeling, (ed.), Gerasa - City of the Decapolis, pp. 153-158. Pls. IIa, XXXII a, b.
H.C. Butler, Architecture and other Arts, New York, 1903, p. 393.
See also chapter 5, pp. 105-106.

4. H.C. Butler, (East Triumphal Arch), pp. 240-243, 111s. 214, 216, 217, Pl. X.
R.E. Brunnow, A.v. Domaszewski, (Kleiness Bogentor), p. 23, Fig. 903.

25. H.C. Butler, p. 243, notes 1-4.

26. H.C. Butler, (Central Triumphal Arch) pp. 243-247, 111. 218.
R.E. Brunnow, A.v. Domaszewski (Grosses Bogentor), pp. 14:19, Figs. 888-889.

27. H.C. Butler, p. 246, 111. 218.

28. From the reign of Augustus during the 1st century C.E. the Triumphal Arch, as a free standing monumental architectural element, begins to spread throughout Italy and the Provinces. This reached its climax during the rule of the Antonine and Severan Dynasties. The original Triumphal Arch was erected to commemorate a specific event such as, in the case of Gerasa, the visit of the Emperor Hadrian to the city in 129/130 C.E. (see chapter 2, pp. 24-25, notes 34-38). Triumphal Arches can be widely seen in the Arabian cities where (except in the caste mentioned above of Gerasa) they are a purely decorative architectural element similar to the Tetrapylon or the Nymphaeon (see chapter 5, p. 106).
In Bostra the East Triumphal Arch marked the point where one could enter the sacred precinct of the city, while the Central Triumphal Arch marked the passage from the main street to the street which led to the Theatre (figs. 106, 107).
With reference to the origin and development of the Triumphal Arch, see:
L. Crema, E.C. L'Architettura Romana (Archi Onorari e porte urbiche), pp. 208-224, 303-307, 441-452, 550-558.
M.P. Nilsson, "The Origin of the Triumphal Arch", COROLLA ARCHAEOLOGICA, Lund, 1932, pp. 132-139.
idem., "The Triumphal Arch and the Town Planning", OPAR 1, (1934), pp. 120-123.

29. H.C. Butler (Temples), pp. 247-251, 111s. 219-223.

30. H.C. Butler, pp. 249-250, 111s. 221-223.

31. H.C. Butler, (Nymphaeum), pp. 251-252, 1lls. 224-226.
R.E. Brunnow, A.v. Domaszewski, (Korinthische Saulen), pp. 20-22, fig. 901.

32. The Nymphaeon of Bostra is far more modest than those found either in Gerasa or in Philadlphia and is in fact very similar to that found in Petra.

32a. With reference to the Nymphaeon of Philadelphia see chapter 1, pp. 8-9, notes 25-26, (figs. 25-28).

32b. With reference to the Nymphaeon of Gerasa, see chapter 2, p. 23, note 28, (figs. 52-55).

32c. With reference to the Nymphaeon of Petra, see:
W. Bachman, Petra, Berlin, 1921, pp. 34-35, Fig. 28, (fig. 31), see also chapter 5, p. 106.

33. H.C. Bulter, (Kalybe), pp. 251-255, 1lls. 225-226.
R.E. Brunnow, A.v. Domaszewski, (Grosser Temple), pp. 22-23, Fig. 901.

34. Butler has followed De Vogue who, in his book Syrie Centrale, pp. 41-43 (note 5), describes a structure he uncovered in Umm iz Zetum upon which he found an inscription naming the structure as a 'Kalybe'. This is an open ritual structure. A similar building fulfilling religious or ceremonial purposes has been discovered in the Palace in Philippopolis (fig. 161). The latter has been reliably dated to the middle of the 3rd century C.E. and it is therefore safe to presume that the Kalybe in Bostra belongs to the same period.
See chapter 4, pp. 79-80, note 15.

35. H.C. Butler, (The Palace), pp. 225-260, figs. 227-229.
R.E. Brunnow, A.v. Domaszewski, (Palast), p. 24.
The German scholars only mention the Palace in a few sentences while Butler gives an exact and detailed description of it together with a possible reconstruction plan.

36. H.C. Butler, p. 257.

37. In Butler's opinion the Palace is a "Late example of Nabataean work" (p. 260), and he dates it to the beginning of the 2nd century C.E. It seems to us, however, that there is nothing in the art or architectural style of this Palace which may relate it to the Nabataean period. The building's plan is closer in design to another structure found in Bostra - the Episcopal Palace, which Butler himself dates to the 4th century C.E., (pp. 286-288, 1lls. 251-253). The Palace is situated in the Old City of Bostra and is positioned such, that it totally ignores the Roman street network. This does not necessarily mean that it preceded the Roman city - it might equally have post dated the Romans and might belong to a period in which other buildings such as the churches were constructed. These too ignored the regular street network. Then again, it could possibly have been built upon the foundations of an earlier structure, but at a much later date such as the 3rd century or 4th century C.E.
Another structure similar to the Palace was found at Dura Europos and was called the 'Governors Palace' by excavators. It has been dated to the 3rd century C.E. See:
M. Rostovtzeff, Excavations at Doura-Europos, Part III, The Palace of

the Dux and the Dolicheneum, pp. 69-96, Fig. 7.
(See fig. 135).
Butler traced yet another building similar to the Palace in Bostra in Southern Syria. This palace is situated in Kasr Ibn Wardan and its main hall is also shaped like a "triconchos". See:
C.H. Butler, P.U.A.E.S. Div. II, Sect. B, Kasr Ibn Wardan, pp. 26-45, 111s. 24-37, Pls. IV-V.
(See fig. 136).

38. H.C. Butler, (South Bath), pp. 260-264, 111s. 230-231, Pl. XIII.
R.E. Brunnow, A.v. Domaszewski, (Ost-Thermen), p. 29.

39. A bath (Bath "C"), uncovered at Antioch, is remarkably similar to the one is Bostra, (see fig. 138). See:
A. Boethius, J. Ward-Perkins, Etruscan and Roman Architecture, Penguin Books, 1970, pp. 443-444, Fig. 164.
C.S. Fisher, Antioch on the Orontes I, Princeton, 1934, pp. 19-31, (Bath C).

40. H.C. Butler, (Central Bath), p. 264.
(North Bath), pp. 264-265, ill. 232.
(North-West Bath), p. 265, ill. 233.

41. H.C. Butler, (Basilica), pp. 265-269, 111s. 234-238.
R.E. Brunnow, A.v. Domaszewski, (Kirche der Bahira), pp. 36-38, Figs. 914-919.

42. Although the German scholars believe the Basilica to have served as a Church, we tend to follow Butler who feels that it was first constructed as a public building and only later became a Church. See also:
A. Boethius, J. Ward-Perkins, op.cit., pp. 444-445, Fig. 165.

43. H.C. Butler, ill. 235.

44. H.C. Butler, (Market), pp. 270-273, ill. 240.
R.E. Brunnow, A.v. Domaszewski, (Bazaar), pp. 24-25.
The 'Bazaar' described by the German researchers as well as by Porter is none other than a central section of the main north-south street (fig. 103) where, in the Middle ages, the market of Arab Bostra was centered. Butler, however, believes the Roman market to have been in an area on the west near the junction of the two main streets (fig. 143). He was unable to pinpoint its borders as the piles of earth above it were too great. In our discussion we have prefered the term 'Forum' for this area as the Roman Forum provided many other public services besides that of commercial value.

45. Cross vaults on the ceiling are more typical of later periods, but originated in the earlier years. Some of the halls in the market of Trajan in Rome were constructed with such cross vaults, see:
L. Crema, C.E., (Mercato di Traiano), pp. 358, Figs. 415, 418, 419.
E. Nash, Pictorial Dictionary of Ancient Rome, London, 1962, (Mercatus Traiani), pp. 49-57, ill. 739.
Yet another example of these cross vaults can be seen at Hadrian's Villa in Tivoli, see:
S. Aurigemma, Villa Adriana, Roma, 1961, Figs. 73-74.

46. H.C. Butler, (Theatre), pp. 273-276, 111s. 241-243, Pls. 14-15.
R.E. Brunnow, A.v. Domaszewski, (Theater), pp. 47-84, Figs. 928-982,

Pls. L-LI.
N.E. Frezouls, "Les Theatres Romaines de Syrie", A.A.S. II, (1952), pp. 69-79.

47. Excavations and reconstructions of the Theatre began in 1946 and ended in 1970, see note 6.

48. See final discussion on town planning of Bostra, pp. 59-63 (see fig. 126).

49. The Theatre and the Hippodrome stand alongside one another and this is a widespread phenomenon in the architectural world of the Roman Empire. In the eyes of the Romans the theatre was a place of entertainment and they therefore saw no harm in placing these two structures, which culturally seem to be so different, side by side. See chapter 2, note 29; chapter 5 pp. 106-107.

50. A similarly planned theatre to that of Bostra may be found in Orange where the skenefrons in particular is designed and ornamented in a remarkably like manner. Most of the semi-circular outer facade of the Theatre in Bostra cannot be seen today as it is still covered over by the Moslem fortress - a small section may be viewed from the southern tower, see:
H.C. Butler, ill. 267.
The rounded facade is like that of the Theatre of Marcellus in Rome, see:
L. Crema, E.C. (I Teatri), pp. 187-203, 290-292, 416-429.
E. Nash, op. cit., (Theatrum Marcelli), pp. 418-421, Figs. 1210-1211, (see fig. 149).

51. A Nabataean inscription uncovered among the ruins of the Theatre which was probably a permanent feature of the building, mentions that a particular seat was reserved for.....(the name has not survived the centuries and is illegible), see:
E. Littmann, P.U.A.E.S, Div. IV, Sect. A., Nab. Inscri... No. 73, p. 60.

52. H.C. Butler, (Hippodrome), pp. 275-276.

53. Hippodromes are rarely found in this area. The nearest one was found in Gerasa, see:
E.B. Muller, Gerasa, The Hippodrome, pp. 85-100.
G. Horsfield, Gerasa, Appended Note on the Hippodrome, pp. 100-103, Pls. XII-XVIII, plans VI-XI.See also chapter 2, p. 25, notes 39-40.

54. H.C. Butler, (Naumachia), pp. 276-277.

55. H.C. Butler, (Tombs), pp. 277-278, ill. 245.
R.E. Brunnow, A.v. Domaszewski, (Westilicher Friedhof), pp. 3-4, Figs. 866-871.

56. Many burial inscriptions have been discovered in and around the city which give evidence to the large amount of mausolea that must have once existed in Bostra. See also note le.

57. An all encompassing discussion concerning the date when Bostra was proclaimed the capital of Provinica Arabia. See:
G.W. Bowersock, "A Report on Arabia Provincia", J.R.S. LXI (1971), pp. 228-234.

58. See note 5.

59. H.C. Butler, pp. 219, 247-251.

60. See discussion on the East Triumphal Arch, pp. 54, notes 24, 28.

61. Refer to section on "Nabataean Heritage in Bostra", pp. 52-53, note 3.

62. See section on "City Gates", pp. 53-54.

63. This square was designed to widen the area where the two main streets met. The two public structures which decorated the square - the kalybe and the nymphaeon - were interphased with the street colonnades and their facades created a pleasant town square.

65. See note 62.

66. H.C. Butler, (Naumachia), pp. 276-277.

67. H.C. Butler, (Market), pp. 270-273.
See also section on the "Forum", p.57, note 44.

68. See section on the "Palace", p. 56, note 37.

69. A von Gerkan, op.cit., pp. 135-155, Fig. 20.

70. In the city of Perge in Asia Minor both the Theatre and the Hippodrome are situated outside the city walls, see:
A. Giuliano, Urbanistica delle Citta Grecha, Milano, 1966, pp. 170-172, Fig. 67.
K. Lanckoronski, Stadt Pamphyliens und Pisidiens I, (Perge), pp. 33-63, Fig. 26.
See also note 49.

71. With reference to the city plan of Pompeii, see:
A. von Gerkan, Der Stadtplan von Pompeii, Berlin, 1940.
F. Castagnoli, Orthogonal Town Planning in Antiquity, M.I.T., 1971, pp. 24-35, Figs. 9-12.
My thanks are due to Prof. A. Negev who drew my attention to the similarity between these two cities. Another example of the development of a city in a manner similar to that of Bostra may be seen in the North-African city of Leptis Magna. Here too the new city was established alongside an ancient Phoenician city. See:
E.V. Caffarelli, G. Caputo, R.B. Bandinelli, Leptis Magna, A. Mondadori Editore, 1964.
J. Ward-Perkins, Cities of Ancient Greece and Italy, Planning in Classical Antiquity, New York, 1974, Fig. 76.
Gerasa and Bostra have certain urban features in common. As already suggested it is possible that eastern Gerasa was an earlier Hellenistic city. Western Gerasa, the new city, was connected to the eastern city by three main routes and was encompassed by its walls. In a similar way the new city of Bostra attempted to unite the old with the new through a regular street network. See chapter 2, pp. 31-35.

72. F. Castagnoli, op.cit., pp. 96-121.
The Italian scholar divides the Roman cities into four main types:
a) The Hippodamian City (i.e. a city plan which has been influenced by the Hippodamian tradition).
b) A city where the plan is based on two main axis meeting at a right angle in the city centre.
c) A city, influenced by the meeting of two axes (as in the army camp), but where these do not meet in the centre.
d) A city based on the army camp plan.
This kind of a schematic division cannot suit a city like Bostra where a city plan was designed to take into consideration an already existing unplanned city. Thus we have difficulty in fitting Bostra into the above mentioned list. See chapter 5, pp. 111-113.

73. See introduction to chapter on Bostra, pp. 51-52, note 1a, 1b.

74. Epigraphical discoveries throw light on the ethnic make up of Roman Bostra. Semitic and Nabataean names were popular even in the Roman city. See note 1e, 3.

75. G. Webster, The Roman Imperial Army, London, 1969, pp. 109-114.
G.W. Bowersock, op. cit., pp. 230, 232, note 85.
With reference to the Camp of Diocletian in Palmyra, see:
Th. Wiegand, Palmyra, (Die Diocletianslager), Berlin, 1932, pp. 85-105, tafel 10.
See also the publications of the Polish expedition which excavated in this area from 1959. See:
K. Michalowski, Palmyre, Fouilles Polonaises, I-V, Warszawa, 1960-1966.
M. Gawlikowski, Palmyre VIII; Les Principia de Diocletien (Temples des Enseignes), Varsovie, 1984.
With reference to the Roman camp at Dura Europos, see:
C. Hopkins, H.T. Rowell, The Excavations at Dura Europos V, Yale University Press, 1934, pp. 201-237.

76. The possible position of the Third (Cyrenaica) Legion's camp in Bostra has fascinated many scholars, some of whom have made similar suggestions to that presented in this book (fig. 109). See:
F.E. Peters, "City Planning in Greco-Roman Syria", D a M I (1983), pp. 269-277, fig. 5 (see fig. 110).
R. Brulet, "Estampilles de La IIIe Legion Cyrenaique a Bostra", Berytus XXXII, (1984), pp. 175-179, fig. 1.
(see fig. 111).
M. Sartre, Bostra - des origines a' Islam, Paris, 1985, Fig. 1.
(See fig. 112).

77. With reference to the excavations in Ostia, see:
R. Meiggs, Romman Ostia, Oxford, 1960, (Town Planning and Town Development), pp. 111-148, figs. 2 22, 23.
A. Boethius, J. Ward-Perkins, op.cit., pp. 279-281, Figs. 106, 108.
G. Rickman, Roman Granaries and Store Buildings, Cambridge, 1971, (Ostia), pp. 15-76.

78. H.C. Butler, p. 215.
It is true that Bostra was the most important and most highly populated city in the region, but in size it covered less area than other cities - such as Gerasa (847,000 sq. metres) or Philippopolis (863,000 sq. metres).

79. As discussed in the text, Bostra was blessed with well developed and constructed monumental buildings, but with very few ornamental additions to them. Except for capitals, pilasters and decorative niches there is hardly a statue or relief to be found in the city. A similar picture may be seen in Philippopolis which was also constructed as a result of a Government initiative and completed within a very short time (see chapter 4, pp. 77-83).
With reference to the administrative status of cities in Provincia Arabia and their boundaries, see not 1a, b, c, d, and in chapter 5 note 41.

80. Tens of the inscriptions discovered in Gerasa describe the donations of private, wealthy citizens to the development of the city.
See:
C.H. Kraeling (ed.) Gerasa, The History of Gerasa, pp. 27-69.
C.B. Welles, Gerasa, The Inscriptions, pp. 355-494.

81. See discussion on the architectural character of the cities of Arabia chapter 5, p. 63.

82. With reference to the Greek city in the East from the Hellenistic Period until the Roman Period, see:
A.H.M. Jones, The Greek City from Alexander to Justinian, Oxford, 1940.
idem. The Cities of the Eastern Roman Provincia, Oxford, 1937. (Syria), pp. 227-295.
V. Tscherikower, Die Hellenistischen Stadtegrundungen von Alexander Dem Grossen bis auf die Romerzeit, Leipzig, 1927.
M. Avi-Yonah, Hellenism and the East: Contacts and inter-relations from Alexander to the Roman Conquest, Ann Arbor, 1978.

CHAPTER IV

PHILIPPOPOLIS (SHUHBA)

Introduction

The establishment of the city of Philippopolis was an unusual phenomenon because, unlike all other cities in Provincia Arabia, this city was founded from the very outset by the Romans. It did not develop out of another urban reality, where classical town planning was forced to adapt itself to and work around existing structures. The homogeneous city plan of Philippopolis, the clear street network parallel to the two main street (north-south and east-west) points to the fact that here lies a Roman city, established on virgin soil, a mainly flat tract of land (figs. 153, 154-156).

We have chosen to discuss the remains of Philippopolis for the following reasons:

a) The city is situated on the important route - the Via Traiana Nova (fig. 1), which straddles the border between settled areas and the desert.

b) It represents the only example of Roman town-planning from the 3rd century C.E.

c) The dated ruins present a clear picture of the nature of city architecture in Arabia during the 3rd cent. C.E.

Historical sources as well as epigraphical evidence date the ruins of Shuhba to the years 247-249 C.E. - and its establishment is completed by Philip the Arab after whom the city was named (1). The state of most of the remains show that the construction of the city was probably never completed and that a short while after its establishment the city was abandonned by the Romans. In the 4th century C.E. a small Christian settlement existed here but left little impression on the city. In fact, it is only during the last 100 years that new life has been brought to the ruins of Philippopolis by the Druze villagers (2). Although travellers from Europe began visiting the city in the early 19th century, it was only when Butler arrived that a more detailed survey was carried out. Brunnow and Domaszewski followed shortly thereafter (3). Butler was the only one to map out the area and the discussion that follows is mainly based on his plans, descriptions and photographs. The material published by Brunnow and Domaszewski has also been taken into account although this, in the main, is based on Butlers' work. The city has never been excavated and only the Theatre has been partially renovated. More recently, however, work was begun on the preservation of a few of the remaining monuments (4).

Unfortunately, most of the remains described during the 19th century are no longer visible and have disappeared as a result of the villagers later building projects. Therefore our descriptions of the few monuments rely almost entirely on the material published by the early visitors. On the other hand, more modern aerial photographs will permit us a view of the general layout of the city, its functional division and its well planned street grid.

A General View of the City (figs. 154-156).

Philippopolis lies mainly on a flat stretch of land and only its south-western part rises with the volcanic hills encompassing the city on the south and south-west. The general layout of the city is of a somewhat irregular square. It is surrounded by a strong stone wall in which are 6 Gates. Of these, four are main gates and served as entrances to and exits from the city for the two main street, and the other two are more minor gates which were situated at the northern and southern ends of another street that cut through the city running from north to south. The two main streets meet at a right angle, not quite in the centre of the city, and the city walls are not parallel to the main axis. The reason for these deviations lies in the lay of the land created by the volcanic nature of the neighbouring hills.

Remains of the structures once existing in Philippopolis and described by visiting researchers include: Sections of the city wall, Gates, parts of the streets, the Bath, Tetrapylon, the Theatre, the "Philippaeon", the Palace, a Temple and the aqueduct. As already mentioned most of these ruins are no longer visible on the surface.

We will first describe the various monuments and thereafter progress to a discussion on the city plan and the general character and place of Philippopolis within the development of Roman city planning.

The Hexastyle Temple (figs. 154-155, 157) (5).

The Temple was situated about 50 metres from the junction of the two main streets, close to the main east-west street. Its facade faces south. Six columns originally stood in the facade but only four remained in position. Of these, three were complete including their Corinthian capitals while one had broken in half. All that remained of the walls of the building were heaps of rubble and it was only the north-east corner still standing, that allowed a certain picture of the nature of the cella. Butler reconstructed this building and believed it to be an unusually shaped Temple (6). The column bases belonging to the portico in the front stood on podia. All the capitals were Corinthian and displayed a high artistic standard.

Today the entire structure has been destroyed and only the facade columns remain, now playing a role in a more modern structure.

The "Philippaeon" (figs. 154, 155, 160) (7).

This building stands south-west of the junction of the two main streets, about 50 metres south of the east-west street. The inscriptions discovered on the structure and uncovered in close proximity to it led Butler to give it this specific name (8).

It has a very simple plan: A square cella, where the walls retained their original height, was divided internally by symetrically positioned vaulted niches separated one from the other by square pilasters (fig. 160, a-i). The south wall was wider in diameter and included a staircase (9). The outside walls were constructed of smooth, extremely well dressed stones. The four corners of the "Philippaeon" were decorated by flat pilasters protruding a little from the line of the wall. They support Ionic capitals and a flat cornice. Nothing of the upper section remained but it is

possible that it took the shape of a pyramid (10).

A large opening was situated in the northern facade of the structure, measuring 3 metres in width and 5.5 metres in height. Above it was a cornice and a frieze decorated with simple geometric patterns. On either side of the opening, about 3 metres above ground level were two corbels originally meant to hold statues (11). The internal walls of the building were covered by thin marble slabs (12).

It seems as if this was meant to be used as a family Mausoleum for the Emperor Philip the Arab and might also have served as a place of ritual for him. It stands in the heart of the city not far frm the Palace, the Theatre and the Temple. The shape of this structure, its measurements, the beauty anbd precision of its construction, together with the rich epigraphical finds in the area, leave us with no doubt concerning the functions and nature of the "Philippaeon".

The Palace (figs. 154, 155, 161) (13).

A group of buildings forming an urban complex was found along both sides of the east-west street and about 200 metres away from the junction of the main streets. Butler named this complex the Palace.

This cluster of buildings was divided into two sections by the main east-west street. A wide vault bridged the street thereby joining the two sides together (fig. 161, A) (14). The vault may still be seen in position today, but all the other remains of the Palace have been covered by more modern structures. Both on the south and the north side of the Palace were exits to the street beneath the vault (fig. 161, passageways D, D). The southern part of the complex is emphasized by a large structure, like an open exedra, before which was a square courtyard closed in on the north and south sides by side walls decorated with square niches (fig. 161, B). The facade of the building faces east, measure 30 metres in width and comprises one large semi-circular niche alongside of which are two smaller niches. A half dome once covered the big niche. Two diagonal walls, with passages to corner rooms, flank the big niche on either side (fig. 161, E, F). These walls were also decorated by semi-circular niches, close to the point where they joined the side walls.

The main east-west street could be reached from Building B via the corner room (E) and the vaulted passageway (D) while to reach the northern side of the Palace (C) one used the northern section of the passageway (D). Between the northern side wall of Building B and the street were two more large vaulted halls. Butler points out the probable existence of still more rooms situated further west of the passageway (D) (fig. 161).

From the little that remains, it is difficult to form a detailed picture of the architectural decorations of this palace. However, from what Butler, Brunnow and Domaszewski recorded it might be possible to reconstruct Building B as having porticos which, together with the side walls of Building B, supported an overhead covering. It is impossible to know exactly what functions were fulfilled by Building B, but it was clearly a monumental structure meant for ceremonies or used as an open ritual precinct (15).

Less remained of the northern part of the Palace (fig. 161, C), however

it is possible to make out a row of vaulted rooms east of passageway (D), as well as a longer room. These are the same as the rooms found on the south side of the street. From passageway (D) one moved north to a large courtyard, probably an Atrium, which the researchers never succeeded in measuring or describing (C).

As previously stated, because of the amount of later structures erected on this area, it is impossible to give an account of the original size of this complex. It is clear, however, that here, in the heart of the city, stood a variety of well built structures which could very possibly have functioned as a Palace (16).

The Bath (figs. 154, 155, 162) (17).

The remains of the Philippopolis Bath count among the largest groups of ruins discovered in the Hauran. The buildings was situated in the south-east part of the city, at a distance of 80 metres from the east-west street and 25 metres from the north-south street. It was well constructed and as a result was better preserved than many others. Its plan was symetrical and an overall view shows its division into: a) the southern section (which is shorter), and b) the northern section (which is wider). The former was divided into 3 large halls, all equal in size (11 x 18 metres), and separated from one another by thick walls (3 metres). One moved from room to room through a vaulted passageway measuring 4.65 metres in width (fig. 162 A, B, C). At the far end of each of the three walls were staircases (b, c) leading to the roof (18). The construction of the third room (C) was never completed.

It seems that the rooms (A, C,) were used as Vestiaria and room (B) was the Frigidarium. The northern part of the Bath included in its centre two circular rooms (D, D) both 9 metres in diameter which were probably used as Caldaria. To the north was a rectangular room whose short walls were formed by semi-circular niches (E). This was the Tepidarium.

The Bath was entered through a wide, vaulted entranceway (4.65 metes wide) situated at the western end of the southern part of the building (a). The only connection between the two blocks of the Bath (south and north) was through narrow passageways (d) from the large rooms (A, B, C) to the circular rooms (D, D). Similar connections existed (c, c) between the latter and the rectangular room (E). However, it is not clear what the connection was between the circular rooms (D, D) and the group of rooms (F, G, H). It is possible that these rooms, situated at the north-west end of the Bath complex, were cut off from the others, and having their own separate entrance (g), were used as a Bath for women only.

It is important to note that the piles of rubble within the Bath have not allowed a more exact study of the functional division of this structure. However, the Bath excells in its strong and pleasing forms of construction. The outer walls are made of well dressed hewn stones while the interior walls are a mixture of cement and small rough stones. Inside too, some parts were covered by thin marble slabs (19). On average the walls are 1.2 metres thick.

South-east of the Bath and within close proximity to its was a reservoir (K), which undoubtedly was connected both to the building and to the aqueduct (see below).

The Philippopolis Bath can be clearly categorised as a Roman building similar in character to the big Baths in Rome and all around the Empire (20). The few years that Philip the Arab reigned were not enough, however, to allow for the completion of this structure.

The Aqueduct (figs. 154, 156) (21).

The aqueduct reaches the city from the south-east side, crosses the city wall in a straight line and approaches the Bath. Here it lies in ruins and scholars have failed to understand exactly how it was completed in the vicinity of the Bath. Today, 6 piers still stand near the Bath. These were connected to each other by arches which in turn supported an upper structure. Only one arch remains today connecting the first and second piers. The first 4 piers are almost identical to their measurements. They are square (2.36 x 2.48 metres) and stand 6.20 metres apart. The fifth pier is nearly double in size because of the turn taken by the aqueduct as this point at a 45 angle south-east. The sixth pier is once again similar to the other 4 in size.

The aqueduct is strongly built of basalt stones with protruberances and smooth margins. Cement was used between stones and the inner walls comprised a mixture of cement and small rough stones. The aqueduct ran for a few kilometres in the direction of the mountains on the south-eastern side of Philippopolis (22). It has never been properly studied but a comparison between sections surveyed outside the city walls and those found within the city (23) show that the former were not as well built as those within the city walls.

The Theatre (figs. 154, 156, 163-166) (24).

To the south of the "Philippaeon", and not far from it, stands the Theatre of Philippopolis. In general, it has been extremely well preserved, and the bottom sections are particularly impressive. In the skenefrons, which rises to what was almost its original height of 2 floors, are 3 vaulted passageways. The middle one is wider and higher than the others. On both sides of this central passageway are two semi-circular niches while the lower passageways are flanked by two square niches. Flanking the skenefrons are the two staircase towers, actually acting as Versurae (Paraskenia), leading to the upper floor and the roof (fig. 163) (25). The skenefrons also served as the north wall of the skene building while the south wall of the skene building was also the outside wall of the Theatre itself (figs. 163, 164).

The pulpitum (proskenion) was a narrow strip, slightly raised above the semi-circular orchestra. The auditorium (cavea) comprised two horizontal sections of seats. The upper has collapsed but the lower still remains almost in its entirety and in excellent condition. The entire auditorium is constructed upon a series of vaulted corridors - two floors high. Only the eastern corner of the upper level, near the facade of the skene, still stands, the bottom level is totally preserved. The semicircular, vaulted corridors on both levels, interphase with the radial, vaulted corridors. The interlacing of these vaults is an unusual example of an efficient and attractive solution to an architectural problem where two barrel-vaults are joined together creating a quite unique type of cross-vault (fig. 165).

A semicircular passage with a high wall (Praecinctio) divided the upper cavea from the lower cavea. In its centre, opposite the Orchestra, was a vaulted passageway which led directly to the outside of the Theatre while passing below the upper cavea. One entered the theatre through any of the 8 vaulted entrances (vomitoria) in the semicircular outer wall (fig. 164) and these entranceways were on the same level as the Praecinctio described immediately above. From this it becomes clear that those who sat on the lower cavea descended to their seats, while those whose seats were on the upper cavea had to climb further up.

The Theatre was well built and although there seems to be no evidence of it having been covered by marble (as in the case of the Bath and "Philippaeon"), it does seem to have been plastered and colourfully painted (26). In summary, the Theatre although modest in size, is impressive for its beautiful proportions, its high standard of building and the clever way in which the architectural elements of the arch and the vault have been used (27).

The Tetrapylon (figs. 154, 155, 167) (28).

The junction of the two main street of Philippopolis was marked by a Tetrapylon. Three of the four pedestals that carried the upper structure were still seen by Butler, Brunnow and Domaszewski, but today are no longer visible. These measured: 5.60 x 7.55 metres and stood 2.60 metres high. Nothing remained of the upper structure and therefore it is impossible to reconstruct the Tetrapylon, although it seems reasonable to presume that it was similar to the other structures of this kind that were a common sight in the cities of Syria and Arabia during the 2nd and 3rd centuries (figs. 71, 168) (29).

The City Gates (figs. 154, 155, 169-171) (30).

Four large Gates, each with three vaulted entranceways, marked the exits of the two main street of Philippopolis in the city wall. Two smaller Gates each with only one vaulted entranceway marked the southern and northern exits of the other north-south street (fig. 154).

The four Gates seem to have had identical plans. The South Gate was particularly well preserved (fig. 169-170) - its central entranceway measuring 4.60 metres wide, and the two side ones each 2.80 metres wide. The ceilings of the barrel-vaults were artificially 'lowered' in all three entrances by simple stone beams, placed upon the corner pilasters which decorated all the passageways (31). Above each beam was a flat arch intended to ease the pressure of the stone wall which blocked in the hollow space left between the beams and the top of the original vaults (fig. 170). This addition belongs to the original structure and seems to have no functional explanation. The architects probably wanted to give the Gate a more powerful and solid appearance. On the other hand, the pilasters in the East Gate had Corinthian capitals (32). On the outside of the two central pilasters, facing away from the city, were half columns, resting on high piers. These could still be seen at the East Gate but had been completely destroyed at the South Gate (33).

The Gates of Philippopolis were also built of the local basalt stones,

well dressed and hewn and their interior were made of a mixture of cement and little rough stones as could be seen in other structures of the city. The sparse architectural decoration includes half columns and simple architectural mouldings. The capitals are either Corinthian or Nabataean in design, there is no relief ornamentation and no decorative niches adorned with statues or freestanding columns.

The two smaller Gates were also well constructed but they too were not ornamented (fig. 171) (34).

The Stadium (figs. 155, 156).

The area most suited to the construction of a stadium was in the south-west of the city, alongside the south city wall, west of the main north-south street and east of the volcanic hills. Butler, Brunnow and Domaszewski never noticed this structure, but there are signs on the aerial photographs of a stadium measuring about 180 metres long and 60 metres wide. It appears that the long natural depression in the area was flattened and suited to the needs of a stadium (35).

Remains of other Buildings (fig. 154) (36).

Butler remarks that among the ruins of Philippopolis are those which require further study, but because of the widespread building of the local villagers and because of the mounds of rubble covering these monuments, he was not able to investigate them. It is important however to name these structures marked by Butler in order to gain a more complete view of the main focal points of buildings in the city.

A large block of structures stretches over part of the city close to the east-west main street and about 20 metres north of it (fig. 154, A). This area lying between the other north-south street and the north-west city wall was named the "Necropolis" by Butler (37). Indeed, a few badly preserved monuments discovered here seem to strengthen the view that the area functioned as such. Structure (D) is rectangular in shape measuring 12 x 20 metres and looks as if it was originally a pyramid shaped, stepped building (fig. 154, D). Nearby is a circular structure, three metres in diameter, which Butler described as being of a particularly fine and high standard of building (38).

The City Plan of Philippopolis

Today, as in the past, Philippopolis (Shuhba) is situated on the highway leading from Bostra through Suwayda to Damascus. At this point the eastern slopes of the rocky mountain of the Ledja meet the north-west slopes of the G'ebal Druz range of hills (fig. 153).

The city itself lies on a rocky, fairly flat-topped hill at an altitude of 1,100 metres above sea level. The modern asphalt highway cuts across the city exactly along the lines of the main north-south street of ancient Philippopolis. The new town is concentrated almost entirely within the borders of the Old City, and only a few houses have been constructed outside, along the asphalt road (fig. 156).

On the north, east and south sides of the city the grounds have been flattened and divided into agricultural tracts, and it is only on the west that the area is rocky. Close to the west city wall there are two volcanic hills. Here the topography made construction difficult and indeed the line of the western wall at this point is not straight (compare figs. 154, 155, 156).

The east city wall runs in a straight line (about 800 metres long), but is not parallel to the line of the main north-south street which is completely straight for its entire length. The north city wall from the North Gate until the north-east corner of the wall measures 275 metres. The section parallel to it on the south side runs for 350 metres. The area lying to the west of the main north-south street is almost double the size of that on the eastern side, but topographically it is a more difficult terrain. The southwest section of the city is almost entirely rocky and could not be exploited for urban purposes (fig. 156). Yet this area was included in the city, and encompassed by its walls. It would appear that it was preferable to protect the area which in itself was a high vantage point, not far from the city centre. In addition, by not including this rocky area in the walled city the planners would have created an irregular shaped city something they undoubtedly did not want to do.

The west city wall runs along the foot of the two volcanic hills and is not straight (fig. 156). Its northern section - from the north-west corner to the West Gate - moves in a south-westerly direction and measures 375 metres long. The other section running from the West Gate turns eastwards and continues for 225 metres. From here to the south-west corner of the city wall (a distance of 400 metres), the wall turns 30 in a westerly direction. Butler does not record all these directional changes in the wall and probably did not notice them (fig. 154). The reason for the irregularity of the line of the western wall is a group of hills lying on the south-west side of the city on the one hand, and the eastern slopes of the volcanic hills situated to the city on the other hand. For example, in the section of the wall running from the small South Gate to the south-west corner the wall protrudes thereby bypassing a large piece of rock. This protruberance is also not recorded in Butler's city plan (compare figs. 154, 155). The inclusion of the rock in the city wall was important for defence purposes as it then allowed control over the area around the small South Gate (fig. 155). From the main South Gate to the south-west corner of the city, the wall ran from 550 metres. We can now see that the circumference of the walls measured 3,500 metres. Thus the area they encompassed, which formed the city of Philippopolis, was about 863,500 sq. metres.

Contrary to Butler's opinion, the two main street cross at a right angle to each other and divide the city into four blocks not equal in size (compare figs. 154, 155). Butler also noticed the other street cutting through the city from north to south. It is not parallel to the main north-south street and runs west of it. This street moves in a straight line from the north to the group of rocks in the south-west of the city. Here it circles them on their east side and finally ends at a Gate with a single vaulted entranceway (compare figs. 154, 155). A similar Gate stood at the northern end of this street (fig. 171).

On a closer study of the aerial photograph of the city our attention was caught by a few more street in the city which help to complete the picture of a street network already recorded by Butler: Another north-south street crossing the city west of the main north-south street. Here it may be

noticed that the northern section of this street (until it reaches the main east-west street) is not parallel to the main north-south street, while the southern section does run parallel to it. The street ended at the Forum. At both its ends, close to the city wall the line of the street is not quite clear (fig. 155). The reason for the slight turn of this street to the west probably lies in the lay of the land, but we have no way of confirming this supposition.

Yet another two streets run east of and parallel to the main north-south street but only small parts of these are clear as most of the sections near the north and south walls have disappeared under agriculturally worked lands and new structures.

There are clear signs of more streets running parallel to the main east-west street, while to the north of the main street the middle sections of two streets are noticeable. All of these form the street network in the northern region of Philippopolis. South of and parallel to the main east-west street is a street which runs across the breadth of the city in a way similar to that of the former. It can be clearly followed running south of the Theatre and the Bath and only the sections near the city walls are not clear.

There are signs of still three more short street moving in an east-westerly direction and connecting the main north-south street to the one running parallel to it on the west. Only the northern of these three street is clear enough to be traced, the others are not as obvious (fig. 155).

Although the above description of Philippopolis' street network is not, and never will be accurate until full scale excavations are conducted in the area, certain conclusions may still be reached. Philippopolis was a city built on the principle of two main streets intersecting at a right angle, near the centre of the city, and surrounded by a network of minor street which together form the planned street grid of the city.

Many cities of this kind were established by the Romans as settlements throughout the Empire from the beginning of the 2nd century B.C. onwards. Philippopolis, set up in the middle of the 3rd century C.E., is an example of one of the latest cities of this kind. The shape and size of the city (a square measuring about 750 x 800 metres; the insulae 100 x 130 metres i.e. the measurements of two actus) is typical of many of the Roman cities constructed particularly during and after the Principat Period. It is not difficult, therefore, to see where the city plan of Philip the Arab and his architects originated. One has only to look at the situation of structures such as the Forum, the Theatre and the layout of the street network in other cities such as Turin, Verona, Aosta, Lucca and Como, to realise that there were many examples of this kind of city-planning in the Roman world (39).

It is in this way that the city of Philippopolis differed in essence from all the other cities constructed in Provincia Arabia.

The two main streets, as recorded by Butler, were lined by colonnades (fig. 154) but it is impossible to check whether they lined the other streets too (40). The junction of the two main streets was marked by a Tetrapylon (fig. 167) which no longer remains. In its place today is a small town square. The street paving stones, still seen by Butler, have disappeared beneath mounds of refuse or asphalted roads (41). The

villagers' houses have been constructed upon the ruins of the Old City's buildings most of which have been completely covered. It must be noted that the borders of 20th century Shuhba are almost identical to those of Roman Philippopolis.

The ruins of the group of buildings that made up the Palace are today also in the heart of the town. We believe that the Forum was situated in the middle of the city, bordered in the north by the main east-west street, in the south by the "Philippaeon" and the Theatre, by the Palace in the west and by a large public structure (maybe the Basilica) in the east (fig. 154). The Forum in the north, was surrounded by a portico which was part of the colonnade of the main east-west street. Similar columns perhaps belonging to another portico were found in the east and these probably closed the Forum in on this side. Opposite the building (B) which was part of the Palace complex on the west was possibly yet another portico (42). In Shuhba today the area which housed the Forum is the main city plaza (fig. 156). The Sheikh of the village has built his house on top of some of the Palace ruins and this once again shows the continuation of the functional division of the Roman city.

A large section of the city, south of the Bath and east of the main north-south street is mainly empty and uninhabited. Only a few houses stand alongside the asphalt road which runs in between agricultural lands. The aqueduct, which even today is easily recognizable, runs through these lands and Butler believed that this area was set aside specifically as a public gardens and was never built up. (fig. 154). It is difficult to know whether this theory is correct or not. It is entirely possible that a planned city like Philippopolis enjoyed the luxury of such open areas and gardens. On the other hand, it is also possible that plans for buildings did exist but because of the distance from the city centre, this was one of the areas (like others in the city) that was eventually never completed. (see fig. 155 - the dotted areas mark the sections of the city suitable for building but never exploited). It seems as if the most built up areas were in the four insulae around the Forum and in the two insulae east of the Tetrapylon (fig. 155).

Of the 863,500 sq. metres in the city only 187,500 sq. metres, i.e. 25% of the entire area, was exploited for urban building. A glance at a map shows that this is a typical Roman plan to be seen in the Empire particularly during the 1st and 2nd centuries C.E. The foundations of Philippopolis however, is different, as only a few cities like this were built during the 3rd century C.E. (43). In the days of Philip the Arab the founding of a city was, in itself, an exceptional event and this therefore attracted the attention of the Roman historians (44). It would seem that Philip the Arab had personal and dynastic reasons for erecting the city of Philippopolis (45).

In the history of urban development in the Roman Empire, Philippopolis fulfills a special role. It was a city established in Arabia by a ruler who originated in the East. But it took on a totally Western, Roman character in its design and plan. On the other hand, it was rare for the Romans, who generally had very pragmatic reasons for establishing their cities, to build a new city and name it after a specific person. One of the exceptions to this rule was Hadrian who founded a city in Egypt and called in Antinoopolis after his close friend. Therefore, this act of Philip the Arab, of naming the city after himself, is one more suited to the Hellenistic-Eastern tradition than to the Western Roman one.

What status did Philippopolis enjoy? Was it meant to have been the Emperor's capital? Or perhaps his private city? Maybe he intended it to serve as a memorial to himself? (46). The "Philippaeon" which seems to have been a family Mausoleum might partially answer some questions. Here the ashes of Philip and his family were interred as they were in the Mausoleums of Augustus and Hadrian and their heirs. If we consider that the city served as a symbolic capital for the Emperor during this reign and as his place of burial thereafter, we can understand its monumental character. The planners and builders endowed this provincial city with the best of Roman Imperial architecture. But is was a city built at the command of the Emperor, planned in an empty area, with little concern for the future of its inhabitants. The general impression one gets is of a certain artificiality of buildings which do not quite suit their surroundings. There are empty tracts of land and sections that were never completed. The architectural decoration is poor when compared to the standard of construction and the solutions found to architectural problems. All these phenomena might be a sign of the decline of Classical Town-Planning and Architecture. While the technical and operational standards were still very high, less attention was paid to fine art work and ornamentation which in fact are virtually non-existant (47).

Philippopolis is far more similar in plan to the Roman cities of Europe than to those established in Arabia (48). It was a city that existed only over a short period and was not preceded or followed by other major cities.

Philip the Arab was never widely mentioned among the historians of Rome. He rose to power with the support of the Legions after the murder of his predecessor, Gordian the Third (in the year 244 C.E.) and disappeared from the arena of history after a short and uneventful reign, murdered in Italy by the very same Legions who had supported him 5 years previously.

The ruins of Philippoplis together with the few words written about him by historians of the time are the only evidence of the rule and deeds of the Emperor Philip the Arab.

NOTES

1a. With reference to the reign of the Philip the Arab, see:
E. Gibbon, The History of the Decline and Fall of the Roman Empire, London, 1926, pp. 208-209, 256.

1b. Only a few historical sources mention the period during which Philip the Arab reigned, see:
Sextus Aurelius Victor, De Caeseribus, 28, B.G. Teubneri, 1911.
"Igitur Marcus Julius Philippus arabs Traconites, sumpto in consortium Philippo filio, rebus ad Orientem compositis conditoque apud Arabiam Philippopoli Opida Romam venere..."

1c. The city Philippopolis is also mentioned in later sources, see:
P. Thomsen, Loca Sancta, Halle, 1907, p. 113. E. Honigman, R.E. s.v. Philippopolis, col. 2263.

1d. Numismatic material uncovered provides further information concerning the dates and status of this city. It allows us to correctly date its foundation as well as its end, as no more coins were produced after the death of Philip in the year 249 C.E. See:
G.F. Hill, Catalogue of the Greek Coins of Arabia, Mesopotamia and Persia, London, 1922, p. XLI, pp. 42-43, Pl. VI 14-17.
A. Spijkerman, The Coins of the Decapolis and Provincia Arabia. Franciscan Printing Press, Jerusalem, 1978. (Philippopolis, pp. 258-261).

2. An inscription discovered among the ruins of the city bears witness to a small Christian settlement there. It dates to the year 552 C.E. and mentions the existence of a church in the city. See:
W. Kelly Prentice, P.U.A.E.S., Greek and Latin Inscriptions, pp. 314-315, (inscr. 403).

3. U.J. Seetzen, Reisen durch Syrien, Palastina, Phonician die Transjordan - Lander, Arabia Petraea und Unter-Aegypten I, Berlin, 1854-1855, p. 89.
J.L. Burckhardt, Travels in Syria and the Holy Land, London, 1822, pp. 70-74.
L. De Laborde, Voyage de la Syrie, Paris, 1830, p. 58.
G. Robinson, Travels in Palestine and Syria II, London, 1837, p. 148 ff.
J.L. Porter, Five Years in Damascus II, London, 1855, pp. 72-80.
E.G. Rey, Voyage dans le Hauran et aux bords de la mer Morte. Execute pendant les annes 1857-1858, Paris (-), pp. 91-94, Pl. IV (Atlas).
H.C. Butler, P.U.A.E.S., Part II: Architecture and Other Arts, New York, 1903, pp. 376-396.
R.E. Brunnow, A.V. Domaszewski, Die Provincia Arabia III, Strassburg, 1909, pp. 145-179.
P. Coupel, E. Frezouls, Le Theatre de Philippopolis en Arabie, Paris, 1956.
G. Amer, M. Gawlikowski, "Le sanctuaire imperial de Philippopolis", Damaszener Mitteilungen II, (1985)., pp. 1-15.

5. H.C. Butler, pp. 378-380.
R.E. Brunnow, A.v. Domaszewski, pp. 162-163.

6. H.C. Butler, p. 379.
During the 2nd and 3rd centuries C.E. ritual structures were built which did not conform with the classical architectural principle of a round or rectangular cella. These are commonly known as belonging to the "Baroque" style. It is therefore possible that the Temple of Philippopolis was not an exception as Butler believed it to be. See for example the Temple of Venus at Baalbek (Heliopolis) (fig. 158) which is also from the 3rd century C.E.
A. Boethius, J. Ward-Perkins, Etruscan and Roman Architecture, Penguin Books, 1970, pp. 421-422, fig. 157.
D. Krencker, Baalbeck II, Berklin, 1923, (Der Rundtempel), pp. 90-119.
See further example - Temple "P" in Side, Asia Minor (fig. 159).
A. Boethius, J. Ward-Perkins, op. cit., p. 408, fig. 155 (c).
A.M. Mansel, Die Ruinen von Side, Berlin, 1963, pp. 86-90, fig. 69. See chapter 5, p. .

7. H.C. Butler, pp. 380-382.
R.E. Brunnow, A.v. Domaszewski, pp. 167.
The German scholars prefer not to call this structure the "Philippaeon" but instead call it the "Square Temple" (Viereckiger Tempel).

8. See appendix to chapter 4, pp. 97-100.

9. This system of building staircase rooms is typical of religious architecture in Arabia and originates with the Nabataeans. It is based on the doubling up of one of the cella walls and the construction of a narrow staircase ascending at a steep angle to the second floor or the roof. This eliminates very little space from the area of the cella itself.
The closest example to this staircase may be seen in the Temple of Zeus at Kanawat and in the Temple of Qasr-Bint-Far'un at Petra, see:
a) With reference to the Temple of Zeus at Kanawat, see:
H.C. Butler, P.U.A.E.S. II Architecture and Other Arts, pp. 351-354, fig. 124.
R. Amy, "Temple a Escaliers", SYRIA XXVII, (1950), pp. 94-95, figs. 11-12.
b) With reference to the Temple of Qasr-Bint-Far'un, see:
G.R.H. Wright, "Structure of the Qasr-Bint-Far'un. A Preliminary Report", P.E.Q. 193 (1961), pp. 11-14, fig.s 2-5.
R. Amy, op.cit., pp. 108-109, fig. 23.
See also chapter 2, note 25.

10. Similar mausoleums were very common during the Hellenistic as well as during the Roman Period, throughout the Classical World and may be seen in Italy, Asia Minor, North Africa and Syria.

A) Syria and Arabia
It was here that the use of mausoleums with pyramidal shaped roofs was most common. They dated from the 1st century B.C.E. right through to the 5th century C.E. Tens of such burial places with their sloping or stepped roofs have been uncovered in Syria and Arabia:

I) The Hamrath Tomb in Syria (1st century B.C.), see:
H.C. Butler, Architecture and Other Arts, pp. 324-326.
M. de Vogue, Syrie Centrale, pp. 29-31, Pl. I.

II) A Roman Tomb at Dana (3rd century C.E.) see:
H.C. Butler, op.cit., pp. 73-74.
M. de Vogue, op.cit., Pl. 93.

III) The Cassianos Tomb, (398 C.E.), in Divonya, see:
H.C. Butler, op.cit., p. 109.

IV) The Mausoleum at II-Barah (5th century C.E.), see:
H.C. Bulter, op.cit., pp. 159.

B) Palestine

The Tomb of Zacharia in the Kidron Valley is also a fine example of these structures and has a smooth, pyramid shaped roof, see:
N. Avigad, Ancient Monuments in the Kidron Valley, Jerusalem, 1954, pp. 79-89 (Hebrew).

C) Asia Minor

I) The "Lions Mausoleum" in Knidos near Halikarnassos had a stepped pyramidal roof, see:
A.W. Lawrence, Greek Architecture, Penguin Books, 1967, p. 196, fig. 108.

II) The "Roman Tomb" at Millesa, south-east of Miletus, also has a stepped pyramidal roof see:
H.E. Bean, Turkey beyond the Menander, London, 1971, p. 43, Pl. 5.

D) Italy
Among the Tombs spread out along the Via Appia are also a few shaped as pyramids, see:
L. Grema, E.C. (Monumenti funerari), pp. 484-506, fig. 636.

E) North Africa
I. The Haidra Mausoleum in Tunisia, see:
L. Crema, E.C., p. 503, fig. 645.

II. The Mausoleum at Mactaris in Tunisia, see:
L. Crema, E.C., p. 503, fig. 652.

11) See appendix to chapter 4, inscriptions 396, 397.

12) H.C. Butler, p. 381.

13) H.C. Butler, pp. 382-384.
E. Brunnow, A.v. Domaszewski, pp. 164-167.

14) The vault, photographed by Brunnow and Domaszewski still remains in its orignal position and the main street of the town passes beneath it.

15) Butler names Building B in the Palace a "Kalybe", claiming that M.de Vogue was the first to give it this name see:
M. de Vogue, Syrie Centrale, pp. 41-43, Pl. 6.
The French scholar uncovered a number of inscriptions where the name "Kalybe" appeared, always together with the word 'sacred'. From this he surmised that this structure had a religious function. Bulter sees Building B in the Palace as being an open ritual place, see chapter 3, p. 56, note 34.

16. Only a small section of the Palace at Philippopolis has been studied and therefore it is difficult to judge its size or the area it encompassed. However, from Butler's plan it is possible to see that this was a very

special structure with a particularly unusual shape. The vault under which the main street ran is of particular interest as we have been unable to find a parallel to it in Roman architecture.
A structure that may be vaguely reminiscent of this building can be seen in Shakka, a neighbouring town of Philippolis, see:
H.C. Butler, Architecture and Other Arts, pp. 370-375, fig. 129.
Butler dates the Shakka Palace to the 3rd century C.E.

17. H.C. Butler, pp. 384-389.
R.E. Brunnow, A.v. Domaszewski, pp. 155-160.

18. A comprehensive discussion concerning the character and situations of the staircase rooms, see chapter 2, note 25.

19. H.C. Butler, p. 389.

20. Although we have not found an exact parallel to the Bath in Philippopolis, there were many Bath complexes in the Roman Empire, dating to the 3rd and 4th centuries C.E., whose plans were of a similar nature.
a) The Titus Bath in Rome from the 1st century C.E., see:
L. Crema, E.C., (Krencker, Kaiserthermen), p. 287, fig. 326.

b) Hadrian's Bath at Leptis-Magna is similar but larger than that of Philippopolis, see:
L. Crema, E.C., p. 409, fig. 502.

c) The Bath at Trier in Germany and that in Lambaesis in North Africa both date to the 3rd century C.E. and have similar plans to that of Philippopolis, see:
L. Crema, E.C., pp. 586-594, figs. 781, 784.

21. H.C. Butler, pp. 389-390.
R.E. Brunnow, A.v. Domaszewski, pp. 151, 155.

22. Even the aerial photographs and the map of modern day Shuhba (1:50:000) do not show the beginning of the aqueduct.

23. H.C. Butler, pp. 390.

24. H.C. Butler, pp. 390-392.
R.E. Brunnow, A.v. Domaszewski, pp. 169-177.
P. Coupel, E. Frezouls, Le Theatre de Philippopolis en Arabie, Paris, 1956.
E. Frezouls, "Les Theatres Romaines de Syrie", A.A.S. II (1952), (Philippopolis, pp. 69-79).
The French scholars point out that the Theatre at Philippopolis is the latest known among all the theatres discovered so far in Syria, Arabia and Palestine.

25. See note 18.

26. H.C. Bulter, p. 392.

27. With reference to the position of the Theatre within the urban complex of Arabian cities, see discussion chapter 2, notes 27, 29. See also chapter 5, pp. 106-107.

28. H.C. Butler, p. 393.
R.E. Brunnow, A.v. Domaszewski, pp. 160-161.

29. The Tetrapylon was a widespread urban feature in the Roman cities of the 2nd and 3rd centuries C.E. The two most similar in design to that in Philippopolis are the South Tetrapylon in Gerasa and the Tetrapylon in Palmyra.
a) With reference to the Tetrapylon in Gerasa, see chapter 2, pp. 25-26, notes 49-52.
b) With reference to the Tetrapylon in Palmyra, see:
Th. Wiegand, Palmyra Berlin, 1932, pp. 20-21, figs. 24-25.
A. Ostrasz, "Etudes sur la restauration du Grand Tetrapyle", Studia Palmyrenskie I, (1966), pp. 46-58.
See also chapter 3, p. 106 (fig. 168).

30. H.C. Butler pp. 393-395.
R.E. Brunnow, A.v. Domaszeski, pp. 147-150.

31. The ceiling of the West Gate of Bostra was "lowered" in a similar manner, see chapter 3, p. 53(figs. 115-117).

32. Although Butler does not mention the Nabataean capitals in the South Gate, these are quite clear both from the photographs of Brunnow and Domaszeski as well as from the plan of the Gate (see fig. 170). If we rule out these being used for the second time then their appearance in the 3rd century C.E. is very unusual. If, however, they are in second use it would then appear that a settlement with Nabataean traditions existed on this spot prior to the foundation of Philippopolis, as may be seen in other towns in the area. Clearly this single discovery does no allow us to build a theory or state a definite fact. However, the appearance of Nabataean names in the inscriptions uncovered in the city (see appendix to chapter 4, inscription 395, 401a), and the discovery of an inscription from the end of the 2nd century C.E. (see appendix to chapter 4, inscription 392), together with the above mentioned capitals, all point to the possibility of an earlier Nabataean settlement or sanctuary which might have preceded Philippopolis.

33. H.C. Butler, p. 394, see photograph on p. 394.

34. H.C. Butler, p. 395.

35. Philippopolis enjoyed a very special status as a city and therefore it is not surprising to find that it also had a stadium, which have been uncovered only in a few cities of Syria and Arabia.
See chapter 2, note 40.
See chapter 3, note 53.

36. H.C. Butler, p. 395.

37. R.E. Brunnow, A.v. Domaszewski, p. 178.
H.C. Butler, pp. 395-396.

38. H.C. Butler, p. 396.

39. Among the tens of Roman cities built in the Roman Empire between the 3rd century B.C. and 3rd century C.E., there are many similar in size, plan and with the same functional division as that found in Philippopolis, see:
Aosta (Augusta Praetoria), Italy (see. fig. 174)

Como (Comum), Italy (see fig. 176)
Verona, Italy (see fig. 173)
Luca (Lucca), Italy, (see fig. 175).
Turin, Italy (see fig. 172).
With reference to the history and town planning of these cities, see:
J.B. Ward-Perkins, Cities of Ancient Greece and Italy: Planning in Classical Antiquity, New York, 1974.
F. Castognoli, Orthogonal Town-planning in Antiquity, M.I.T., 1971.
In this study the Italian scholar divides the Roman cities into 4 main types:
a) Cities where the plans were influenced by the Hippodamian tradition.
b) Cities where the plans are based on two main axis meeting at right angles in the city-centre.
c) Cities influenced by the camp plan, but whose main axis do not meet in the city-centre.
d) Camp-cities with plans similar to the Roman camps.
Even if this division is too mechanical and clear-cut, (see chapter 3, discussion on Bostra city plan, note 72) it would appear that Philippopolis, together with those cities mentioned above, clearly belongs to the third type described.
The city plan of Philippopolis is based on two straight main axis meeting at right angles, not in the centre of the city, but instead further north. The city boundaries - with the four slightly off-centered main gates situated in the four walls - suit the camp plan. In general the city plan is the result of the Roman town planning tradition of a few hundred years, but with the addition of some unusual solutions to architectural problems which show the flexibility of the planners of that period to mold the schematic camp plan to suit the topographic conditions that they faced.

40. H.C. Butler, p. 377.

41. It is difficult to accept Butler's statement that the main streets of Philippopolis were probably between 9-10 metres wide. If we measure the width of the passageways of the two main gates we find that the main entrance measured 4.20 metres in width and the side ones both measured 2.62 metes. Therefore it would appear that the main street probably measured about 11 metres in width and maybe even 19 metres if we include the two pavements.
Compare this to the width of main streets in other cities in Arabia:

	Street Width	Pavement width	Total
Philadelphia	8.40 m'	?	?
Gerasa	10.5 m'	11.0 m'	21.5 m'
Bostra	8.0 m'	11.0 m'	19.0 m'
Philippopolis	11.0 m'	8.0 m'	19.0 m'

42. H.C. Butler, pp. 382-383.

43. There were a few cases in the 4th century C.E. where Roman cities in the East were given special status or rights. These were probably not decrees to actually establish a city. The Emperor Diocletian calls the settlement Shakka, situated in the Hauran, by the name Maximianopolis:

See:
A.H.N. Jones, The Cities of the Eastern Roman Provinces, Oxford, 1937, pp. 286-287.

44. See note 1.

45. Prof. M. Avi-Yonah's remark that Philip the Arab was actually born in Shuhba which is the name of the Arab town today and which he also believes was the name of the pre-Roman city, could easily explain why he chose to establish the city with its family mausoleum in this particular spot. However, there is no definite base for this and although Roman historians state that Philip the Arab was born in Arabia, they do not sepecify exactly where, (see note 1c), see:
M. Avi-Yonah, The Holy Land from the Persian Period to the Arab Conquest, Baker Book House, Michigan, 1966, p. 177.

46. Perhaps Philip the Arab intended establishing a city similar to the one founded by the Emperor Diocletian during the 4th century C.E. in Spalato (today Split in Yugoslavia) along the Dalmatian coast. This city was based on the camp plan, and housed the Emperor's palace, other service buildings and in particular the Emperor's Mausoleum - very similar to the "Philippaeon", see:
G. Niemann, Der Palast Diokletians in Spalato, Wien, 1910.
Y. Marasovic, Der Diokletianspalast, Zagreb, 1968.
G. McNally, "Digging in Diocletian's Palace", EXPEDITION 15, (3), 1973, pp. 30-39.

47. H.C. Butler, Architecture and Other Arts, pp. 369-370.
P. Coupel, E. Frezouls, Le Theatre de Philippopolis en Arabie, pp. 122-126.
Another word may be added as to the reason for the poor architectural decorations found in the city. Philippopolis was established as the result of an Emperor's decree, built during a short period and its population was artificially brought to the city from elsewhere. They clearly displayed no attachment or emotional involvement with their new city and therefore saw no reason to beautify it or add to what already existed there. Philippopolis may be likened to a pleasant and well planned urban skeleton into which life never truly entered.

48. See note 39.

APPENDIX TO CHAPTER IV

Introduction

All the inscriptions discovered at Philippopolis have been published by W. Kelly Prentice (see chapter 4, note 2). What follows is a collection of these in Greek together with an accompanying explanation. Their importance lies in the exact information they have supplied scholars over the years concerning their understanding of the special status and character of Philippopolis. They also provide an exact date for the foundation of the city, are further proof that information passed on by historical sources concerning the name of the founder are correct, and they embellish descriptions of its short existence. The epigraphical material that follows accompanies most of the important structures in the city. They are numbered according to the numbers given by W. Kelly Prentice.

Inscription 392

Ὑπὲρ σωτηρίας καὶ νίκης τῶν κυρίων Αὐτοκρατόρων Μ. Αὐρηλίου Ἀντωνείνου καὶ Λ. Αὐρηλίου [Κομμόδου], υἱοῦ αὐτοῦ, Σεβαστῶν, ἐπὶ Μαρτίου Οὐήρου, πρεσβ(ευτοῦ) Σεβ(αστῶν) ἀντιστρ(ατήγου), ἐφεστῶτος Πετουσίου Εὐδήμου, (ἑκατοντάρχου) λε-γ(ιῶνος) ις΄ Φλ(αβίας) Φ(ί)ρ(μης), ἐπὶ Λιλάμου Δα-βάνου στρατηγοῦ. Λίλαμος Δαβάνου στρα(τηγός).

This inscription, if indeed it originated in Philippopolis, provides the only epigraphical evidence to the existence of an earlier settlement in the area, prior to the rise of Philip the Arab in 244 C.E. It was found in secondary use in a new building, and dates to 177/8 C.E. at the time that Emperor Commodus was granted the title Augustus. At present there is no further way of proving that a town existed on this particular spot during this period. The uniformity of the city plan and the style of building of Philippopolis, seem to clearly negate the possibility of it having been constructed upon the ruins of an earlier settlement. If the inscription truly belongs to this area then it might merely have been part of a ritual structure standing in the vicinity.

Inscription 392a

Αὐτοκράτ]ορα, Κέσαρα, [Μ. Ἰ]ούλιον
Φίλιπ[π]ον, Εὐσεβῆ, Εὐτυχῆ, Σεβ(αστὸν),
Ἐακκαιῶται.

Discovered on a corbel which was intended to hold a statue on a monumental building marked by Bulter by the letter 'B' on his city plan (fig. 154). The inscription describes the statue as having been one of Philip of Arab himself.

Inscription 393

Iulio Prisco, v(iro) (e)m(inentissimo), fratri et patru[o] d(omi-
norum) n(ostrorum) Philipporum Aug(ustorum), et praef(ecto)
praet(orii), rect(o)riq(ue) Orientis, Trebonius Sossianus, p(rimus)
p(ilus), domo Col(onia) Hel(iupoli) (?), devotus numini maiesta-
tiq(ue) eorum.

This inscription was found engraved on a column that had been re-used in a new building. It mentions the brother of the Emperor Philip the Arab and is the only Latin inscription found to date in the city.

Inscription 395

Ὑπὲρ σωτηρίας τῶν κυρίων Μ. Ἰουλίων Φιλίππων Σεβ(αστῶν), ἐπμελοομένων Ἰουλίου Σεντίου Μάλχου καὶ Λμωνις κὲ Ἀλεξάνδρου, βουλ(ευτῶν), προεδρίᾳ Μαρρίνου, ἔτους πρώτου τῆς πόλεως.

This is an inscription honouring the Emperor Philip the Arab which was found built into a modern house. It is interesting to pay special attention to the name 'Malchus' which is probably a Nabataean name (see below inscription 401a). This inscription is important because it mentions the first year of the city's existence. This is clear proof that it was founded by Philip the Arab who was honoured with the title of Augustus only in the year 247 C.E. He was murdered in 249 C.E. and therefore construction of the city progressed only during the years 247-249 C.E.

M. Avi-Yonah, however, believes that the city was actually founded in 242 C.E. although it is not known on what he bases this theory. All the numismatic and epigraphical material confirm the later dates mentioned above as the correct chronological framework for the city of Philippopolis. See: M. Avi-Yonah, The Holy Land from the Persian Period to the Arab Conquest, Baker Book House, Michigan, 1966, p. 17.

Inscription 396

1.	ΘЄW	Θεῷ
2.	MAPЄINW	Μαρείνῳ
3.	----IOCYΠA	_____]ος ὑπα[τικός].

Discovered on a corbel on the east side of the entrance to the "Philippaeon", it describes the statue that must have stood here as being the Emperor's father - Marinus (see below inscription 400a).

Inscription 397

1.	ЄW	Θ]εῷ
2.	ЄINW	Μαρ]είνῳ
3.	^	[_____ ὑπ]α[τικός (?).

Discovered on another corbel, this time on the west side of the entrance to the "Philippaeon", it describes either a statue of Philip's

father or another member of his family.

Inscription 398

1. ΙCΦΙΛΙΠΠΟΥCCЄΒΒ
2. --ΑΥΡΗΛ ΑΝΤΩΝΙΝΟC
3. ΠЄΛΑΓΙC

Uncovered near the entrance to the "Philippaeon", this is a fragment of a larger inscription in honour of the Emperor Philip the Arab.

Inscription 398a.

1. Τούς δεσπ]ότας τῆς οἰκουμέν[ης,
2. Μ. Ἰουλίου]ς Φιλίππους, Σεβ(αστούς),
3. _____ Αὐρήλ(ιος) Ἀντωνῖνος,
4. Πελάγις.

Found close to the "Philippaeon" it is also dedicated to Philip the Arab.

Inscription 399

B A C

1. Ἰούλιον Πρεῖσκον, τὸν ἐξο]χώτατον ἔπα[ρ]χον τοῦ ἱεροῦ πραιτωρίου,
2.] Τρυφωνιαν[ῆ]ν, σύνβιον αὐτοῦ,
3. Αὐρηλ. Ἀντωνῖ](ν)ος, δουκηνά[ρ]ιος, Πελάγις.

This inscription was found in three parts, spread out among the ruins of the "Philippaeon". It is dedicated to members of the Emperor's family and in particular mentions his brother - Julius Priscus.

Inscription 400

Τ]οὺς δεσπότας τῆς οἰ[κουμένης,
Μ. Ἰουλίο]υς Φιλίππους, Σεβαστούς, καὶ
τ]ὴν κυρίαν ἡμῶν, Σεουῆραν Σε-
βα]στίν, καὶ τὸν ἐξοχώτατον ἔπαρ-
χον] τοῦ ἱεροῦ πραιτωρίου, Ἰούλιον
Πρεῖσκ]ον, Κλ. Αὐρ. Τιβέριος, δο[υκη-
νάριος, δι]καιοδότης τῆς λαμπρο[τά-
των ἀν]δρέων πόλεως, ὑπ' αὐτῶν
προαχ(θ)[είς.

Dedicated to the Emperor Philip the Arab, to his wife and brother. This inscription was also discovered among the ruins of the "Philippaeon". It is dedicated by Claudius Aurelius Tiberius who is the Governor of the city (dikaiodotes, "lord justice"). It is unusual to find this title mentioned and it means "a keeper of the laws" or "enforcer of the laws" (of the city?). See:
E.A. Sophocles, Greek Lexicon on the Roman and Byzantine Periods. Vo. I, Boston, 1887, p. 381. (dikaiodotes - dispenser of the laws, judge).

Inscription 400a

Μ. Ἰούλι]ον Μαρῖ[νον],
θεὸν πατέρα [τοῦ Σεβαστοῦ],
Λὐρήλ(ιος) Ἀντω[νῖνος],
δουκηνάριο[ς].

Once again Philip's father - Marcus Julius Marinus is mentioned in an inscription found near the "Philippaeon".

Inscription 401a

Τὸν δεῖνα . . . , Ἰουλ]ίου Πρείσ[κου, τ]οῦ ἐξοχωτά[του] ἐπάρχου Μεσο[πο]ταμίας, υἱὸν ἄ[ω]ρον, ἡ πόλις, διὰ Ἰουλίου Μάλχου, βουλ(ευτοῦ), συνδίκου καὶ ἐπιμελητοῦ, μ(νήμης) χ(άριν).

Found near the Palace, this inscription was dedicated by Malchus (perhaps the same one with the Nabataean name, see inscription 395 above), and mentions Philip's brother - Julius Priskus, who was appointed Governor of Mesopotamia.

Inscription 401b

Τὸν δεῖνα, Ἰουλίου Πρείσκου, τ]οῦ ἐξο[χω]τάτου ἐπάρχου Μεσοποταμίας, υἱόν, Κάσσιος Τειμόθεος, ἀπὸ β(ενε)φ(ικιαρίου) πετεῖτορ, τὸν ἄωρον, μ(νήμης) χ(άριν).

Similar to the previous inscription (401a), once again Julius Priskus, the emperor's brother, is mentioned.

CHAPTER V

URBAN ARCHITECTURE IN ARABIA

Introduction

Each of the four cities under discussion in this study - Philadelphia, Gerasa, Bostra and Philippopolis presents its own specific and individual urban growth and development. The report deals with the specific planning of each city and with the forces which formed their different urban natures. Particular stress has been laid on the original planning solutions put to use within them, compared to the traditional forms then dominant.

By outlining all urban architectural factors these cities had in common, we hope to show how despite developmental, cultural and historical differences, the cities still embody architectural forms similar to one another. It proved a virtual impossibility to follow carefully or reconstruct the full development of each city and therefore the plans given or the terms described, have been taken from the peak of each city's formation.

It appears that it was the combination of the "imported" urban framework and the traditional local architecture that moulded the final character of the cities of Arabia. New structures were introduced into the Roman urban framework of straight streets and functional divisions of quarters, which did not originate locally but were certainly redesigned, built and decorated by local builders and artisans in their own style.

This local architecture is the first fruit born after a long period of blossoming during which a style, which drew inspiration both from the traditional Eastern structures and from the Classical World was formed.

This process started prior to the conquest of Alexander and continued over a long period reaching its climax during the second and third centuries C.E. Examples of this eclectic style are clearly visible in the urban architecture of the cities mentioned above. Almost "Baroque" in style, it excelled in its freedom of movement and soft anti-Classical lines.

It is necessary to distinguish between two separate groups of cities as far as the application of this style is concerned. In cities such as Bostra and Philippopolis constructed by governmental powers, the style is modest and unimposing; while in Philadelphia and Gerasa, which belong to the Hellenisitc "polis" tradition, the style was exposed in its full glory.

The Romans who began their rule in this area during the second half of the 1st century B.C., were confronted by a very definite cultural reality prominent in the cities discussed above, against which they could not, or did not want to struggle. Even construction work completed by the Romans or during their rule merely formed a kind of "imported facade" which was inhabited by the local population who thereafter determined the nature and character of the city.

This study deals in great detail with the urban development and history of the four cities already mentioned as well as with their individual architectural natures. The following is a short summary of this report.

PHILADELPHIA (see figs. 5-6) was founded during the Hellenistic period (3rd century B.C.) however all the remains found today, beside certain sections of the Acropolis walls, date to the 2nd and 3rd centuries C.E.(1) The urban plan and character of Philadelphia was determined by the topographical conditions surrounding it. Most conspicious were the two colonnaded streets running the length of the two valleys on the south and south-west of the Acropolis (see fig. 5), and along which all the public buildings were concentrated. The temples were constructed upon the Acropolis which represented the sanctuary of the city and this was reached via the Processional Way which lead from the center of the city through the Propylaea to the Acropolis (see figs. 5, 8, 10).

Other important public buildings were concentrated at the widest point of the Southern Valley and included the Forum, the Theatre, the Odeum, the Nymphaeum and still others that have not been clearly identified. The commercial section of the city was established on the Western side of the Southern Valley. This precise division of the city into functional quarters exploited every square metre of the limited plain available. A vault was even constructed over the river flowing through the centre of the Southern Valley, to enlarge the central area of the city as well as to prevent floods.

GERASA (see figs. 35-43). Although Gerasa was also established during the Hellenistic period, here again most of the structures date to the 2nd and 3rd centuries C.E., while the urban plan was determined in the latter half of the 1st century C.E. (2)

The city is comprised of two sections, divided by a particularly deep valley in which a river runs. The "Eastern City" (where the network of streets may possibly date to the small Hellenistic town) was the residential quarter of the "Western City". The latter designed during the first century C.E. was connected to the "Eastern City" by three main axes passing over the river on solid bridges. One wall encircled both sections of the city thereby creating a unified urban body (see fig. 43).

Almost all the functionary buildings were concentrated in the "Western City" which was almost twice the size of the "Eastern City". Here were the public, religious and commercial quarters comprising three sanctuaries, two theatres, three public squares and a Forum. Close by the city to the south was a hippodrome while to the north stood an open air sanctuary which included another theatre.

BOSTRA (see figs. 101-109) was constructed alongside an irregular Semitic city early in the 2nd century C.E., after it had been decided that this was where the capital of the Province of Arabia should be built. (3)

Although basically a Roman planned city, the unusual urban reality already existing in the area forced the architects and planners to search for original and unconventional solutions when constructing this city (see fig. 107).

It is the functional division of the city that teaches us of the special role fulfilled by the city as capital of the Province, and it becomes clear that it served as the central base and camp for the Cyrenean Third Legion soldiers. The old and unplanned Semitic city was used as living quarters

while the ancient sanctuary within it continued to serve as the main sanctuary for the city. The new Roman city with its regular grid of streets spread out to the west of the old city and served as the administrative and commercial centre. Because of the unusual care taken with all supplies reaching Bostra, the shops and warehouses were all constructed in the centre of the city. The hippodrome, theatre and naumachia were constructed mainly to satisfy the needs of the large population of legionnaires and their followers. The structures of Bostra, while exhibiting a high standard of architecture, are plain and lacking in ornamental touches.

PHILIPPOPOLIS (SHUHBA) (see figs. 153-156) established by Emperor Philip the Arab between the years 247-249 C.E., and never completed.(4) Philippopolis was one of the last cities built by Rome in the East and it is the only one constructed on virgin soil.(5) It has an extremely regular plan composed of a rectangular area divided into four parts by two main colonnaded streets which intersect at a right angle at the off-centre of the city. An incompleted sub-network of streets cuts the city into "insulae" which to a large extent never housed structures of any kind (see fig. 155).

The Forum sprawled out in the centre of the city and around it stood the other main buildings: the Palace, the Theatre, another large public building (probably the basilica) and the "Philippaeon". The latter emphasizes the use of this city as a "personal capital" city as well as a memorial monument. (6) The completed structures such as the hexastyle temple, the palace, the theatre and the "Philippaeon" point to a high standard of construction although they too lack suitable adornment.

With the death of its founder the city was deserted without ever having been completed. It was planned without any thought or consideration of its future life and development.

What was the nature of urban architecture among the cities of Arabia? The following is a description of both the individual and the general aspects of town planning in this area.

The phenomenon of STANDARDIZATION is clearly visible in the urban architecture of Arabia. By this we mean the use of accepted and conventional standards as far as the type of structures, and the choice of decoration is concerned. There is a standard selection of buildings that makes it appearance in each and every city. In fact these structures are so similar that one tends to wonder whether they were designed by the same group of architects or whether they were simply copied from each other.

THE COLONNADED STREETS - In all the cities discussed the main streets were lined with columns. This architectural element probably originated in Asia Minor during the end of the 1st century B.C.

It became popular among the Syrian and Arabian town-planners and spread very rapidly during the 2nd and 3rd centuries C.E., soon becoming the most common architectural element on the urban scene.(7) The streets themselves were paved with flag stones and lined with pavements. The width of these was similar in all the cities. The columns were either topped by Ionic or Corinthian capitals, depending on the fashion at the time. In Gerasa for example, the colonnades first had Ionic capitals which were later changed to

Corinthian, while in Bostra and Philippopolis they were only decorated with the Ionic styled capitals.(8) At the point where the main streets intersected the TETRAPYLON was usually built and was a popular and decorative element in these towns. Architects saw it as another means emphasizing and enhancing the main points of the city (see figs. 68, 71, 167, 168).

THE TRIUMPHAL ARCH fulfilled a similar purpose. While the original Roman version served as an architectural symbol of a specific historicl event, the Triumphal Arch in Arabia turned into yet another decorative element and in a similar fashion to the Tetrapylon it also stressed a particular element in the town's layout. The Triumphal Arch of the Eastern city of Bostra for example marked the border between the new city and the sanctuary (see fig. 106).

THE CITY GATES also changed and developed over the years from a purely defensive structure flanked by solid towers and with one vaulted entrance, to wide, magnificant structures with three separate entrances. The new gateway was far more reminiscent of the Triumphal Arch than of the old city gates. It was probably the feeling of security felt in Arabia during the 2nd and 3rd centuries C.E. that permitted the creation of this new design (see figs. 66, 169).

THE NYMPHAEA (Fountain buildings) are one of the most outstanding features in the urban scene of Arabian cities. They are all similar in plan and differ only in size and magnificence, depending on the economic possibilities of each particular city. The buildings themselves rose to two or three storeys high and were decorated with pilasters and other small niches in which statues were placed. Opposite them was usually a pool of water and a portico. They were always located along the main streets and their theatrical facades acted as a stage backdrop to the city centre (see figs. 27, 53, 129).

Large BATHS were established in the Arabian cities during the 2nd and 3rd centuries C.E. which were similar to others found throughout the Roman Empire. It also seems as though they were not characterized by any special architectural phenomenon.

In each of the cities discussed above there was at least one THEATRE (see figs. 16, 19, 57, 98, 147, 166). They were all Roman in plan and were built from the late 1st century C.E. until the 3rd century C.E. Despite their Roman origin they present us with examples of local architectural solutions to problems arising in the field. (9) These theatres were erected either by the State as in Philippopolis and Bostra, or by local and municipal bodies as in Philadelphia and Gerasa.

They were usually constructed within the dense urban complex but sometimes, as in Gerasa, they stood outside the city adjoining the sanctuary (see fig. 97)

The different locations of the Theatres within these cities, teach us something about the various traditions which influence the formation of Arabian cities. The southern Theatre of Gerasa for instance (end of 1st century C.E.) is situated on the slope of a hill and in fact forms an

integral part of the sanctuary for Zeus (see fig. 43). This location follows the Greek-Hellenistic tradition where the Theatre was seen as an inseparable part of religion. The Northern Theatre of Gerasa however, built in the second half of the 2nd century C.E., stands near the Forum, in a similar fashion to the Theatre of Philadelphia and Philippopolis. In true Roman tradition the Theatre was viewed as an entertainment centre to be built in the centre of the town (see figs. 5, 43, 155). (10) The Theatre may be situated in the area specifically set aside for entertainment purposes outside the city. Such is the case in Bostra where the theatre and hippodrome stand alongside each other, outside the city walls (see fig. 107).

THE HIPPODROME and THE STADIUM were not constructed as frequently as theatres. They too appeared in Arabia as a result of Roman influence during the 2nd and 3rd centuries C.E. In Gerasa and Bostra the Hippodrome was constructed outside the city walls while in Philippopolis the Stadium stands within the city (see figs. 43, 107, 155). The actual appearance of these buildings in Arabian cities may even be seen as a desire to be fashionable or a need to imitate. In the case of Bostra however, the hippodrome was probably constructed by the state and undoubtedly served the inhabitants who mainly comprised legionnaires. Similarly the stadium of Philippopolis was supposedly built for the future citizens of the Emperor's private city.

THE TEMPLES of Arabian cities may be divided into two main groups:

a. the traditional Roman temples.

b. the stylized "Baroque" temples.

The latter have an irregular shaped cella and are unlike the traditional rectangular style. (11) The following all similar in plan, belong to the first group: the two large temples at Gerasa; the temple of Zeus and that of Artemis, and the Southern Temple on the Acropolis of Philadelphia (see figs. 10, 48, 80). The second group includes the hexastyle temple at Philippopolis and two open places of worship which were called "Kalybe", both in Bostra and Philippopolis (see figs. 129, 157, 161). The latter are evidence of the local sacral architecture which appears in the cities that had no Hellenistic tradition. Both buildings were constructed during the 3rd century C.E. and are outstanding for the monumentalism and rich ornamentation.

The temples of Arabian cities clearly show the combination of those elements typical of the Roman peripteral styled temple, built on a podium with a rectangular cella, and the other elements which undoubtedly had local origins such as the staircases built in anta (see figs. 48, 80). (12)

The location of the temples presents yet another movement away from the Roman source. In Arabian cities they are hardly ever found among the crowded structures of the city centre, but either within a specific sanctuary, or on the Acropolis. Such is the case at Gerasa, Philadelphia and Bostra. Only in the later city of Philippopolis was the temple erected due to Roman tradition, among the other structures in the city centre (see fig. 155). In Philadelphia the sanctuary (which took on its final form at the end of the 2nd century C.E.) spreads out over a large section of the Acropolis, thereby sanctifying the site that first became sacred during the

Bronze Age (see figs. 8-9). (13) Gerasa has three sanctuaries: the Hellenistic styled one of Zeus, situated close to the South Theatre (see fig. 44) (14), the sanctuary of Artemis built one hundred years later and belonging to the monumental type of structure constructed during the second half of the 2nd century C.E. (see fig. 75).(15) The "Cathedral Sanctuary" which has not been excavated but appears to be more similar in plan to that of Artemis (see fig. 92). (16)

In the heart of the old city of Bostra, at the highest spot of the city, the remains of sacred buildings have been unearthed. This was probably the Acropolis and the sanctuary of the city (see fig. 106) (17)

The discussion of these sanctuaries - structures planned on an extensive scale with varied ornamentation and which stood in juxtaposition to the size of the rest of the city brings us to the phenomenon of MONUMENTALIZATION in the Arabian cities.

The Sanctuary of Artemis at Gerasa sprawled over 34,000 m^2 and was thus one of the most magnificent sanctuaries known in the Ancient Classical East. (18). The Processional Way, the two Propylaea, two public squares surrounded by stoas and exedras and a huge temple were all included within the same area. A high standard of construction and rich adornment was common to all these structures. Above all, however, the location of the sanctuary within the city is of particular interest, for it was visible from every section of the city and access to it was obtainable from all directions. It was in fact the urban focal point of the entire city (see figs. 35, 43, 75).

Strangely enough the phenomenon of FASHION also played an important role in urban Arabia as it had done in some of the other provinces. The cities, while competing with one another also copied styles in an attempt, as it were, to keep up with the latest trends in architecture. Epigraphical finds prove that many of the structures in Arabian cities were erected during the same years and are therefore similar in design (see figs. 13, 18, 79). (19) The existence of competition, imitation and fashion is more obvious in Philadelphia and Gerasa than in Bostra and Philippopolis.(20) In the former cities the initiative to construct the buildings originated with the citizens themselves who raised the money from within the community and themselves decided on the size, shape and decoration of the structures. This was obviously not true of cities where the buildings were erected by the ruling authorities (the two groups differed greatly particularly as far as the ornamentation was concerned). (21)

The Nabateans too had a powerful affect on the urban architecture of Arabia. Southern Syria and the East Bank of the Jordan River were under Nabatean rule for a considerable period of time. Long after the rise of the Arabian Province, the Nabateans cultural influence was still felt in the area.(22) The Nabateans never had an urban tradition nor did they build planned cities. They did however, excell in the construction of temples, sanctuaries and burial monuments, and undoubtedly contributed much to the eclectic style which soon came to typify Arabian architecture between the 1st and 3rd centuries C.E.(23) Their semi-nomadic life style brought them into contact with different cultures which in turn influenced them. They were blessed with a rare capability of learning different construction methods and of later re-applying and re-adapting them not only to different topographical locations, but also to the various raw building materials available wherever they happened to be. To a large extent their

contribution to the urban scene lies in their methods of construction, decoration and also in the art of stone-masonry.

The innovation of the staircase (stairs built around a square pillar) may be attributed to the Nabateans and the widespread use of it both geographically and chronologically is ample proof of its importance of them as an architectural element.(24) These stairs are mainly found in temples such as the two at Gerasa but may also be seen in secular buildings as in the Theatre and Baths of Philippopolis (see figs. 162, 163).(25)

The Nabatean capital appears on buildings that were either built directly by them or that had come under their cultural influence. The Nabatean capitals on the Eastern Arch of Bostra (2nd century C.E.) and on the Southern gate of Philippopolis (3rd century C.E.) confirm the fact that their architectural influence continued long after the termination of their rule (see figs. 124, 170).

Roman rule began in Southern Syria at the end of the 1st century B.C. and on the Eastern Bank of the Jordan River with the termination of Nabatean rule early in the 2nd century C.E. The Romans arrived on a scene already enriched with the local and ancient Eastern urban traditions - a combination of both Semitic and Greek cultures.

What then was Rome's contribution to the different styling and planning of the Arabian cities?

Firstly, it must be stressed that the Romans promised the necessary peace and prosperity essential for the successful growth of the cities. The economic success of international trade was ensured with the completion of the great network of roads, in particular the Via Traiana Nova (see fig. 1). Trading then became the main source of wealth for the Arabian cities. The Romans also believed that it was in their political interest to support the Greek or Hellenized cities in the area seeing them as the main buffer against the existing Semitic elements.

They were more than satisfied to merely encourage, develop and enlarge existing cities and rarely established any new towns on their own.

The Emperors of the Antonine Dynasty, famous for their support of the Greek culture, contributed much to the development of the Arabian cities and it was during this period that the cities took on their monumental forms. During the 2nd and 3rd centuries C.E. the eclectic style reached its peak in Syria and Arabia. This style which drew inspiration both from the East and from the Classical World created the Hellenisitic style and flourished under the easy conditions created by the Roman rule (26).

There are few examples of typical Roman urban architecture in Arabia as all the separate components are either Hellenisitc while only the basic planning framework is Roman. Obviously certain structures originated in the West - the theatre, the hippodrome, the Triumphal Arch, the Bath and the aqueduct. But on closer examination it became quite clear that these buildings were re-adopted to suit local building methods and the urban scene of Arabian cities. Even if their basic plan was Roman in origin, the towns were constructed and decorated by men using local building materials. They were undoubtedly the fruit of local urban architecture. The East Triumphal Arch in Bostra for example, decorated with Nabatean capitals (see fig. 124), is none other than a monumental architectural structure marking the border

between the new Roman city and the Ancient Acropolis with its sanctuary. Unlike the Triumphal Arch at Gerasa this one is not a symbol of a specific historical event.

We have already mentioned that the various locations of the theatres in the urban complex of Arabian cities points to the existence of different traditions.(27) Culturally these theatres served a different purpose to that of the traditional Greek or Roman theatres. The Arabian theatre was essentially an amusement centre used for musical plays, pantomimes and sometimes even public meetings. (28)

It becomes increasingly clear that Rome contributed little to the urban architecture in this area, acting more as a "catalyst", creating the right conditions for the growth and prosperity of the local architecture. It was Rome that formed the bridge over which Classical, Nabatean and Eastern traditions continued to influence each other, resulting finally in the formation of a very definite local style of architecture. The Romans did introduce a few new structures into the area but these soon lost their original use and character and were subsequently styled in the fashion of Arabian urban architecture. It is definitely worth mentioning that the interrelationship between the Roman and local Syrian-Hellenistic architecture was not a one-sided affair as may so far have been understood. One should keep in mind that it was the architect Apollodorus of Damascus who under Emperor Traian was in charge of one of the most impressive urban complexes in Rome - The Traian Market. (29)

As regards town planning itself, Roman influence appears to be greater. Prior to the Hellenisitic period, Southern Syria and the East Bank of the Jordan River had no examples of organized town planning. The first planned cities here were erected by Alexander and his successors.

The remains of the four towns under discussion barely show any evidence of their urban nature during the Hellenistic period. (30) The city plans were established between the 1st and 2nd centuries C.E. and are definitely the fruit of rather Roman than Hellenistic planning tradition. The contrast that now appears is between the Hellenisitic and local urban architecture and the traditionally Roman town planning.

Again the question may be asked whether these cities are purely Roman in plan or whether local planning solutions, typical only of Arabaian cities were also introduced?

Looking at the town planning of Philadelphia (fig. 5) it becomes quite clear that the city's basic form was initially shaped by mother nature and only later by the hands of man. The two main streets run parallel to two valleys at the foot of the Acropolis. All the structures including the Forum, theatre, odeum, nymphaeum and the sanctuary date to the 2nd and 3rd centuries C.E. Despite this it is still difficult to point to a definite Roman town plan, and it would probably be more correct to state that Philadelphia represents an original solution to a specific local and topographical problem existing in this area.

Although the topography also greatly affected the plan of Gerasa, the city seems to have devloped as a result of the unification of its two halves - The "Eastern City" which still has what appears to be a Hellenisitic street network, and the new "Western city" planned during the second half of the 1st century C.E. and later connected to the ancient ("Eastern city") by

three main axes. The different orientation of the streets in both halves points to the fact that the "Eastern city" was used as the main living quarters, while the 'Western city" was the centre of all the other city functions - the ritual, administrative and commercial. Gerasa in this way is an example of the blending of Hellenistic and Roman city planning (see fig. 43).

The new city of Bostra was constructed close to ancient Bostra and has a fairly regular street network. But the urban reality already existing in the area was what established the direction of some of the streets. The Roman town planning, however, is still clearly visible even though here too local architectural solutions were reached to help establish a new town alongside an old unplanned one. The planners emphasized the connection between the two cities by allowing the ancient city to be used for habitation and ritual purposes, while establishing all other public, administrative and business functions in the new one (see fig. 107).

Philippopolis is the only city built upon virgin soil, where the designers did not have to take into consideration previous structures or plans. The city, with its almost perfectly regular plan, is rectangular in shape with two main cross roads intersecting at right angles slightly off centre. The street network running parallel to the main crossroads forms "insulae", the majority of which were never built upon as a result of the short existance of the city (see fig. 155). Philippopolis is thus the only pure Roman city established in this fashion in Arabia, and as such is an exception to the general picture we have seen until now.

From this we may conclude that native Arabian town planning is worthy of a place in the architectural history of the Classical World. Although its sources of inspiration were quite closely Roman, the Arabian town planning, just as Arabian architectue, was unique in its freedom of style and movement away from the harsh norms which characterised Hellenisic and Roman town planning.

While it may be possible to discuss chronological frameworks, sources of inspiration, traditions of building and historical influences, it is impossible to define the exact type of town plan represented by each of these Arabian cities.(31) What then is so special about these cities ? What characterizes their urban scene ?

The "Hippodamian City" or the planned Roman city for instance, with its "Camp plan" excelled in its organized and regular division, but was a monotonous and unexciting city with straight streets and no special highlights or points of specific interests. The Arabian cities on the other hand were established alongside and often adjoining other existing cities whose definite urban nature had to be taken into consideration. As a result the planners succeeded in creating an unusual and extremely interesting urban scene.

Looking at Bostra again we see how the Triumphal Arches, the colonnaded streets, the location of the major monuments and the triangular plaza all break the monotony of the streets which mainly intersect at right angles. The phenomenon of Monumentalization discussed above which included the Triumphal Arches, sanctuaries, the Tetrapylon and the Colonnaded streets was used more for urban decor than because it was so very functional.

The shapes of the two public squares in Gerasa - one oval and one

circular - are in themselves evidence of the great search for original solutions to specific local problems (see figs. 45, 64). (32) The planning of Philadelphia within the two narrow valleys at the foot of the Acropolis, the distribution of its buildings along both sides of the two main streets, the construction of a vault over the river and the ingenious exploitation of the entire area, once again exemplify the greatness of the ability of the planners and architects of Arabian cities (see fig. 5). (33)

In conclusion we must pose a few questions concerning the nature and functions of the Arabian cities during the first centuries of the Common Era. Were these really Caravan cities, commercial stops and legionnaires' camps ? What caused them to prosper so greatly during these years ? The clarification of certain aspects already discussed above will allow us, if only in part, to understand the nature and functional life of these cities.

The very title of this study points to one of the common factors of these cities. All these cities were situated on the edge of the desert along the Via Traiana Nova (see fig. 1), which was the most important route linking the Roman Empire to the East. Despite this location each of these cities was blessed with tremendous sources of water, and all except Philadelphia also had large agricultural lands. (34) Thus, despite their proximity to the desert, these cities were not dependant on the importation of foodstuffs from other countries and therefore never had to rely on an outside force. It is however quite clear that their economic situation was not based upon agriculture alone. The latter merely provided their physical existence but was not the cause of the tremendous prosperity enjoyed by the cities during the first centuries of the Common Era.

Their great wealth was achieved by participating in the International Trade which passed over the Via Traiana Nova. As a result of the feeling of security that existed during the 2nd century C.E. merchandise could pass quickly and safely along the main routes resulting in an international trade boom. (35)

One glance at the four cities discussed above will show that with the exception of Philadelphia, all of them today are poor, small settlements whose sole existence is based on agriculture. (36) They are no longer used as international trading stations, and no merchants pass through them exhibiting their latest wares. From the moment that the peace and quiet was disturbed on the great highways these great cities were forced to fall back on agriculture in order to make a living. The latter can keep a village or small town alive, but much more is needed to keep a great and prosperous city thriving.

We are witnesses, therefore, to the rise and prosperity of these cities during the 1st - 3rd centuries C.E. and also to their fall in the years that followed.

A question that has to be asked in this study is whether in fact these were Caravan Cities as is believed by M. Rostovtzeff. (37) In none of the functional divisions of the four cities could we find any evidence to substantiate this particular theory. In Bostra large granaries were discovered, but these more than likely had to do with the status of the city as the main base for the IIIrd Legion (see figs. 106, 107).

The coastal cities of the East had far more granaries than the desert cities of Arabia as they were import-export ports dealing mainly in

agricultural cargoes including wheat, oil, wines and raw materials. The desert cities were agriculturally self-sufficient and did not export any of their produce. The goods that passed through them were of a very different nature and included various sorts of perfumes, spices and expensive clothes which came from Southern Arabia, Africa and even India. (38) Such merchandise did not call for large granaries and store rooms are therefore lacking in the functional division of the cities. The entire existence of a Caravan City depended upon the passing trade and although it is quite obvious that the prosperity and size of the Arabian cities dwindled considerably after merchandise ceased to pass through them, however they did still continue to exist and live off their lands. The city of Palmyra which was a true Caravan City simply ceased to exist after the Caravans and merchants stopped passing through it. (39)

Each one of the cities we have discussed embodied a different urban function: Bostra was first and foremostly the Arabian Provincial capital and the base for the IIIrd Cyrenian Legion. Philippopolis existed for too short a period to enable us to pin it down to a specific urban function. From epigraphical evidence however it seems that it was built as a "private city" for Philip the Arab. (40)

Philadelphia and Gerasa represent a different type of city. They are of the old "Polis" cities which along with their own cultural traditions continued to see themselves as independent cities. This independence is expressed in the magnificent building projects which were financed by the citizens themselves from the profits of their international trading.

The cities of Arabia with their enormous sancturies must have served a greater population than that living permanently in them. They were undoubtedly focal points for the population living in their vicinity and were used as administrative, cutlural, religious and naturally commercial centres. (41)

In conclusion we may say that the cities of Arabia should be seen both from the architectural and town planning aspects, and from their urban functions within the Arabian Province, within the wide framework of Syrian, Hellenistic and Roman East at the early centuries of the Common Era.

Notes

1. See chapter 1, pp. 3-18.

2. See chapter 2, pp. 19-48.

3. See chapter 3, pp. 49-73.

4. See chapter 4, pp. 75-94.

5. See chapter 4, p. 77, note 1.

6. See chapter 4, pp. 78-79, see also Appendix to chapter 4, pp. 97-100.

7. J.B. Ward-Perkins, Cities of Ancient Greece and Italy: Planning in Classical Antiquity, New York, 1974, p. 32.

8. See chapter 4, note 41.

9. Discussion concerning the position of the Theatre in the cities of Palestine, Syria and Arabia, see:
E. Frezouls, "Recherches sur les Theatres de l'Orient Syrien", SYRIA XXXVIII (1961), pp. 54-56.
A. Segal. "Die Theaterbauten im Alten Palaestina in Roemisch-Byzantinischer Zeit", Antike Welt 18 (1), 1987, pp. 2-21.

10. With reference to the situation of the Theatres in the city, see chapter 2, notes 27, 29.

11. Temple "C" in Gerasa is proof of the existence of a third type of Temple - the Nabataean Temples - which, although more have not yet been uncovered, probably did exist in other cities throughout Arabia. With reference to Temple "C". see chapter 2, note 5.

12. A comprehensive discussion on the Staircase Towers in architecture in Provincia Arabia, see chapter 2, p. 23, note 25.

13. See chapter 1, notes 9, 12.

14. See chapter 2, p. 23, note 21.

15. See chapter 2, pp. 26-29, notes 57-59.

16. See chapter 2, p. 29, notes 74, 76.

17. See chapter 3, p. 55, note 29.

18. With reference to the history, the measurements and the character of sanctuaries in Syria and Arabia, see chapter 2, notes 57-59.

19. See chapter 1, p. 7, note 15. Chapter 2, p. 28, note 63.

20. Perfect evidence of this may be seen in the correspondence between Pliny the Younger, Governor of Provincia Bithynia in Asia Minor, and the Emperor Trajan. The Governor reports that the citizens of the cities splurge their money, on their own accord, to compete with each other in the construction of new and totally unnecessary buildings. See:
Pliny Letters II, W. Heinemann, London, 1947, XXXIX.

21. See chapter 3, pp. 62-63, note 79.

22. See chapter 2, note 5. Chapter 3, note 3.

23. A Negev, "The Staircase-Tower in Nabataean Architecture", R.B. LXXX, (1973), pp. 364-383.
Idem., "Die Nabataer", ANTIKE WELT, Sonder Nummer, 1975.
G.W. Bowersock, Roman Arabia, Harvard University Press, 1983.
F.E. Peters, "City Planning in Greco-Roman Syria", DaM I (1983), pp. 269-277.
A. Barghouti, "Urbanization of Palestine and Jordan in Hellenistic and Roman Times", in A. Hadidi (ed.), Studies in the History and Archaeology of Jordan I, Amman, 1982, pp. 209-229.
E. Will, "L'Urbanisation de la Jordanie aux epoques hellenistique et romaine: conditions geographiques et ethniques", in A. Hadidi (ed.), Studies in the History and Archaeology of Jordan II, Amman, 1985, pp. 237-241.

24. See note 12.

25. See chapter 4, discussion on the Theatre, pp. 81-82, notes 24, 27; and discussion on the Bath, pp. 80-81, note 18.

26. With reference to the character of Hellenistic Architecture, see:
Th. Fyfe, Hellenistic Architecture, Cambridge, 1936.
See sections dealing with Hellenisitic Architecture in Syria and Arabia, pp. 34-45; 84-91; 172-179.
S.B. Murray, Hellenistic Architecture in Syria, Princeton, 1917.

27. See notes 9, 10.

28. E. Frezouls, op.cit., p. 85.

29. Dio's Roman History, W. Heinemann, London, 1955, LXIX, 4.
Another confirmation of the status and prestige of the Syrian architecture in the eyes of the Romans, may be seen from the letter of Emperor Trajan in answer to one sent by Pliny the Younger, Governor of Bithynia. The Emperor writes that he sees no need to send an architect from Rome, as requested by Pliny, because in most cases architects were sent from the East to give advice in Rome, and not the contrary. See:
Pliny Letters II, W. Heinemann, London, 1947, XXXIX, XL.

30. In the case of Gerasa, we put forward the theory that the lines of the "Eastern City" preserve those of the earlier Hellenistic city, see chapter 2, pp. 34-35.

31. See chapter 3, note 72; chapter 4, note 39.

32. See chapter 2, p. 30 and p. 26, notes 52, 83, 84.

39. With reference to the status and character of Palmyra as a Caravan City, see:
M. Rostovtzeff, Caravan Cities, Oxford, 1932, (Palmyra and Dura, pp. 91-152).
J.G. Fevrier, Essai sur L'Histoire Politique et Economique de Palmyre, Paris, 1931.
D. Schlumberger, "Le Developpement Urban de Palmyre", BERYTUS 2 1935, pp. 149-162.
E. Will, "Marchands et Chefs de Caravanes a palmyre", SYRIA XXXIV, (1957), pp. 262-277.

40. See chapter 4, pp. 118-119, note 47.

41. The territories of the cities of Provincia Arabia were particularly large and included many villages and small towns, see:
M. Avi-Yonah, The Holy Land from the Persian Period to the Arab Conquest, Baker Book House, Michigan, 1966, (Philadelphia, p. 177; Gerasa, pp. 175-177).

LIST OF ABBREVIATIONS

AA	Archaeologischer Anziger
ADAJ	Annual of the Department of Antiquities of Jordan.
AASOR	Annual of the American Schools of Oriental Research
AJA	American Journal of Archaeology
AA Syr.	Annales archeologiques de Syria
AW	Antike Welt
BASOR	Bulletin of the American Schools of Oriental Research
DaM	Damaszener Mitteilungen
EC	Enciclopedia Classica, Sezione III, Volume XII, Archeologia (Arte Romana).
FA	Fasti Archaeologici
JAOS	Journal of the American Oriental Research
JDI	Jahrbuch des Deutschen Archaeologischen Instituts
IEJ	Israel Exploration Journal
JHS	Journal of Hellenic Studies
JRS	Journal of Roman Studies
ILN	Illustrated London News
JSAH	Journal of the Society of Architectural Historians
Mesopotamia	Rivista di Archeologia, Epigrafia e Storia Orientale Antica, Universita di Torino
OpArch.	Opuscula Archaeologica, Skrifter utgivna av Svenska Institutet i Rom
PEQ	Palestine Exploration Quarterly
RB	Revue Biblique
RE	Paulys Realencyclopaedie der Classischen Alterumswissenschaft
TJAB	Government of Trans-Jordan Antiquities Bulletin
TPR	Town Planning Review
ZDPV	Zeitschrift des Deutschen Palaestina-Vereins

SELECT BIBLIOGRAPHY

A.D. Albert, The Ancient City and its Site, Chicago, 1940.

S. Applebaum "Hellenistic Cities in Judea and its Vicinity", in B. Levick (ed.), The Ancient Historian and his Materials, Farnborough, 1975, pp. 59-73.

M. Avi-Yonah, Hellenism and the East: contracts and inter-relations from Alexander to the Roman Conquest, Ann-Arbor, 1978.

E.N. Bacon, Design of Cities, New-York, 1967.

A. Barghouti, "Urbanization of Palestine and Jordan in Hellenistic and Roman Times", in A. Hadidi (ed.), Studies in the History and Archaeolgy of Jordan I, Amman, 1982, pp. 209-229.

Th. Bauzou, "Les voies de communication dans le Hauran a l'epoque romaine", in J.M. Dentzer (ed.), Hauran I, Paris, 1985, pp. 137-166.

M. Bieber, The History of the Greek and Roman Theater, Princeton, 1961.

H. Bietenhardt, "Die Syrische Dekapolis von Pompeius bis Traian", in H. Temporini, W. Haase (eds.), Aufstieg und Niedergang der Romischen Welt II(8), Berlin, 1977, pp. 220-261.

M.E. Blake, Ancient Roman Construction in Italy from the Prehistoric Period to Augustus, Washington, 1947.

idem., Roman Construction in Italy from Tiberius through the Flavians, Washington, 1959.

A. Boethius, Roman and Greek Town Architecture, Goteberg, 1848.

idem., The Golden House of Nero, Ann-Arbor, 1960.

G. W. Bowersock, Roman Arabia, Harvard University Press, 1983.

J.M. Bowsher, "Architecture and Religion in the Decapolis, a Numismatic Survey", PEQ 119 (1987), pp. 62-69.

J. Bradford, Ancient Landscapes, London 1957.

F. Braemer, "Prospections Archeologiques dans le Hawran", Syria LXI (1984), pp. 219-250.

F. Castagnoli, Orthogonal Town Planning in Antiquity, M.I.T., 1971.

S. Cecil, A Prospect of Cities, London, 1952.

R. Chevallier, "Cite et territoire", in: Aufstieg und Niedergang der Romischen Welt, II, Berlin, 1974, pp. 649-788.

M. Coppa, Storia dell'urbanistica dalle origini all'ellenismo, Torino, 1968.

I. Crema, "L'architettura romana nell'eta della republica", in Aufstieg un Niedergang der Romischen Welt I, Berlin 1973, pp. 633-660.

G. Dauphin, "Jewish and Christian Communities in the Roman and Byzantine Gaulantitis", PEQ 114 (1982-83), PP. 129-142.

J. Dentzer, "Developpement et culture de la Syrie du sud dans la period preprovinciale (Ier s. avant J.C. -Ier s. apres J.C.)", in J.M. Dentzer (ed.), Hauran I (Deuxieme Partie), Paris, 1986, pp. 387-420.

J. Dentzer-Feydy, "Decor architectural et Developpement du Hauran du Ier siecle avant J.C. au VIIe siecle apres J.C.", in J.M. Dentzer (ed.) Hauran I (Deuxieme partie), Paris, 1986, pp. 261-310.

L. Dodi, Dell'antica urbanistica romana nel Medio Oriente. Milano, 1962.

G. Downey, "Aristotle as an Expert on Urban Problems". TALANTA III (1972).

J. Eadie, "The Evolution of the Roman Frontier in Arabia", in Ph. Freeman, D. Kennedy (eds.), The Defence the Roman and Byzantine East, B.A.R. 297, Oxford, 1986, pp. 243-252.

E. Egli, Climate and Town Districts; Consequences and Demands, Zurich, 1951.

Th. Fyfe, Hellenistic Architecture, Cambridge, 1936.

A.v. Gerkan, Griechiche Stadteanlagen, Berlin, 1924.

S. Giedion, Architecture and the Phenomena of Transition, Cambridge, Mass., 1971.

D.F. Graf, "The Saracens and the Defence of the Arabian Frontier", BASOR 229 (1978), 1-26.

D.F. Graf, "The Nabateans and the Decapolis", in Ph. Freeman, D. Kennedy (eds.), The Defence of Roman and Byzantine East, B.A.R. 297, Oxford, 1986, pp. 785-796.

Sh. Gregory, D. Kennedy (eds.), Sir Aurel Stein's Limes Report, B.A.R. 272 (I, II), 1985.

P. Grimal, Les villes romaines Paris, 1954.

J.A. Hanson, Roman Theater Temples, Princeton, 1959.

O. Handlin (ed.), The Historian and the City, Cambridge, Mass., 1963.

S. Hart, "Nabateans and Romans in Southern Jordan", in Ph. Freeman, D. Kennedy (eds.), The Defence of Roman and Byzantine East. B.A.R. 297, Oxford, 1986, pp. 337-342.

F. Haverfield, Ancient Town Planning, Oxford, 1913.

F. R. Hiorns, Town Building in History, London, 1956.

D. Homes-Frederico, J.B. Hennessy (eds.), Archaeology of Jordan I- Bibliography, (Akkadica Supplementum), Peeters Leuven, 1986.

I. Hopkins, "The City Region in Roman Palestine", PEQ 112 (1981), pp. 19-32.

B. Isaac, "The Decapolis in Syria", Zeitschrift fur Papyrologie und Epigraphik 44 (1981), pp. 67-74.

A.H.M. Jones, The Cities of Eastern Roman Provinces, Oxford, 1937.

P. McKendrick, "Roman Town Planning", ARCHAEOLOGY 9 (1956), pp. 126-133.

D.L. Kennedy, Archaeological Explorations on the Roman Frontier in North-East Jordan, B.A.R. 134 (1982).

D.L. Kennedy, "The Contribution of Aerial Photography to Archaeology in Jordan: With special Reference to the Roman Period" in A. Hadidi (ed.), Studies in the History and Archaeology of Jordan I, Amman, 1982, pp. 29-36.

A. Korn, History Builds the Town, London, 1953.

C.H. Kraeling (ed.), City Invincible, Chicago, 1960.

A. Kresis, Greek Town Building, Athens, 1965.

J. Lander, "Did Hadrian Abandon Arabia", in Ph. Freeman, D. Kennedy (eds.), The Defence of the Roman and Byzantine East, B.A.R. 297, Oxford, 1986, pp. 447-453.

J. Lauffray, "L'urbanisme antique en Proche Orient, in Acta Congressus Madvigiani, Copenhagen, 1958.

P. Lavedan, Histoire de L'urbanisme, Paris, 1926.

M. Lyttelton, Baroque Architecture in Classical Antiquity, Thames and Hudson, 1974.

H. Innes MacAdam, "Epigraphy and Village Life in Southern Syria during the Roman and early Byzantine Periods", Berytus XXXI (1983), pp. 103-115.

idem., Studies in the History of the Roman Province of Arabia (The Northern Sector), B.A.R. 295 (1986).

L. Marfoe, "The Integrative Transformation: Patterns of Socio-political Organization in Southern Syria", BASOR 234 (1979), pp. 1-42.

R. Martin, Recherches sur L'Agora Grecque, Paris, 1951.

idem., L'urbanisme dans la Grece antique, Paris, 1956.

Ph. Mayerson, "The Saracens and the Limes", BASOR 262 (1986), pp. 35-47.

L. Mumford, The City in History, Penguin Books, 1961.

S.B. Murray, Hellenistic Architecture in Syria, Princeton, 1917.

E. Nash, Roman Towns, New York, 1944.

A. Negev, "The Nabateans and the Provincia Arabia", in H. Temporini, W. Haase (eds.), Aufstieg und Niedergang der Romischen Welt II (8), Berlin, 1977. pp. 520-686.

A. McNicoll, R.H. Smith, B. Hennessy, Pella in Jordan I, Australian National Gallery, Canberra, 1982.

M.P. Nilsson, "The Triumphal Arch and the Town Planning", OPUSCULA ARCHAEOLOGICA I (1934-1935), pp. 120-128.

S.T. Parker, "The Decapolis reviewed", Journal of Biblical Literature 94 (1975), pp. 437-441.

idem., "Retrospective on the Arabian Frontier after a Decade of Research", in Ph. Freeman, D. Kennedy (eds.), The Defence of the Roman and Byzantine East, B.A.R. 297, Oxford, 1986, pp. 660-663.

idem., Romans and Saracens: A History of the Arabian Frontier, American School of Oriental Research Dissertation Series (No. 69), Winona Lake, 1986.

idem., (ed.), The Roman Frontier in Central Jordan, B.A.R. 340 (I.II), 1987.

St. Parnicki-Pudelko, Agora-Geneza i rozwoj Rynku greckiego, Warszawa, 1957.

F.E. Peters, "The Nabateans in the Hawran", JAOS 97 (1977), pp. 263-277.

idem., "City Planning in Greco-Roman Syria: Some new Considerations", Damaszener Mitteilungen I (1983), pp. 269-277.

J.P. Rey-Coquais, "Syria romaine, de Pompee a Diocletien", J.R.S. 68 (1978), pp. 44-73.

D.N. Riley, "Archaeological Air Photography and the Eastern Limes", in Ph. Freeman, D. Kennedy (eds.), The Defence of the Roman and Byzantine East, B.A.R. 297, Oxford, 1986, pp. 661-676.

H. Rosenau, The Ideal City, London, 1959.

M. Rostovtzeff, Caravan Cities, Oxford, 1932.

M. Sartre, Trois etudes sur l'Arabie Romaine et Byzantine, Collection Latomus (Vol. 178), Bruxelles, 1982.

idem., "Tribus et Clans dans le Hawran Antique", Syria LIX (1982), pp. 77-91.

idem., "Le peuplement et le developpement du Hauran antique à la lumière des inscriptions grecques et latines", in J.M. Dentzer (ed.), Hauran I, Paris, 1985, pp. 189-204.

idem., Bostra - des origines a Islam, Libraire Orientaliste, Paul Geuthner, Paris, 1985.

H.H. Scullard, The Etruscan Cities and Rome, London, 1967.

A. Segal, "Roman Cities in the Province of Arabia", Journal of the Society of Architectural Historians XL (2), 1981, pp. 108-121.

idem., "Die Theaterbauten im Alten Palaestina in Romisch-Byzantinischer Zeit", Antike Welt 18 (1), 1987, pp. 2-21.

H. Seyrig, "Temples, cultes et souvenirs historiques de la Decapole", Syria 36 (1959), pp. 60-78.

G. Sjoberg, The Preindustrial city, Glencoe, Illinois, 1960.

R.H. Smith, Pella of the Decapolis, The College of Wooster Press, 1973.

D. Sourdel, Les cultes du Hauran a l'epoque romaine, Paris, 1952.

A. Spijkerman, The Coins of the Decapolis and Provincia Arabia, Franciscan Printing Press, Jerusalem, 1978.

D. Stanislawski, "The Origin and Spread of the Grid Pattern Town", Geographical Review XXXVI (1946), pp. 105-120.

J. Starcky, "Les inscriptions nabateenes et l'histoire de la Syrie du Sud at du Nord de la Jordanie", in J.M. Dentzer (ed.), Hauran I, Paris, 1985, pp. 167-182.

V. Tscherikower, Die hellenistischen Stadtegrundungen von Alexander Dem Grossen bis auf die Romerzeit, Leipzig, 1927.

F. Villeneuve, "L'economie rurale et la vie des campagnes dans le Hauran antique (Ier siècle - VIe siècle après J.C.), in J.M. Dentzer (ed.), Hauran I, Paris, 1985, pp. 63-136.

B. de Vries, "The Umm el-Jimal Project, 1972-1977", BASOR 244 (1981), pp. 53-72.

idem., "Urbanization in the Basalt Region of North Jordan in the Late Antiquity: the case of Umm el-Jimal" in A. Hadidi (ed.), Studies in the History and Archaeology of Jordan II, Amman, 1985, pp. 249-256.

J.B. Ward-Perkins, "Early Roman Towns in Italy", Town Planning Review 26 (1955), pp. 126-154.

idem., "The Early Development of Roman Town Planning", in Acta Congressus Madvigiani, Copenhagen, 1958.

idem., "From Republic to Empire: Reflections on the Early Provincial Architecture of the Roman West", J.R.S. 60 (1970), pp. 1-19.

idem., Cities of Ancient Greece and Italy: Planning in Classical Antiquity, New York, 1974.

E. Will, "l'Urbanisation de la Jordanie aux epoques hellenistique et romaine: conditions geographiques et ethniques", in A. Hadidi (ed.), Studies in the History and Archaeology of Jordan II, Amman 1985, pp. 237-241.

R.E. Wycherley, How the Greeks Built Cities, London, 1949.

Idem., "Hellenic Cities", Town Planning Review 22 (1951), pp. 104-121.

Idem., "Hellenistic Cities", Town Planning Review 22, (1951), pp. 178-205.

ILLUSTRATIONS

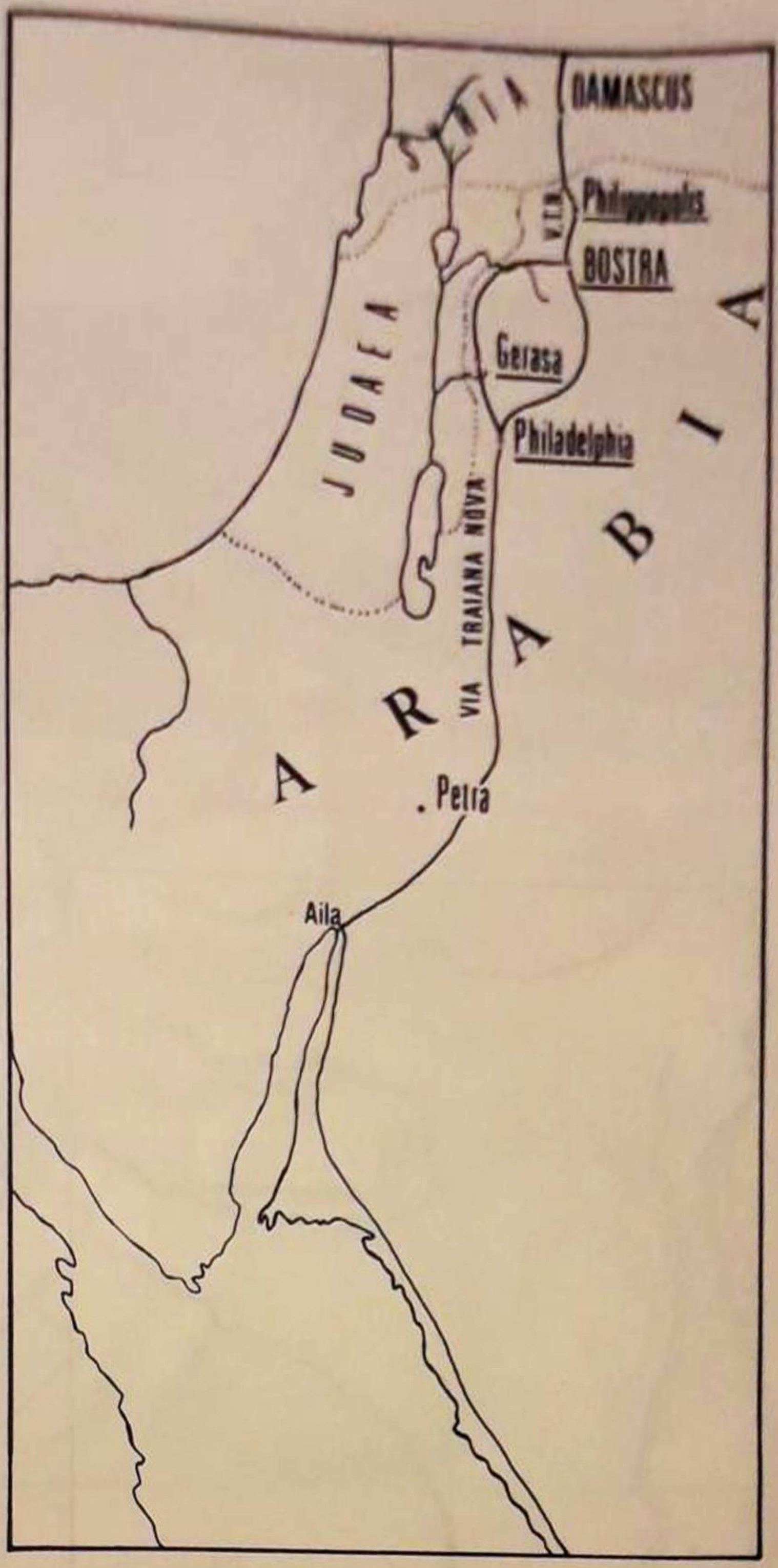


Fig. 1. Provincia Arabia and the Via Traiana Nova.

Fig. 2. Amman, city centre. View from Acropolis. Photograph from the early 30's.

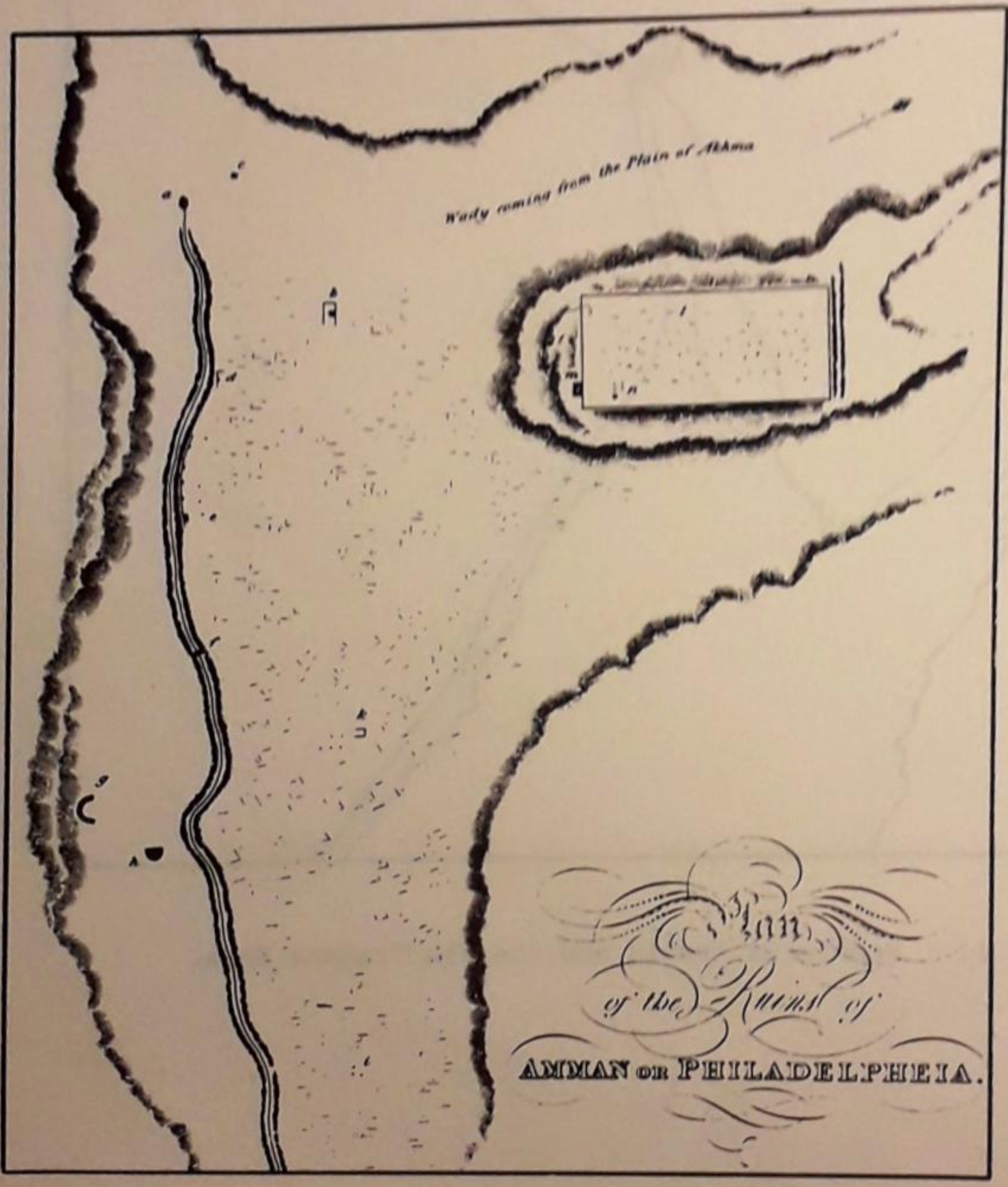
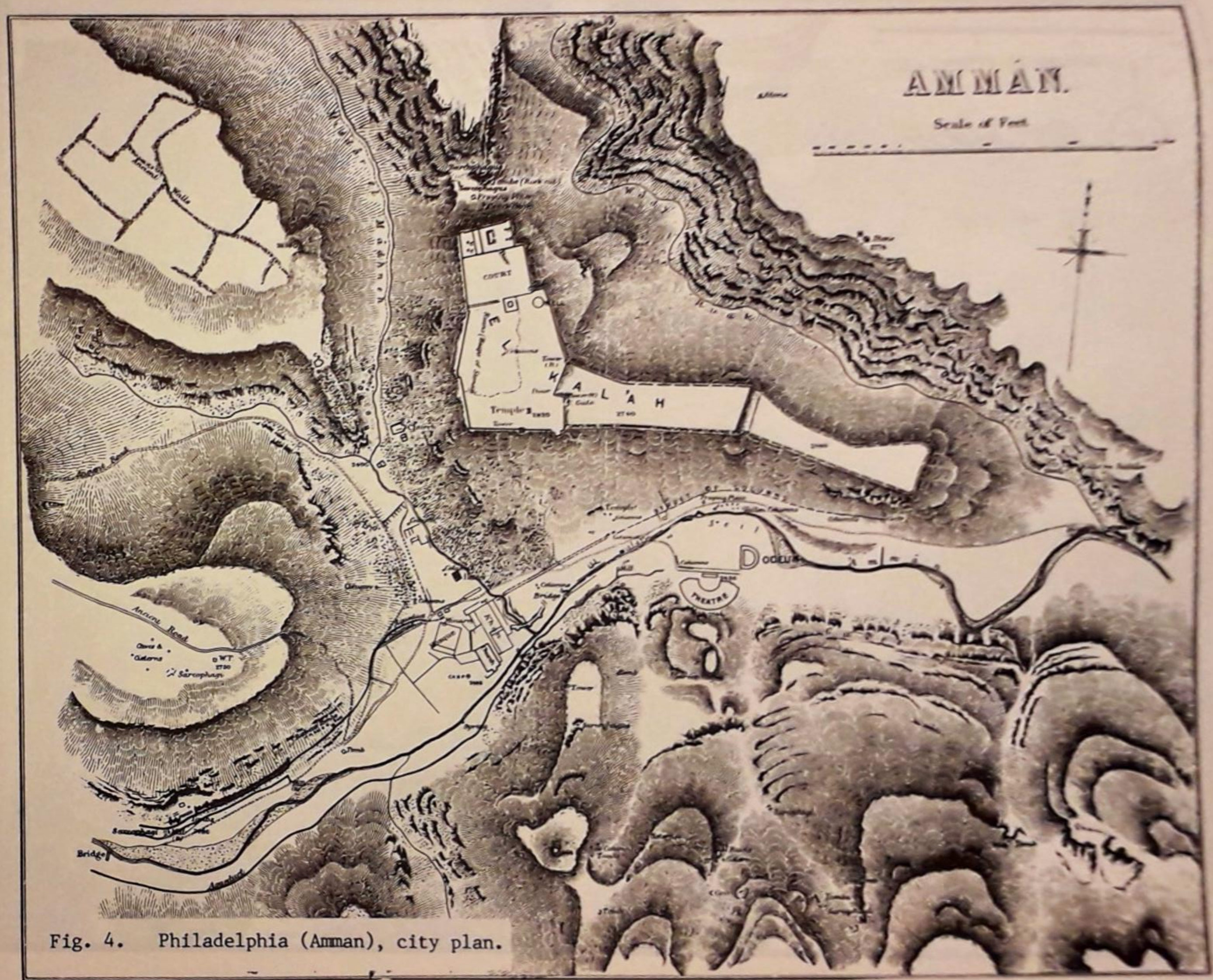


Fig. 3. Philadelphia (Amman), city plan.



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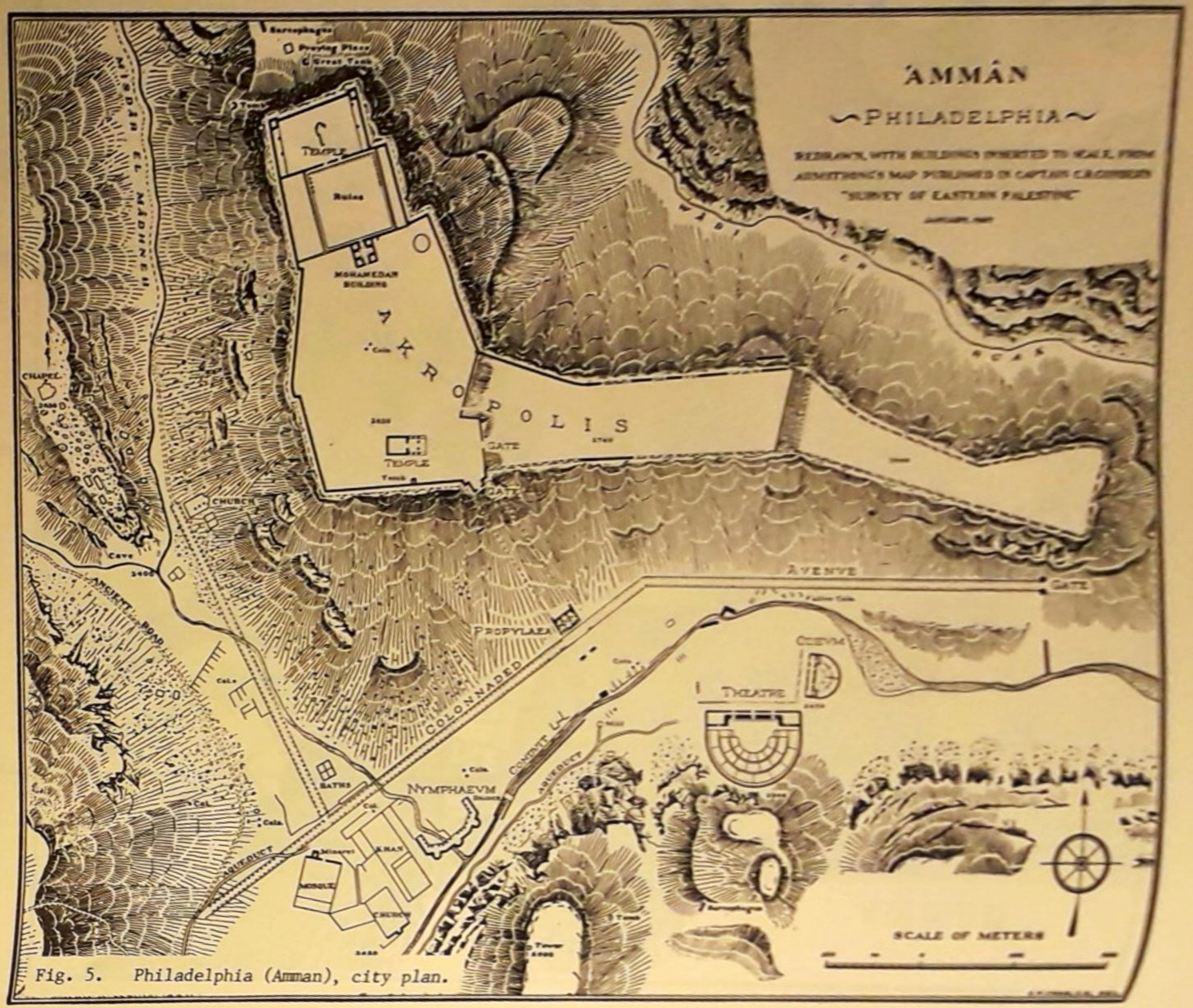


Fig. 5. Philadelphia (Amman), city plan.

Fig. 6. Amman, city centre aerial photograph.

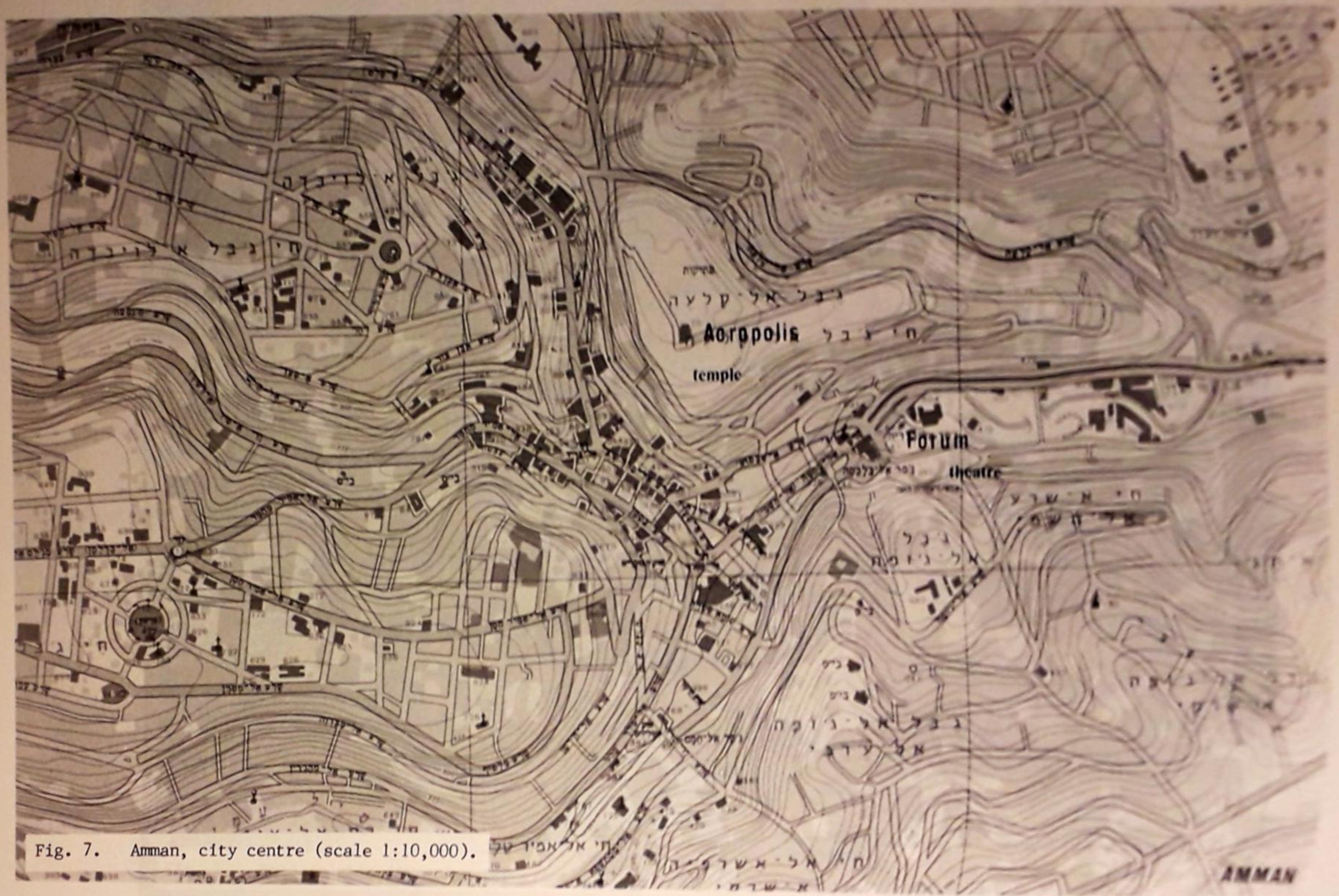


Fig. 7. Amman, city centre (scale 1:10,000).

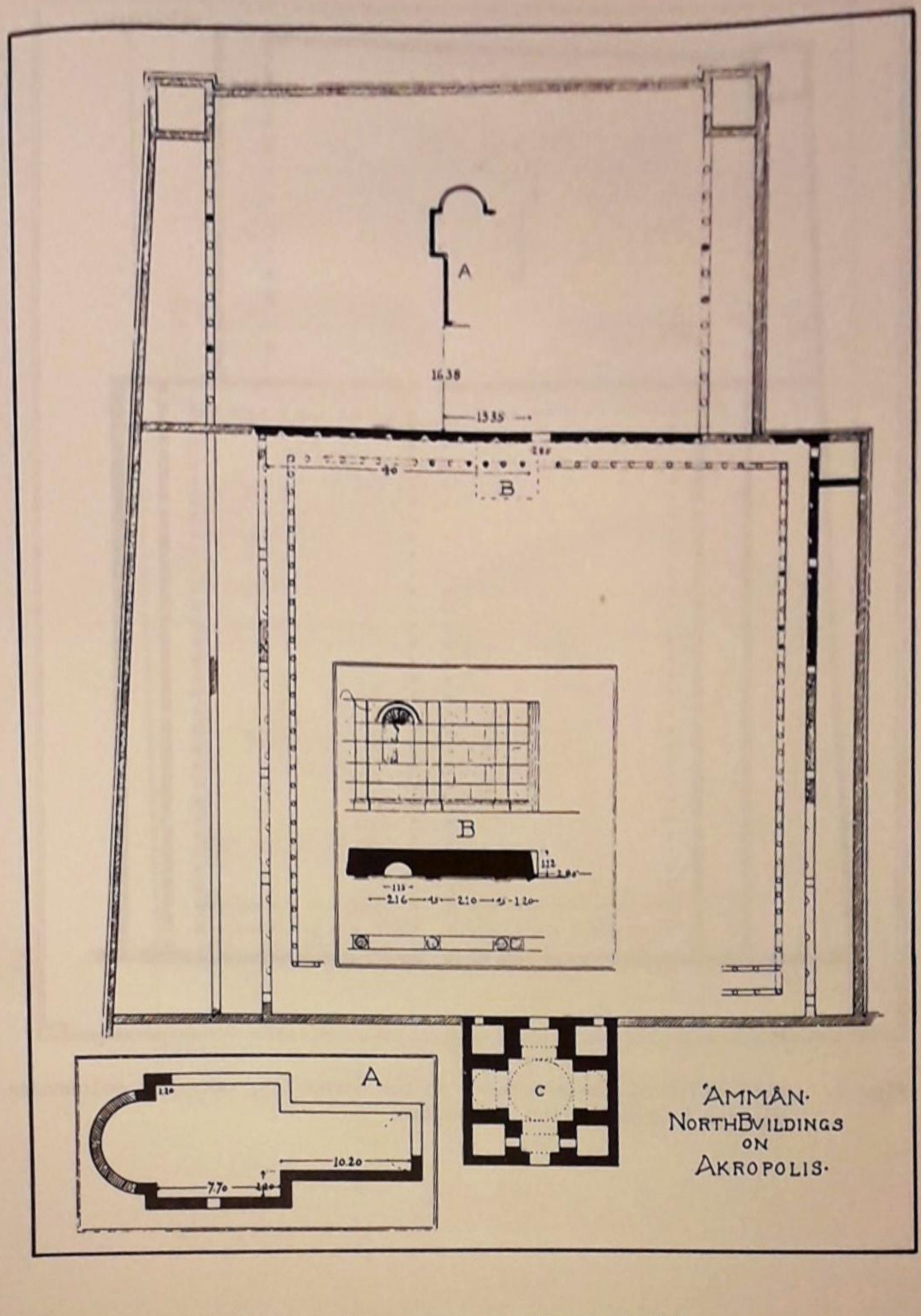


Fig. 8. Philadelphia, the sanctuary on the Acropolis.

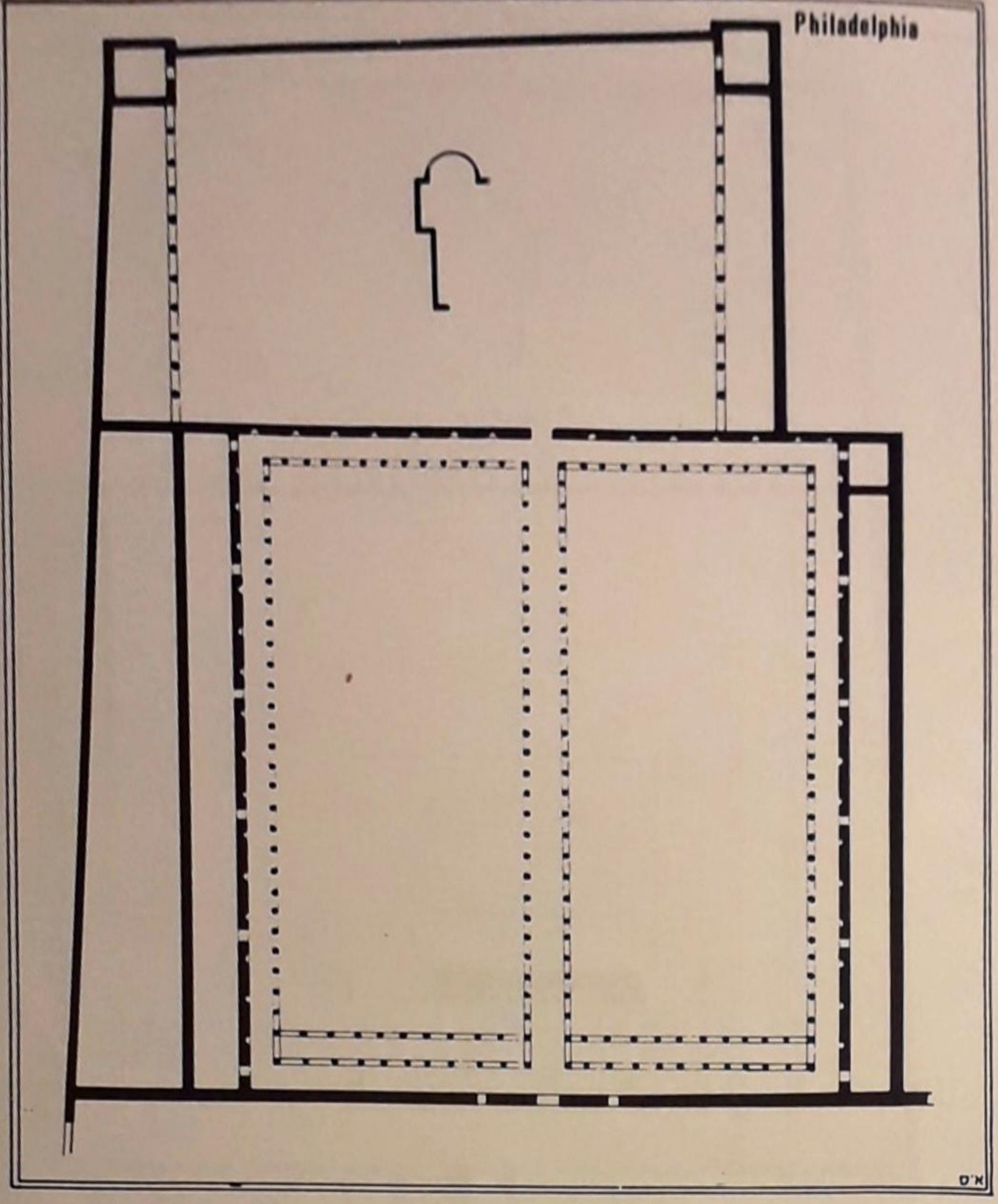


Fig. 9. Philadelphia, the sanctuary on the Acropolis, note the colonnades exposed by the Italian excavators.

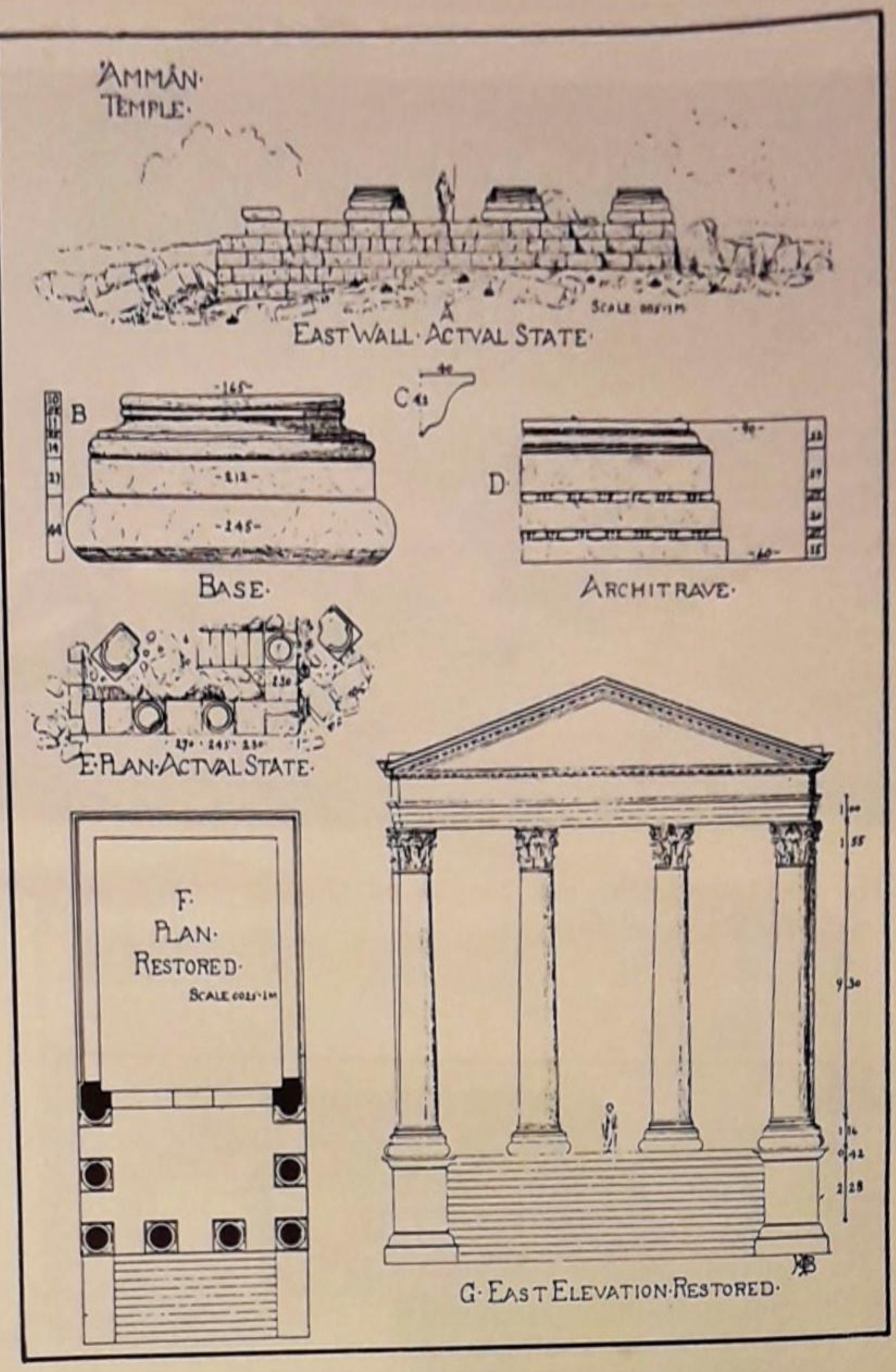


Fig. 10. Philadelphia, the Temple on the Acropolis.

Fig. 11. Philadelphia, the Temple on the Acropolis as exposed by the Italian excavators.

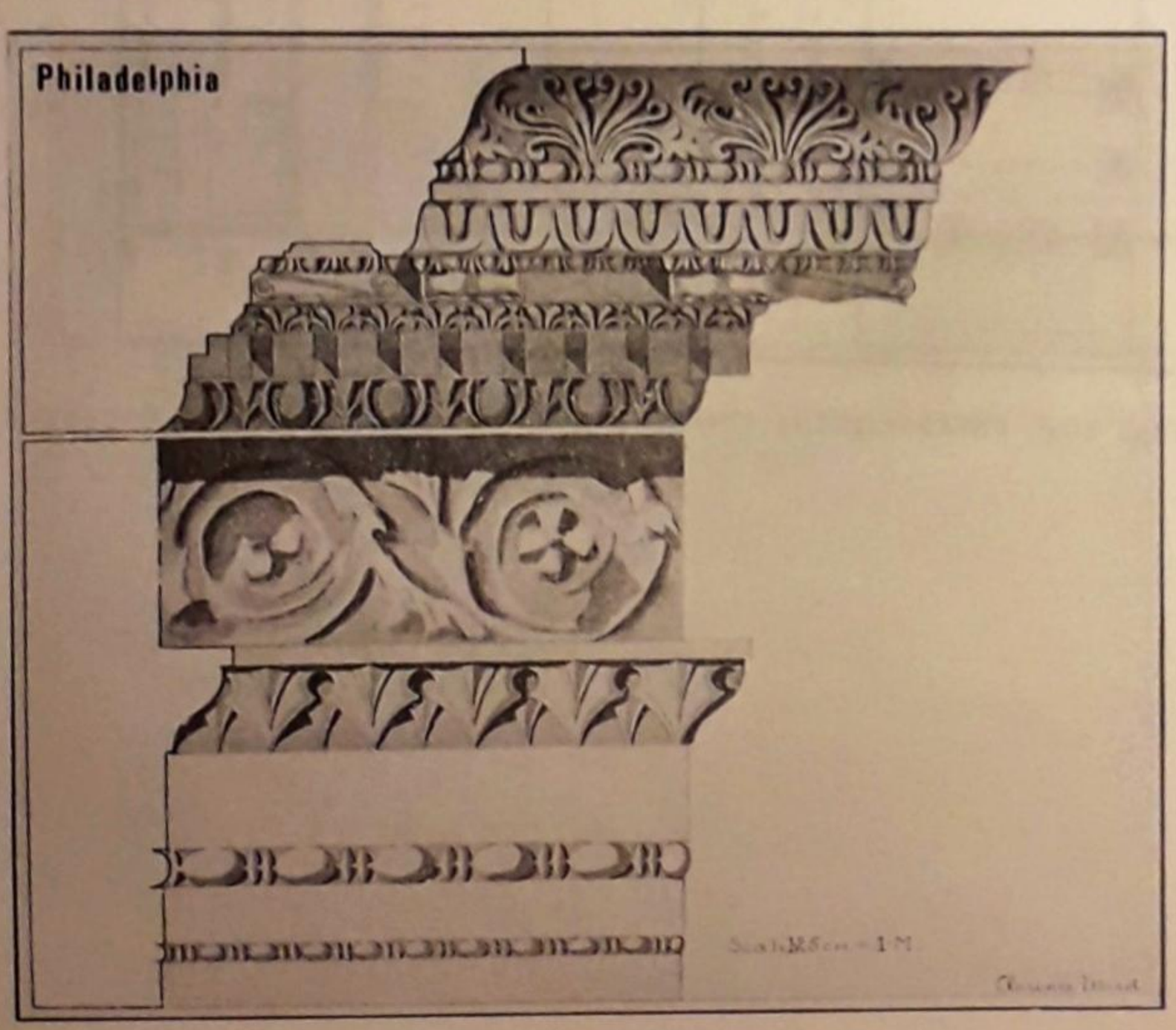


Fig. 12. Philadelphia, fragment of architrave found among the debris on the Acropolis.

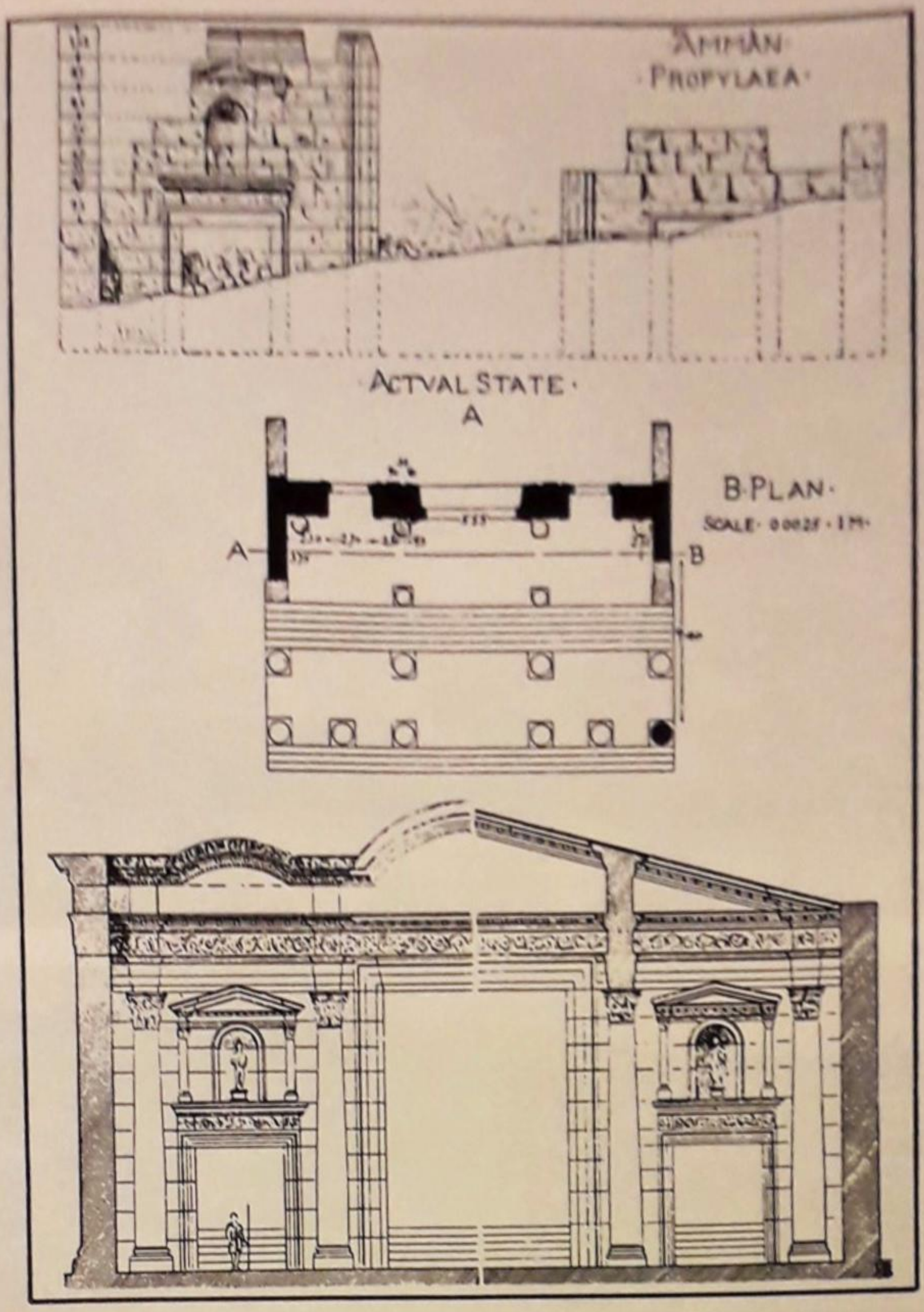


Fig. 13. Philadelphia, the Propylaea at the base of the Acropolis.

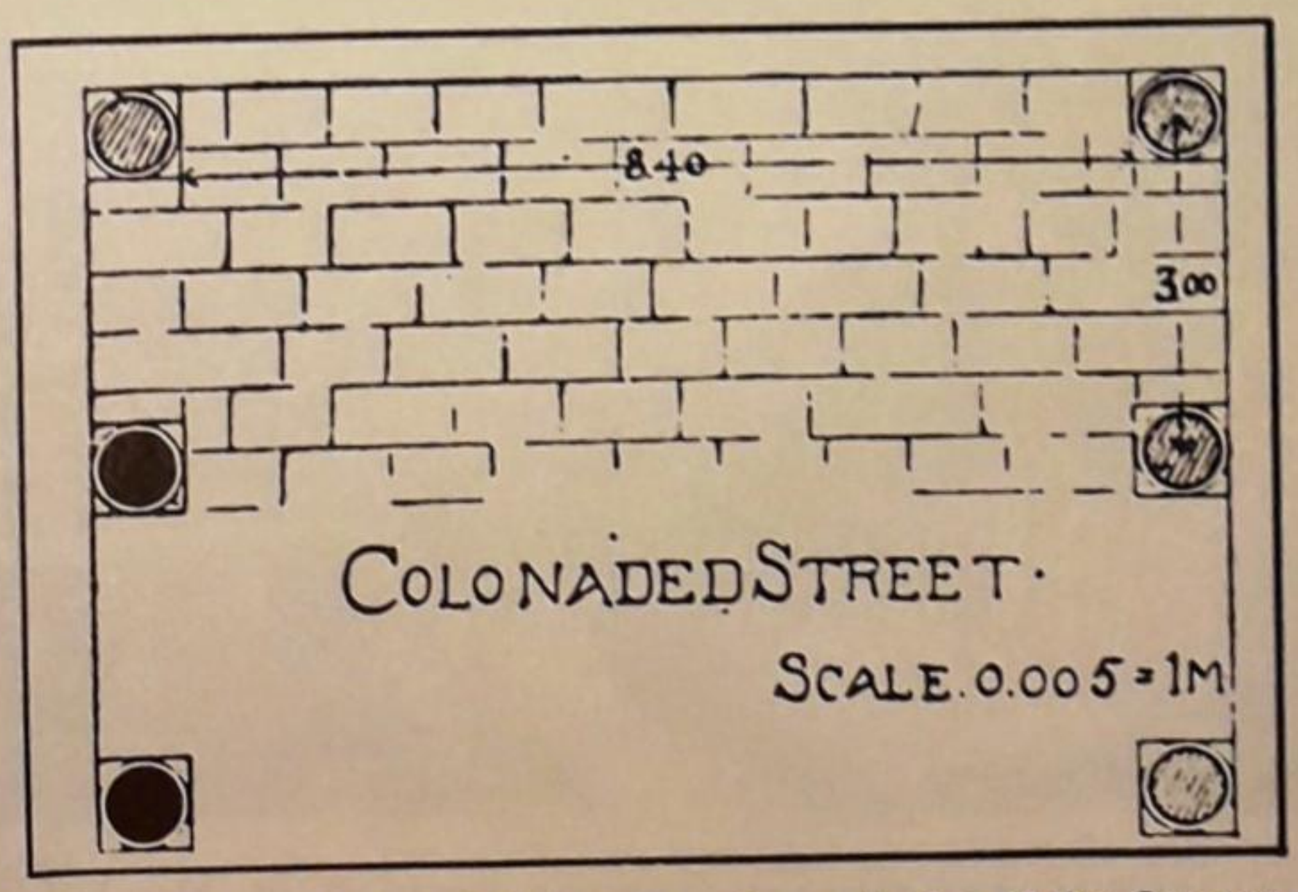


Fig. 14. Philadelphia, section of the Main Street.

Fig. 15. Amman, the theatre before the reconstruction.

Fig. 16. Amman, the theatre and the section of the Forum as reconstructed in early 60's.

Fig. 17. Amman, a section of the portico that surrounded the Forum. Photograph from the early 70's.

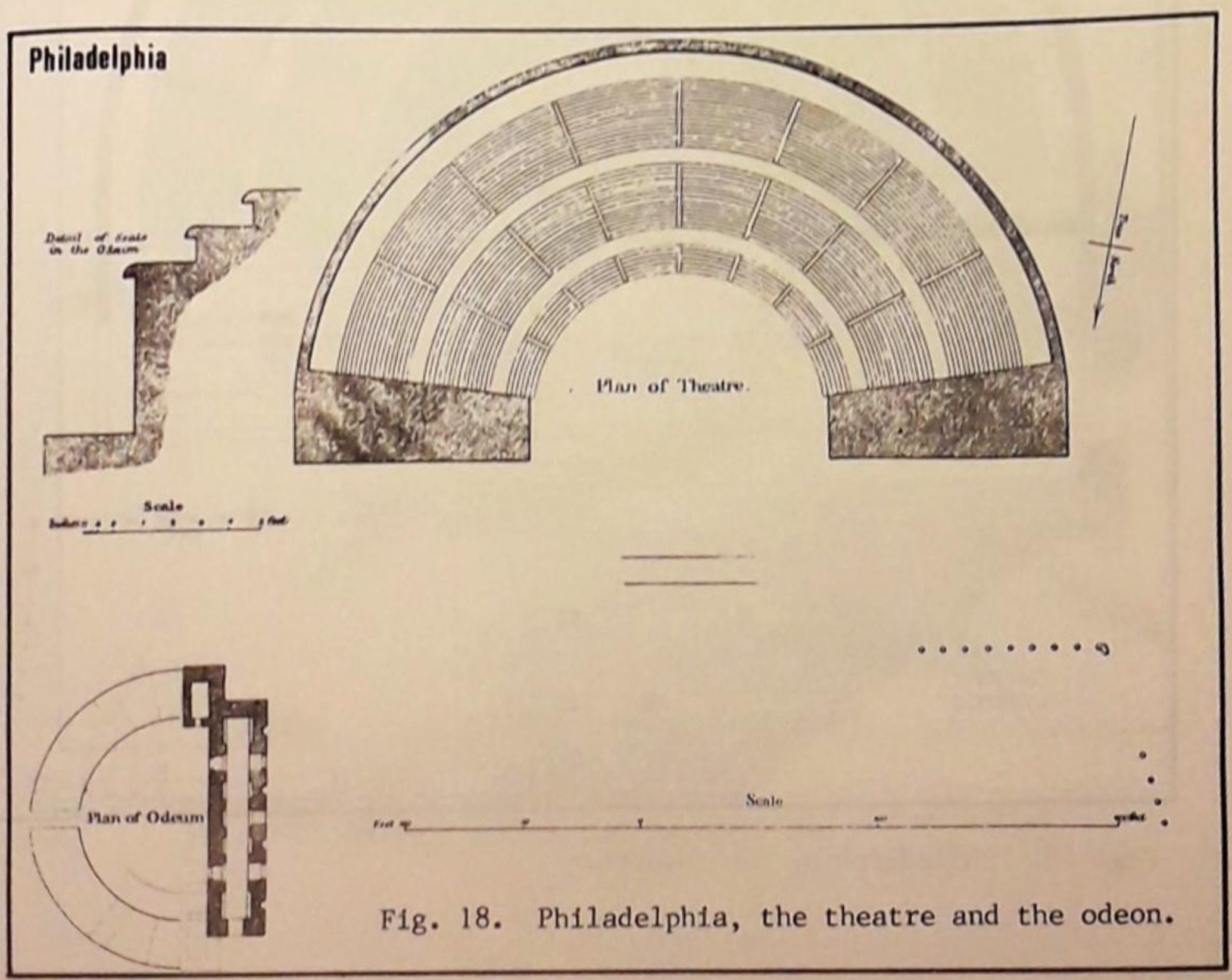


Fig. 18. Philadelphia, the theatre and the odeon.

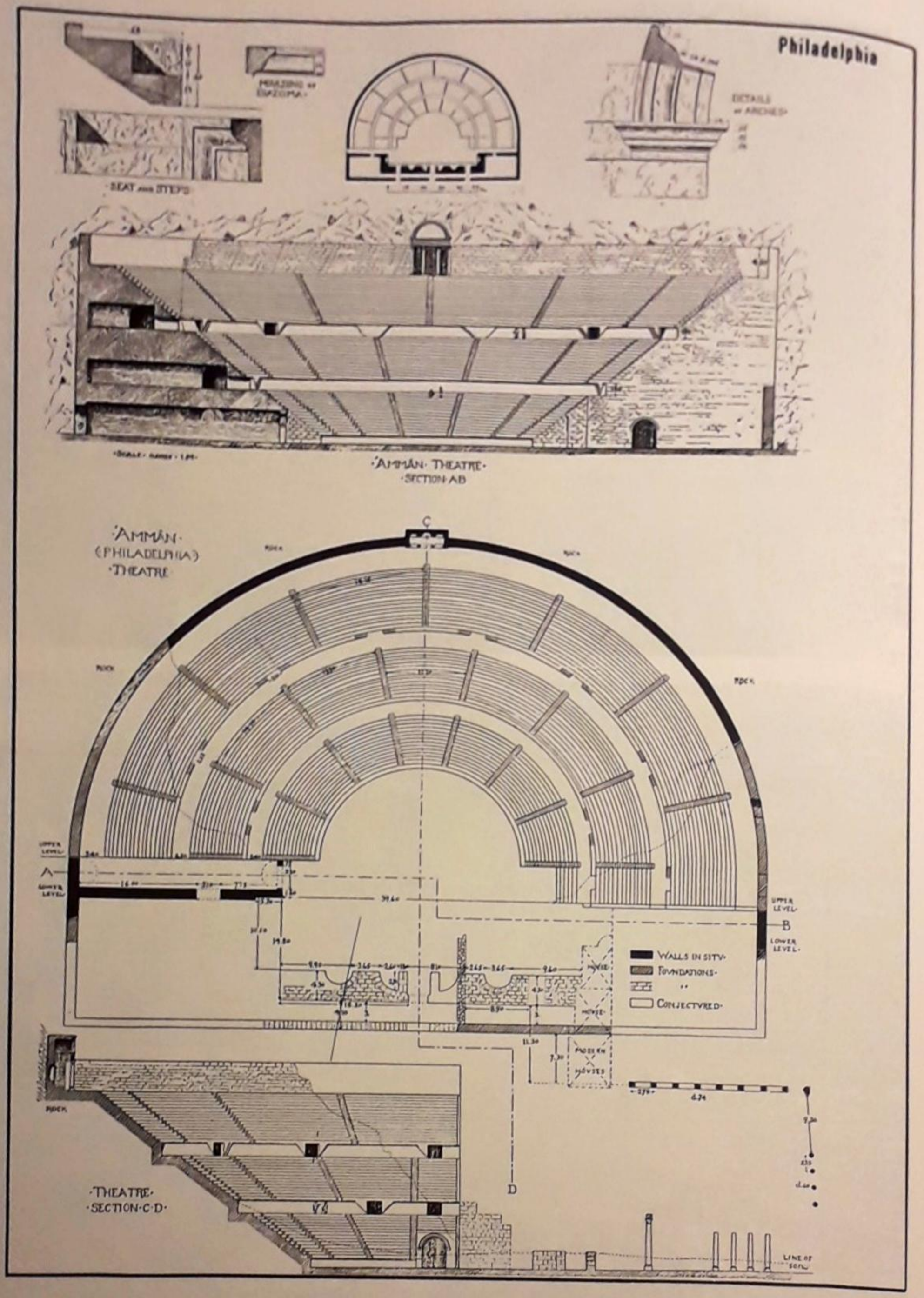


Fig. 19. Philadelphia, the theatre.

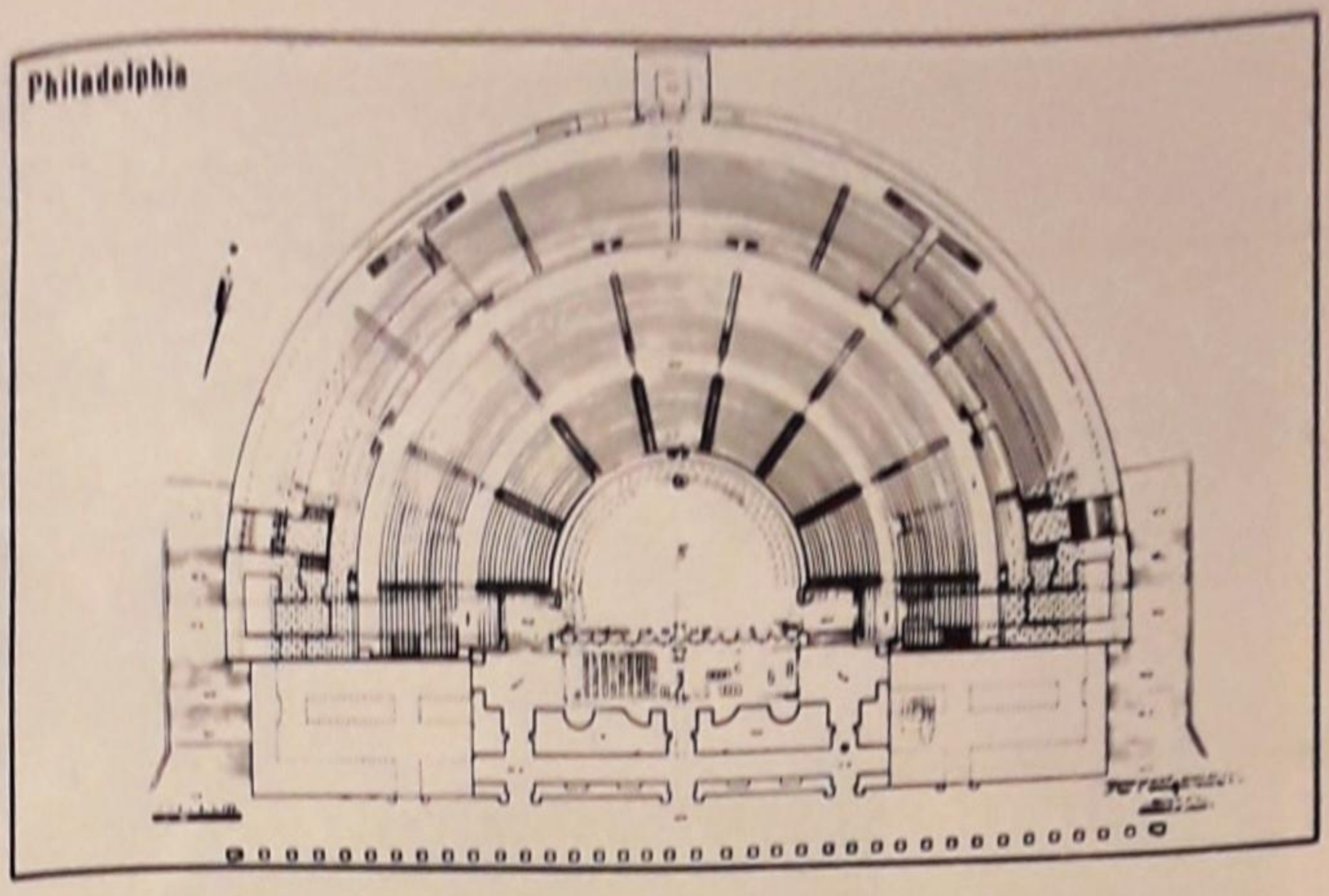


Fig. 20. Philadelphia, the theatre.

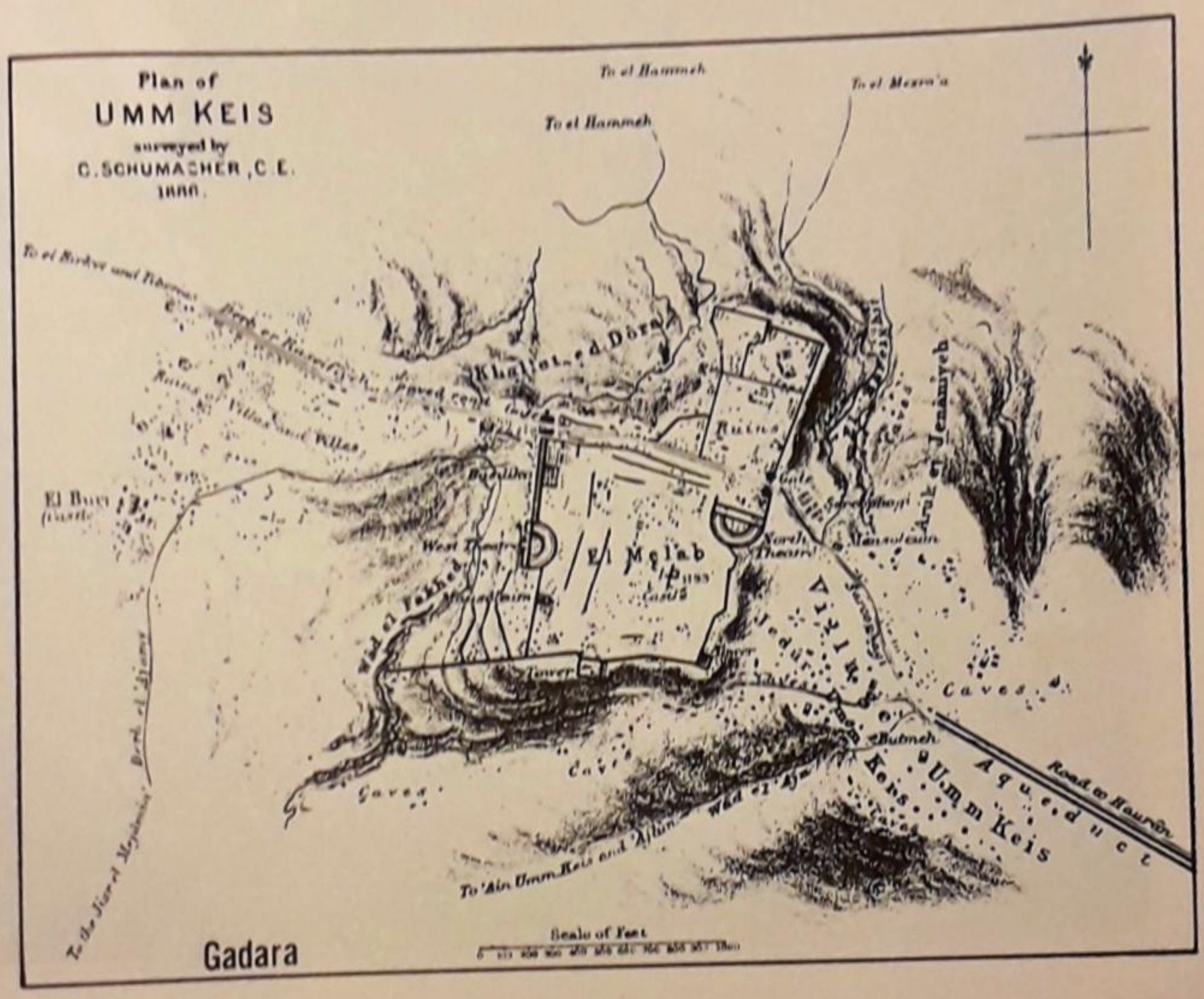


Fig. 21. Gadara, the Acropolis, note the two theatres.

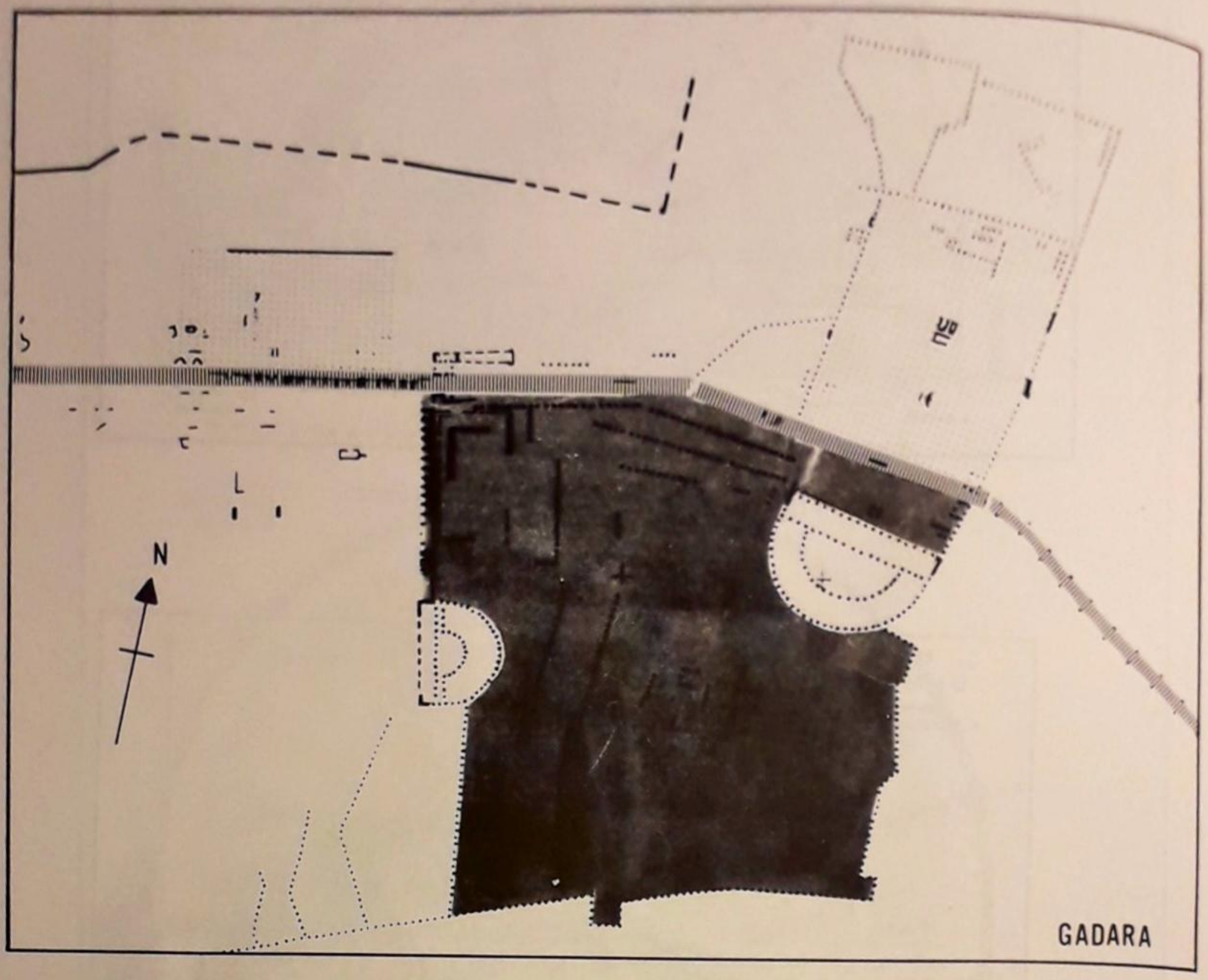


Fig. 22. Gadara, schematic plan of the Acropolis with the two theatres.

Fig. 23. Gadara, the Acropolis, aerial view.

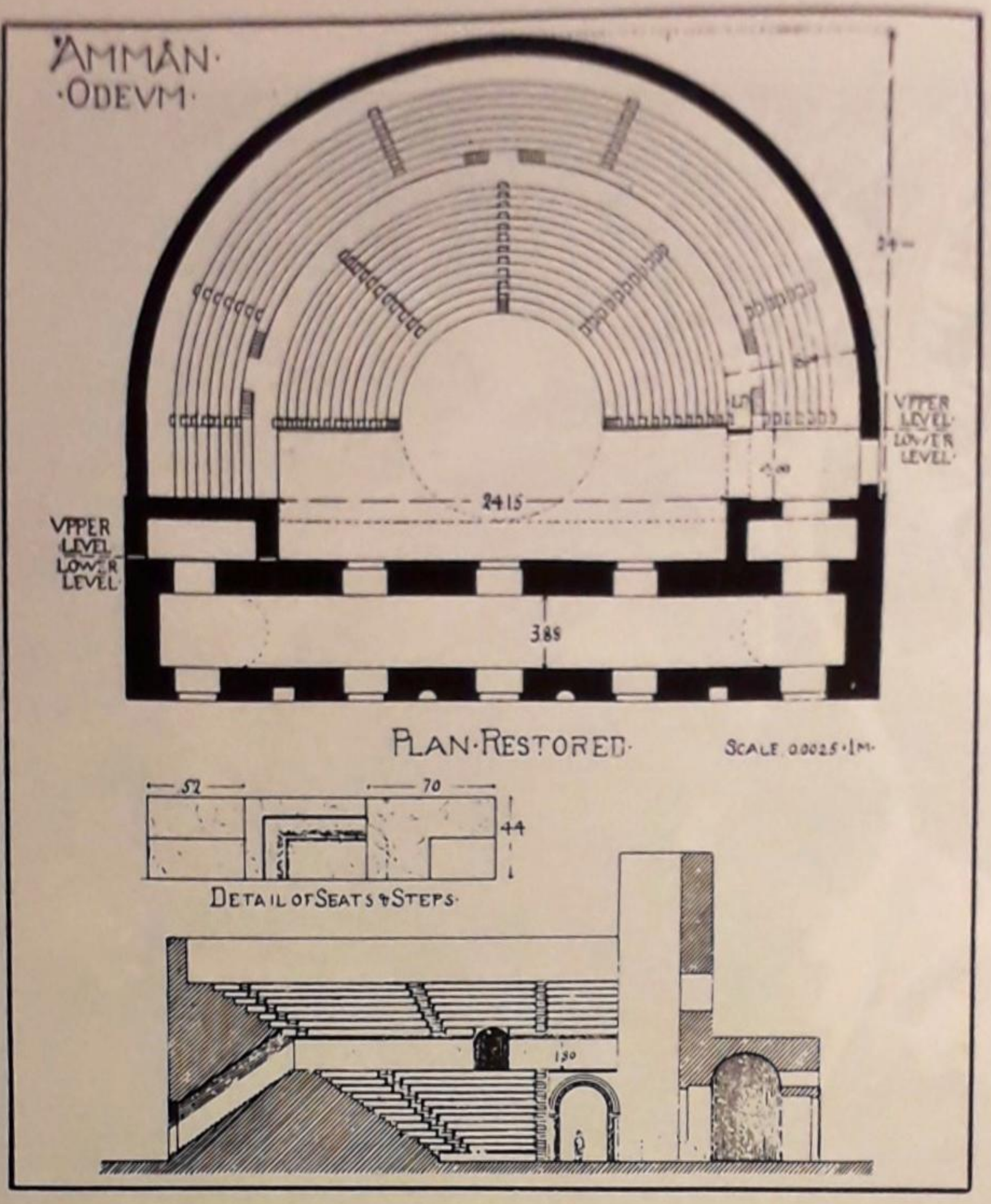


Fig. 24. Philadelphia, the odeon.

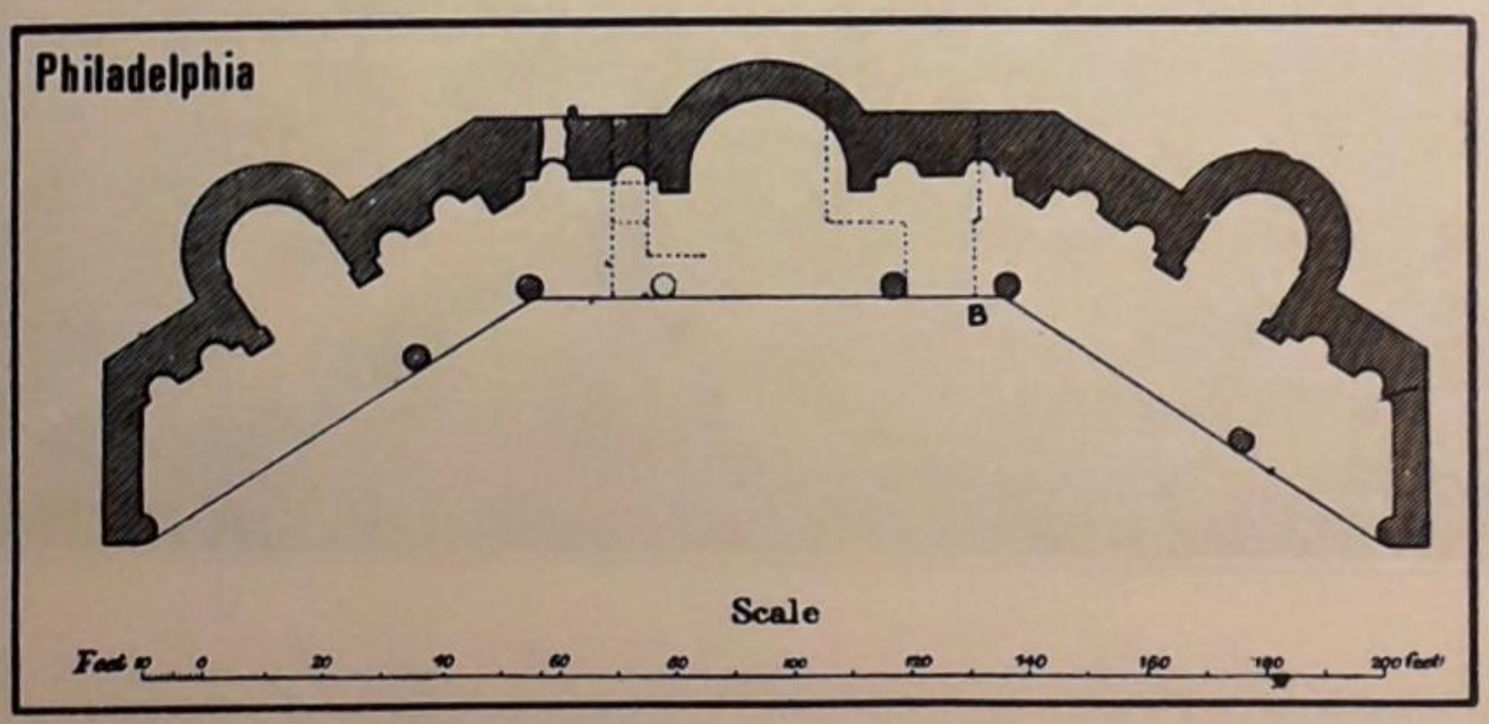


Fig. 25. Philadelphia, the nymphaeon.

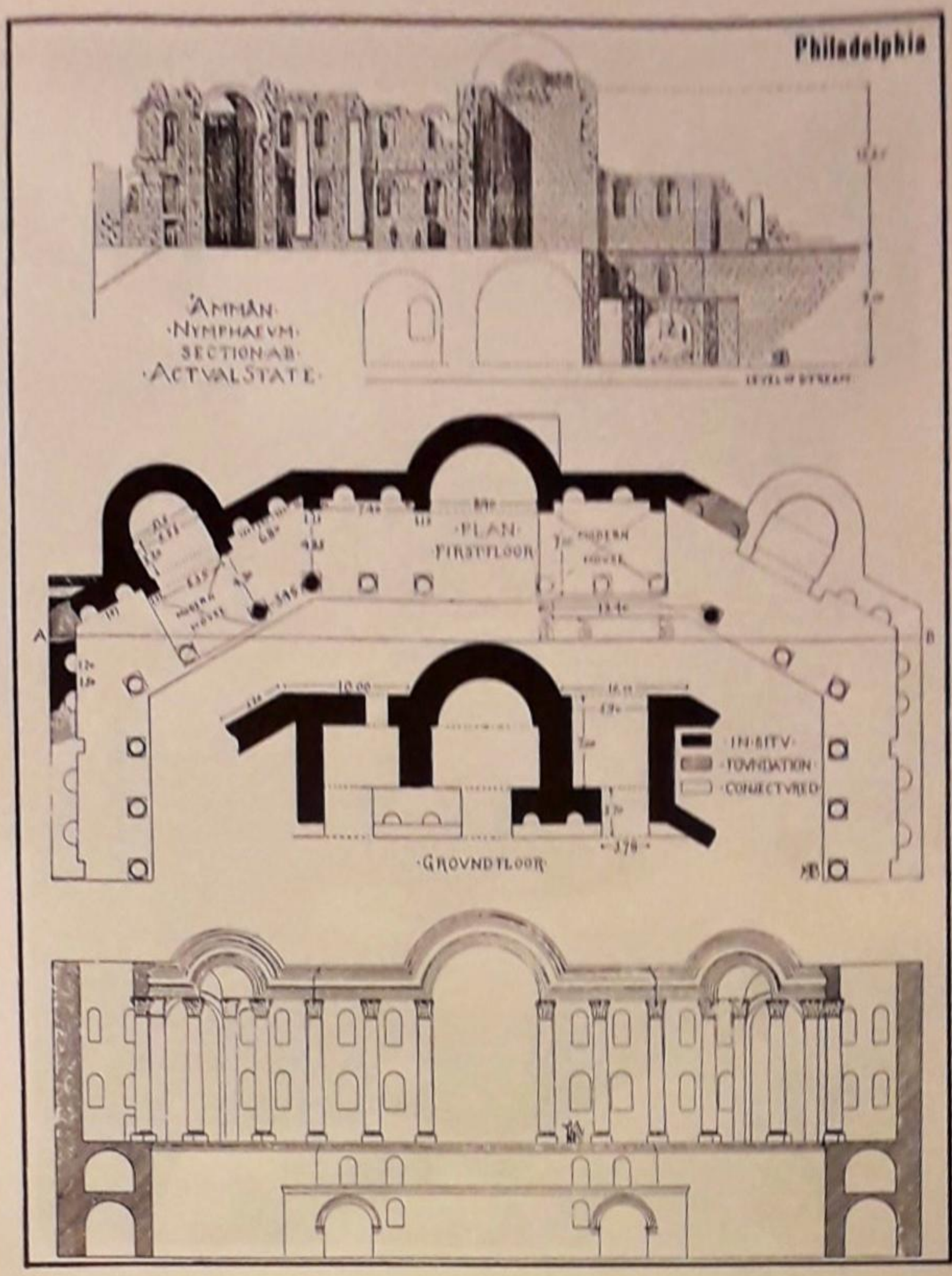


Fig. 26. Philadelphia, the nymphaeon.

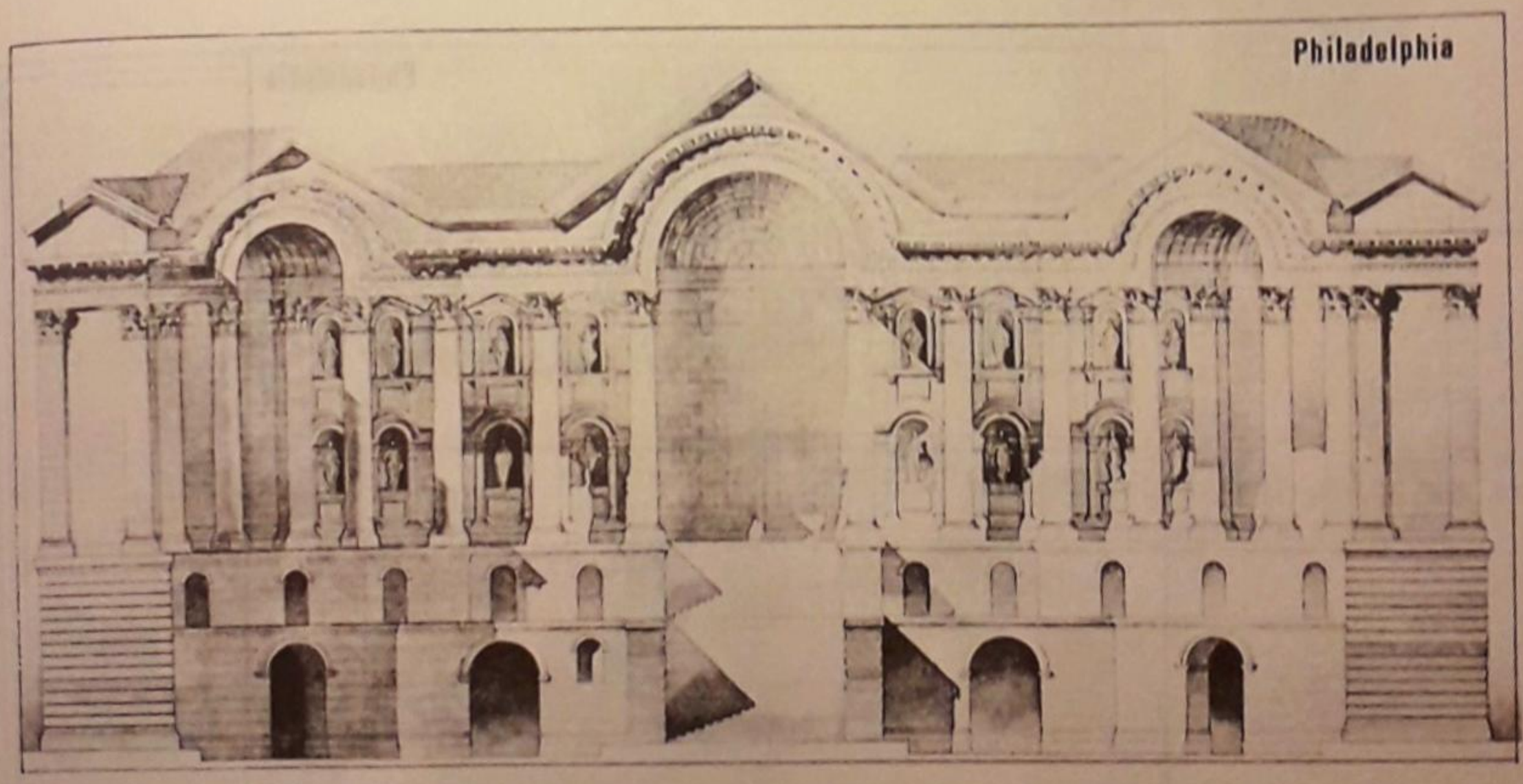


Fig. 27. Philadelphia, proposed reconstruction of the nymphaeon.

Fig. 28. Amman, the back wall of the nymphaeon. Photograph from early 30's.

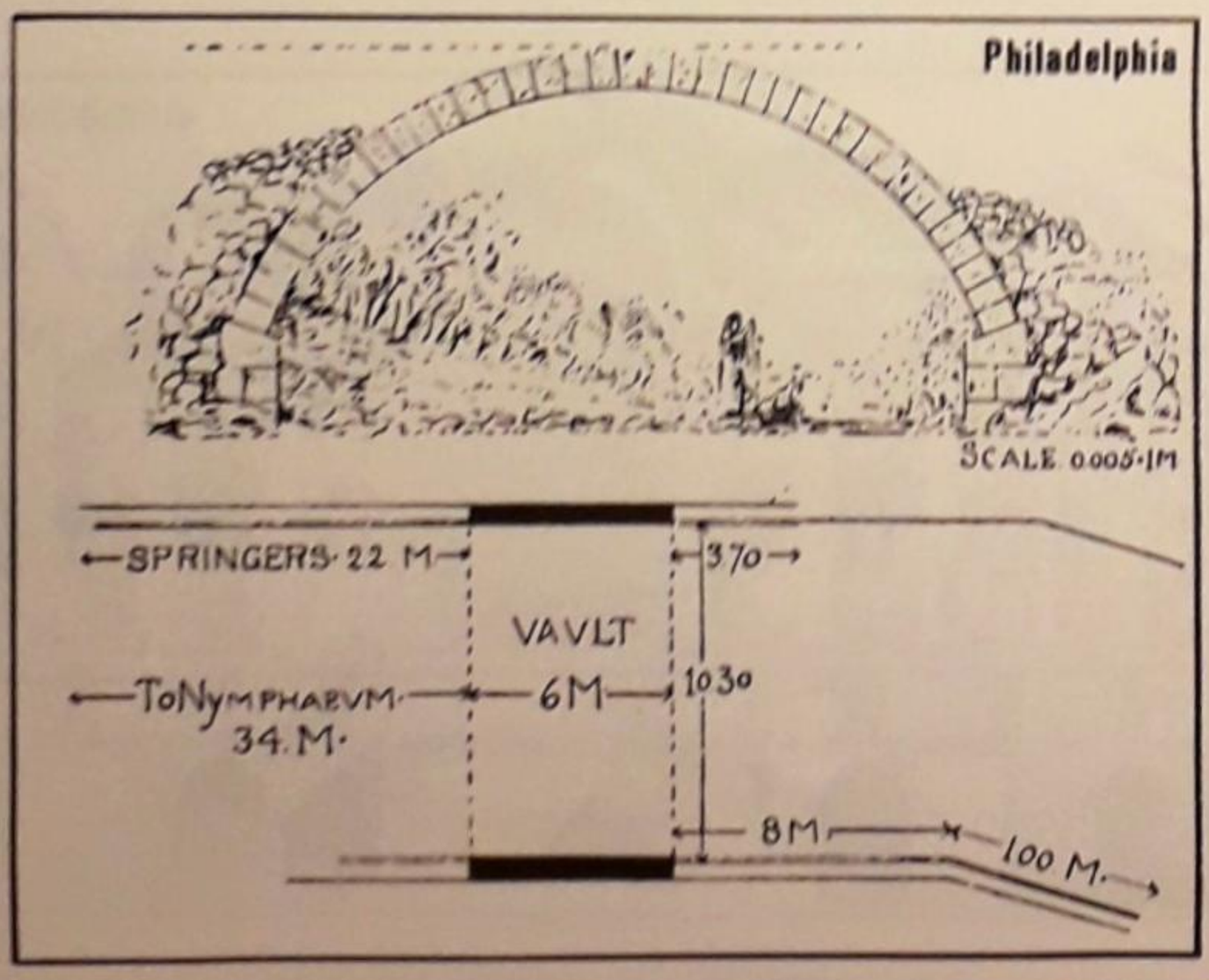
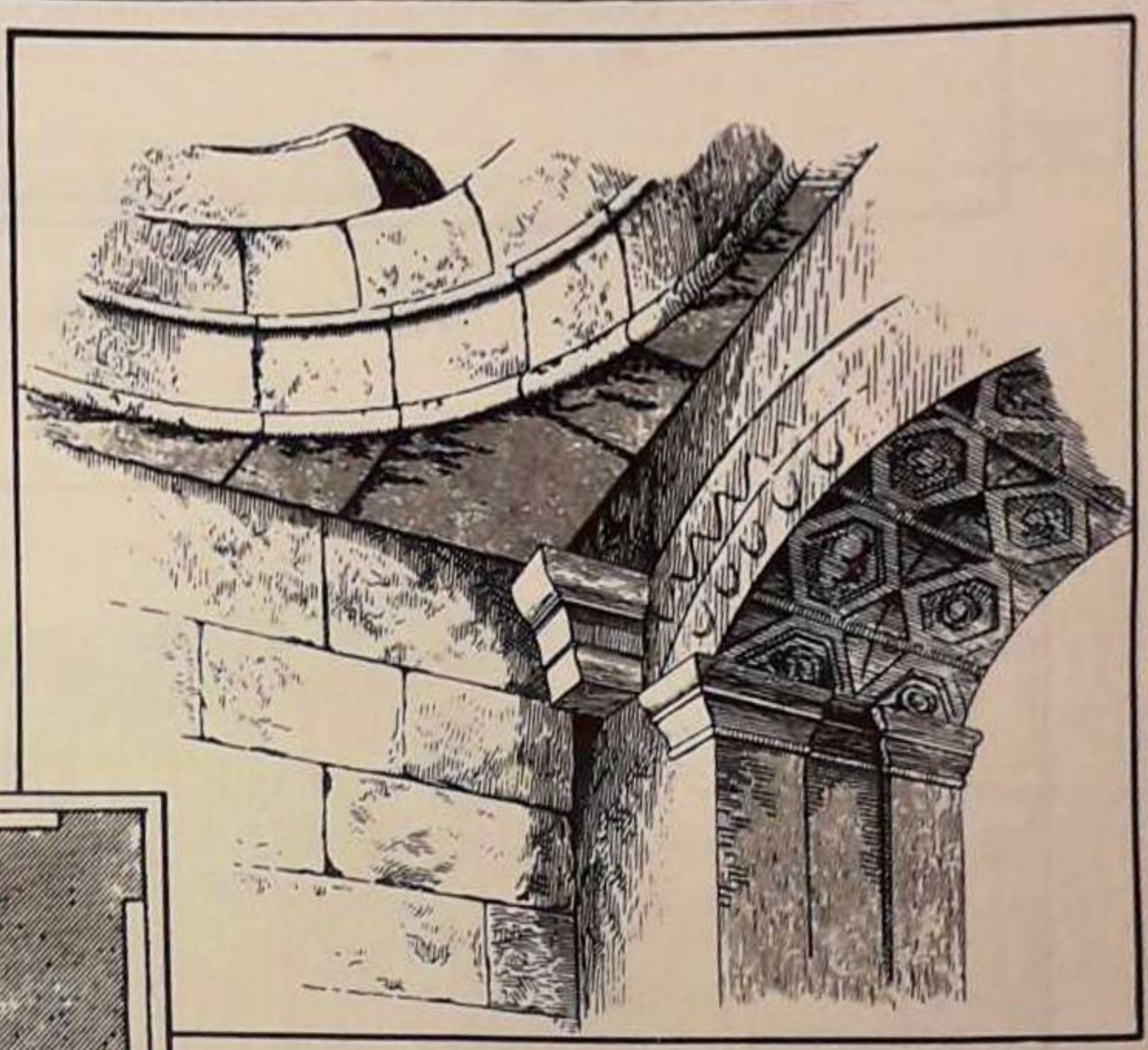


Fig. 29. Philadelphia, section of the vault that once covered the Amman River in the vicinity of the Forum.



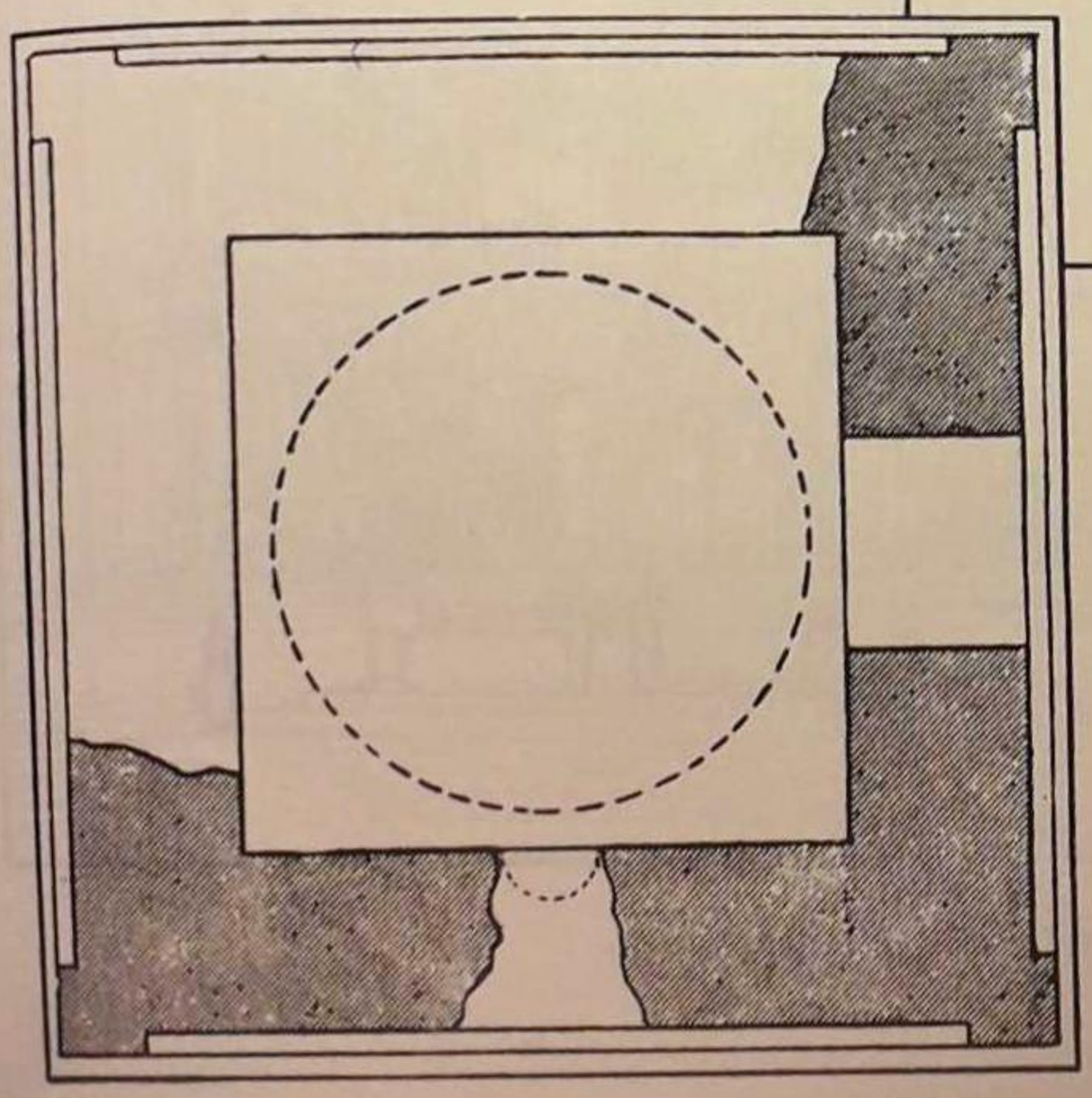


Fig. 30.

Amman, the "West Tomb";
a. A photograph from the end of XIX cent.
b. Fragment of dome.
c. The plan.

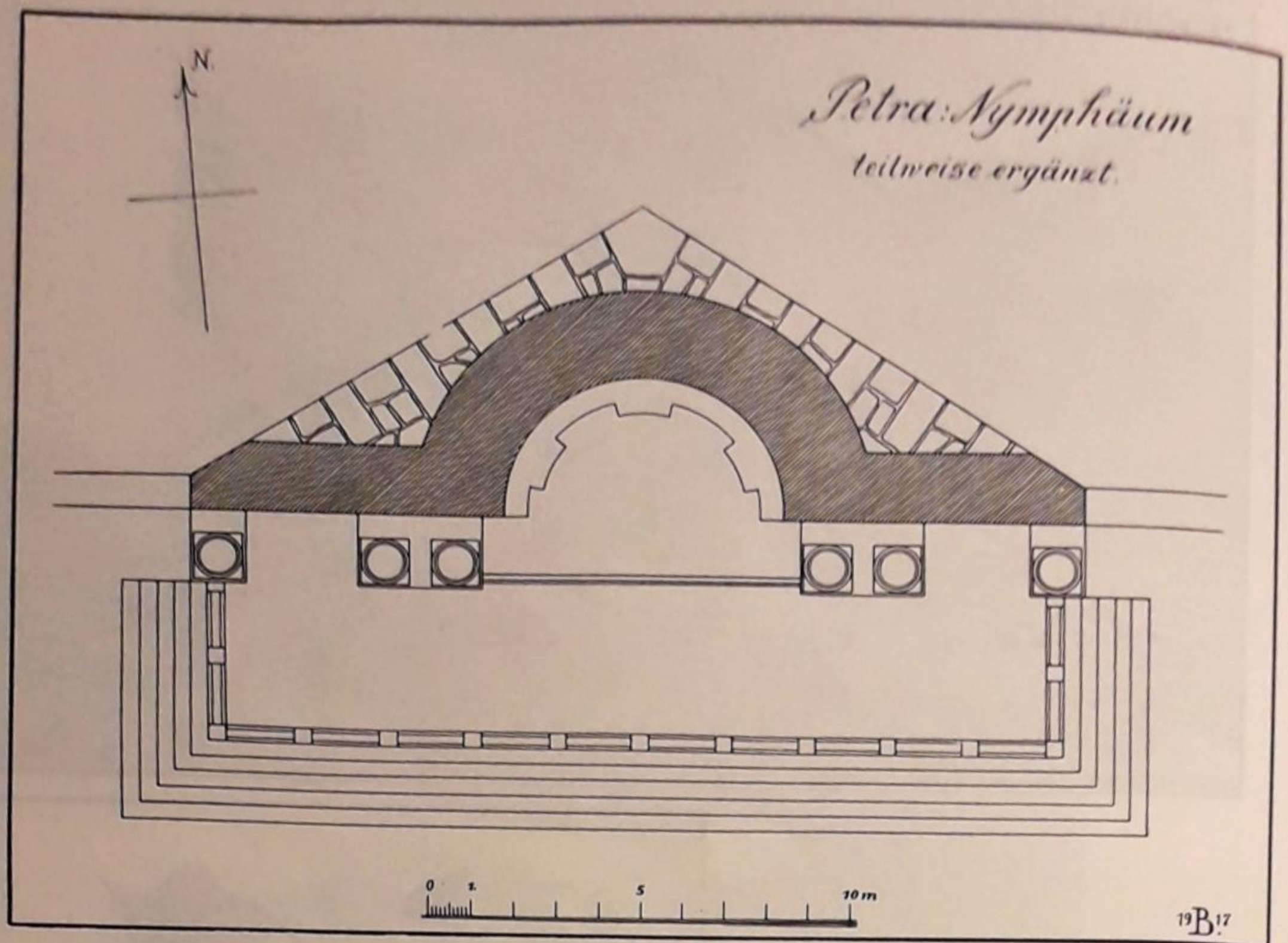


Fig. 31. Petra, the nymphaeon.

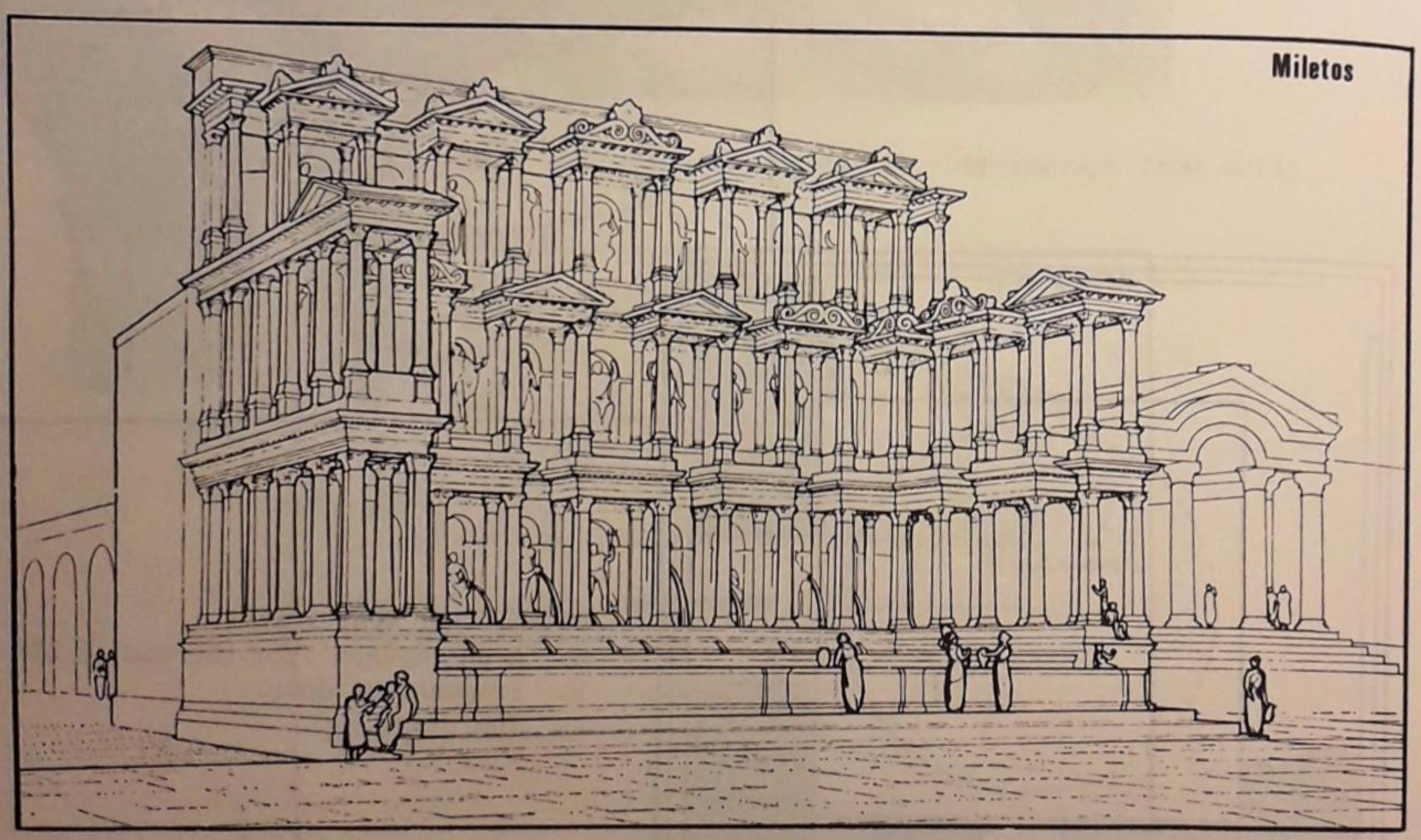


Fig. 32. Miletos, the nymphaeon.

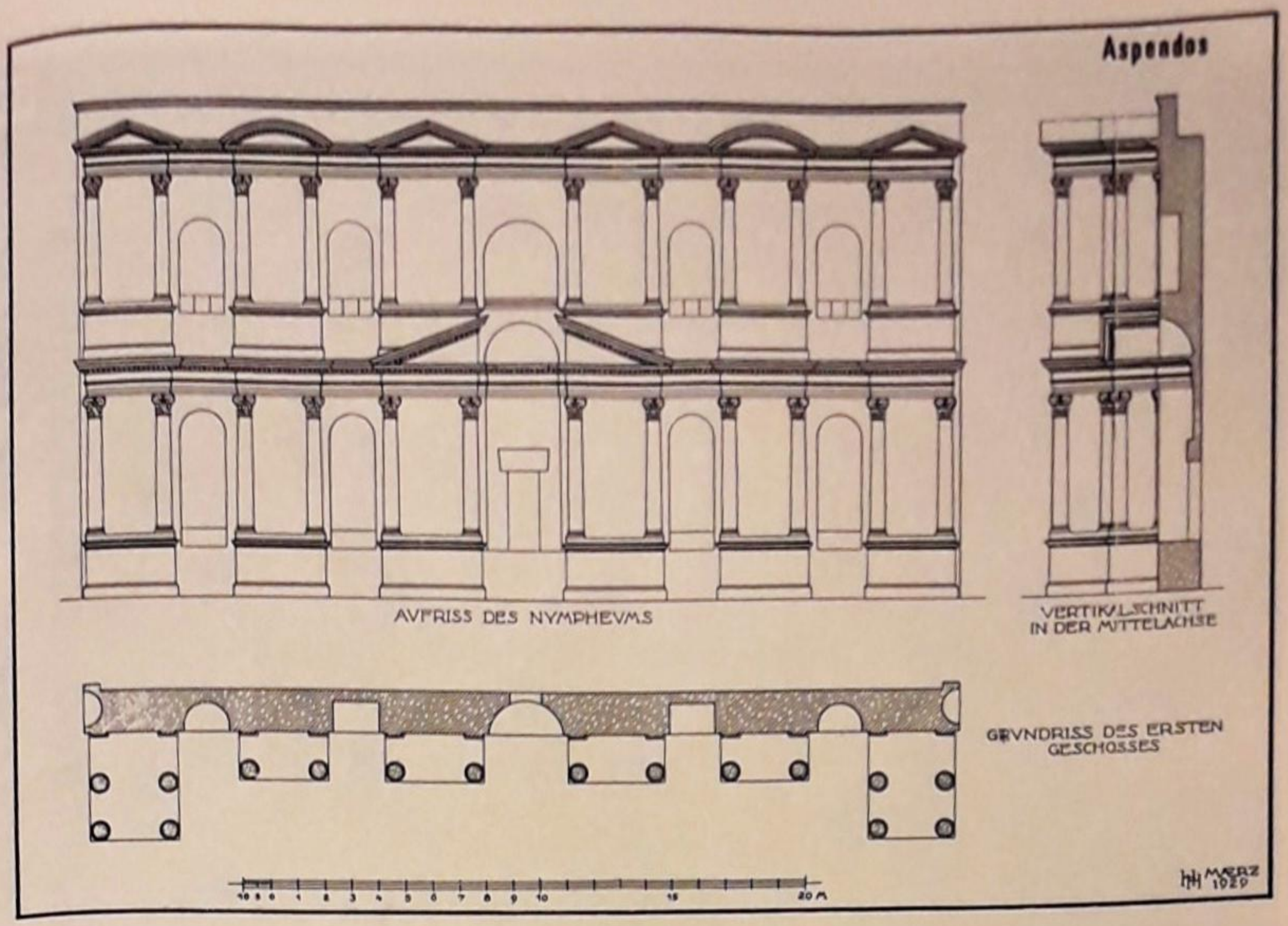


Fig. 33. Aspendos, the nymphaeon.

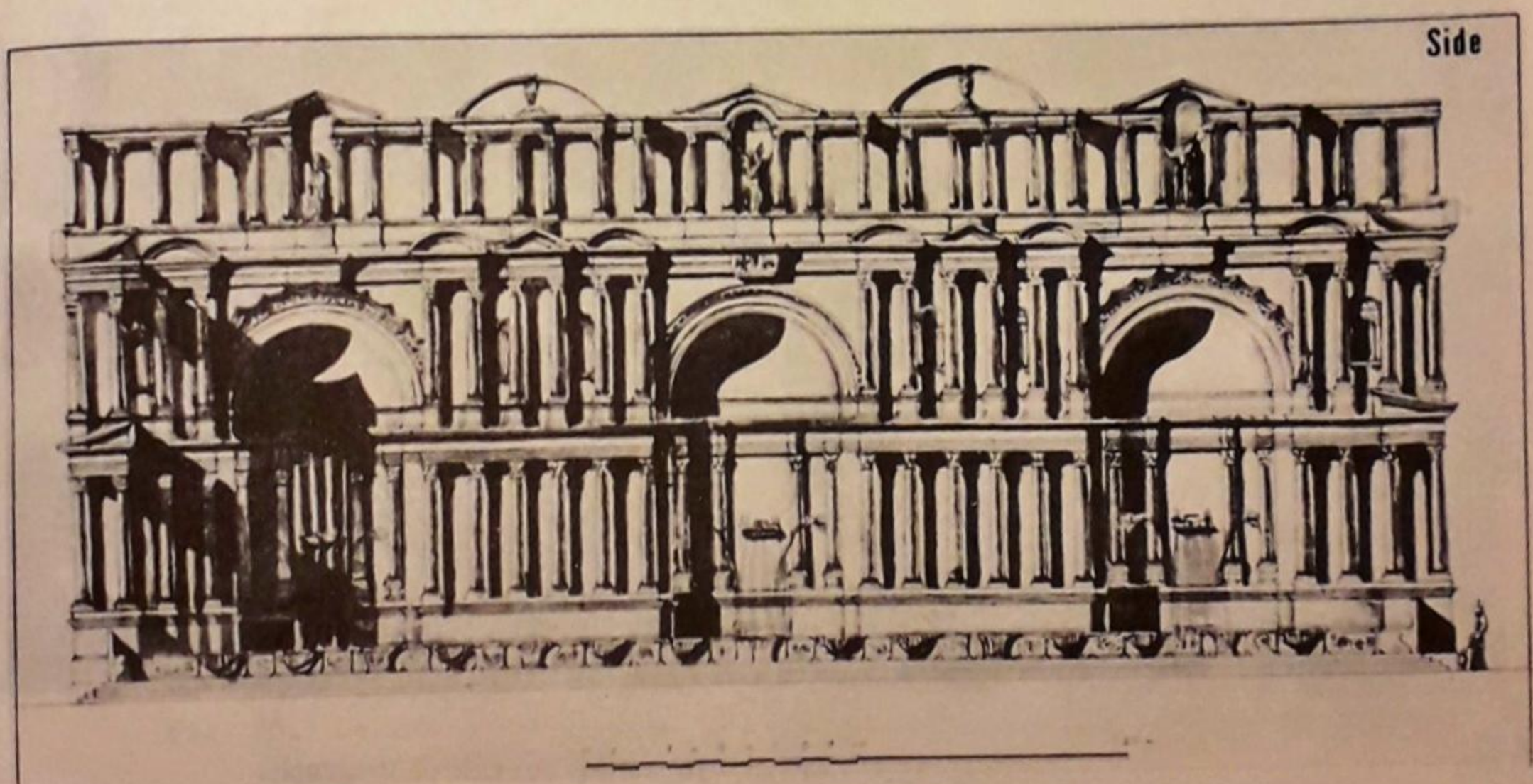


Fig. 34. Side, the nymphaeon.

Fig. 35. Gerasa (Jerash), aerial photograph.

Fig. 36. Gerasa (Jerash), the eastern part of the city, aerial photograph from early 30's.

Fig. 37. Gerasa (Jerash), the northern part of the city, aerial photograph from early 30's.

Fig. 38. Gerasa (Jerash), the north-west part of the city. Aerial photograph from early 30's.

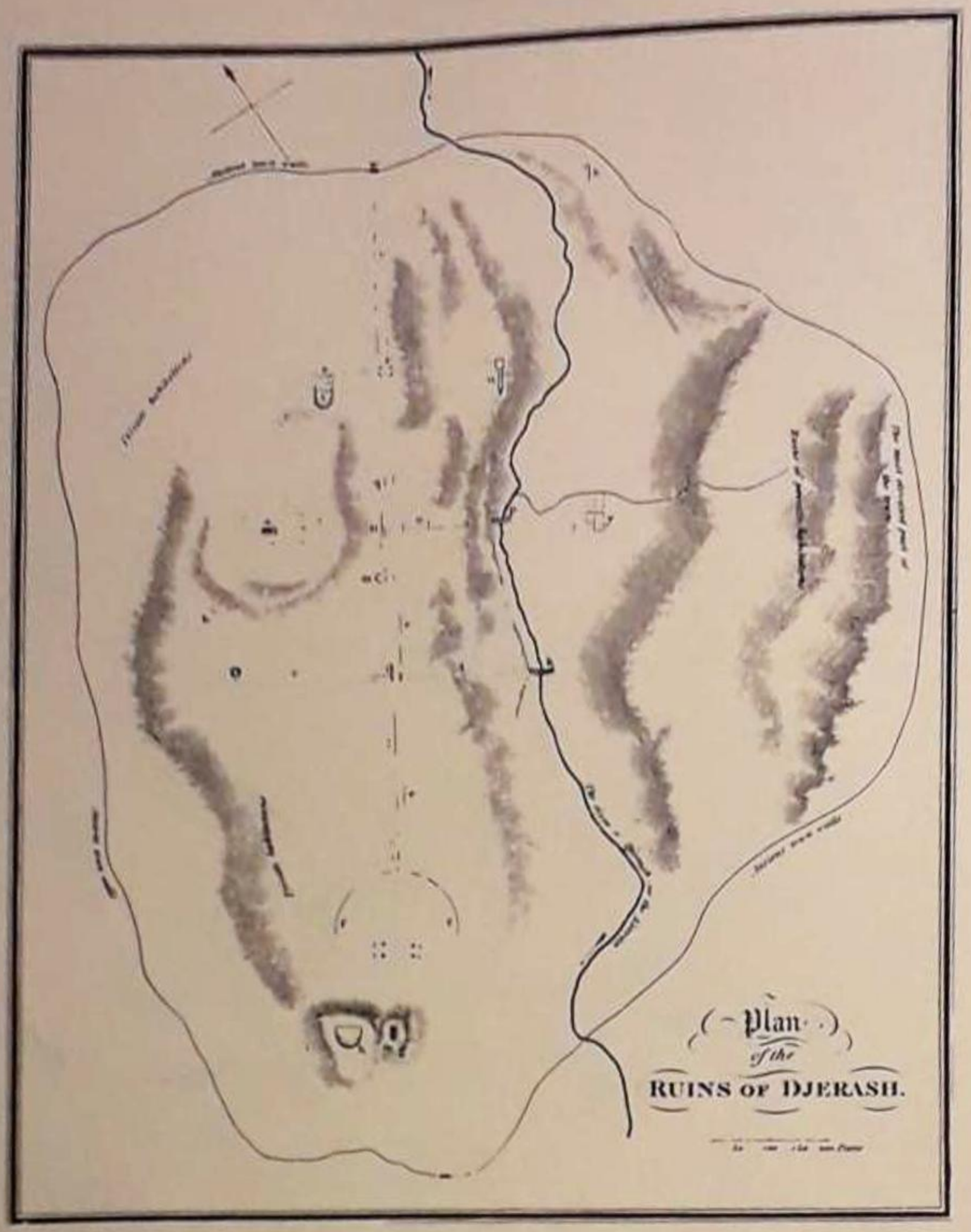


Fig. 39. Gerasa, city plan.

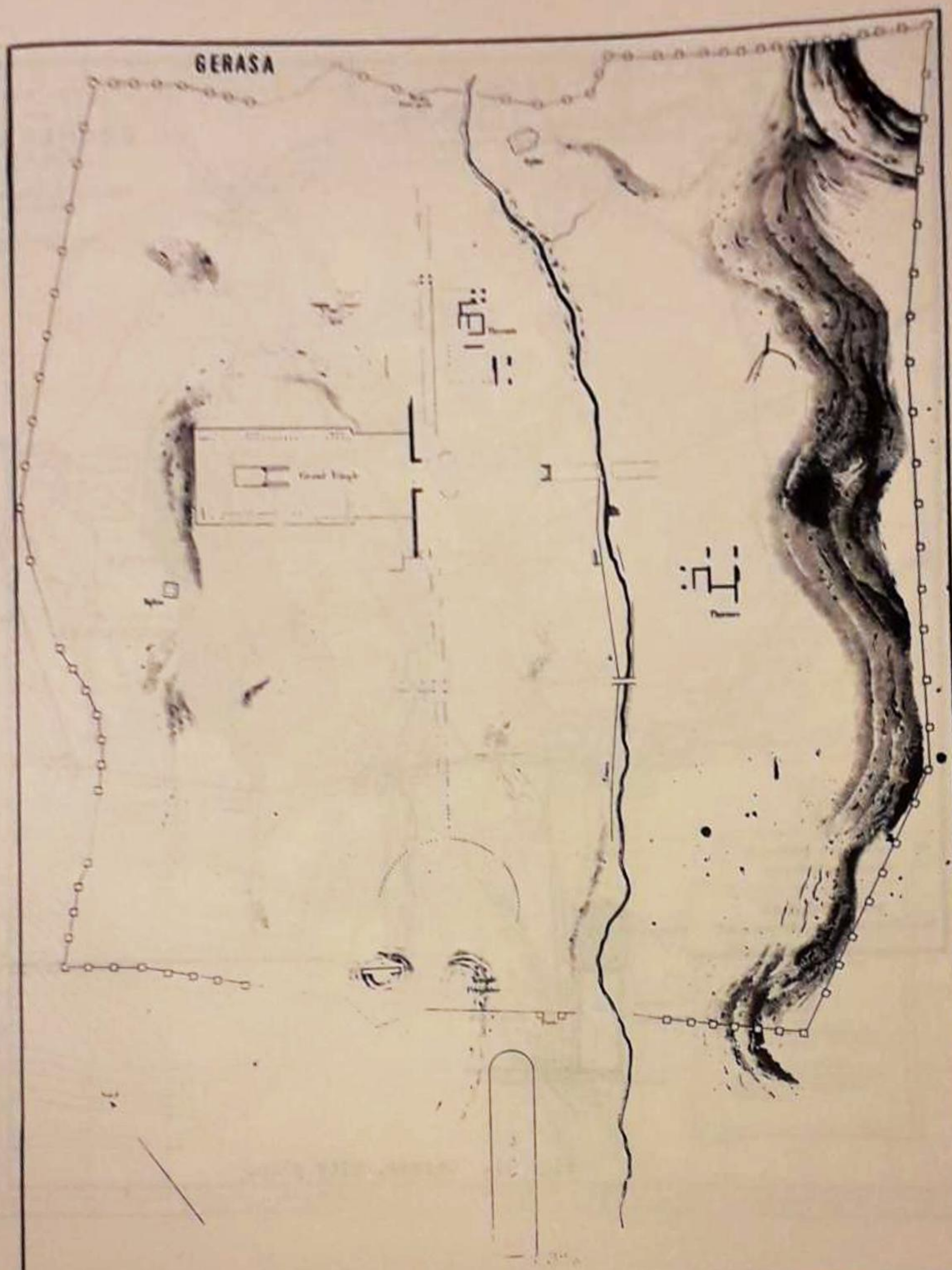


Fig. 40. Gerasa, city plan.

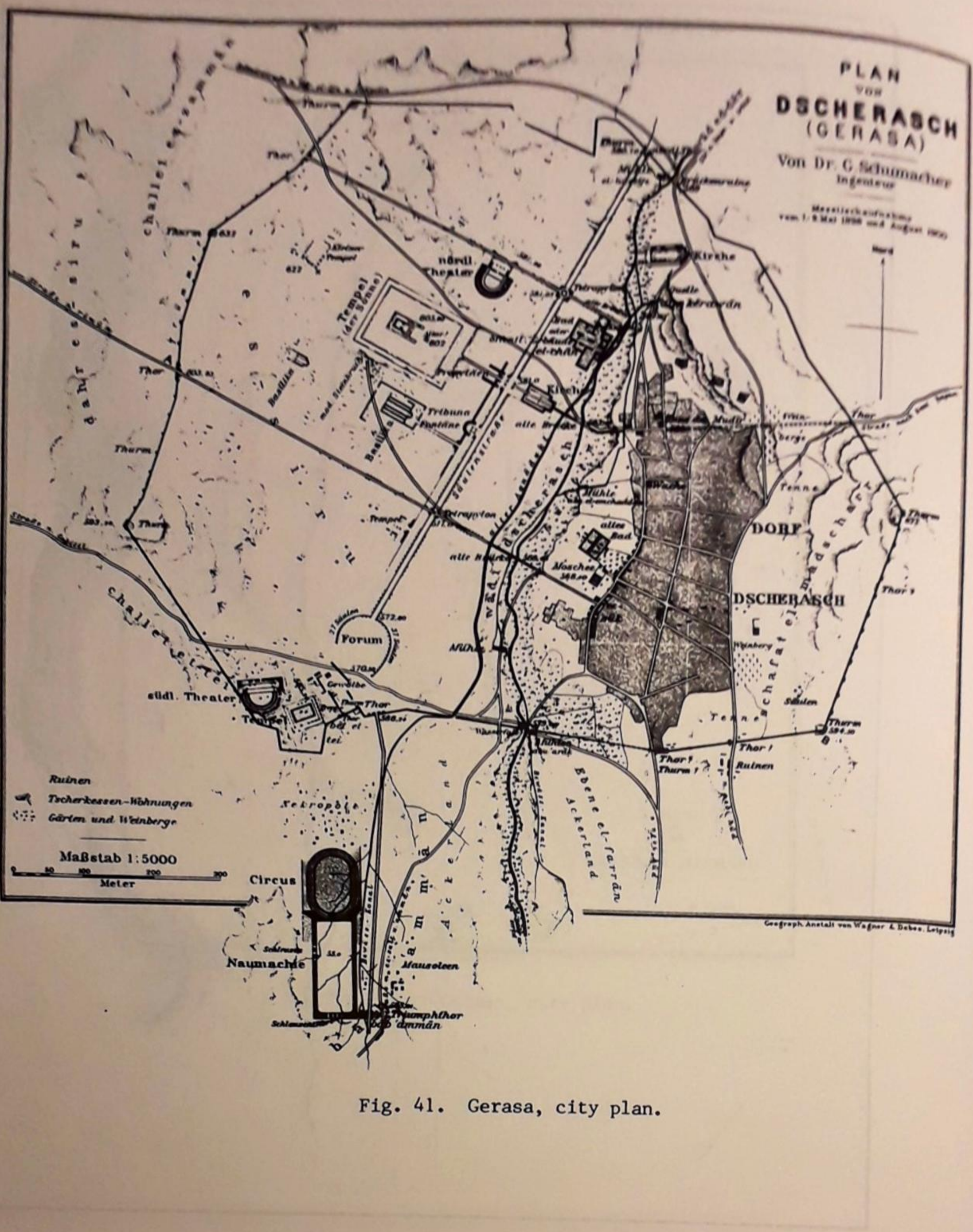


Fig. 41. Gerasa, city plan.

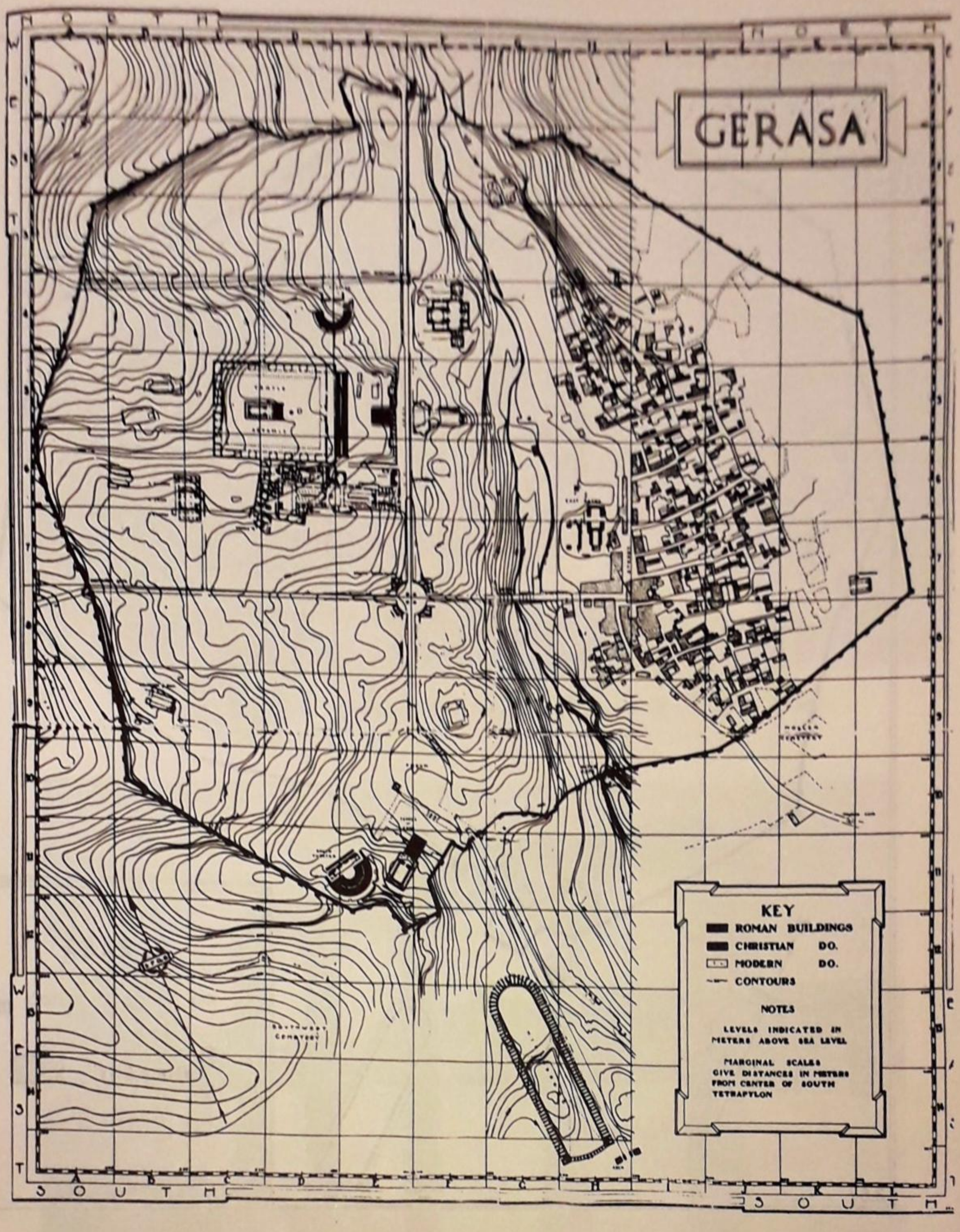


Fig. 42. Gerasa, city plan.

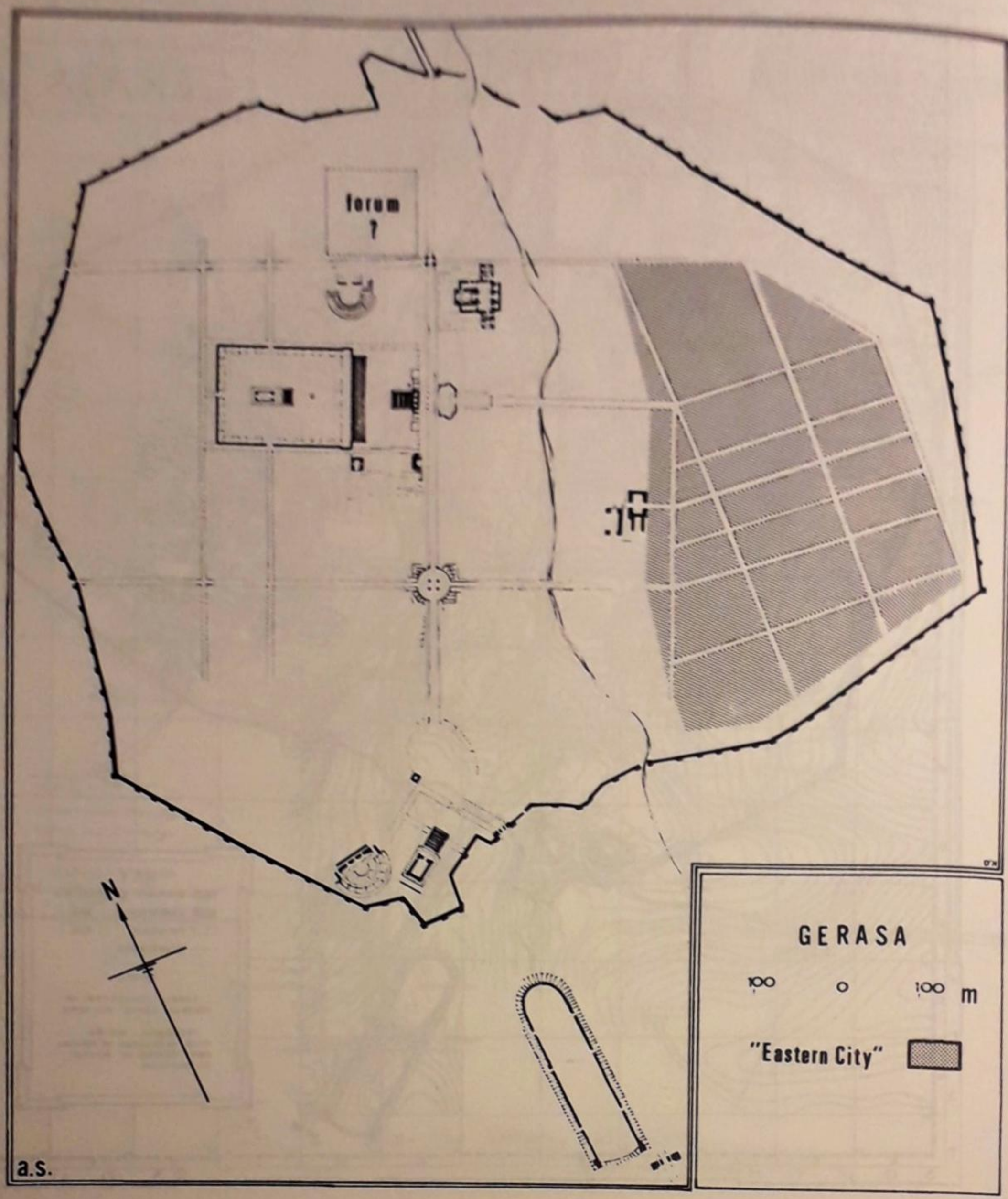


Fig. 43. Gerasa, city plan.

Fig. 44. Gerasa, the Temple of Zeus and the oval plaza.

Fig. 45. Gerasa, the oval plaza, view from the north.

Fig. 46. Gerasa, the Temple of Zeus, view from the south-east.

Fig. 47. Gerasa, the Temple of Zeus.

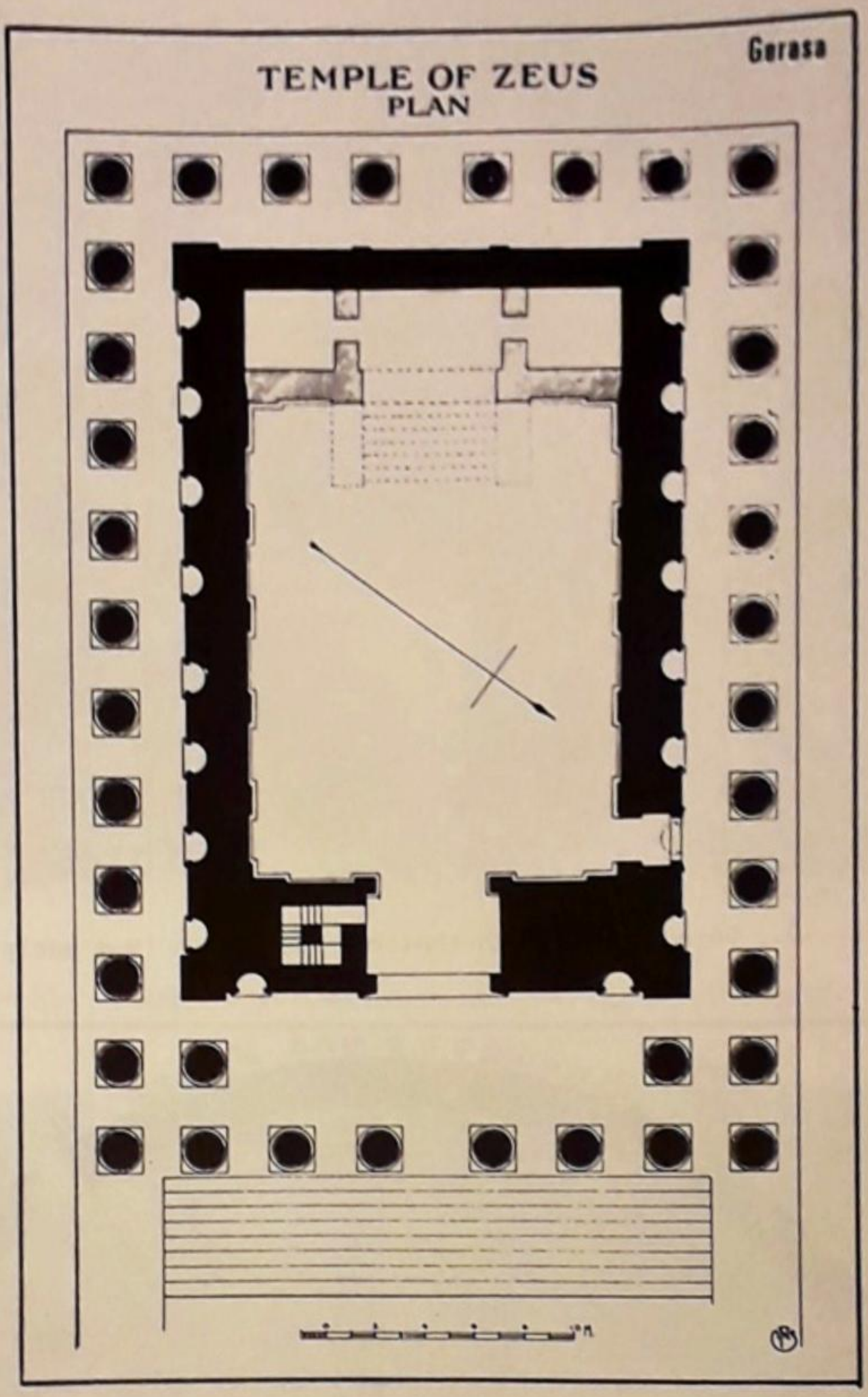


Fig. 48. Gerasa, the Temple of Zeus.

Fig. 49. Gerasa, the south theatre, photograph from early 30's.

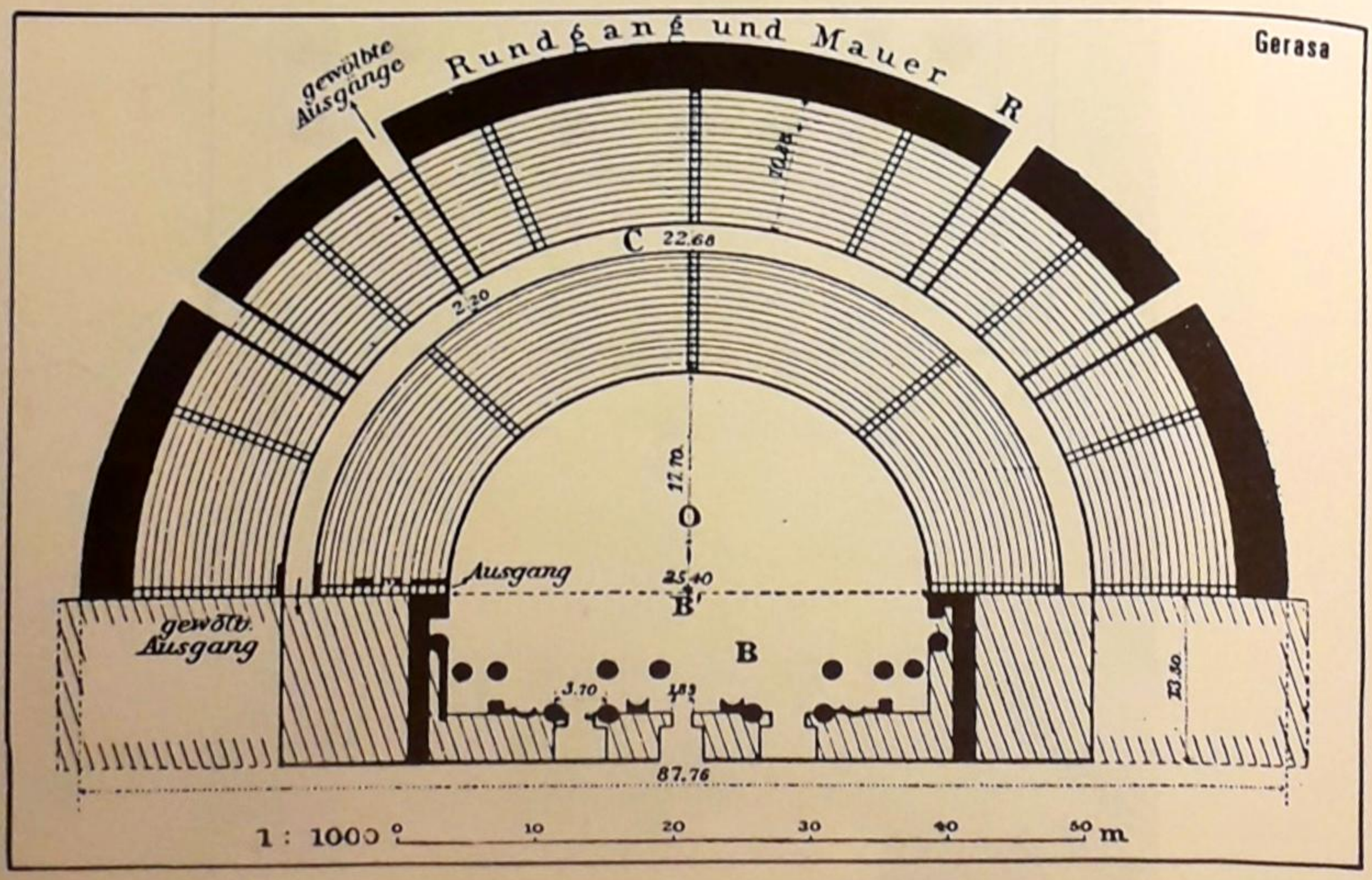


Fig. 50. Gerasa, the south theatre.

Fig. 51. Gerasa, the south theatre, photograph from early 70's.

Fig. 52. Gerasa, the nymphaeon, view from the east.

Fig. 53. Gerasa, section of the main north-south street and the nymphaeon, view from the north-east.

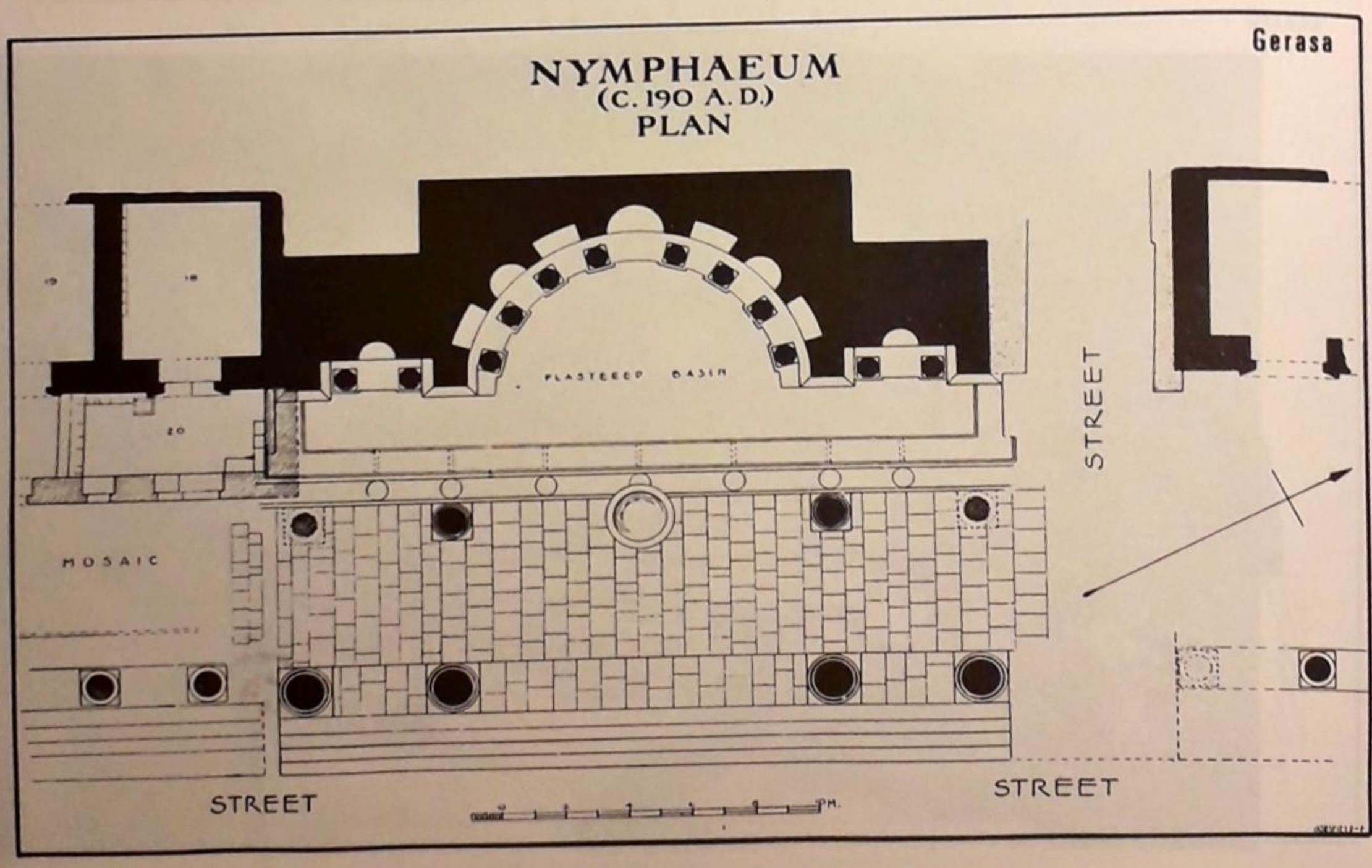


Fig. 54. Gerasa, the nymphaeon.

Fig. 55. Gerasa, the nymphaeon, fragment of the upper part of the central niche.

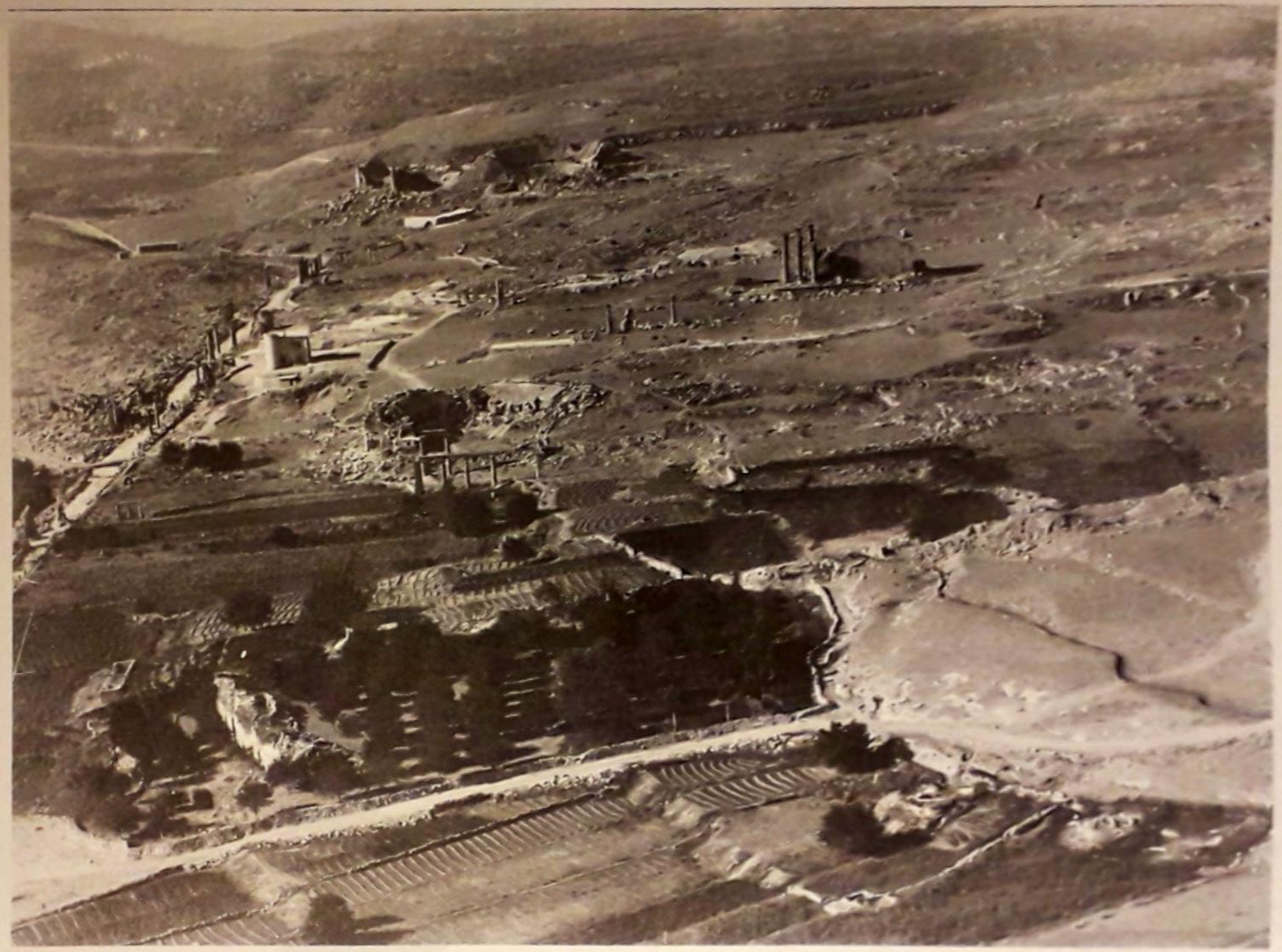


Fig. 56. Gerasa, the north-west part of the city, view from the north, both north and south theatres are clearly visible.

Fig. 57. Gerasa, section of the portico that surrounded the plaza in front of the north theatre.

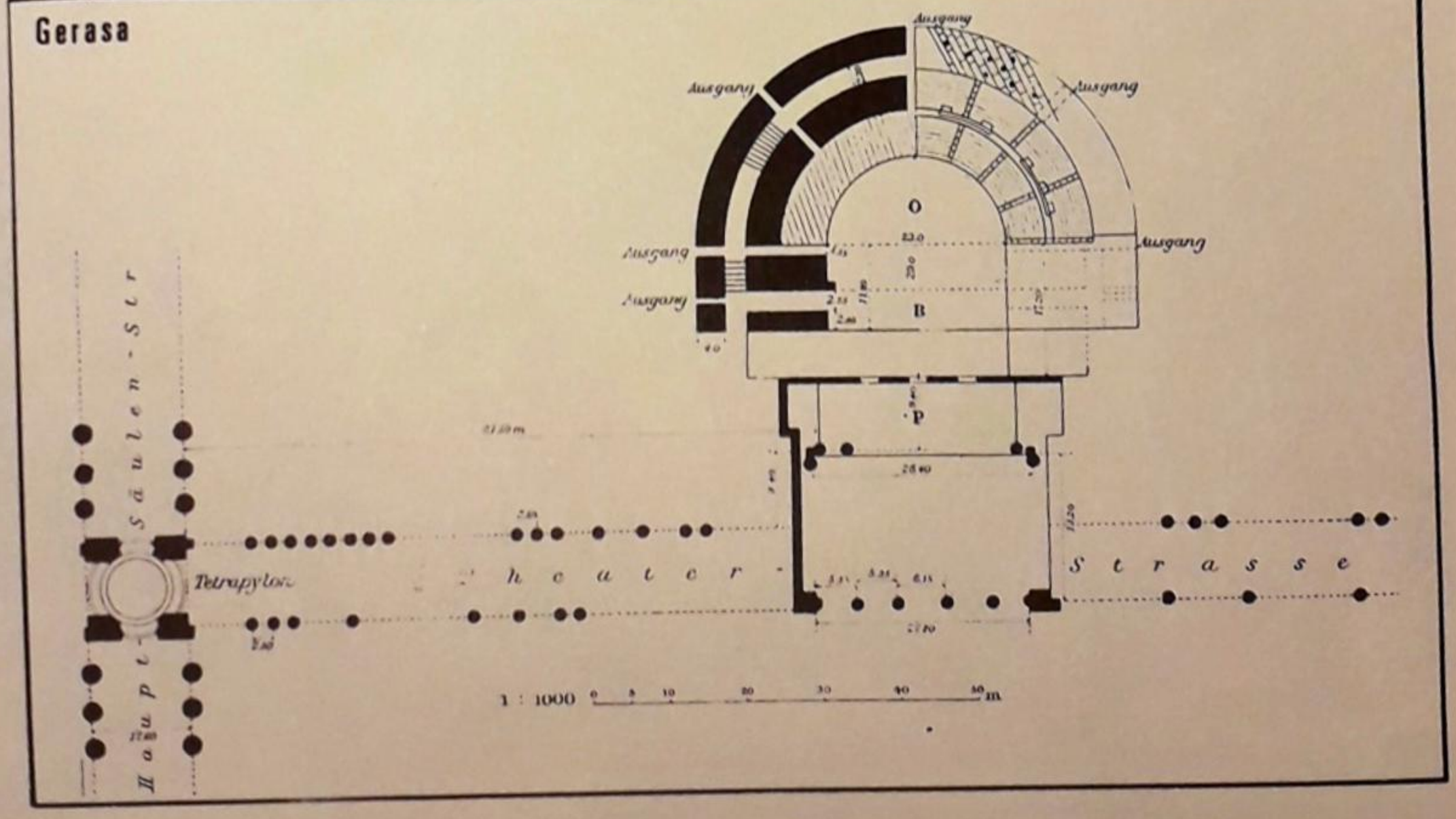


Fig. 58. Gerasa, the north theatre and its plaza.

Fig. 59. Gerasa, the north tetrapylon.

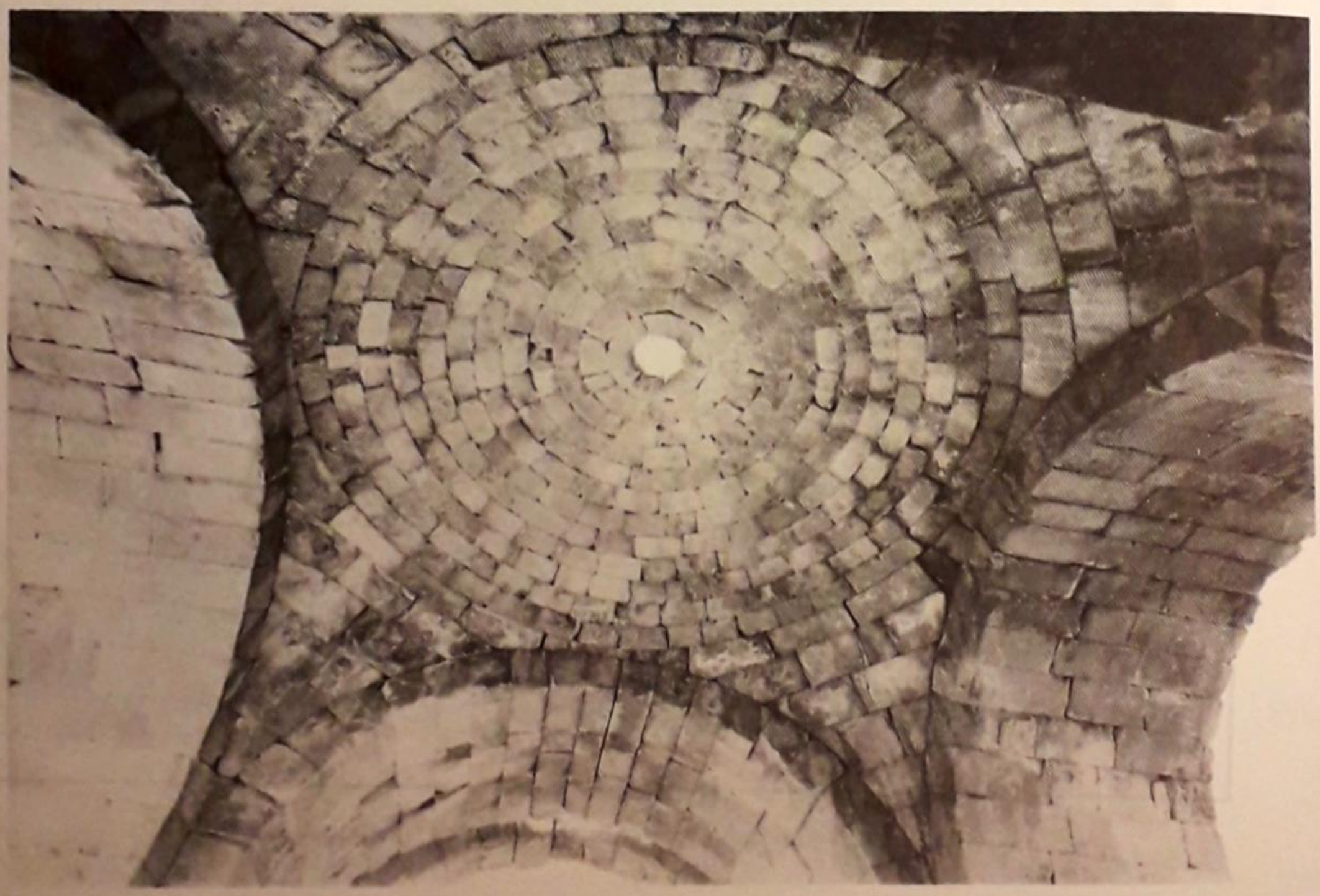


Fig. 60. Gerasa, the dome in the West Bath.

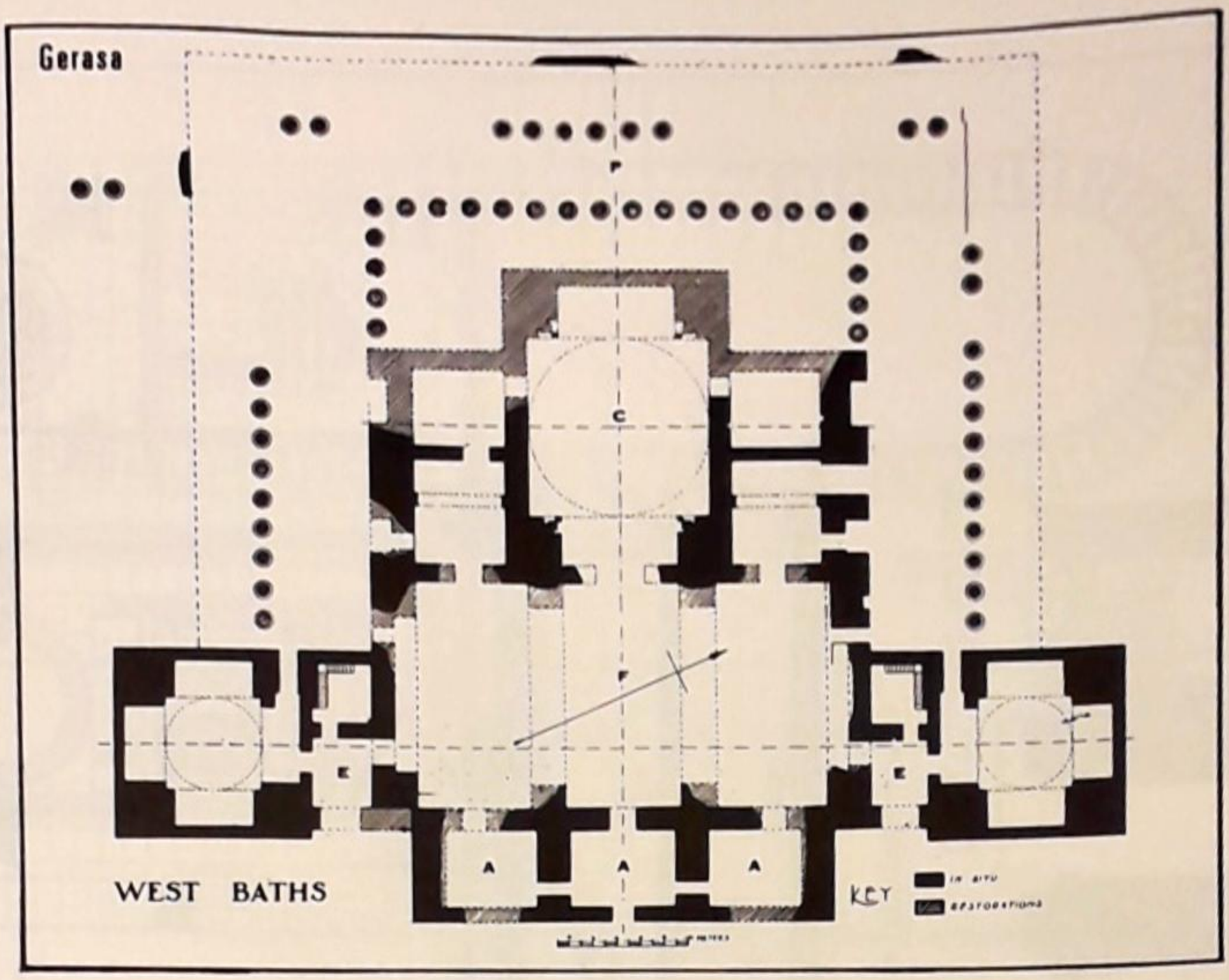


Fig. 61. Gerasa, the West Bath.

Fig. 62. Gerasa, the Triumphal Arch, view from south.

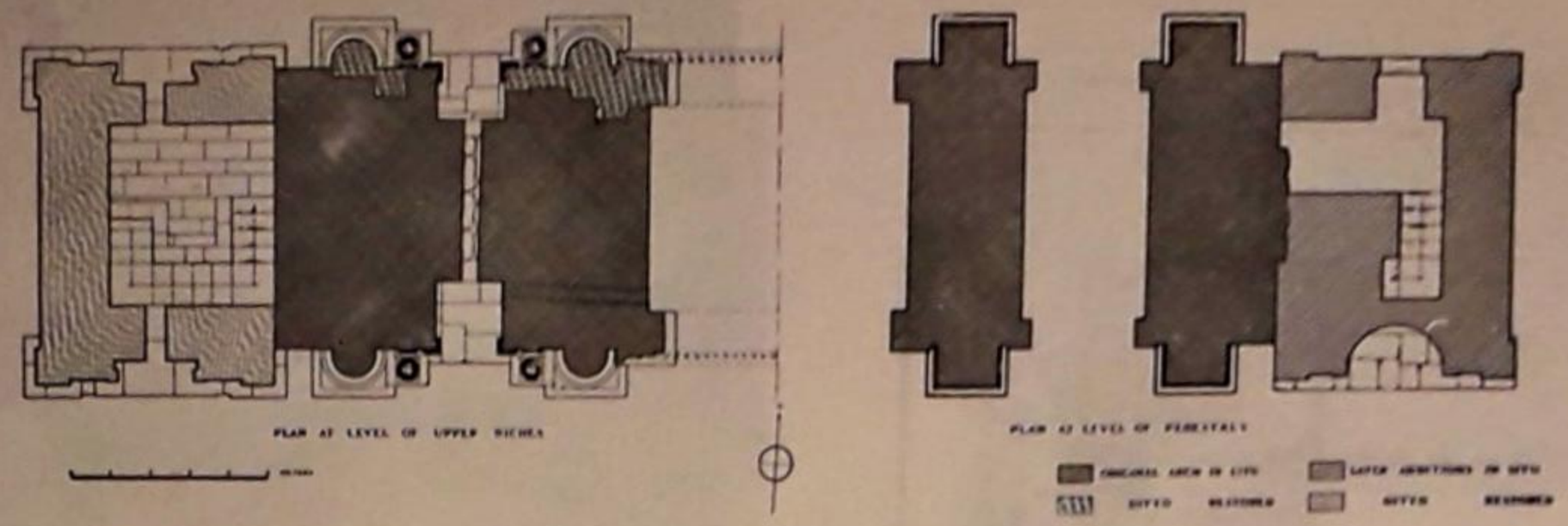


Fig. 63. Gerasa, the Triumphal Arch.

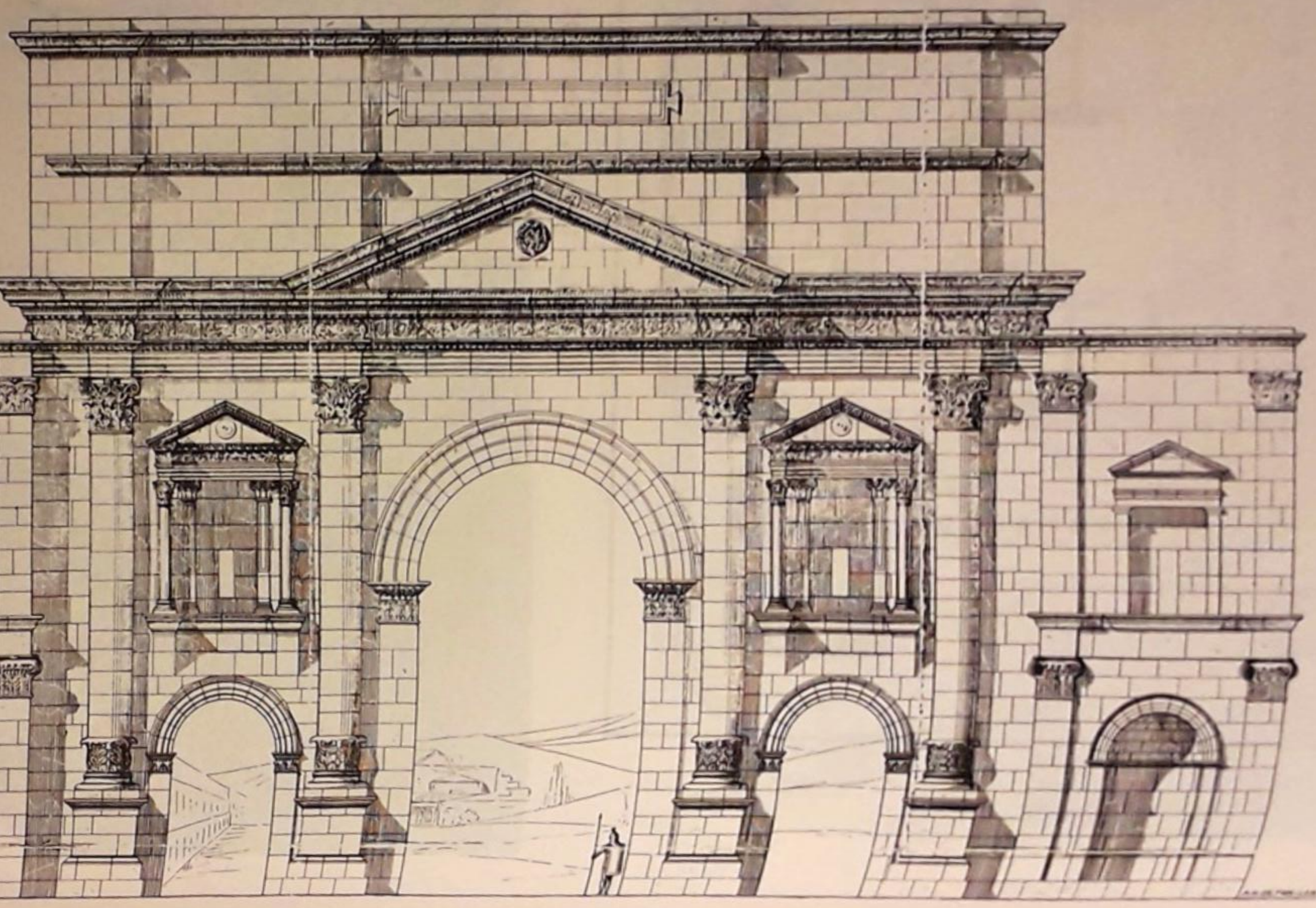


Fig. 64. Gerasa, the Triumphal Arch, proposed reconstruction.

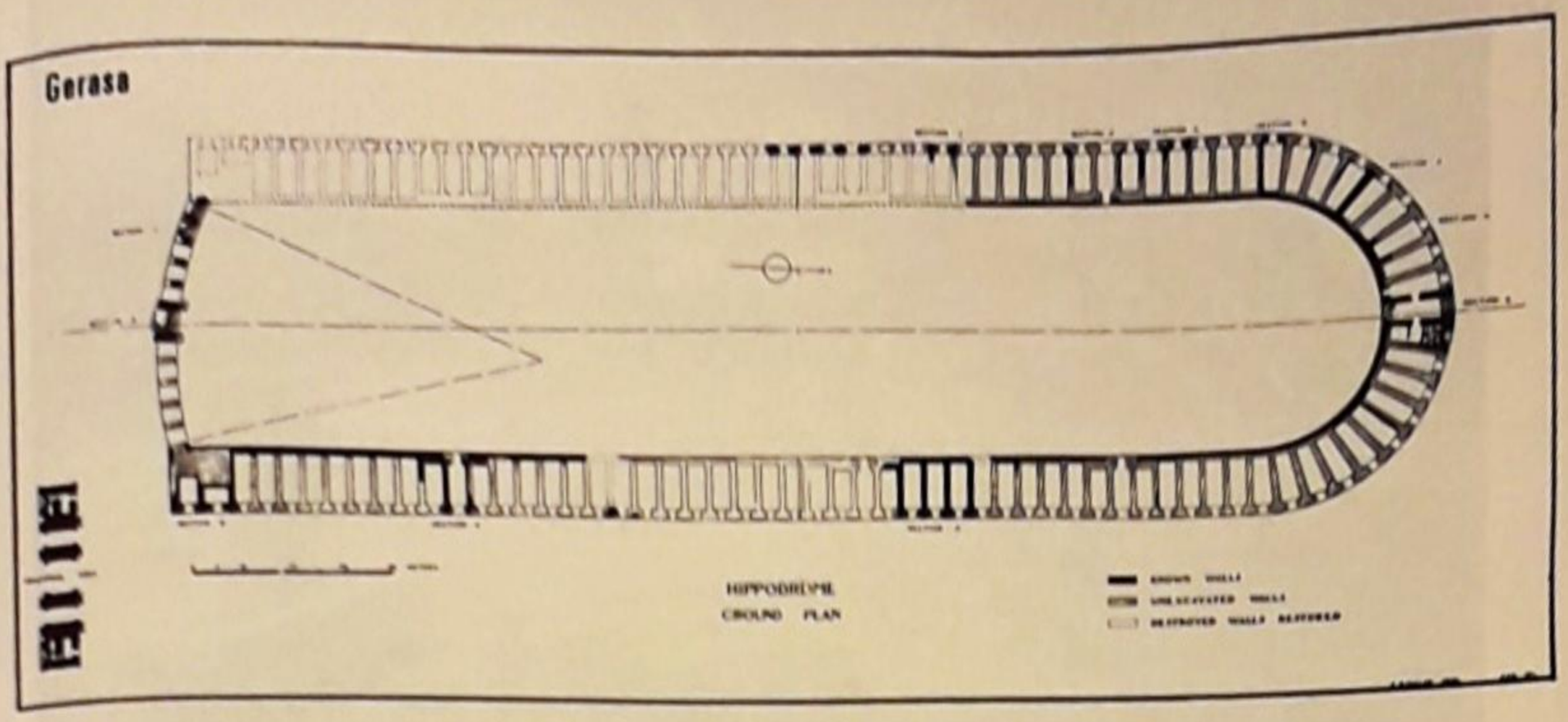


Fig. 65. Gerasa, the hippodrome.

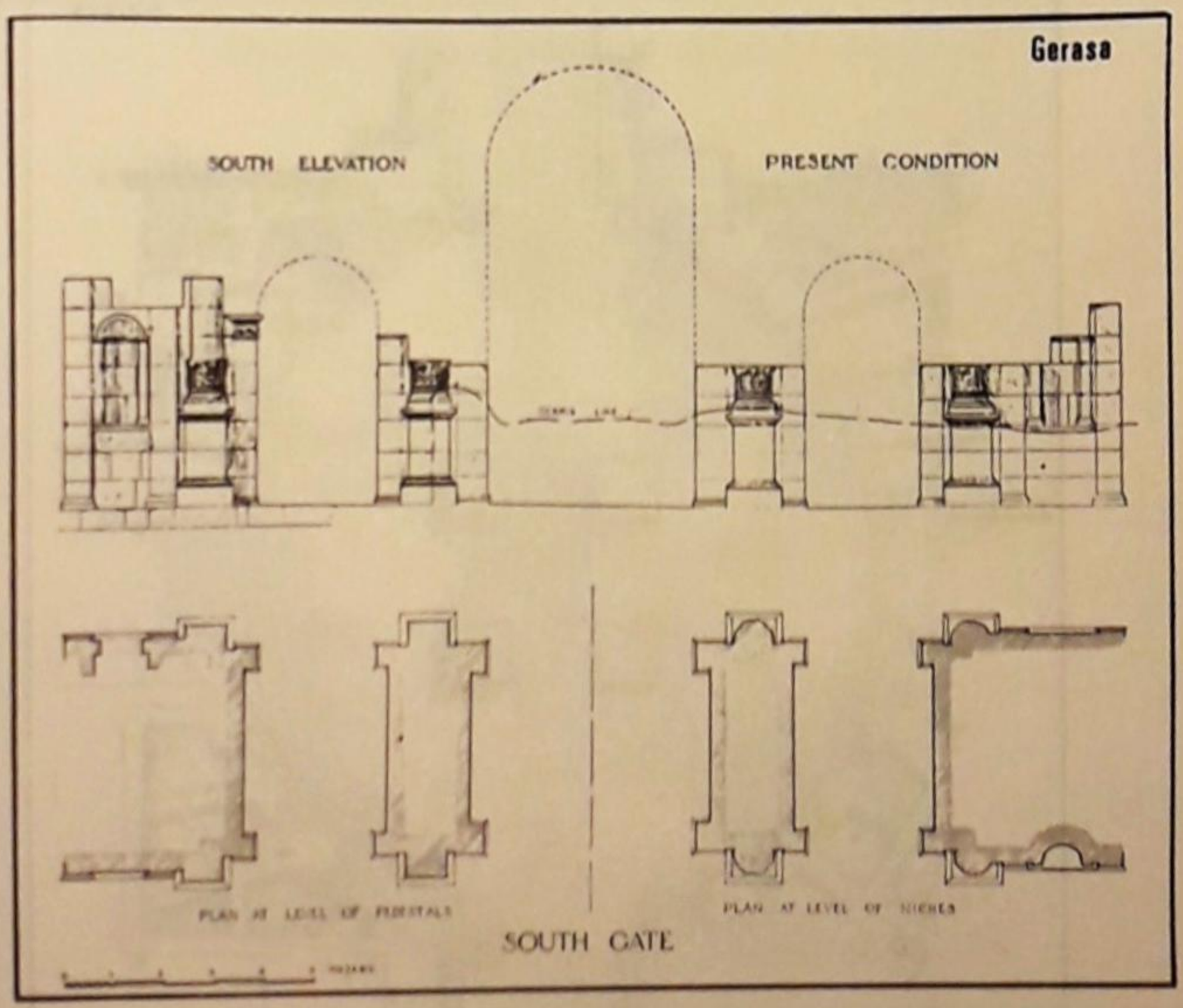


Fig. 66. Gerasa, the south gate.

Fig. 67. Gerasa, the circular plaza and the south tetrapylon.

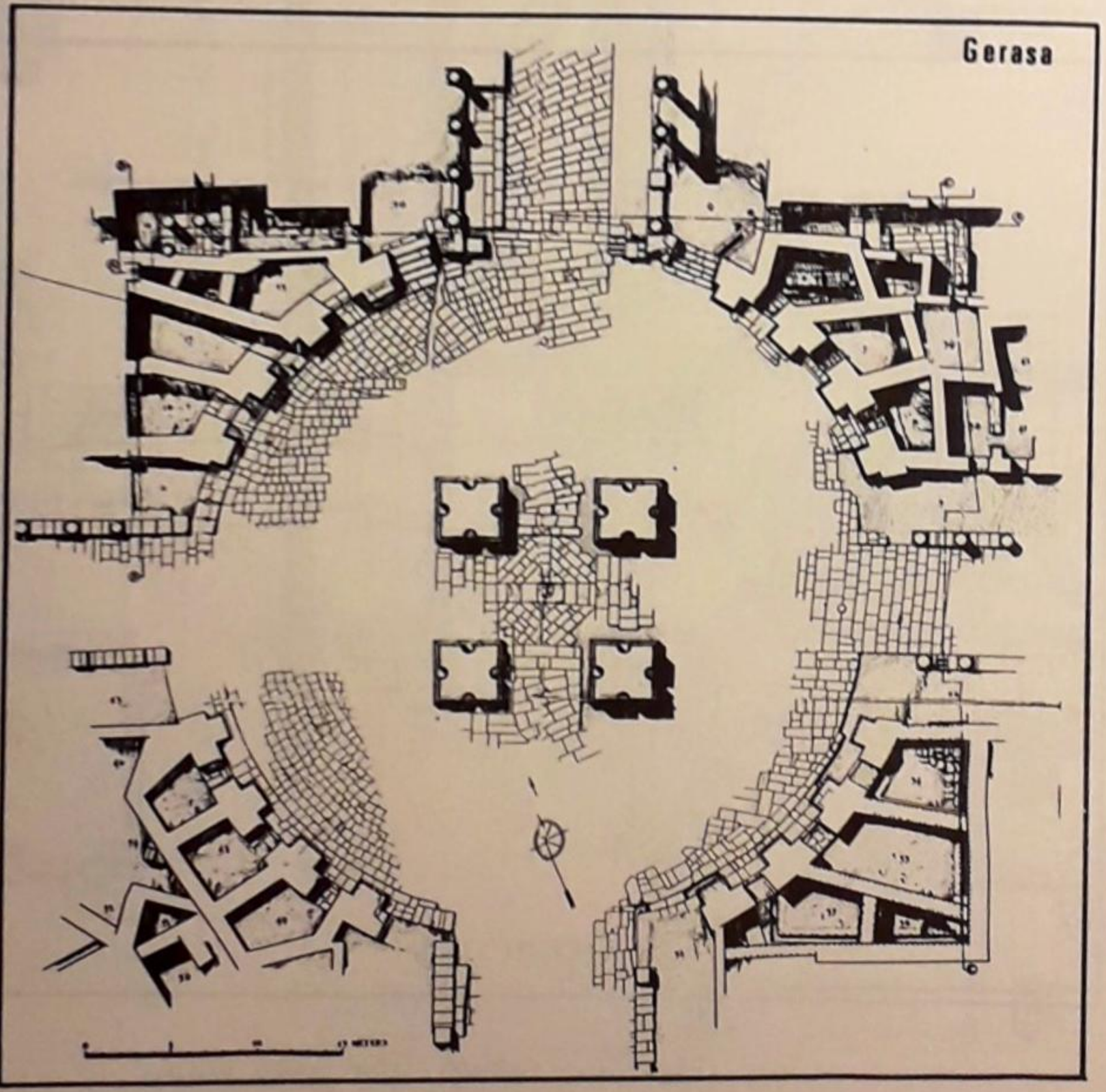


Fig. 68. Gerasa, the circular plaza and the south tetrapylon.

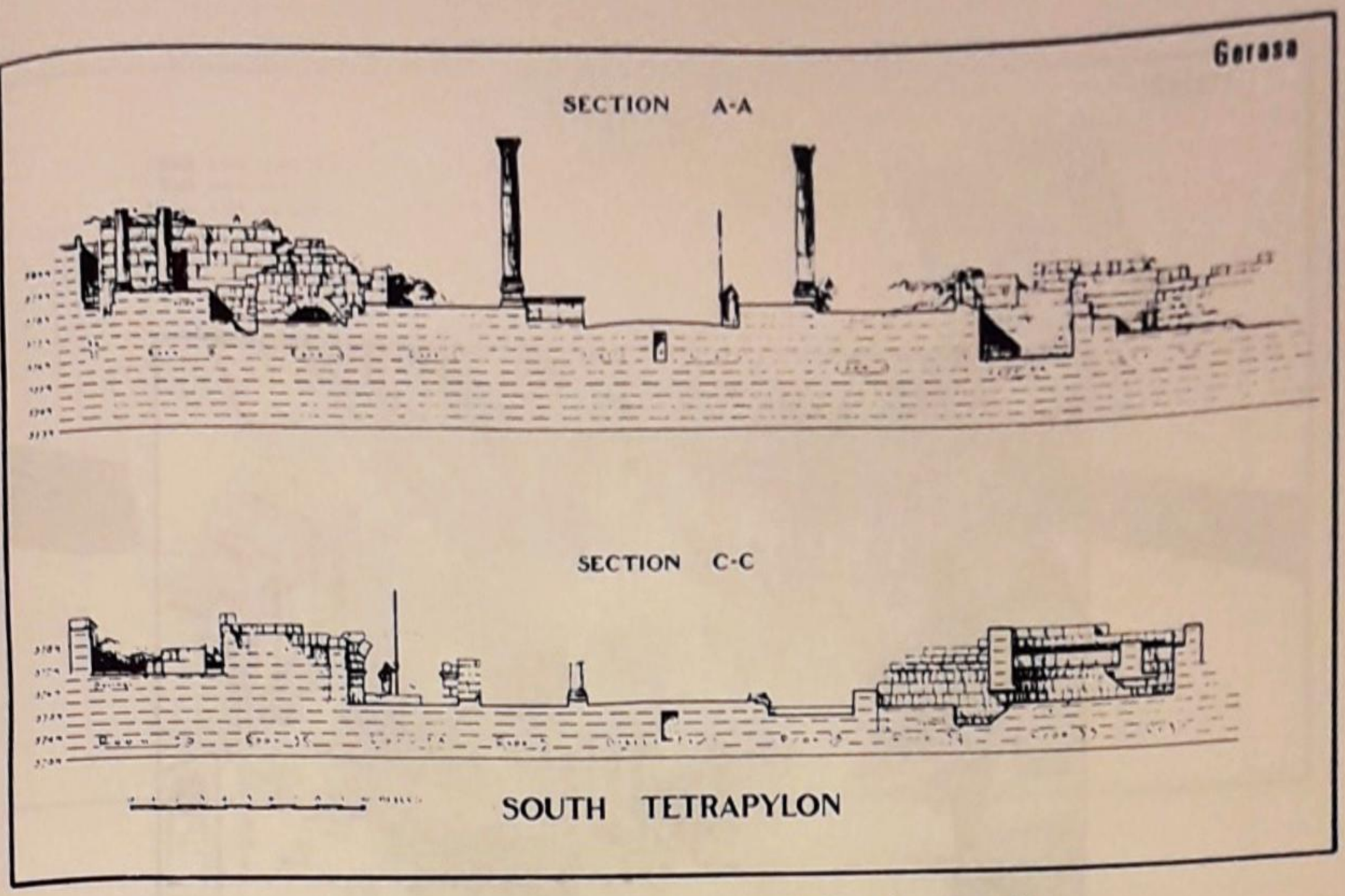


Fig. 69. Gerasa, the south tetrapylon (sections).

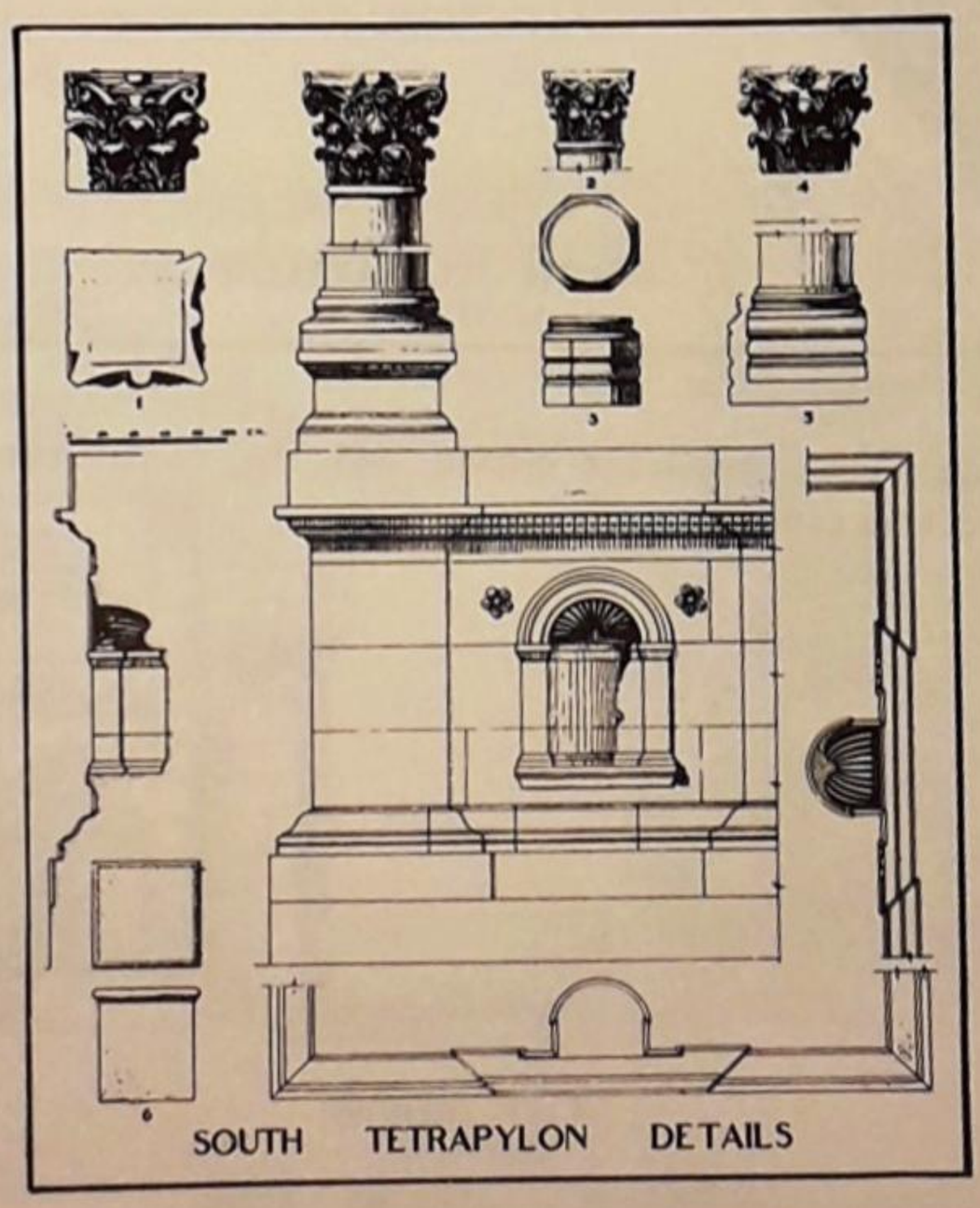


Fig. 70. Gerasa, the south tetrapylon (architectural details).

Fig. 71. Gerasa, the cirucular plaza and the south tetrapylon, proposed reconstruction.

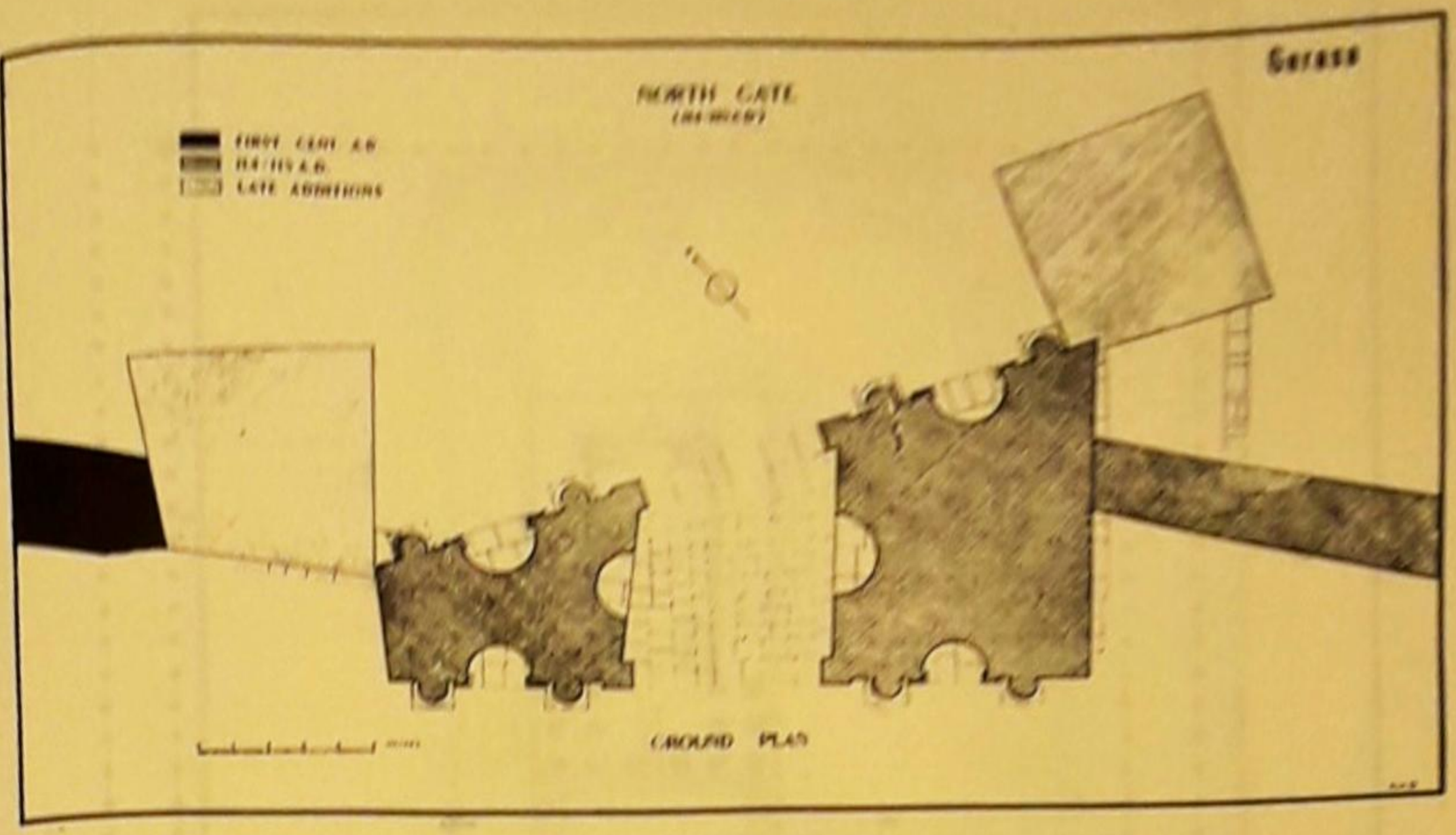


Fig. 72. Gerasa, the north gate.

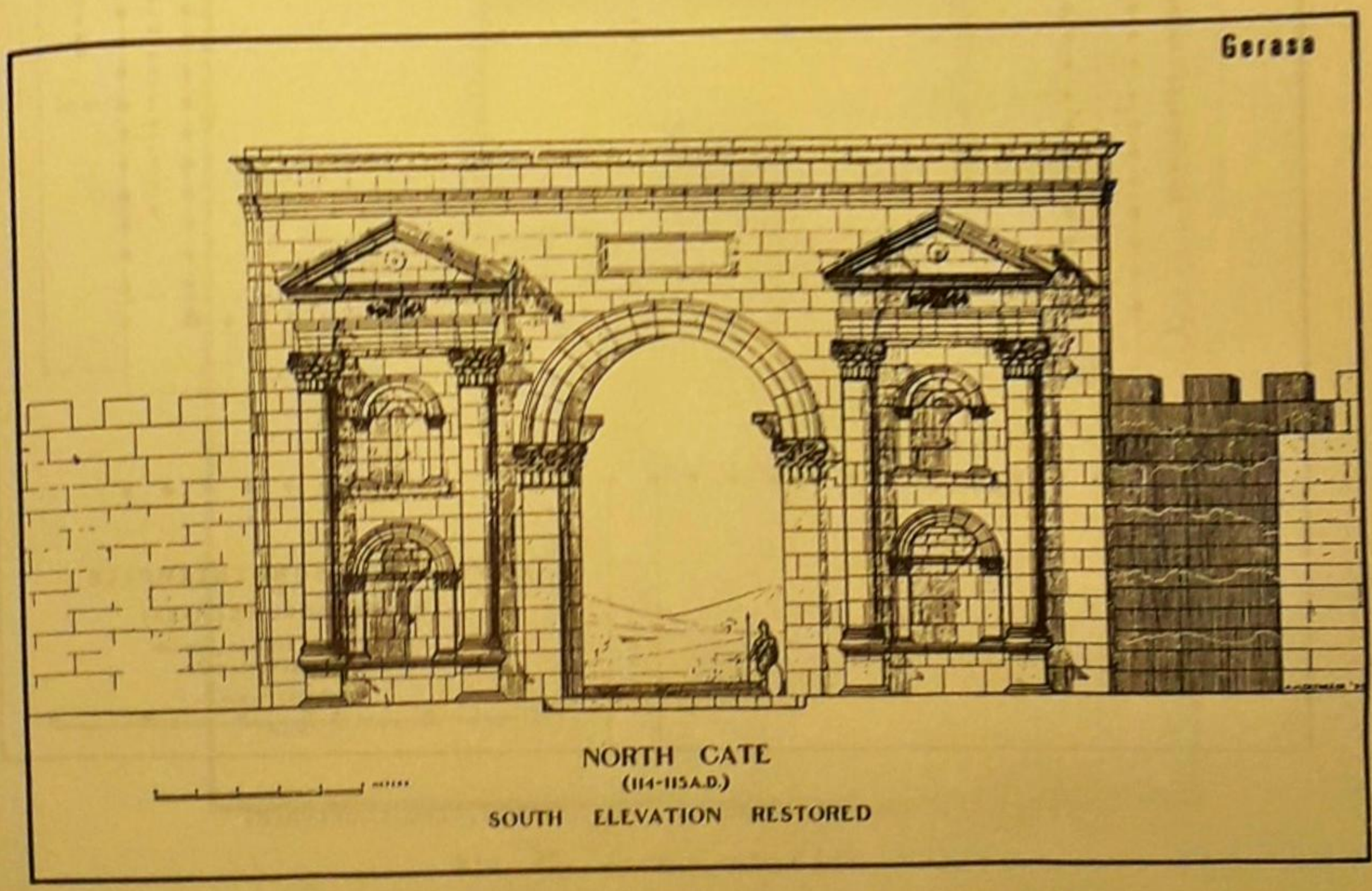


Fig. 73. Gerasa, the north gate, proposed reconstruction.

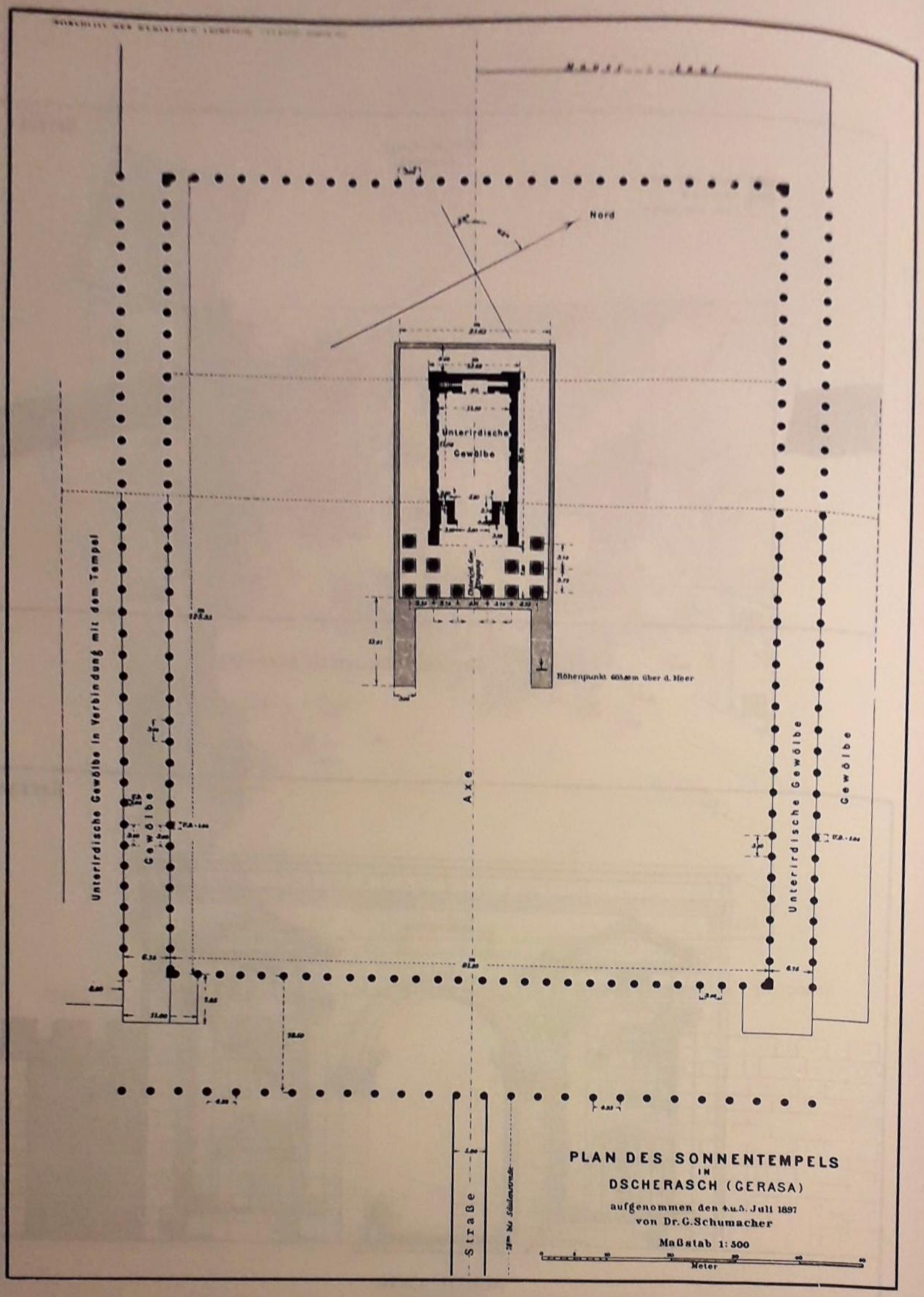


Fig. 74. Gerasa, Sanctuary of Artemis, the courtyard.

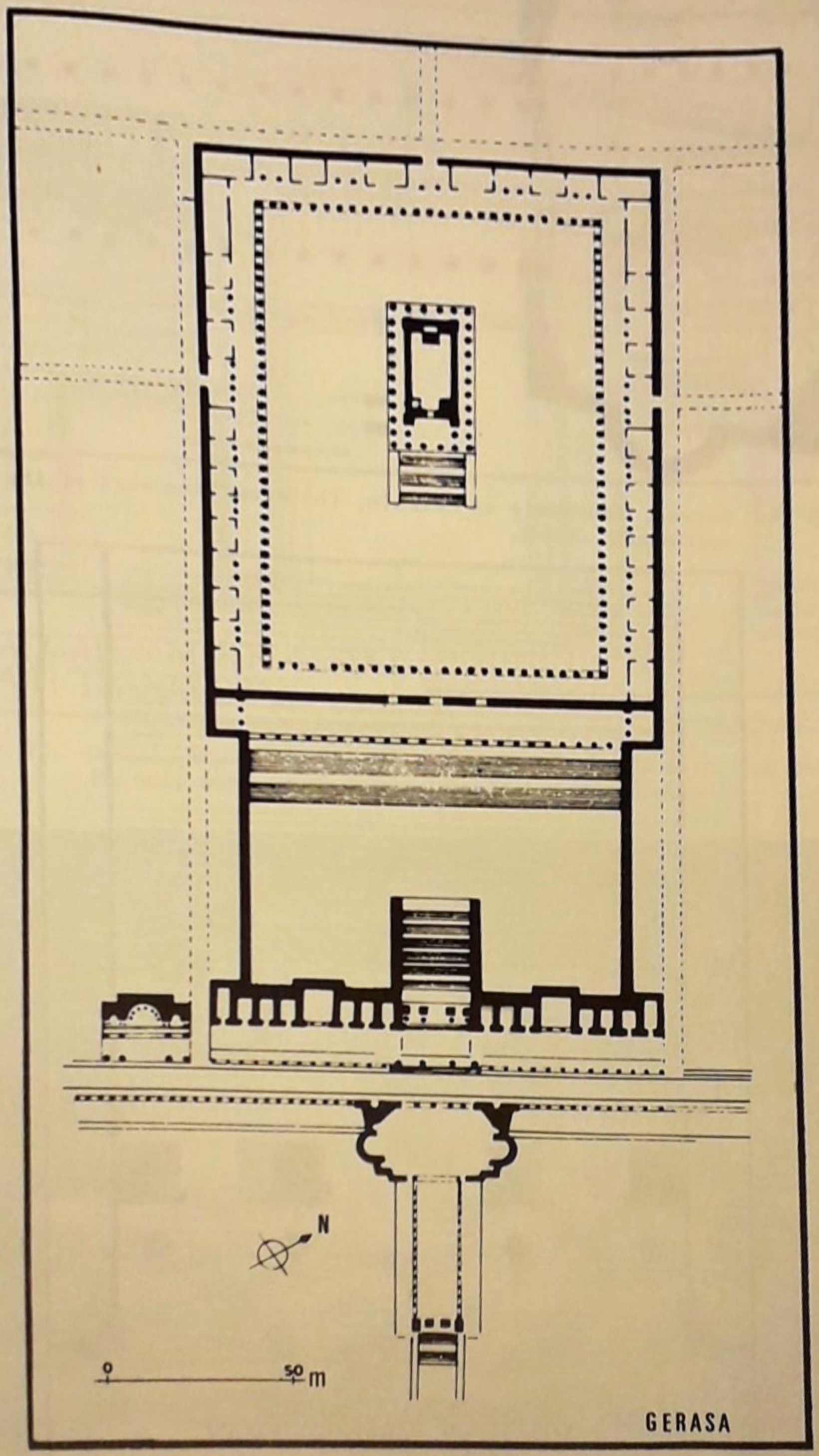


Fig. 75. Gerasa, Sanctuary of Artemis.

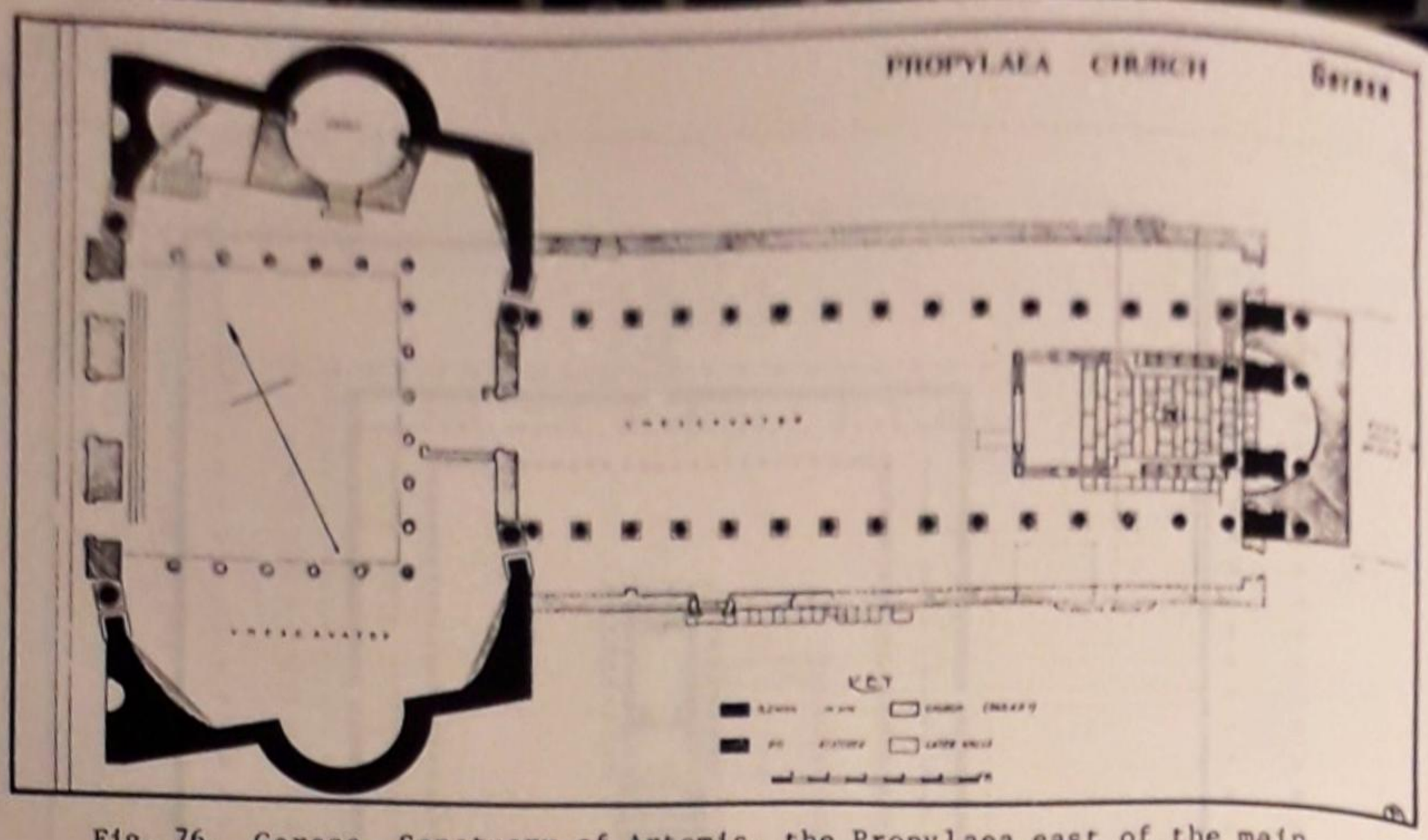


Fig. 76. Gerasa, Sanctuary of Artemis, the Propylaea east of the main north-south street.

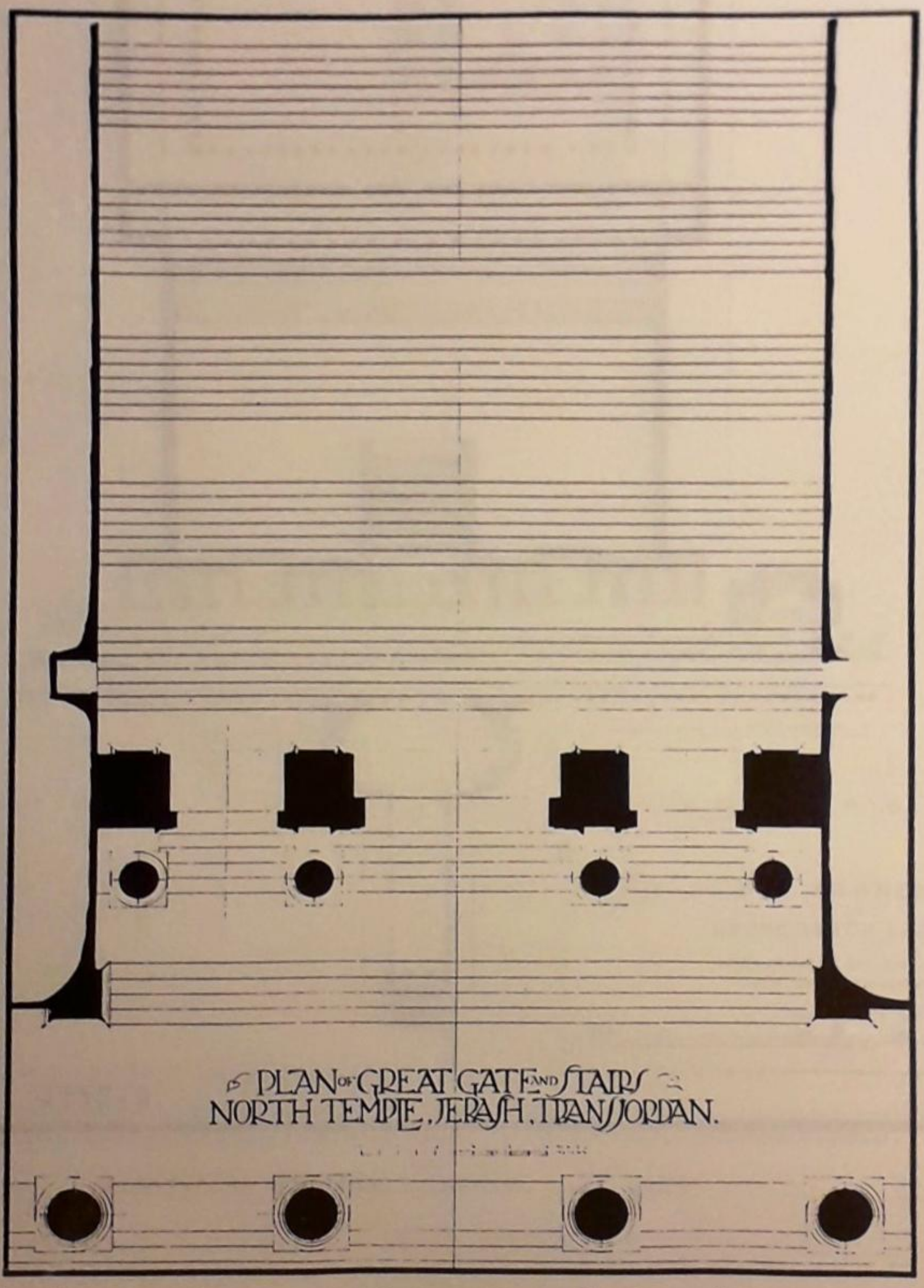


Fig. 77. Gerasa, Sanctuary of Artemis, the Propylaea west of the main north-south street.

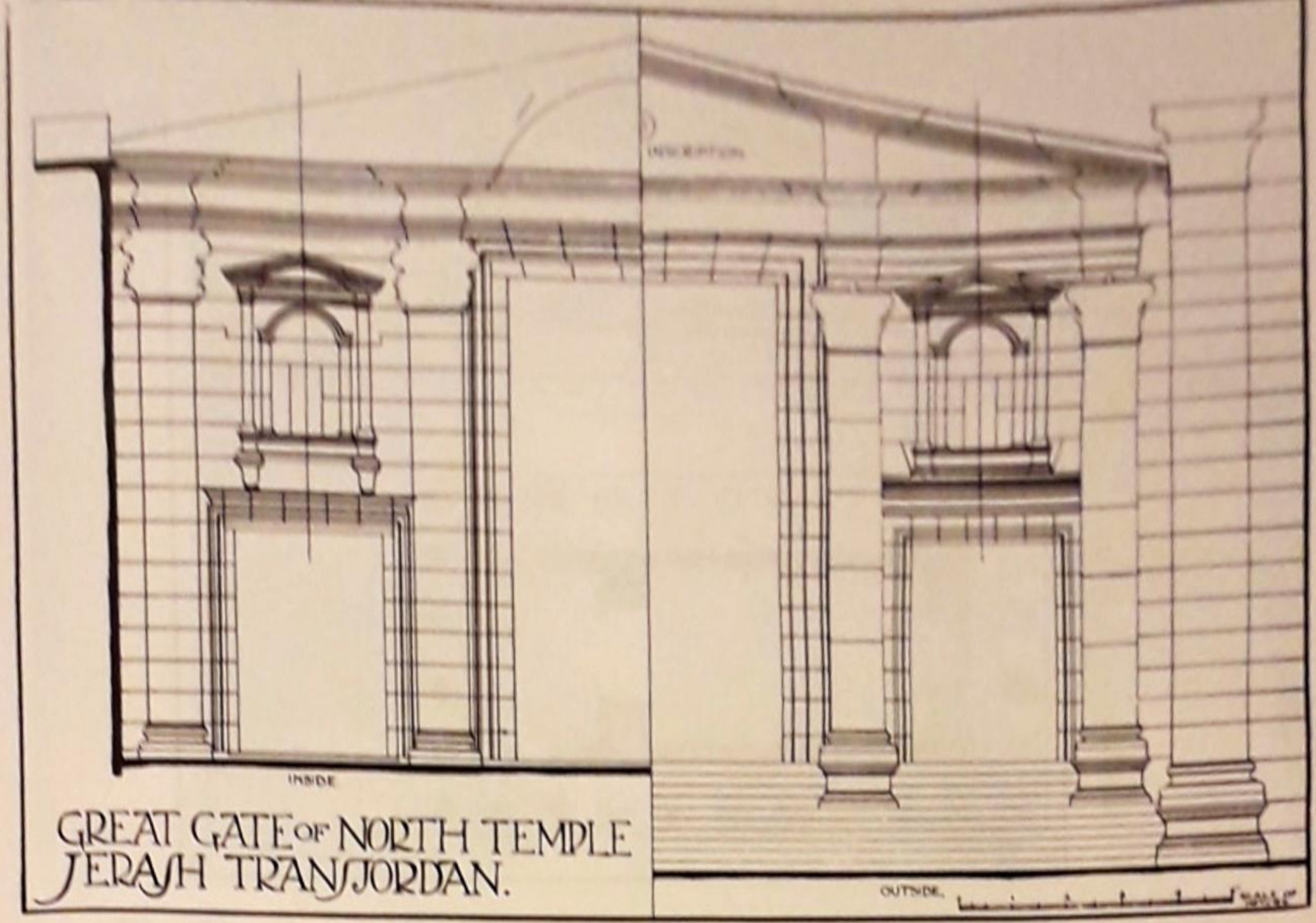


Fig. 78. Gerasa, Sanctuary of Artemis, the facade of the Propylaea west of the main north-south street, proposed reconstruction.

Fig. 79. Gerasa, Sanctuary of Artemis, the Propylaea west of the main north-south street, view from the east.

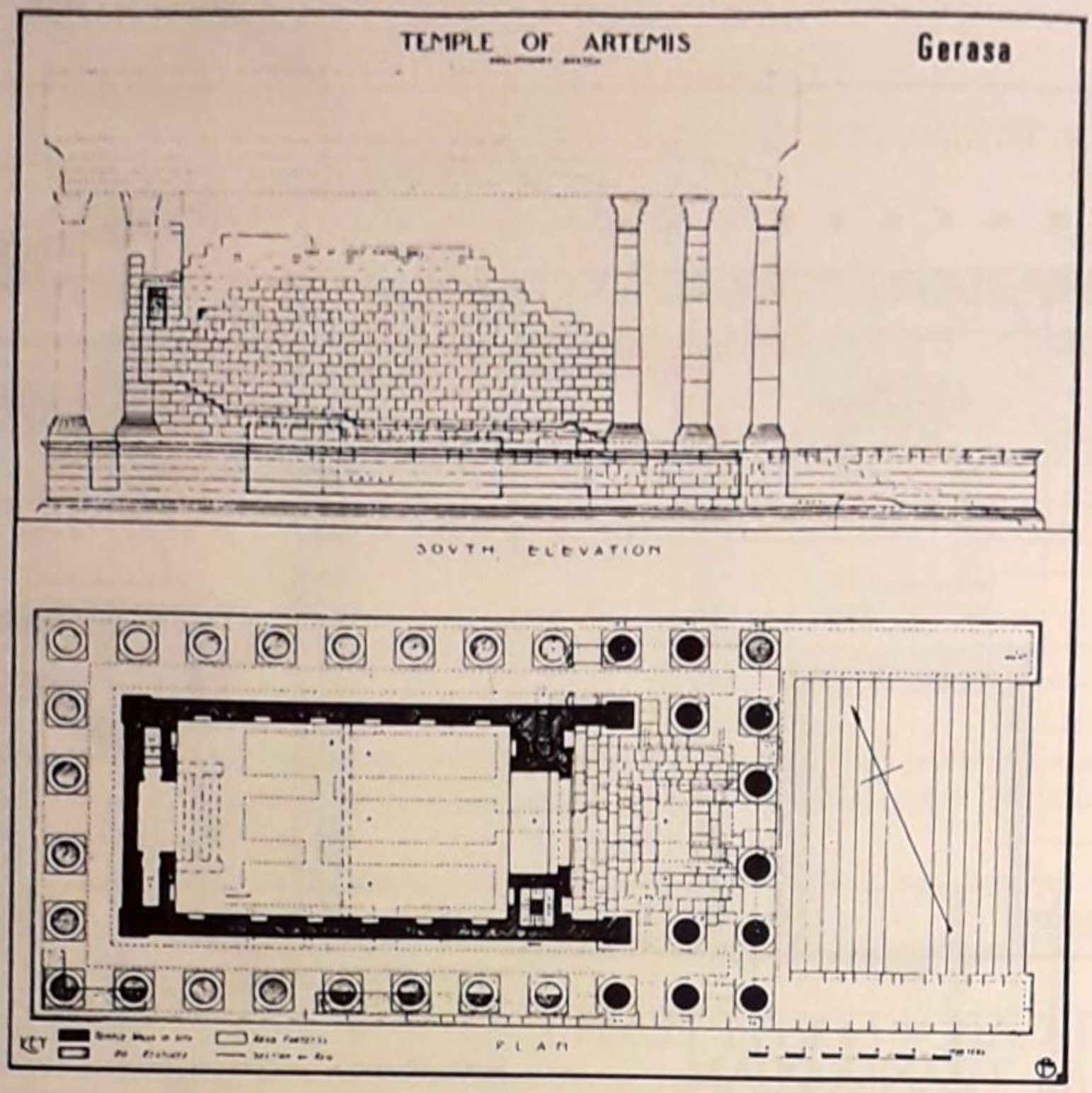


Fig. 80. Gerasa, Temple of Artemis.

Fig. 81. Gerasa, Temple of Artemis, view from west.

Fig. 82. Gerasa, Temple of Artemis, capitals of the columns in front of the temple.

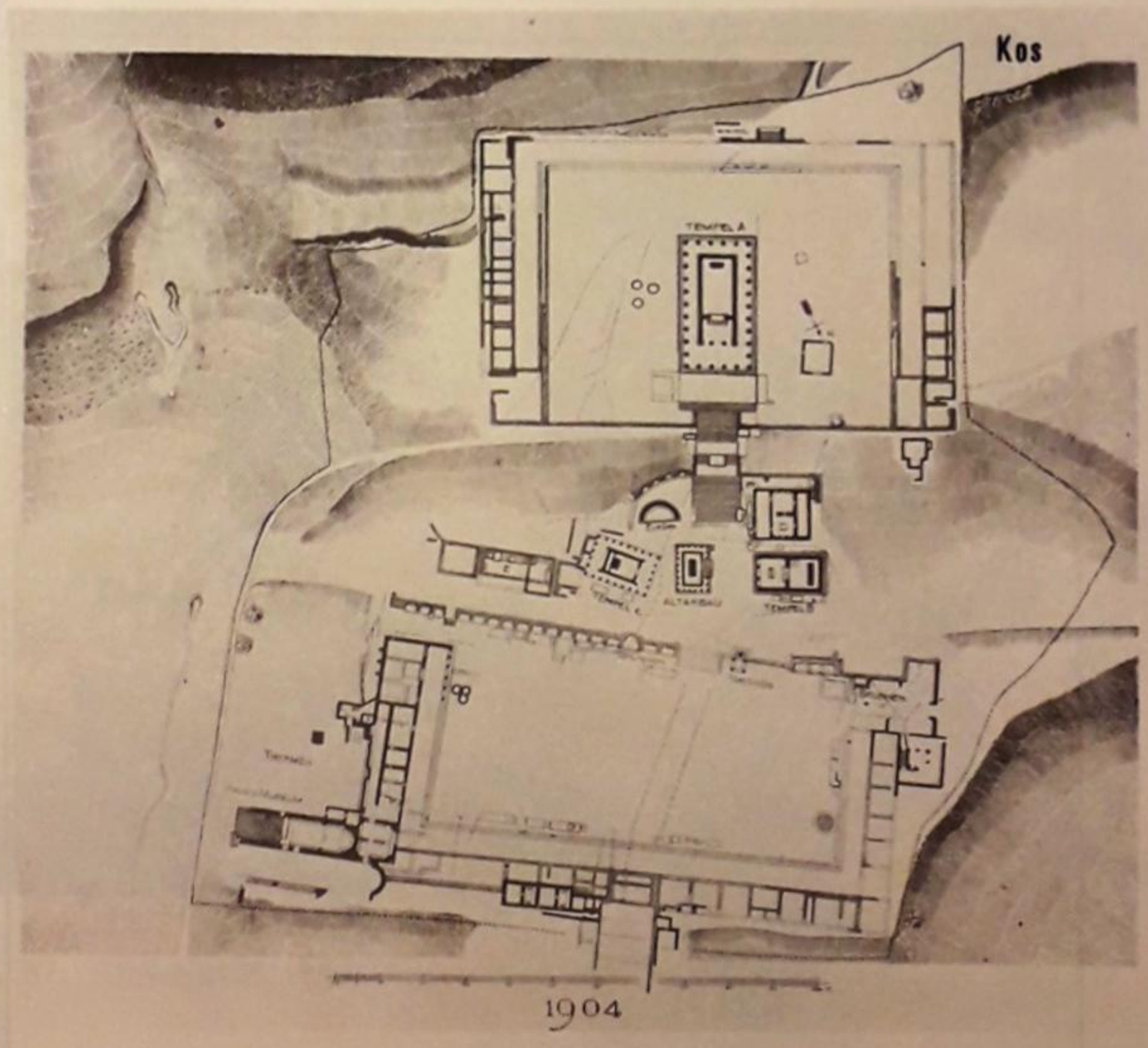


Fig. 83. Kos, Asklepieion.

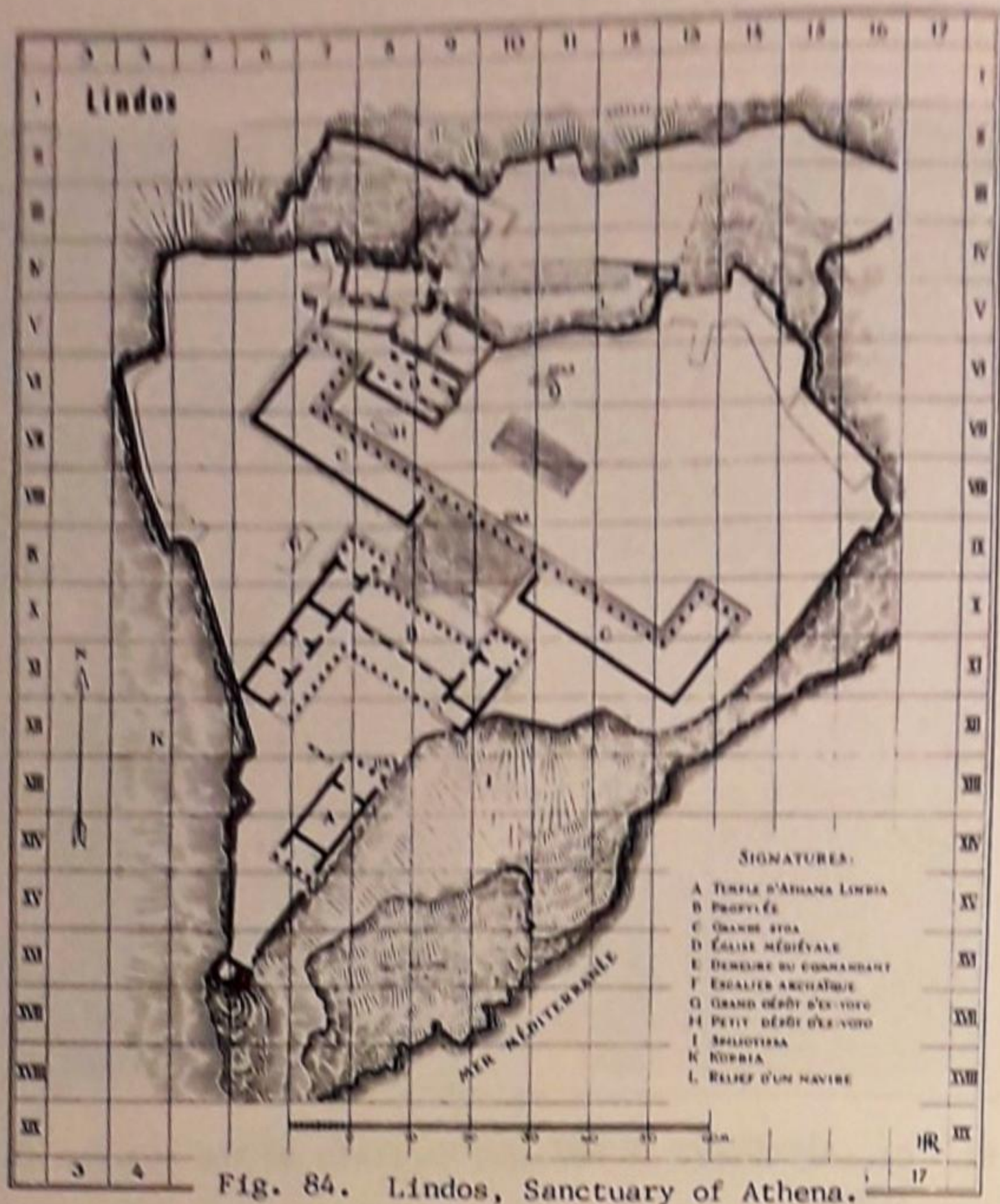


Fig. 84. Lindos, Sanctuary of Athena.

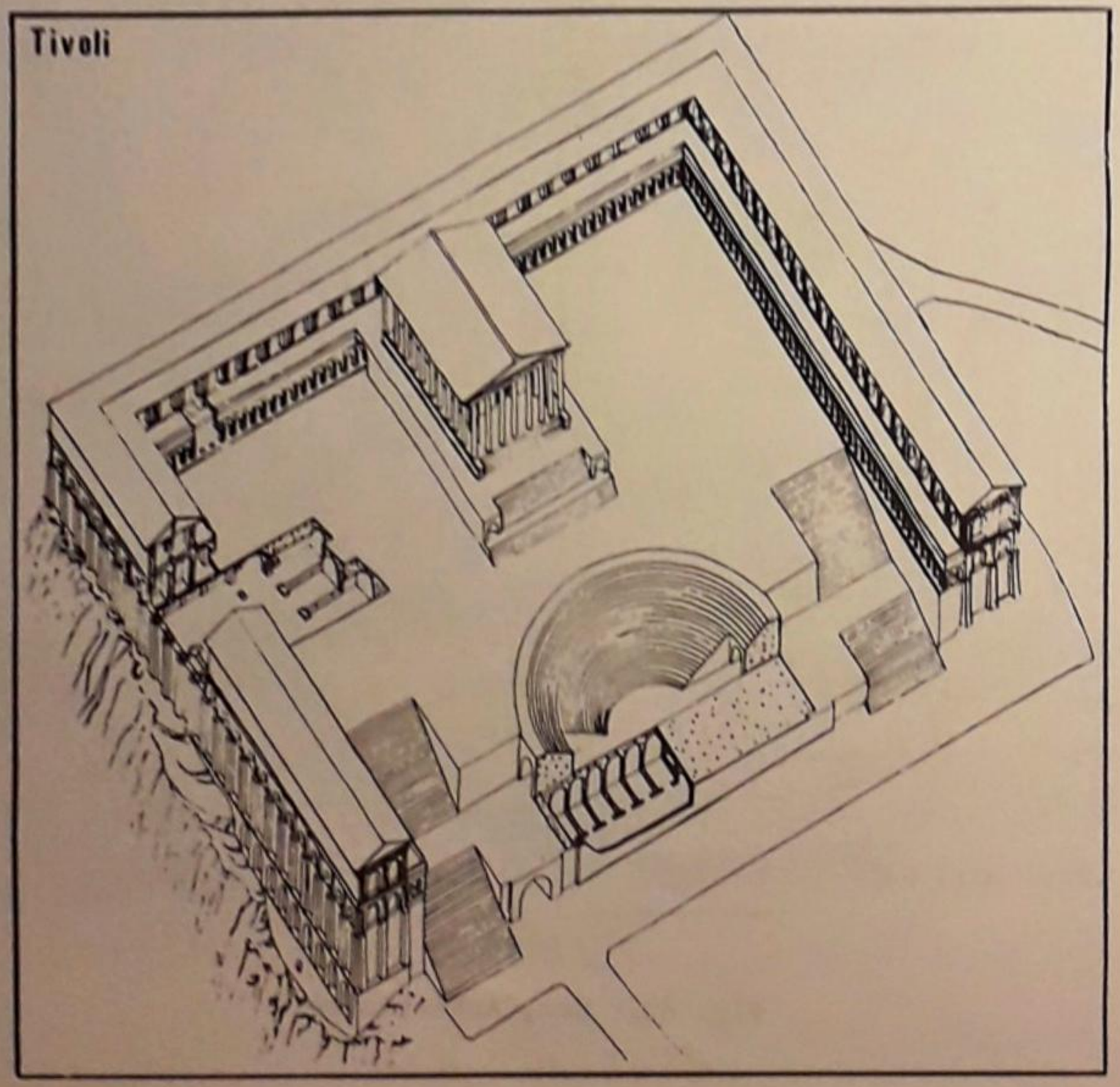


Fig. 85. Tivoli, Sanctuary of Hercules.

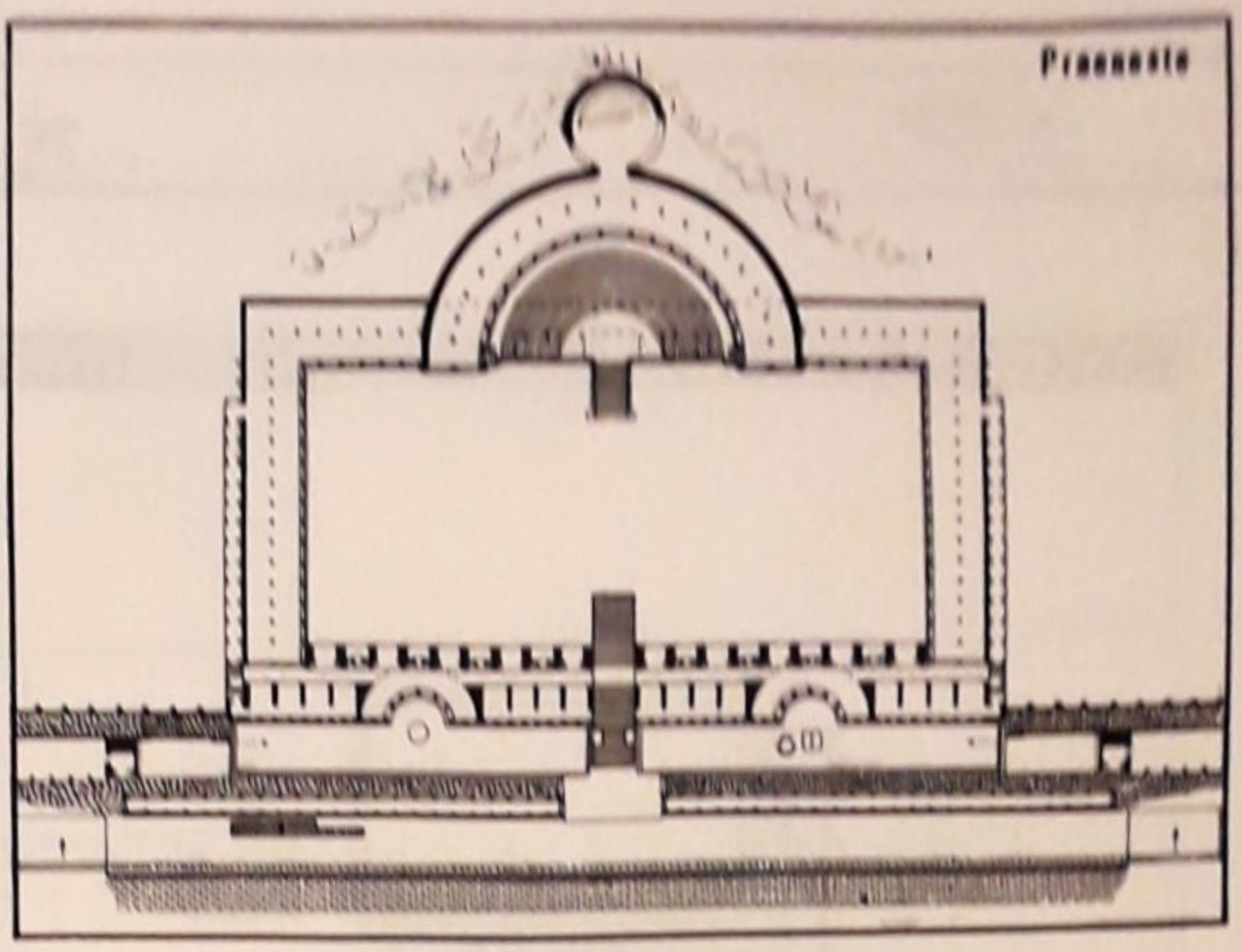


Fig. 86. Praeneste, Sanctuary of Fortuna Primigenia.

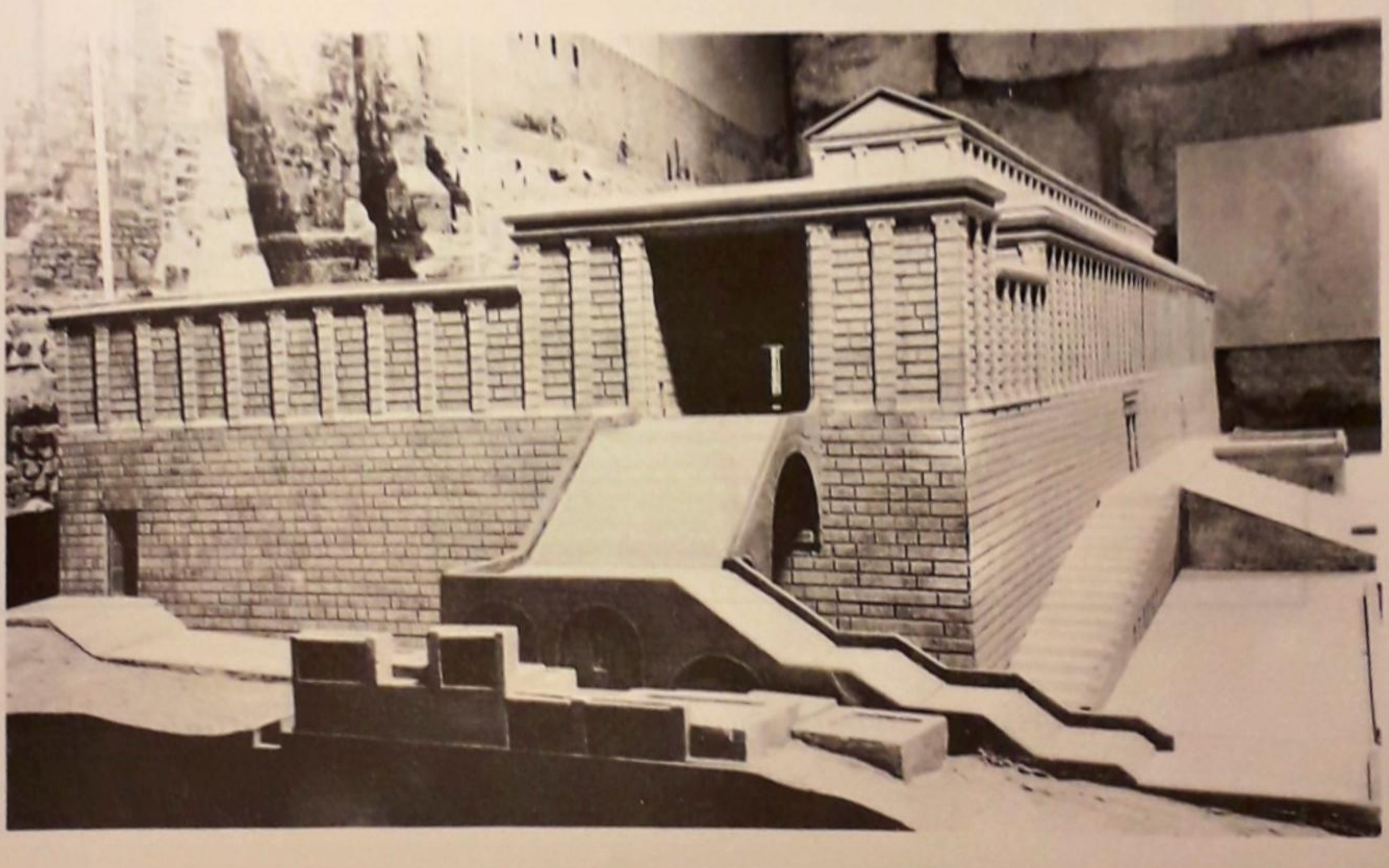


Fig. 87. Jerusalem, south-west section of the Temple Mount, a model.

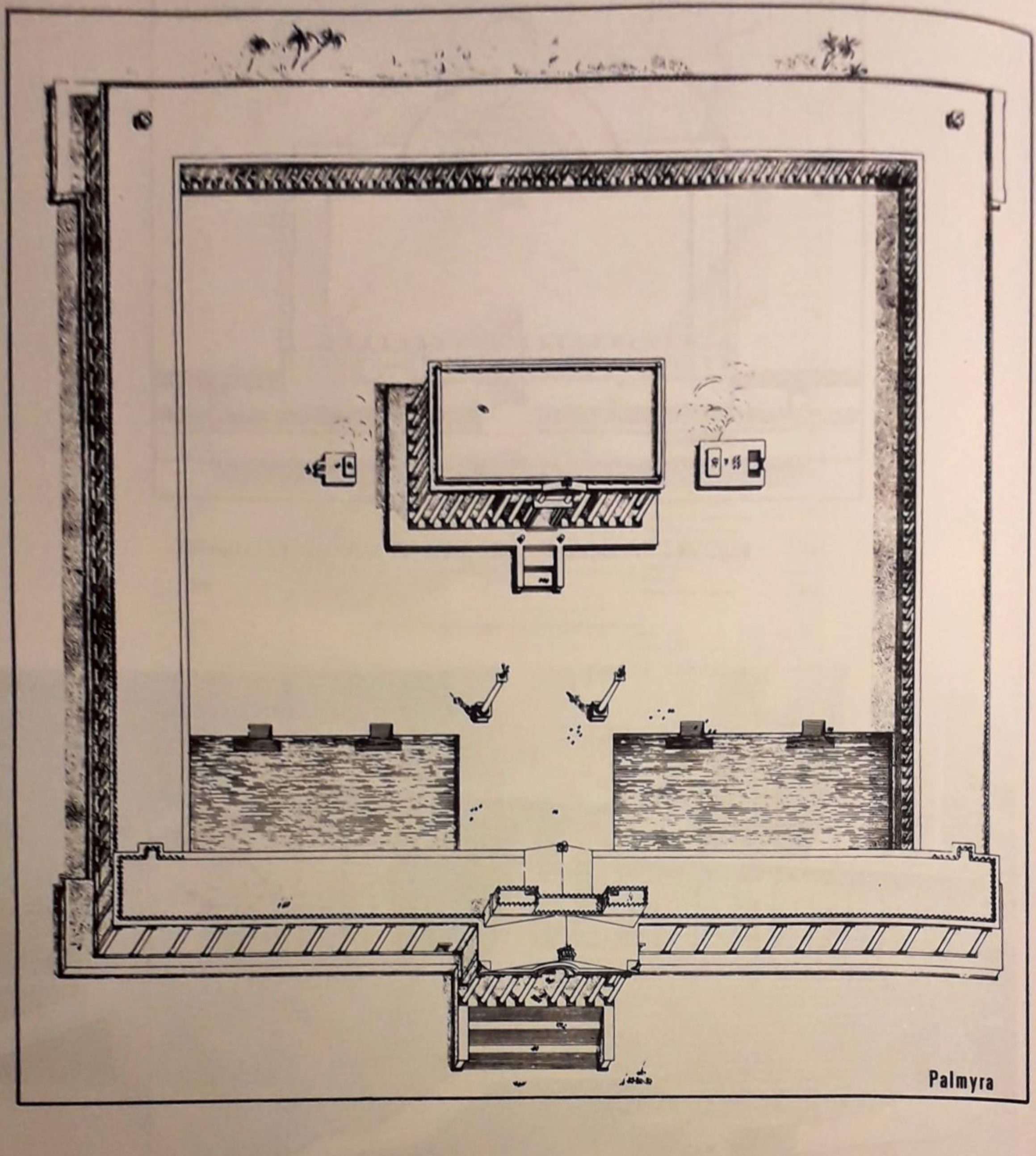


Fig. 88. Palmyra, Sanctuary of Bel, proposed reconstruction.

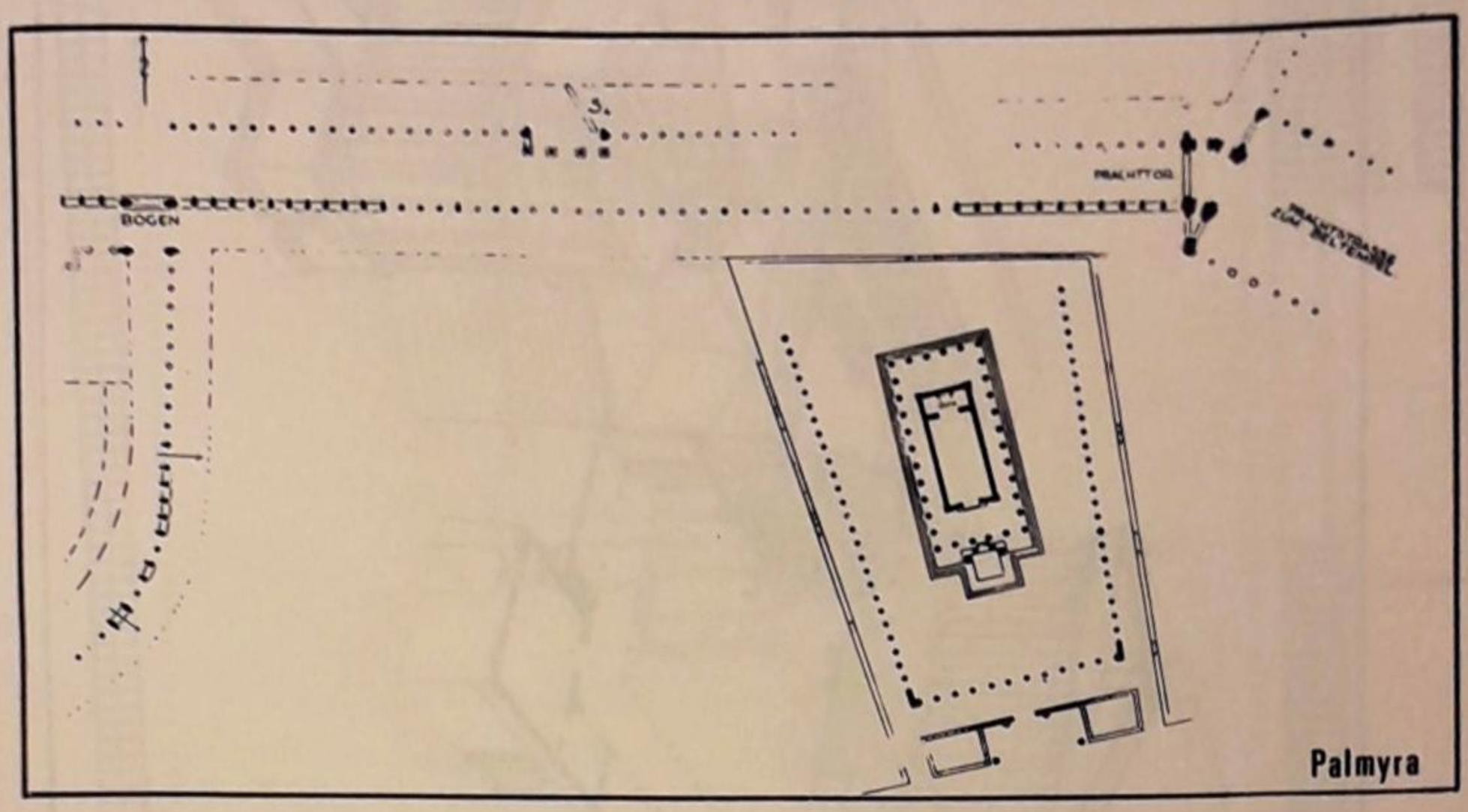


Fig. 89. Palmyra, Sanctuary of Nebo, section of the main colonnade street and the triumphal arch.

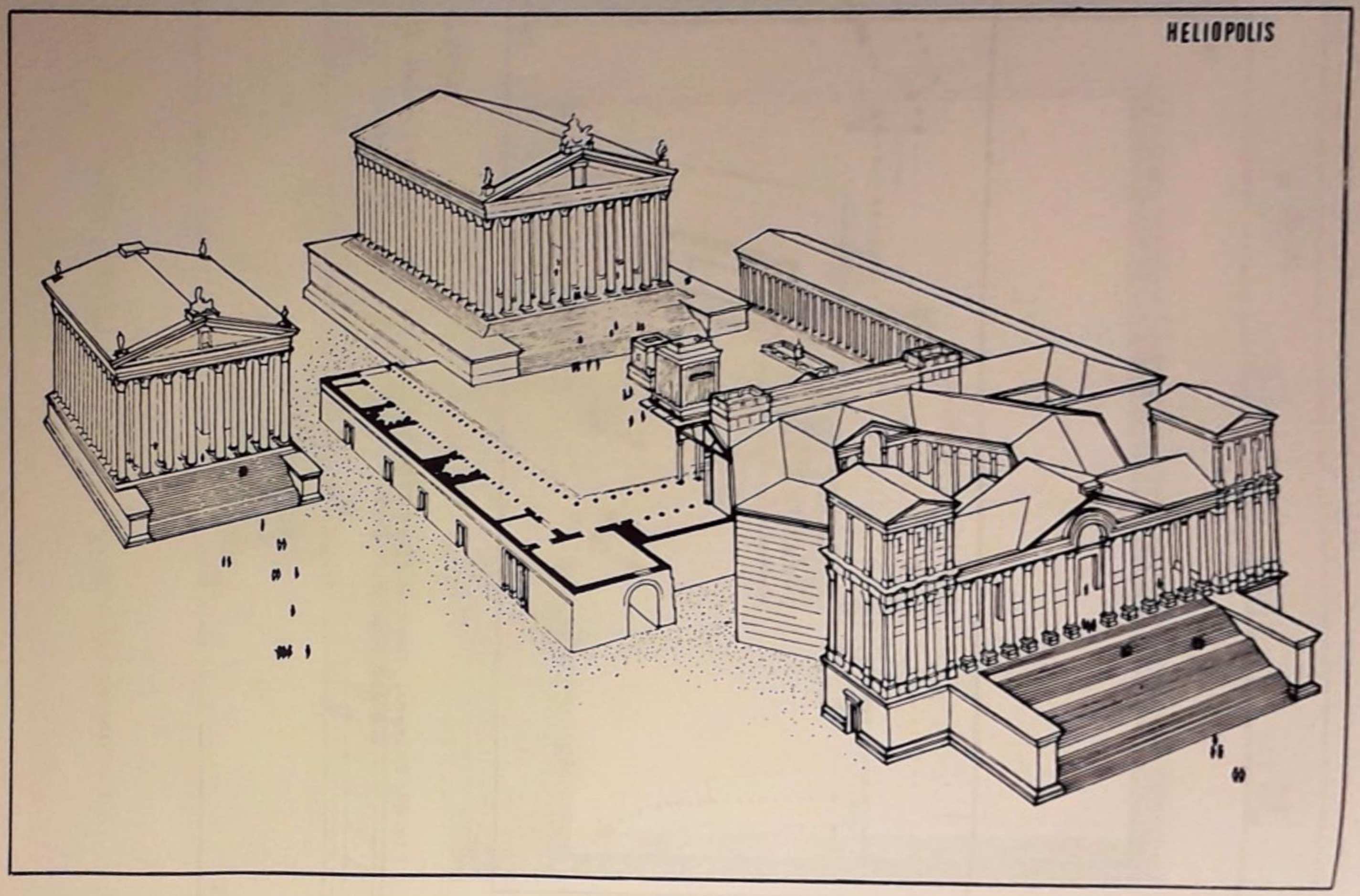


Fig. 90. Baalbek (Heliopolis), *Sanctuary of Jupiter, proposed reconstruction.*

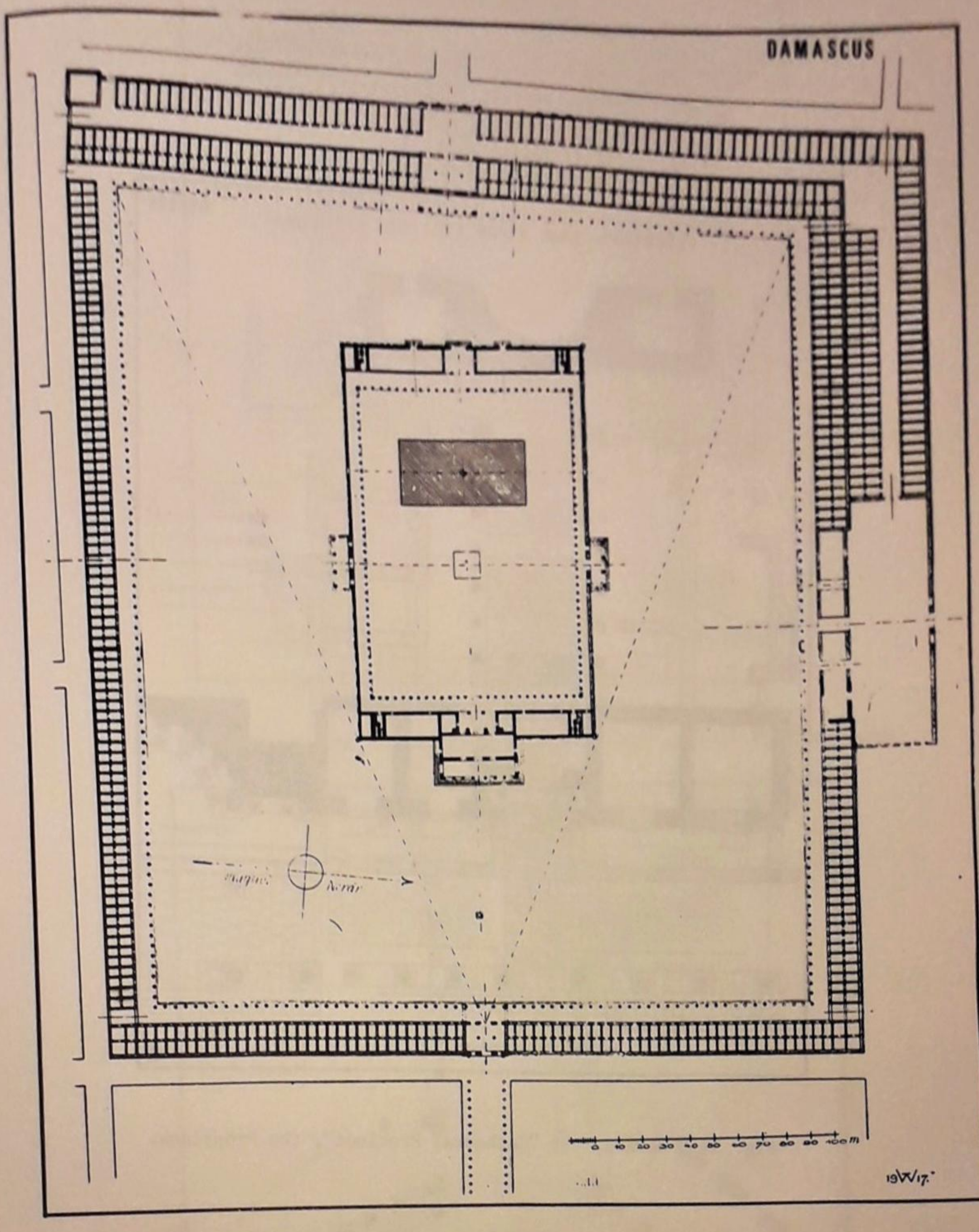


Fig. 91. Damascus, Sanctuary of Jupiter.

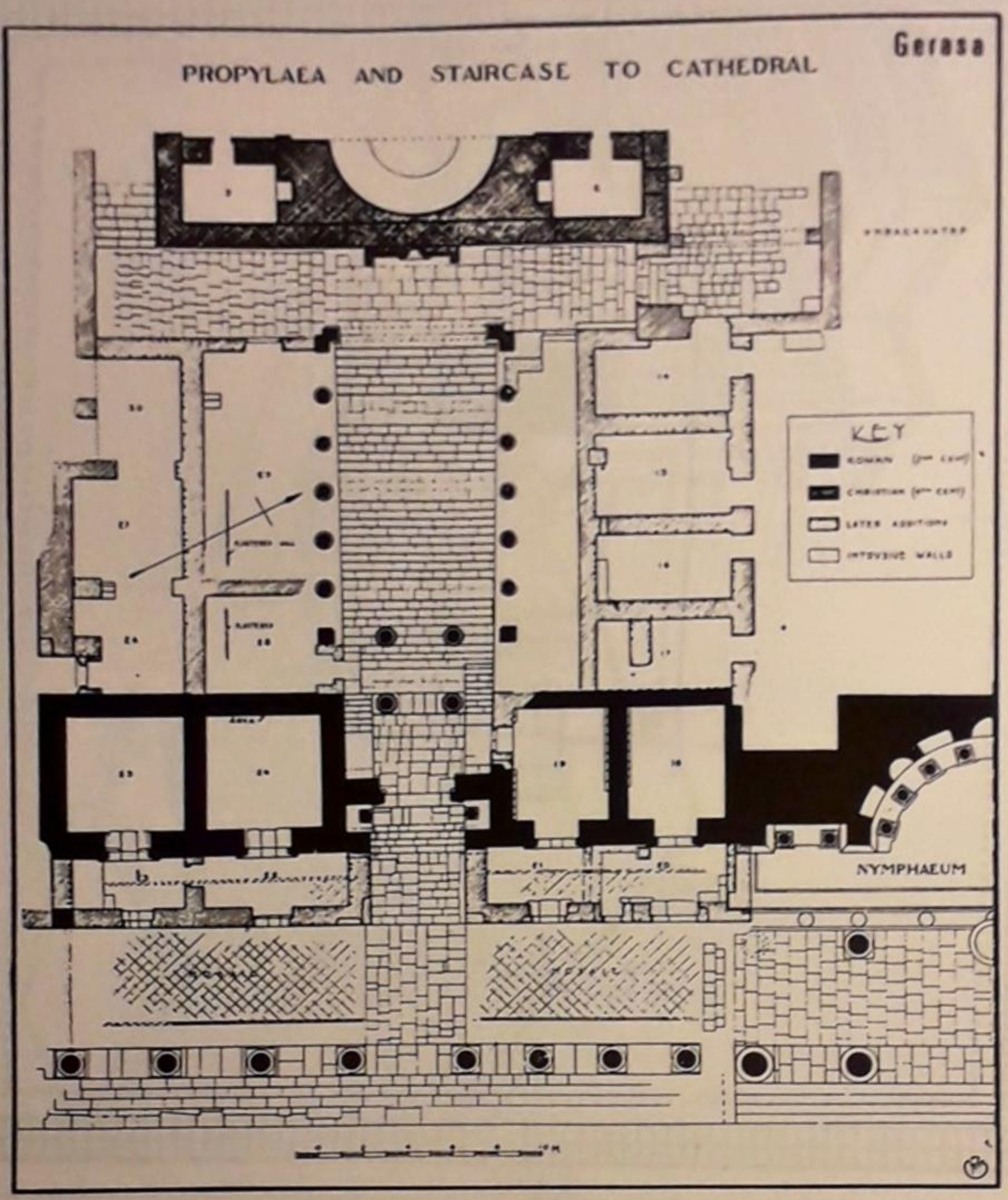


Fig. 92. Gerasa, the "Cathedral Precinct", the Propylaea.

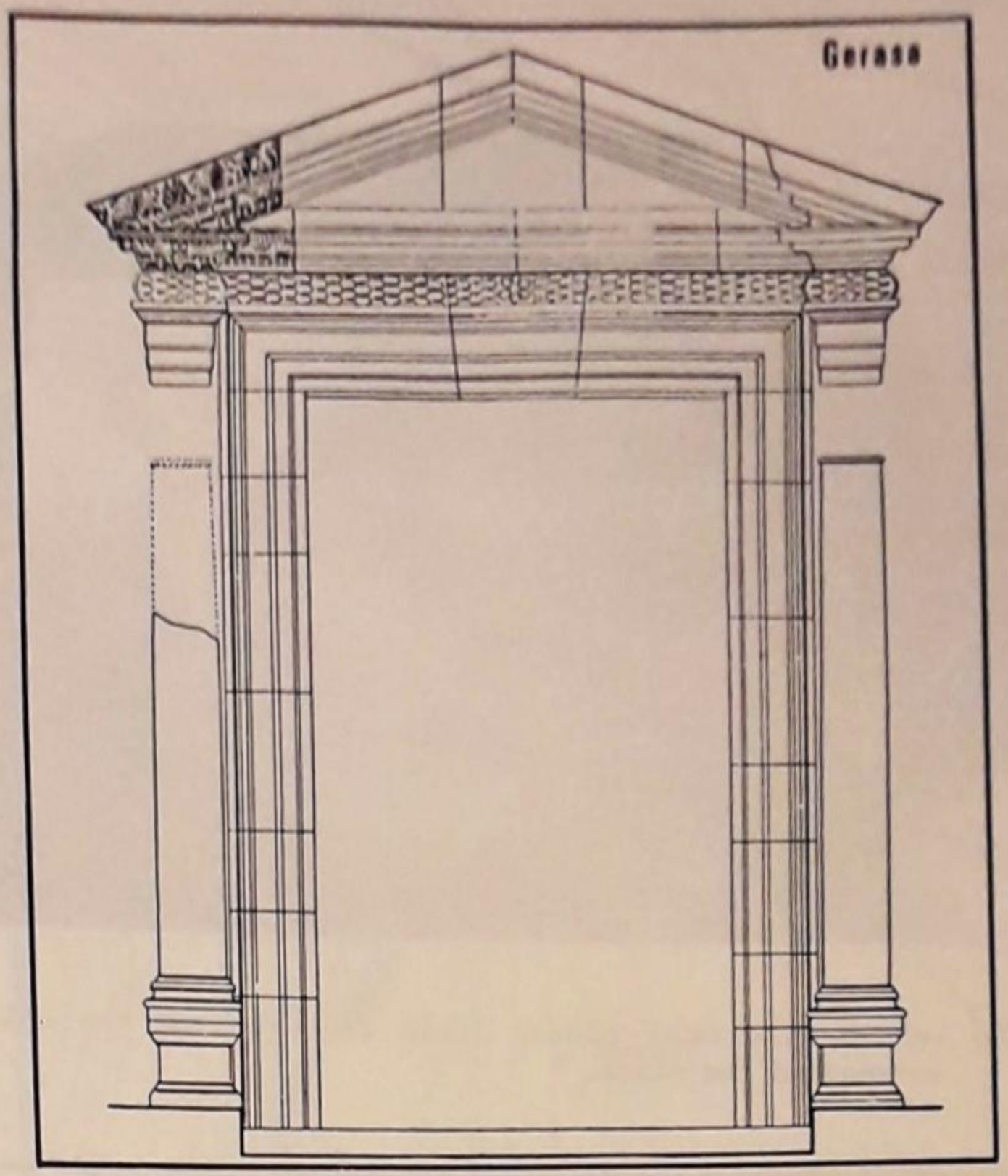


Fig. 93. Gerasa, the "Cathedral Precinct", outer gate of the Propylaea.

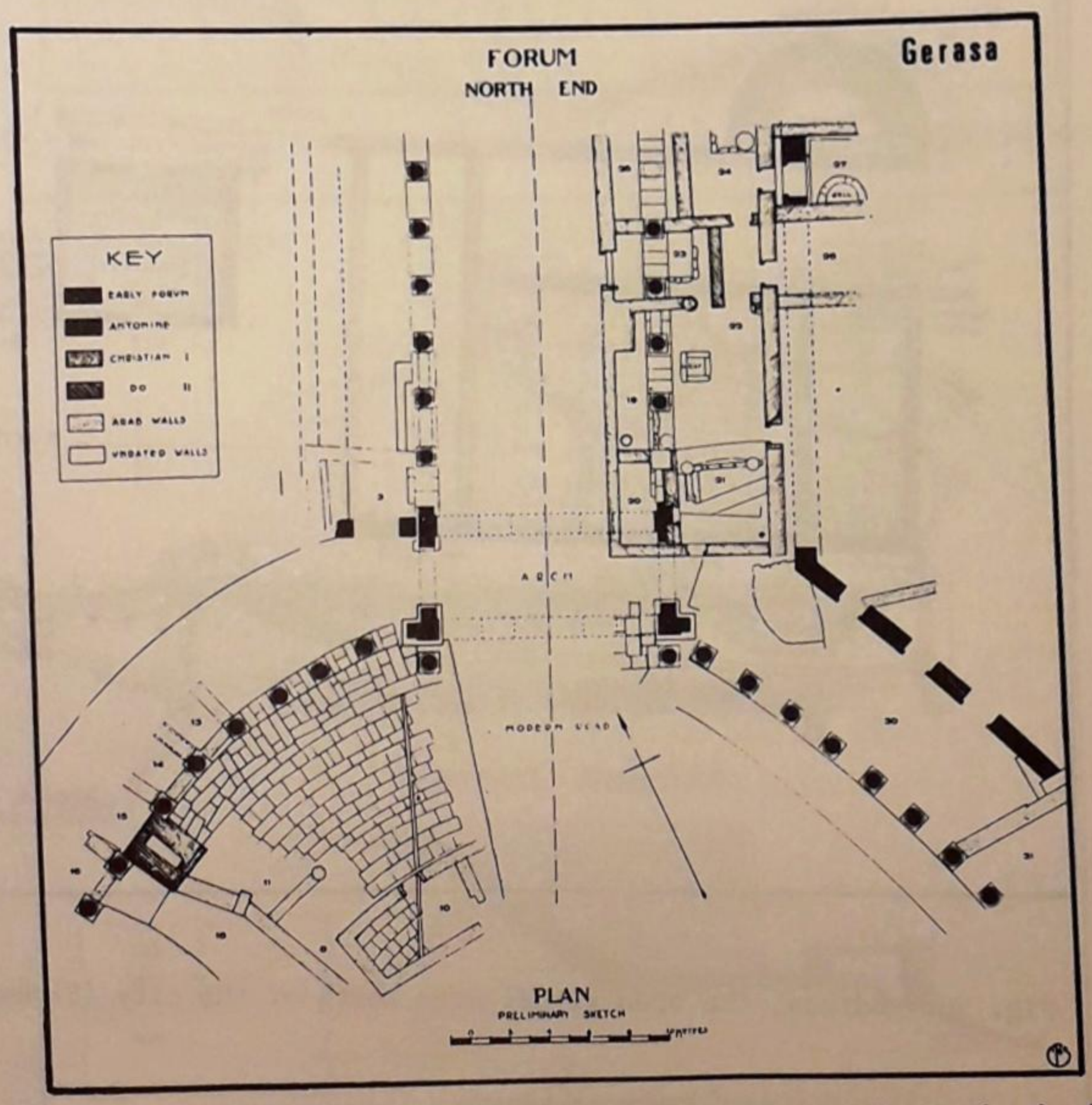


Fig. 94. Gerasa, northern section of the oval plaza and the beginning of the main north-south street.

Fig. 95. Gerasa, the oval plaza, ionic capital from the colonnade that surrounded the plaza.

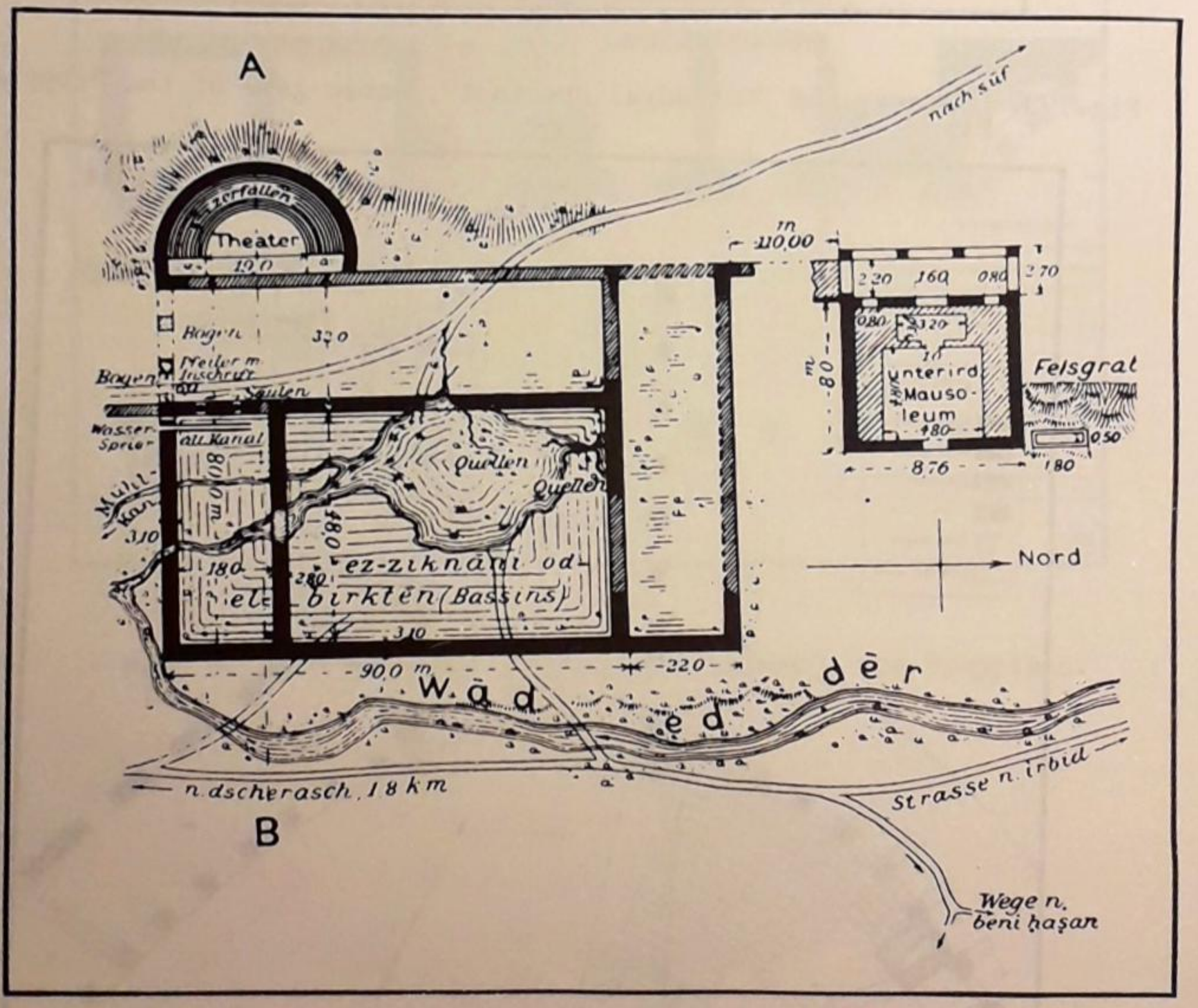


Fig. 96. Gerasa, the open ritual area north of the city (Birketein).

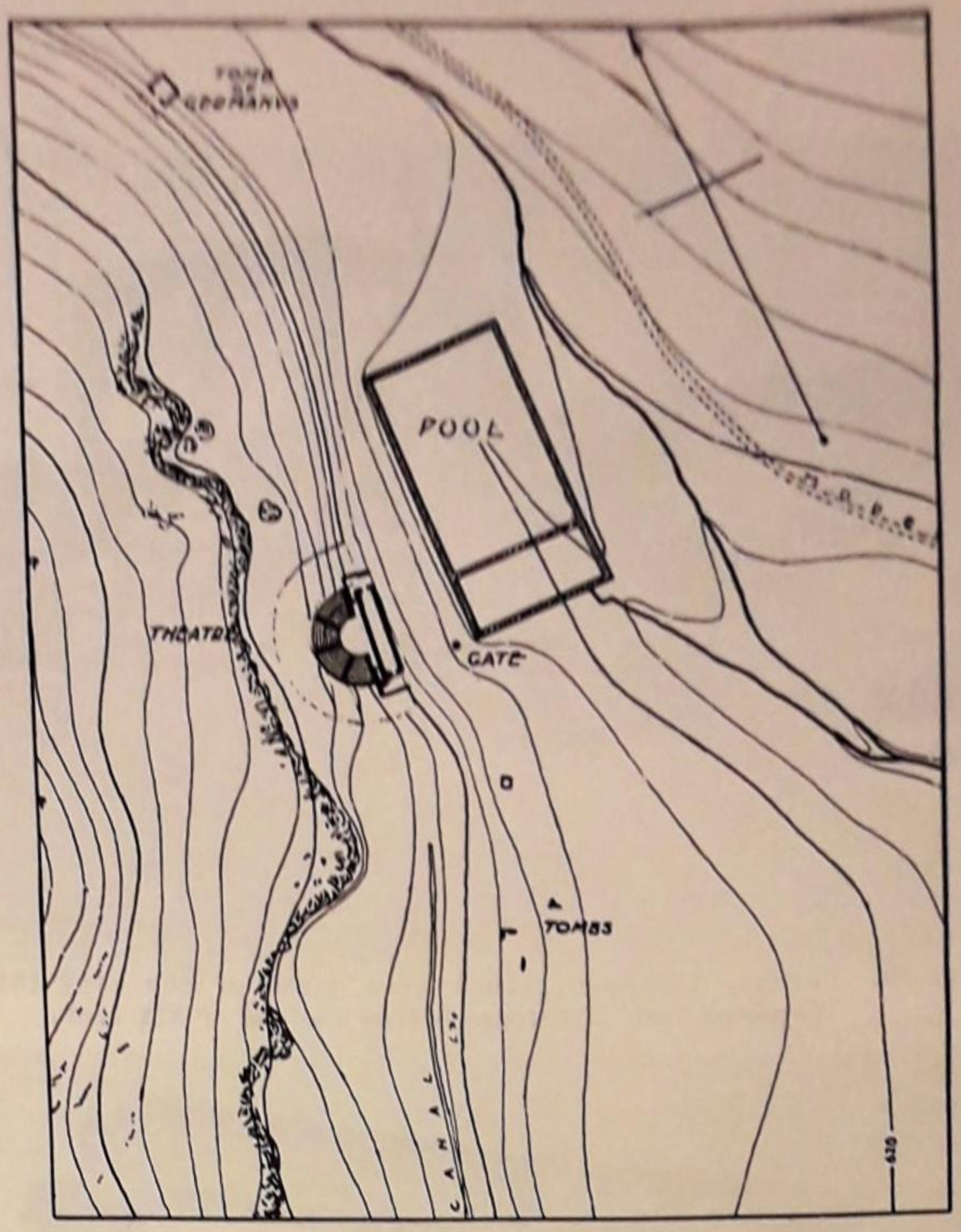


Fig. 97. Gerasa, the open ritual area north of the city (Birketein).

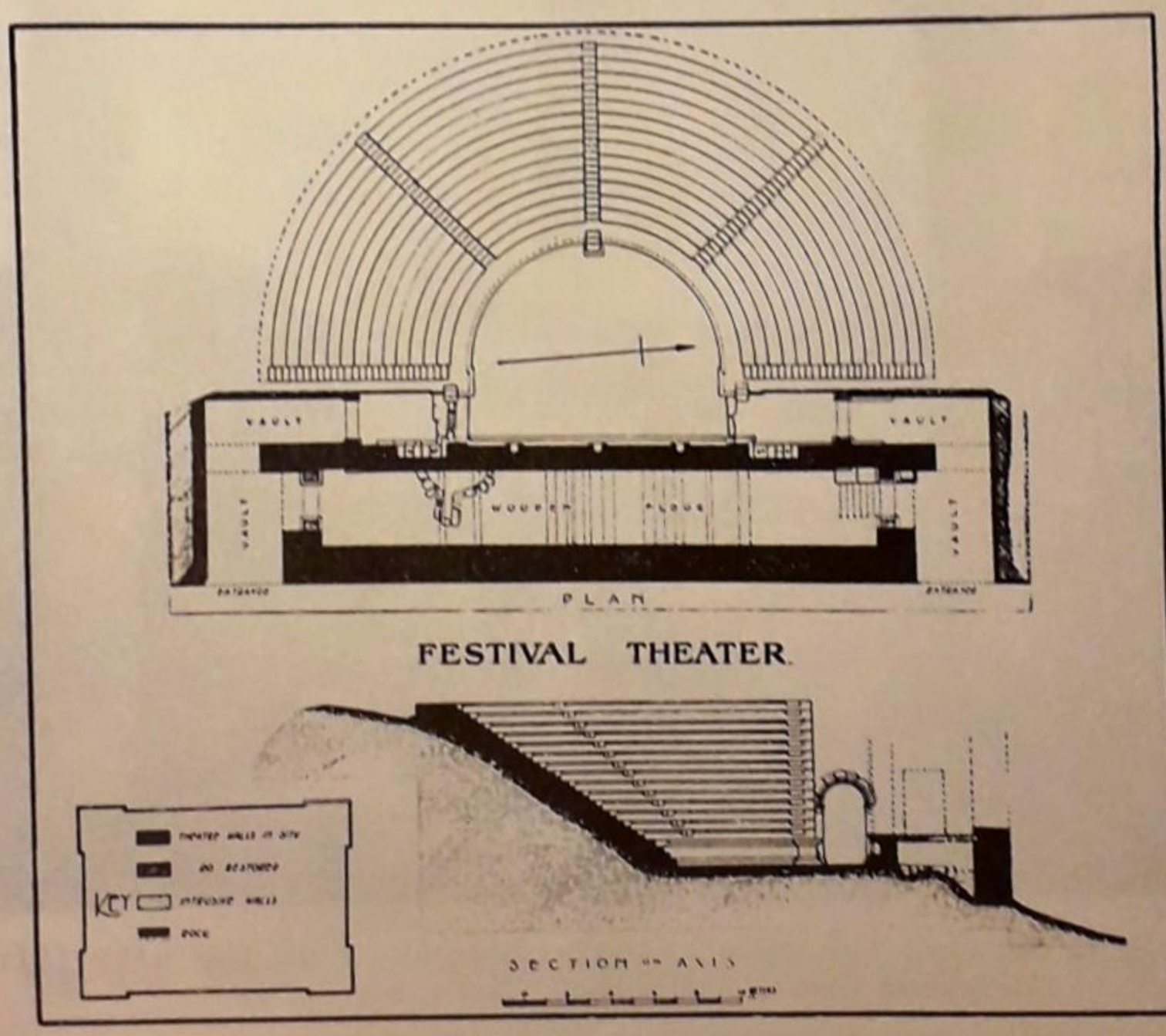


Fig. 98. Gerasa, the open ritual area north of the city (Birketein), the theatre.

Fig. 99. Gerasa, the open ritual area north of the city (Birketein), "Germanus Tomb", photograph from the end of XIX cent.

Fig. 100. Gerasa, the open ritual area north of the city (Birketein), "Germanus Tomb", photograph from early 30's.

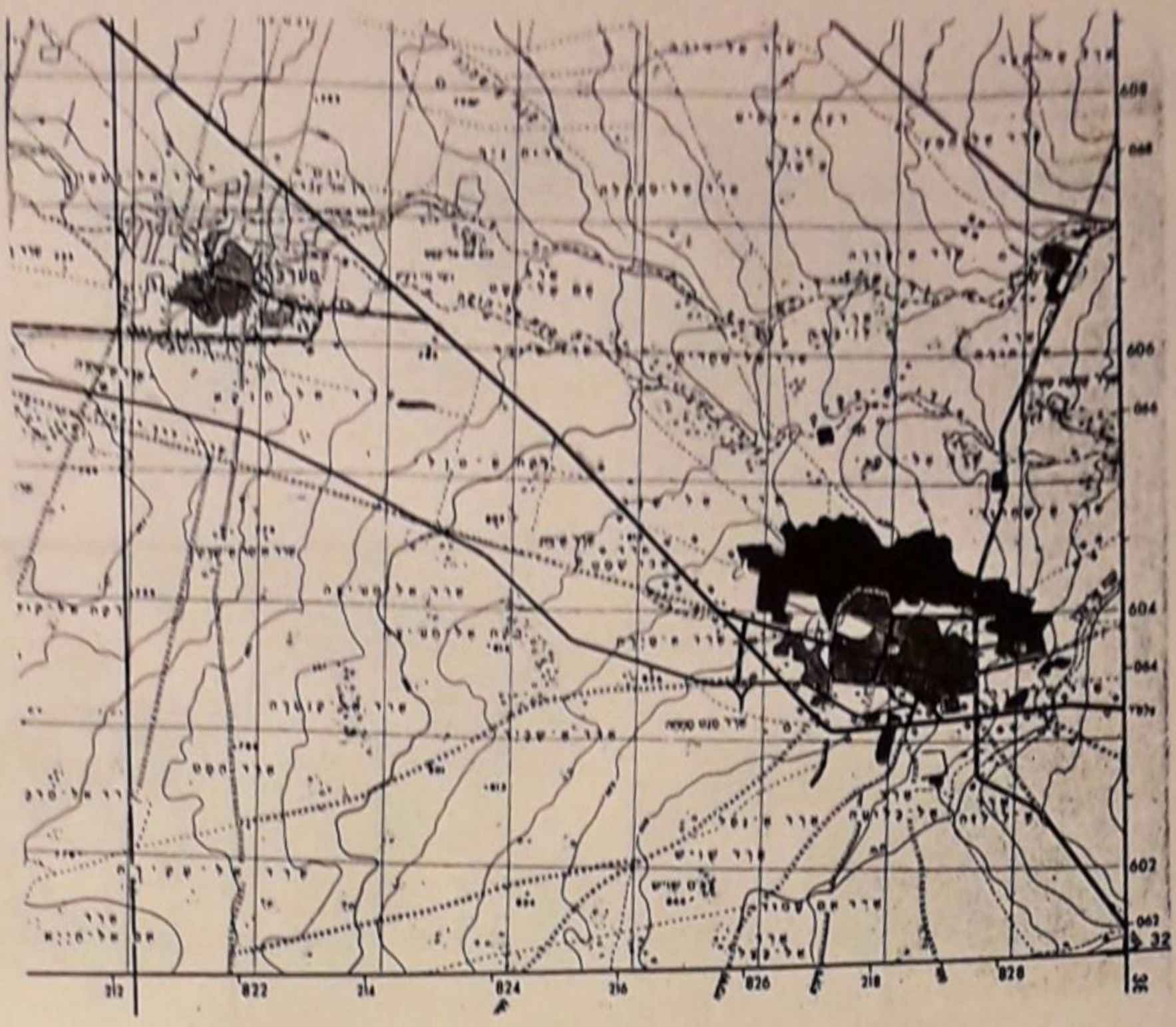


Fig. 101. The area of Bostra, a map (scale 1:50,000).

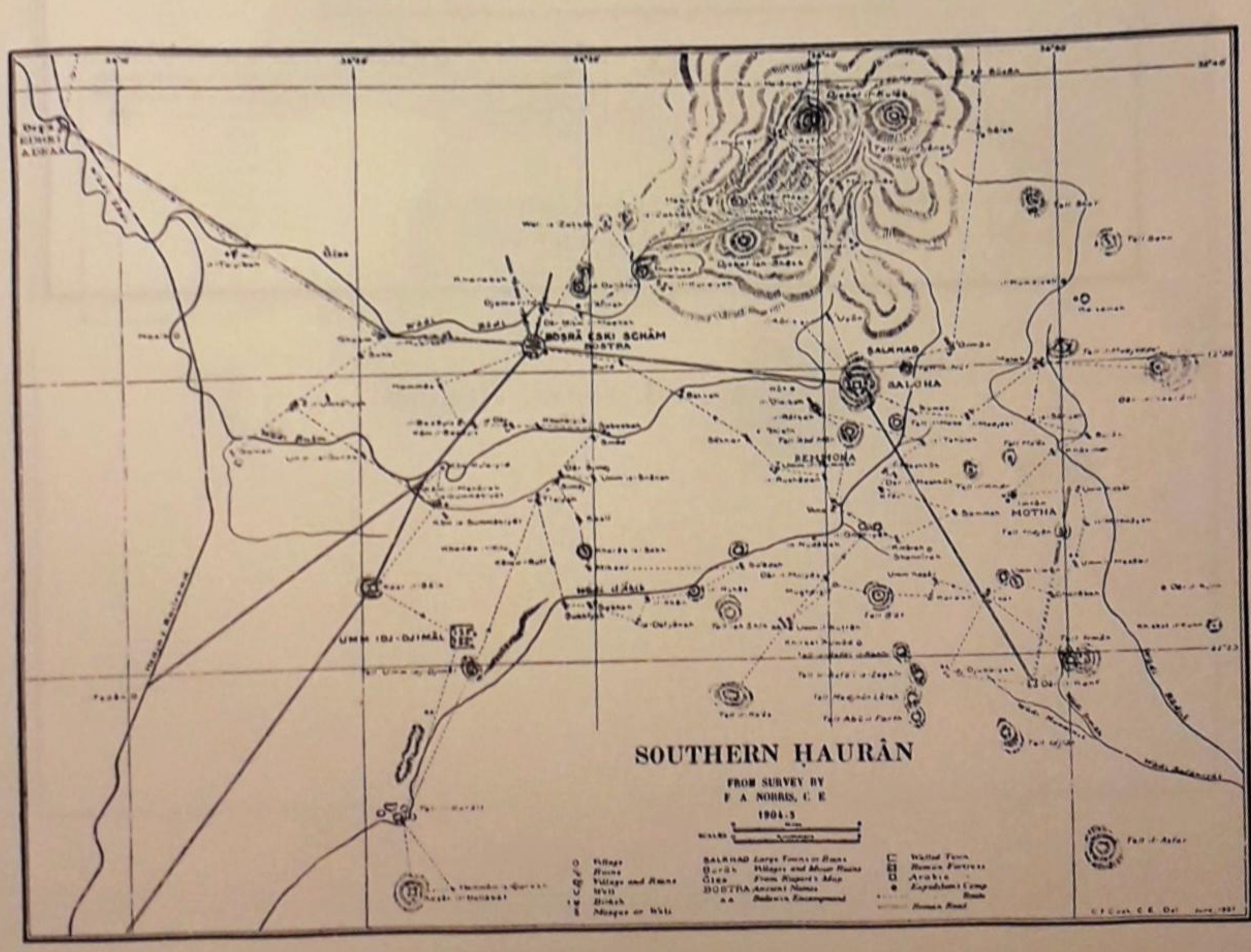
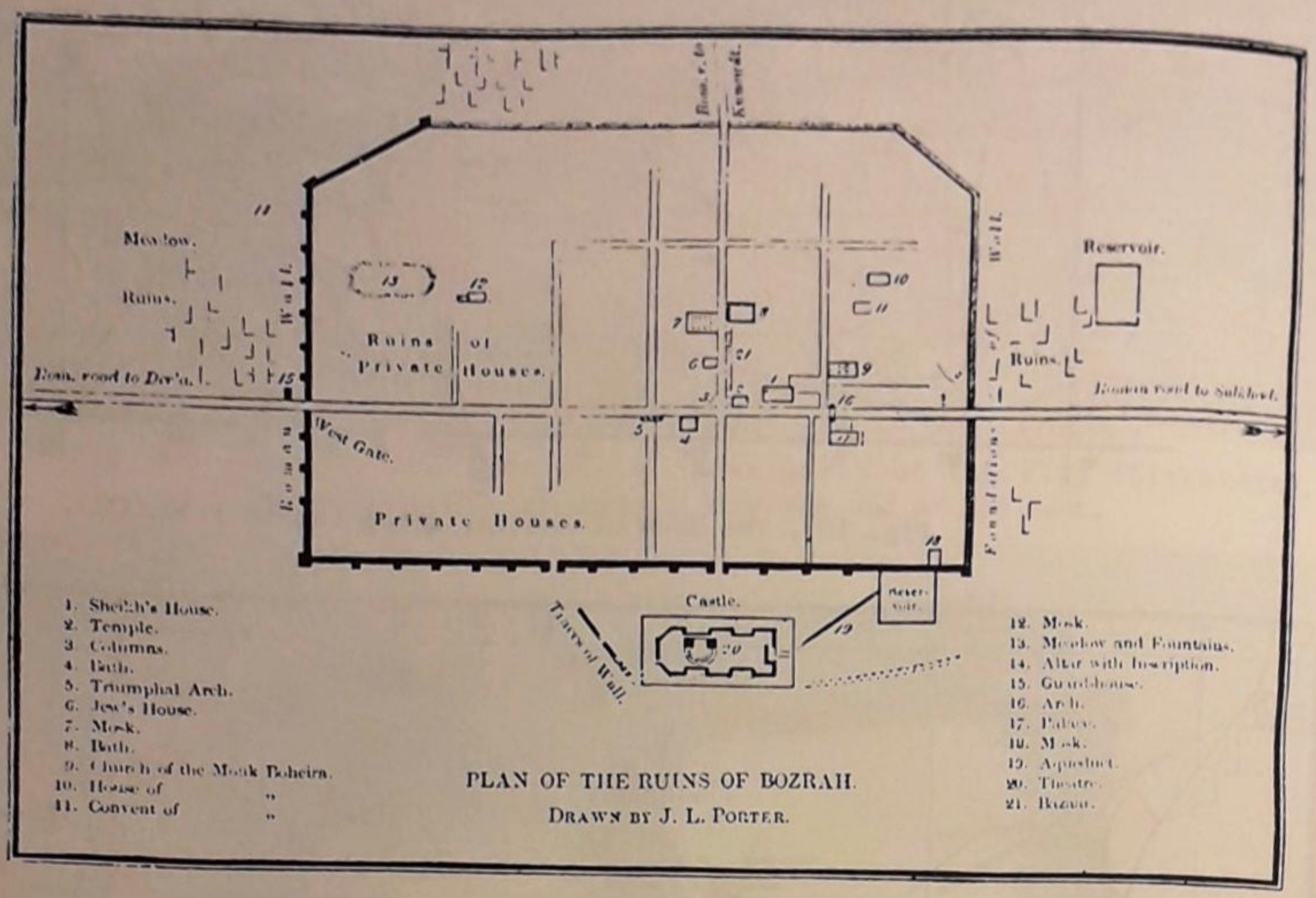


Fig. 102. Southern Hauran, network of roads in the vicinity of Bostra.



PLAN OF THE RUINS OF BOZRAH.

DRAWN BY J. L. PORTER.

Fig. 103. Bostra, city plan.

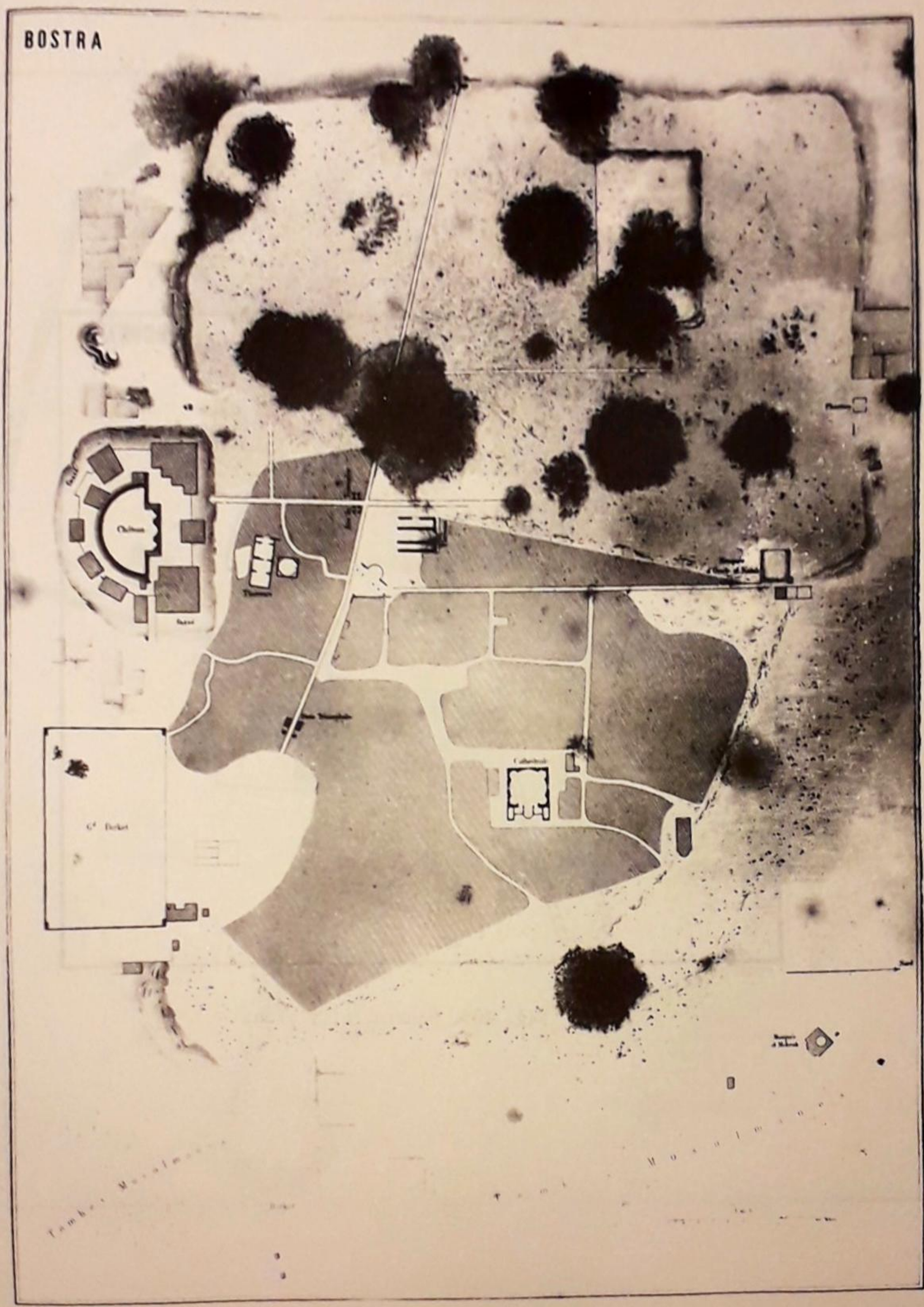


Fig. 104. Bostra, city plan.

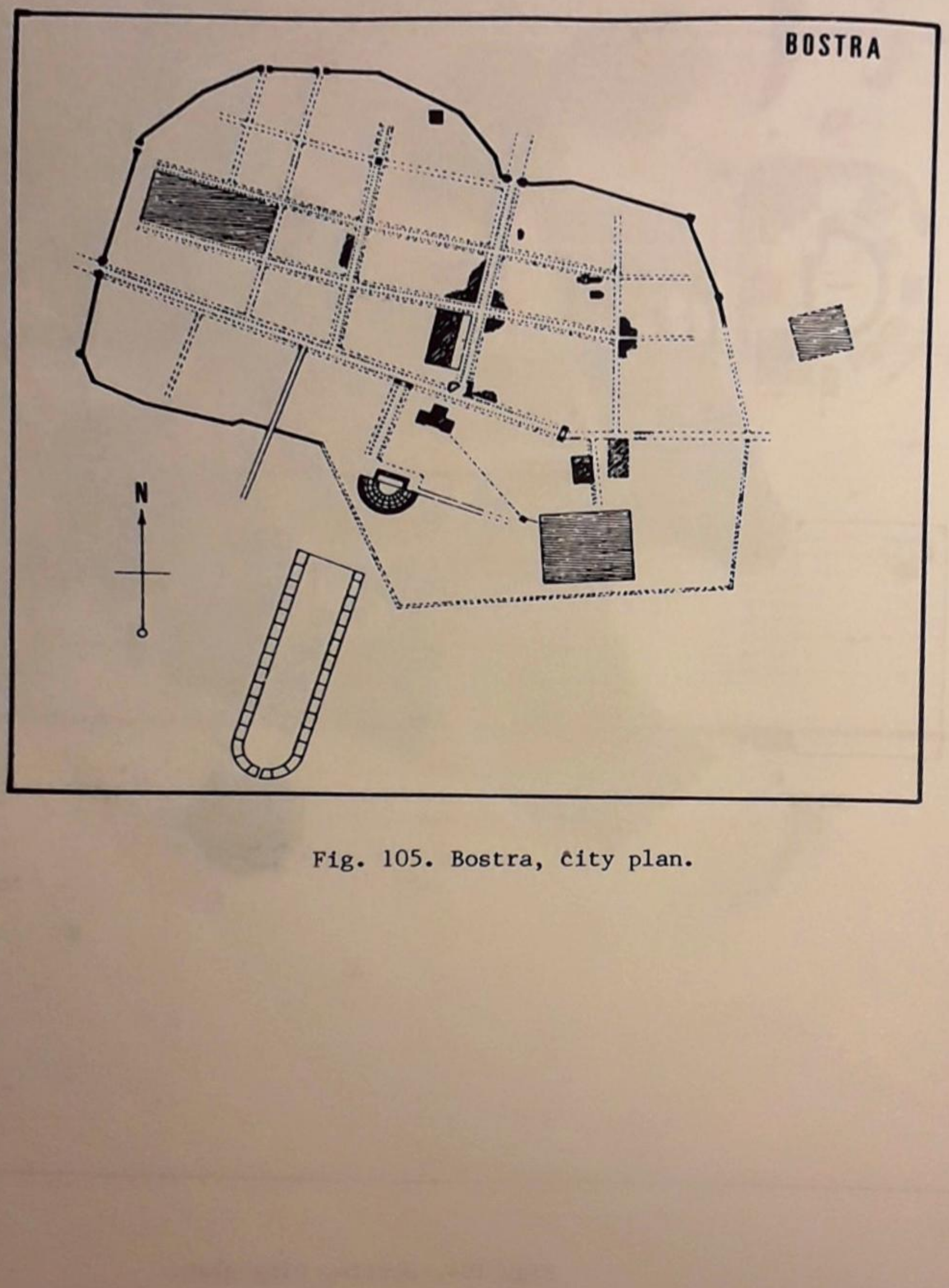


Fig. 105. Bostra, city plan.

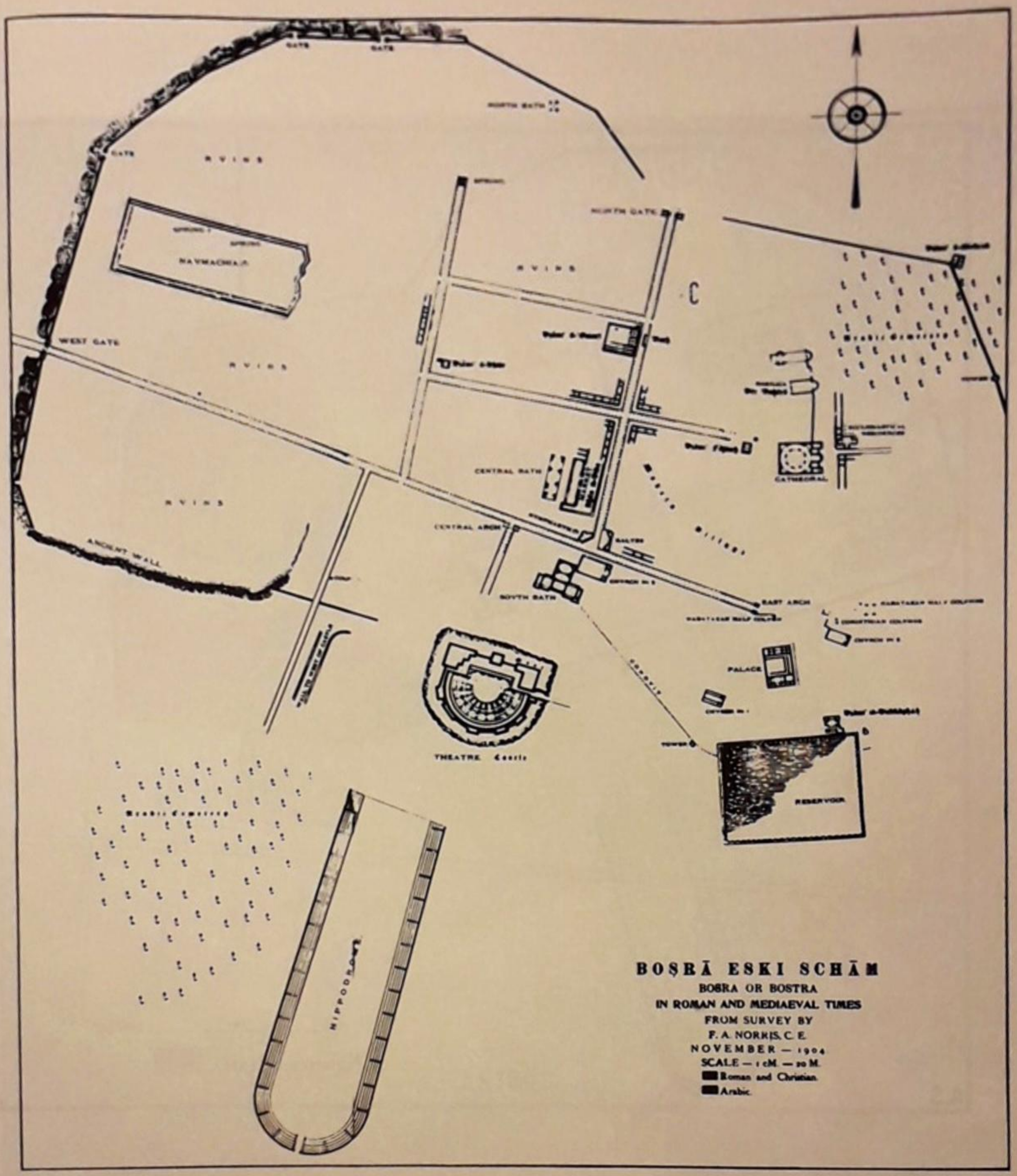


Fig. 106. Bostra, city plan.

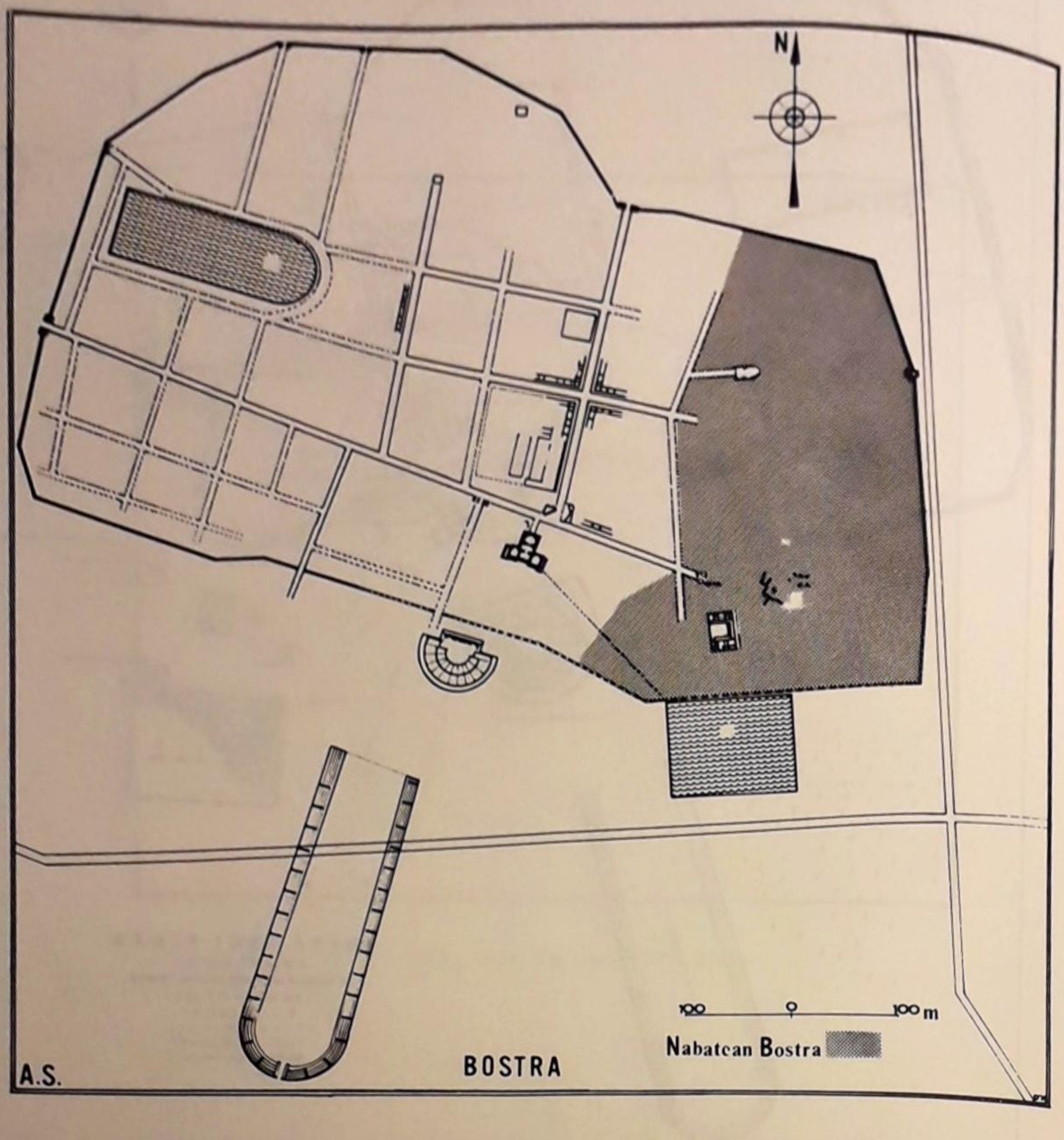


Fig. 107. Bostra, city plan.

Fig. 108. Bostra, aerial photograph.

Fig. 109. Bostra, aerial photograph, note the network of the main streets, city-wall and the conjectural location of the Legion's Camp.

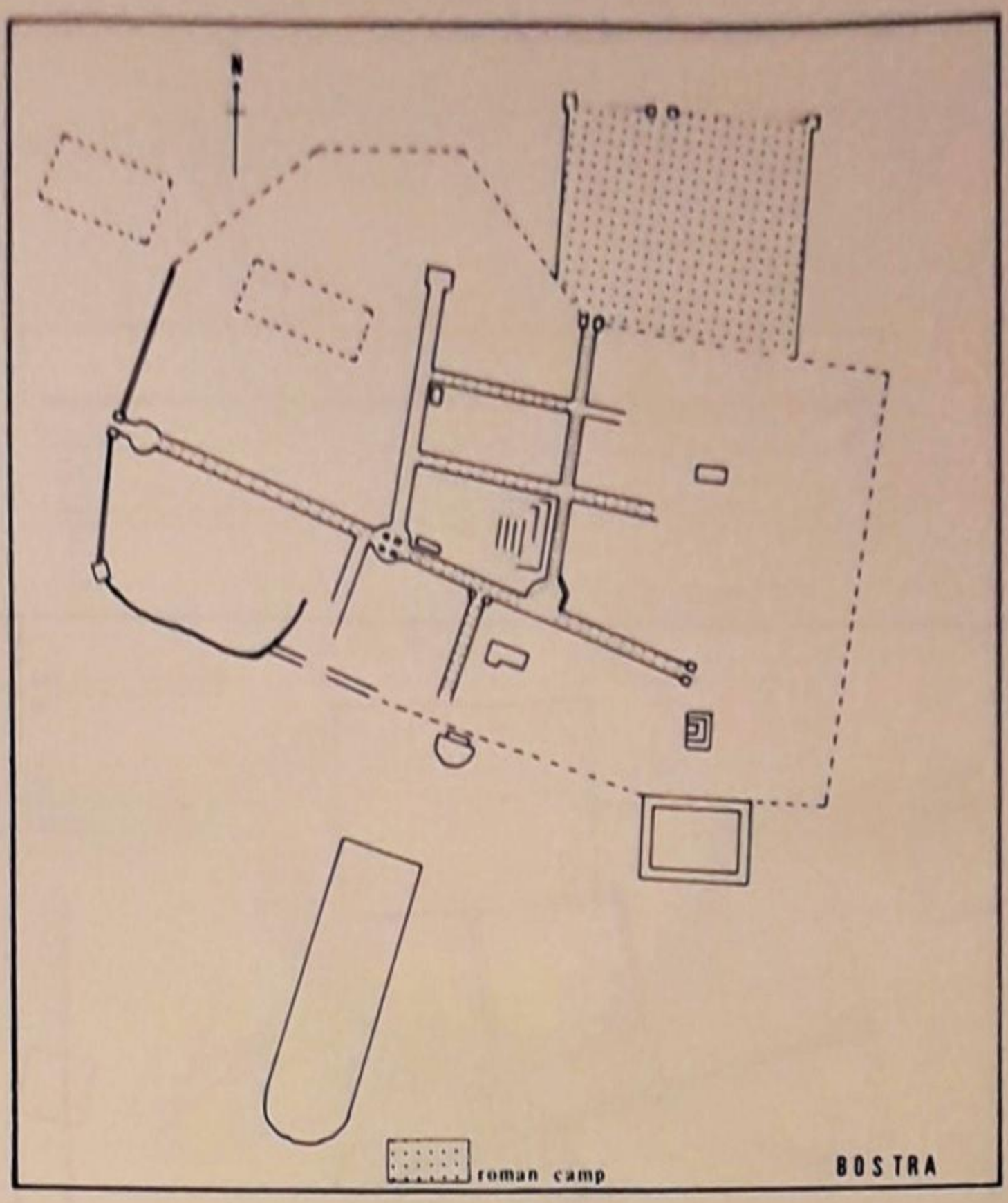


Fig. 110. Bostra, schematic city plan, note the conjectural location of the Legion's Camp.

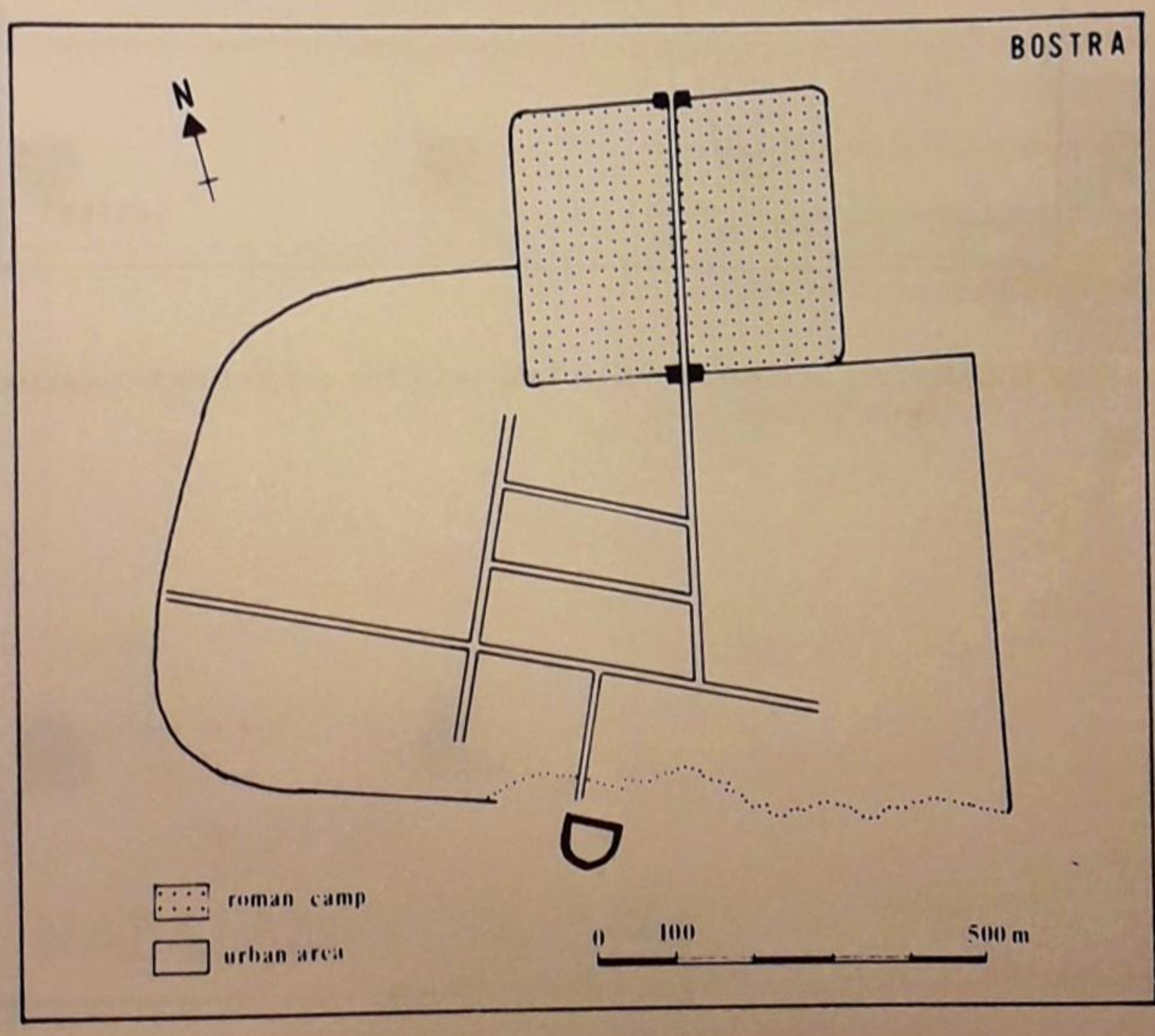


Fig. 111. Bostra, schematic city plan, note the conjectural location of the Legion's Camp.

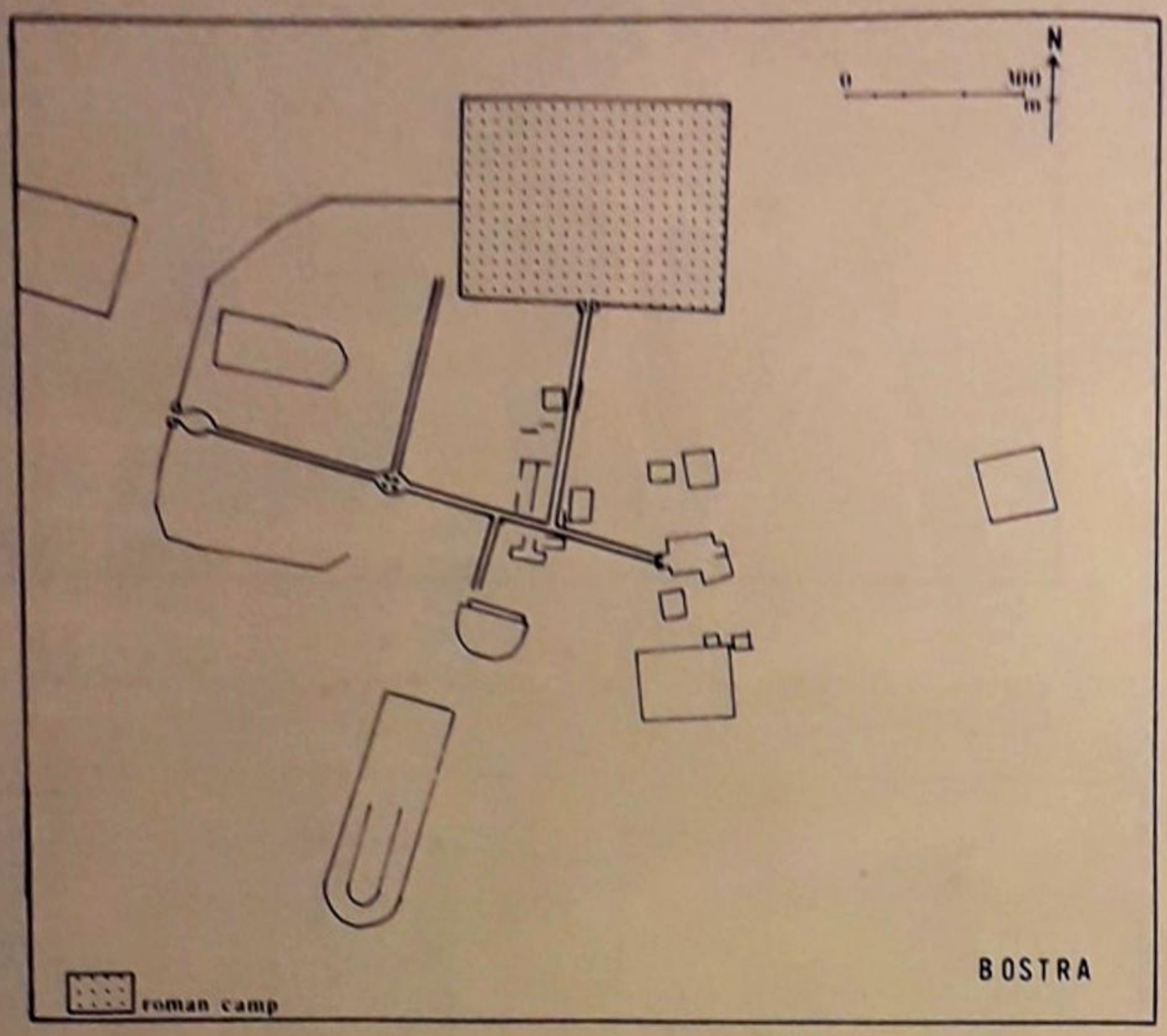


Fig. 112. Bostra, schematic city plan, note the conjectural location of the Legion's Camp.

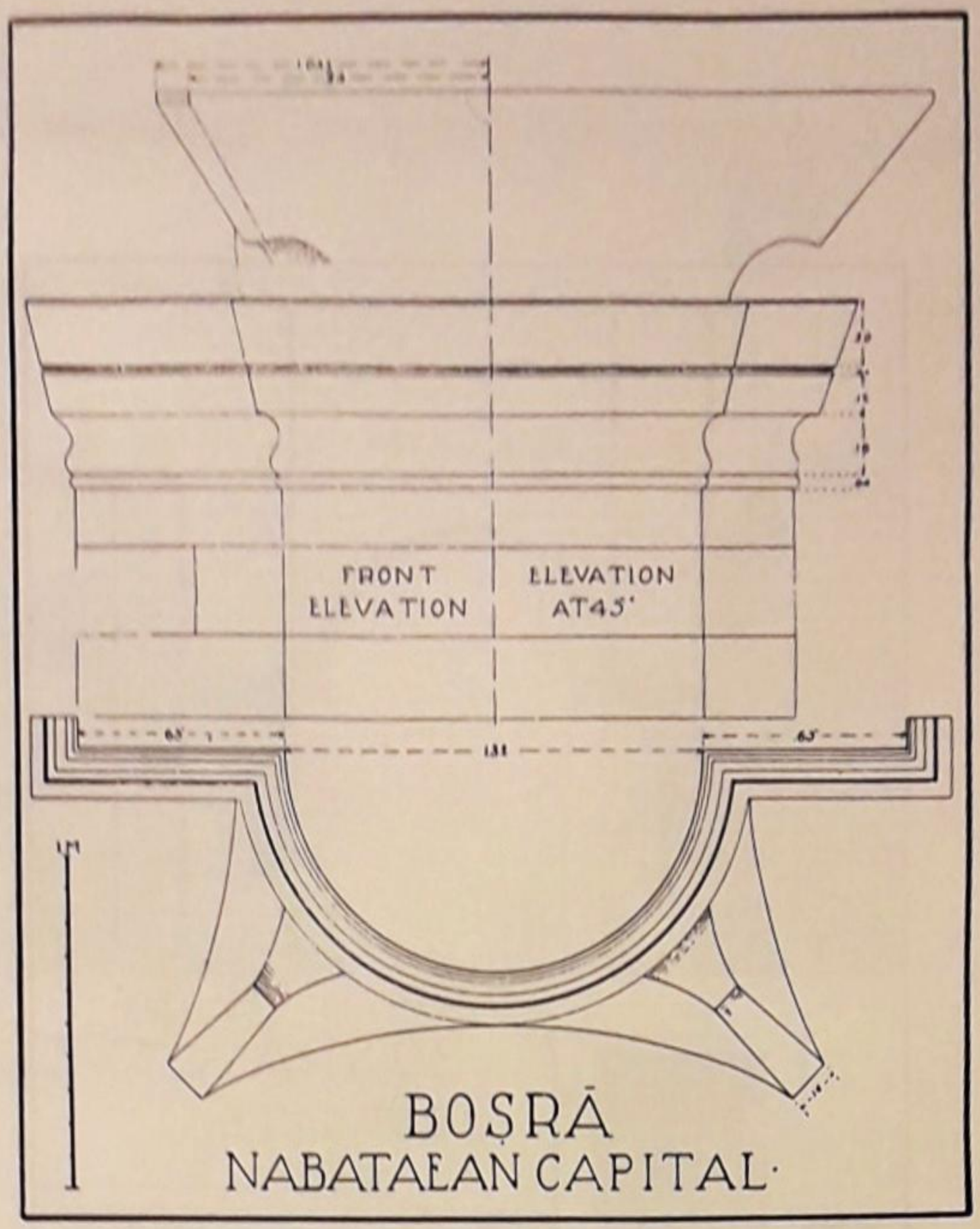


Fig. 113. Bostra, Nabatean Capital.

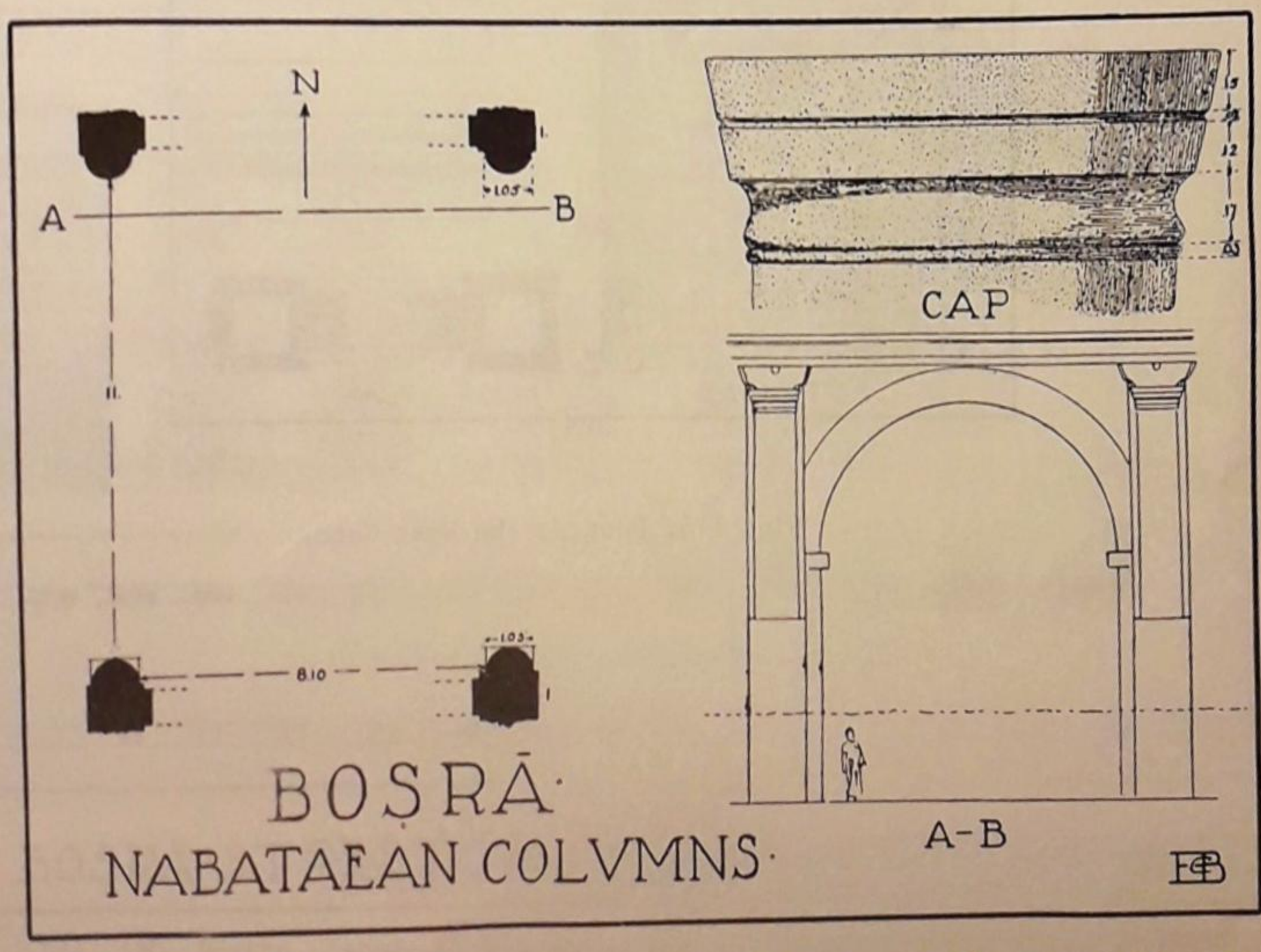


Fig. 114. Bostra, four pillars decorated with engaged columns and Nabatean capitals.

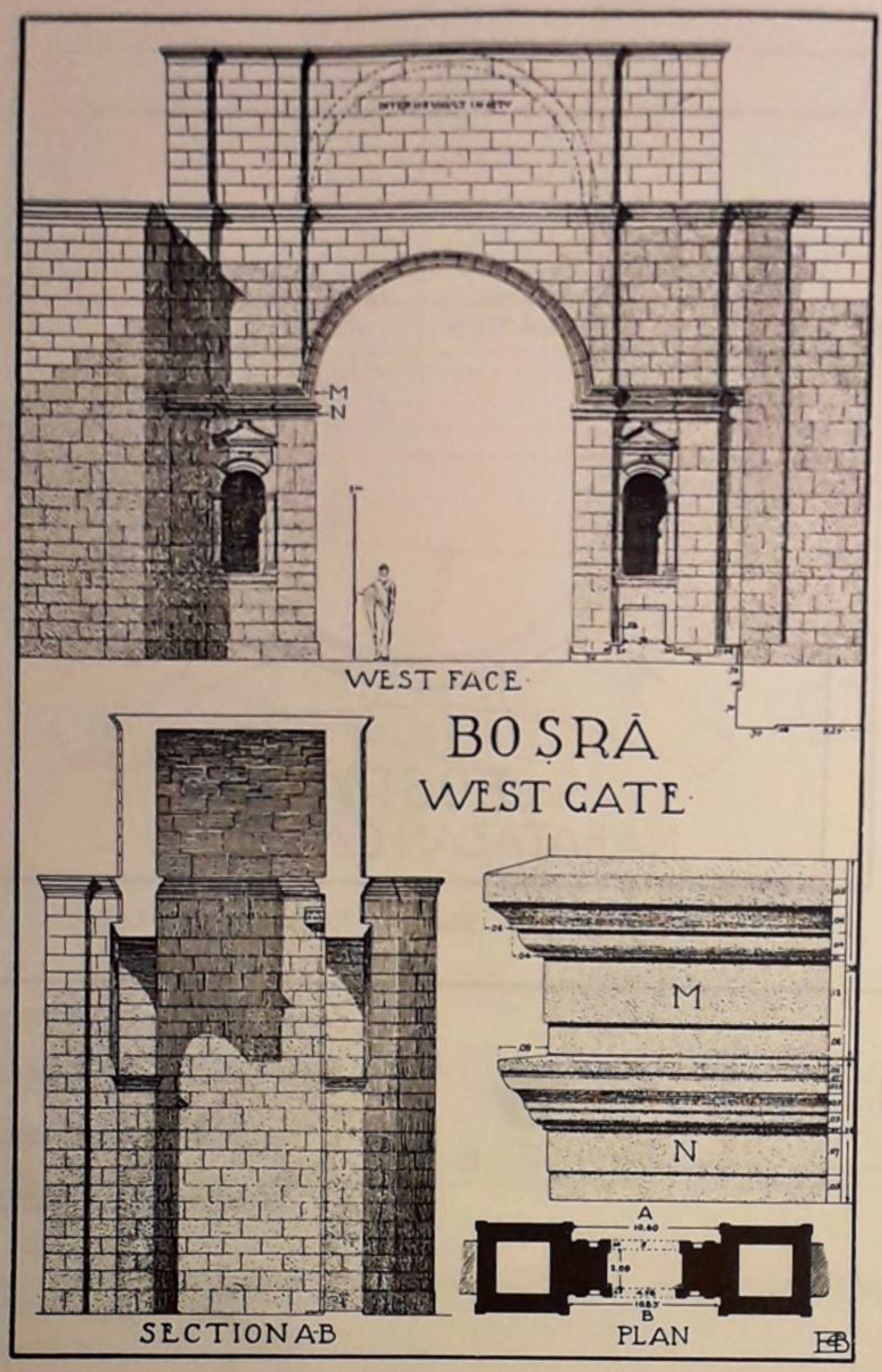


Fig. 115. Bostra, the West Gate.

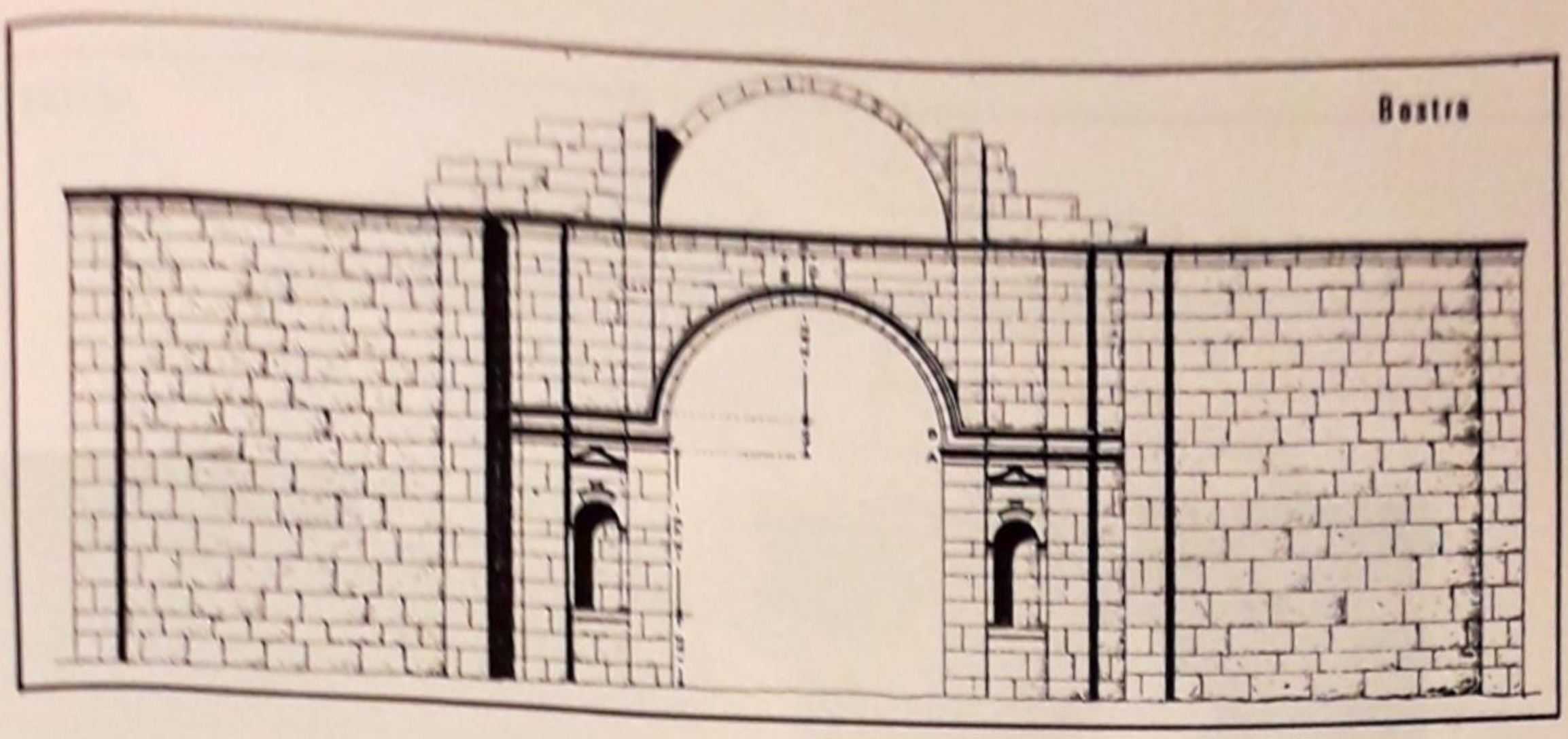


Fig. 116. Bostra, the West Gate.

Fig. 117. Bostra, the West Gate, photograph from early 70's.

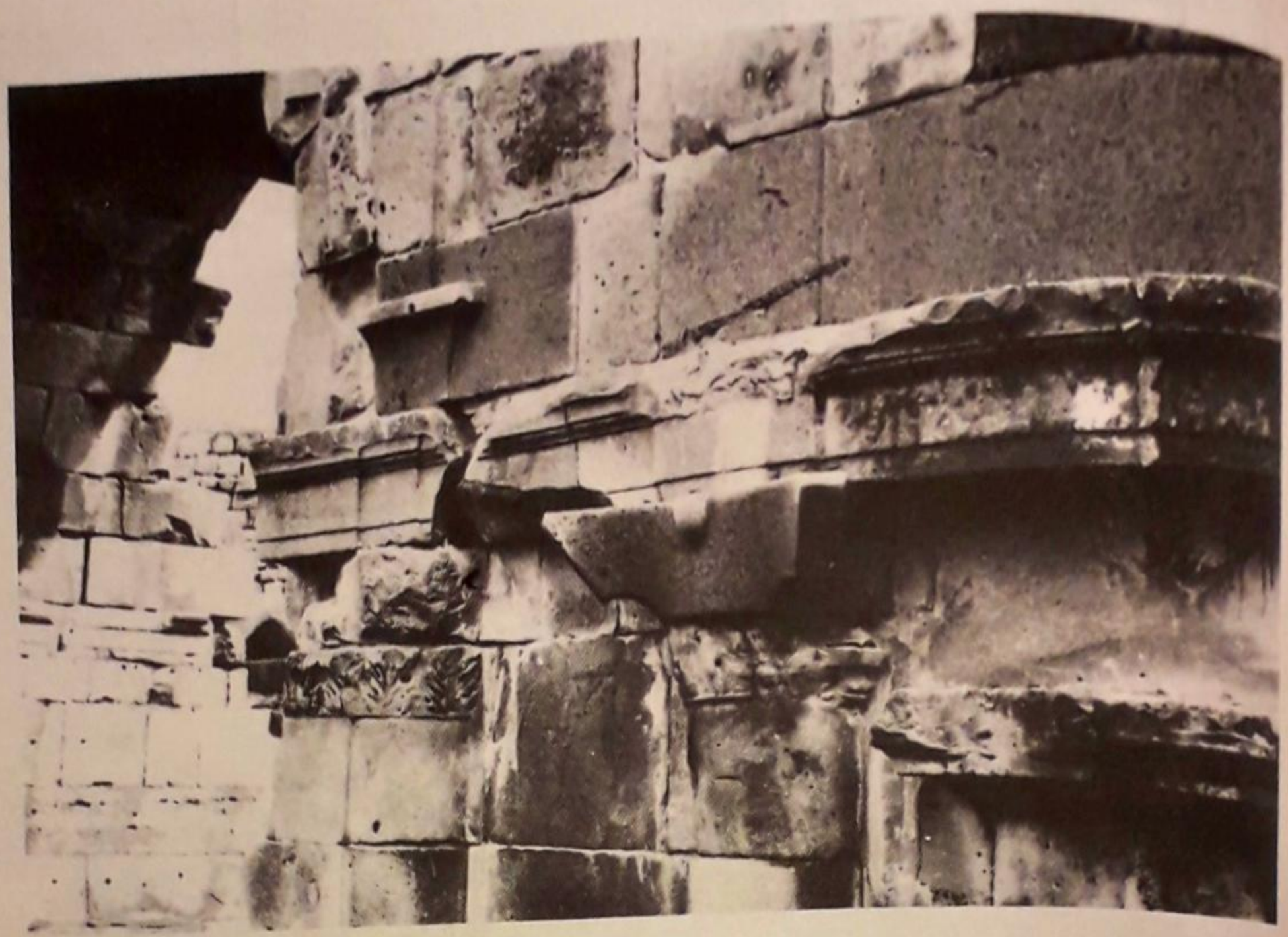


Fig. 118. Bostra, the West Gate, section of the facade.

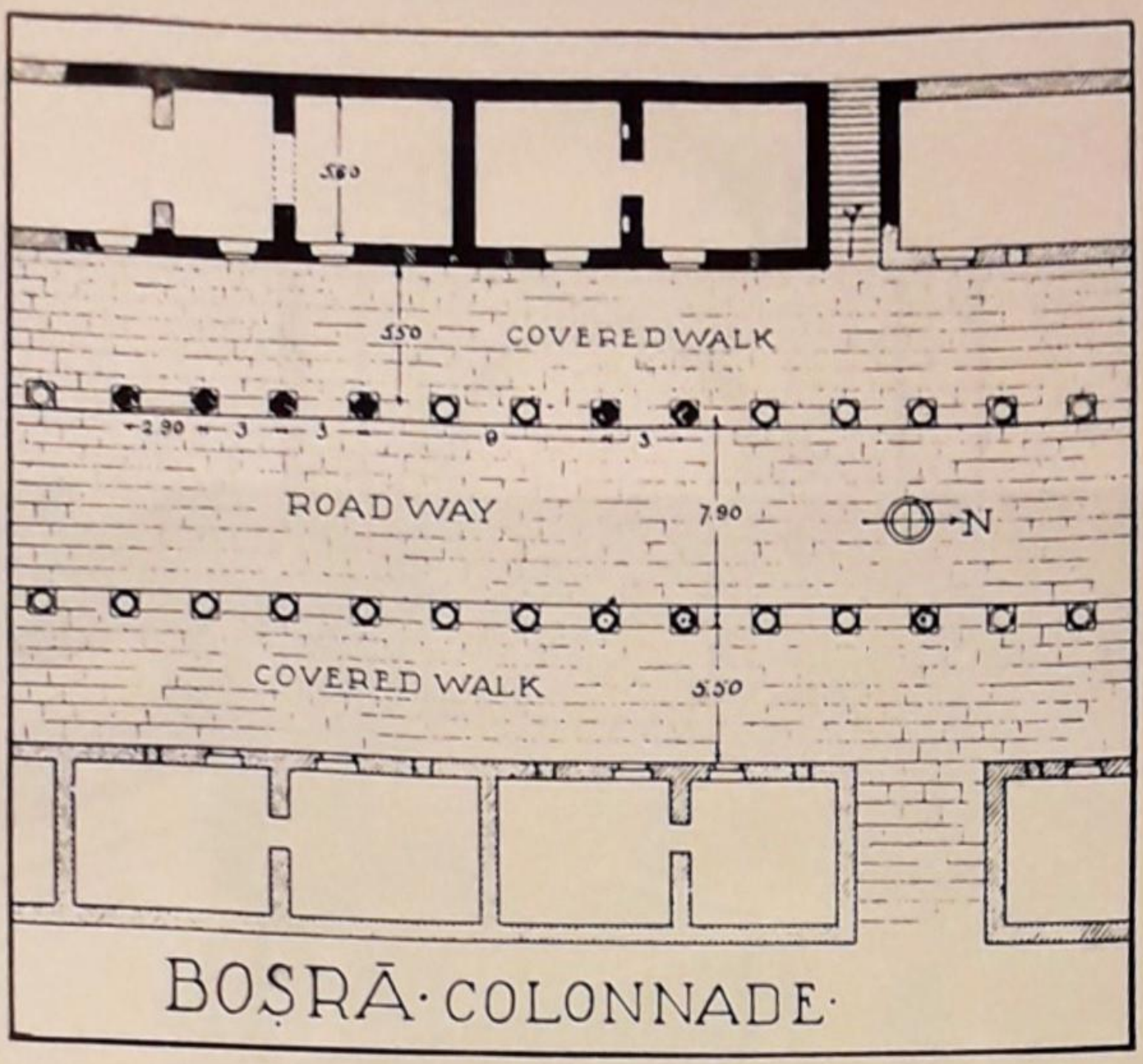


Fig. 119. Bostra, section of the colonnade street.

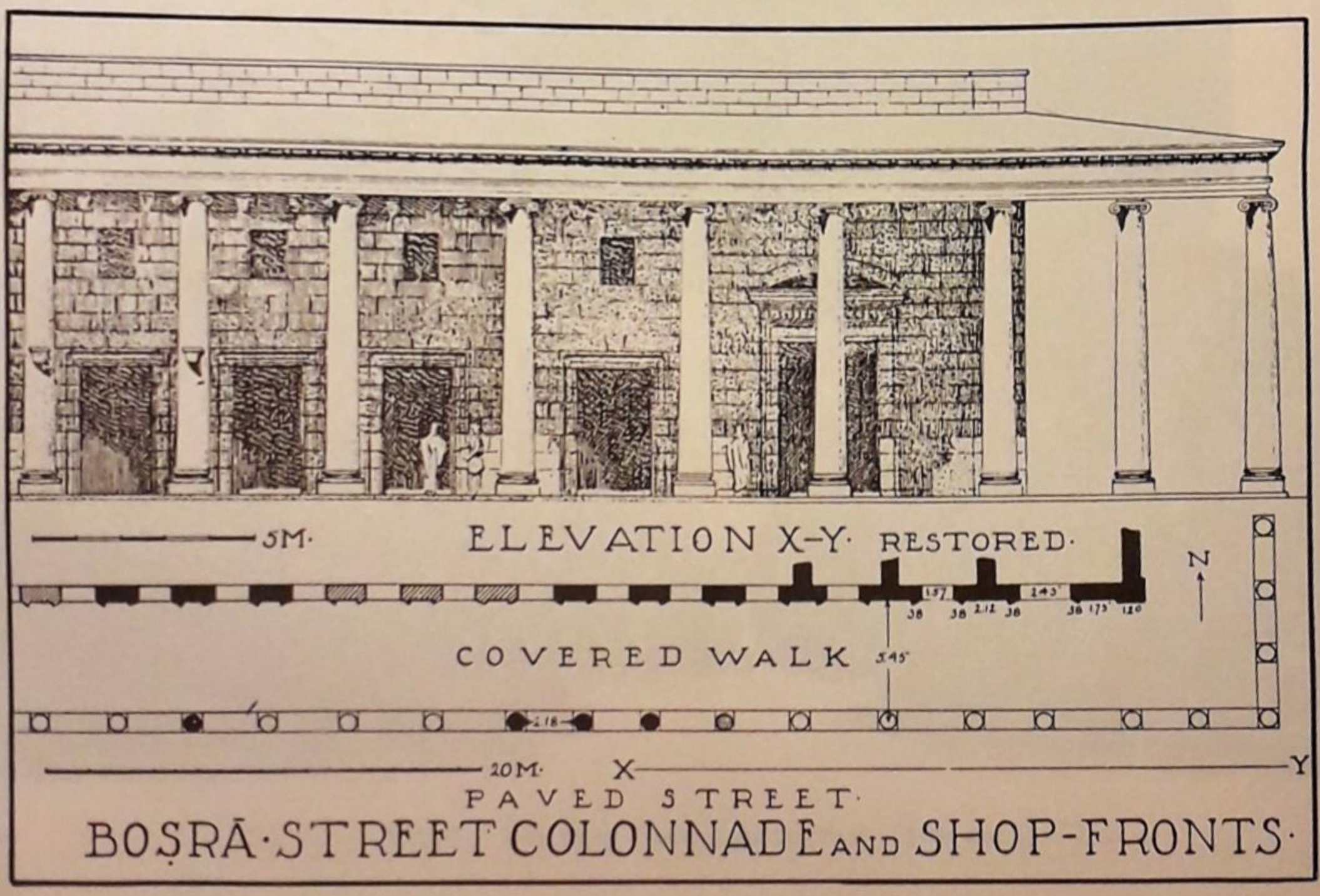


Fig. 120. Bostra, facade of the shops along the colonnade street, proposed reconstruction.

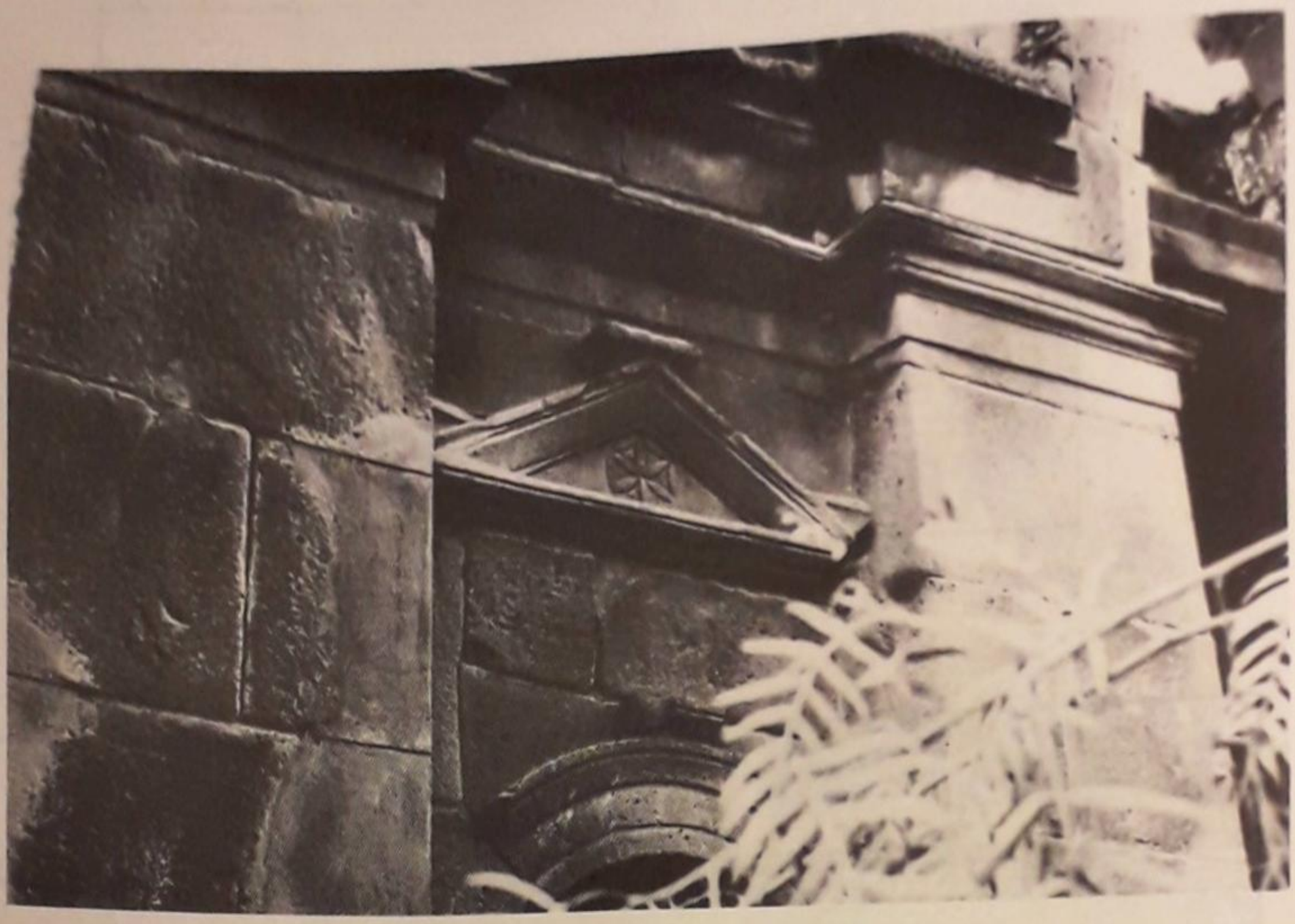


Fig. 121. Bostra, the East Triumphal Arch, section of the facade, photograph from early 70's.

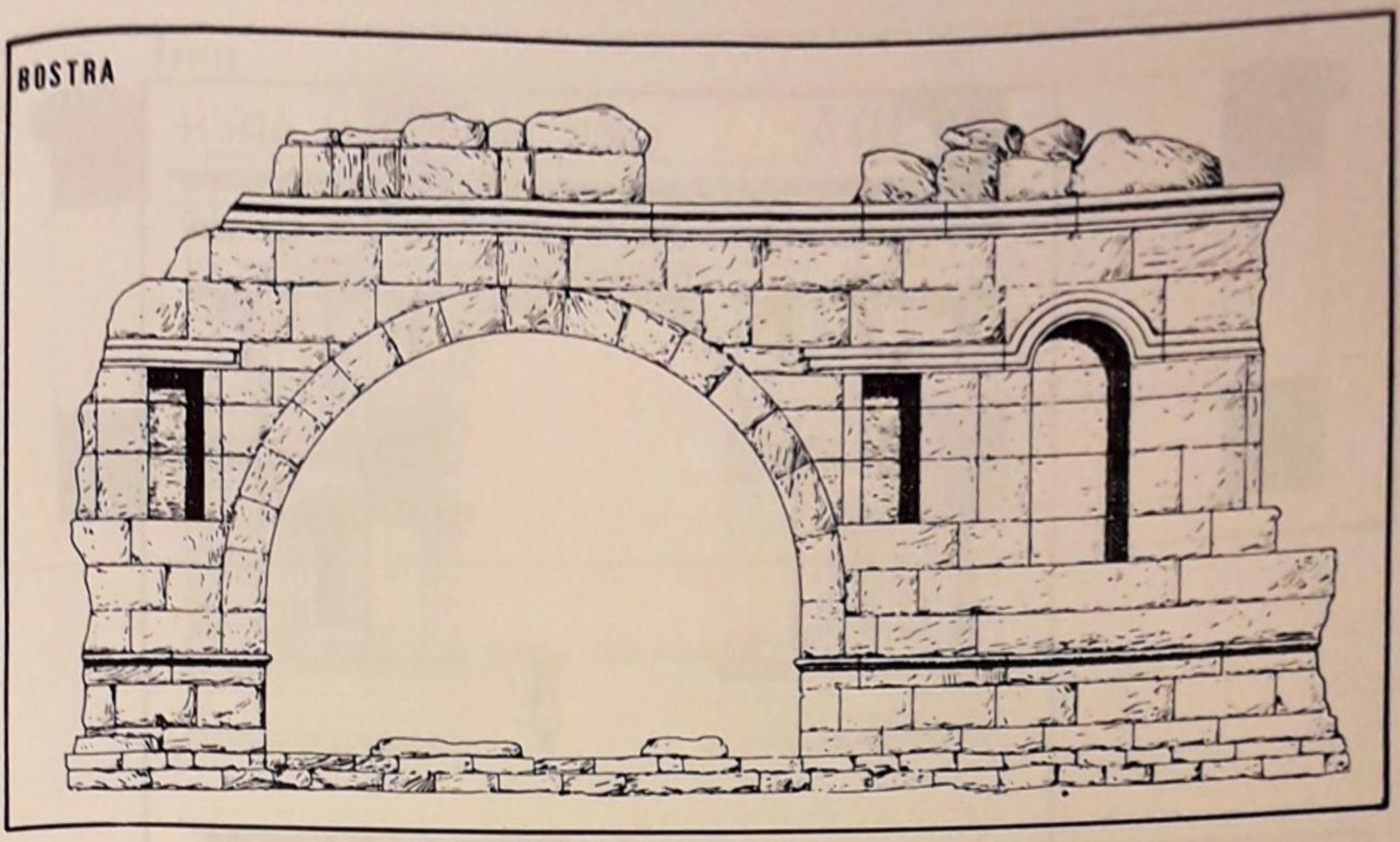


Fig. 122. Bostra, the East Triumphal Arch.

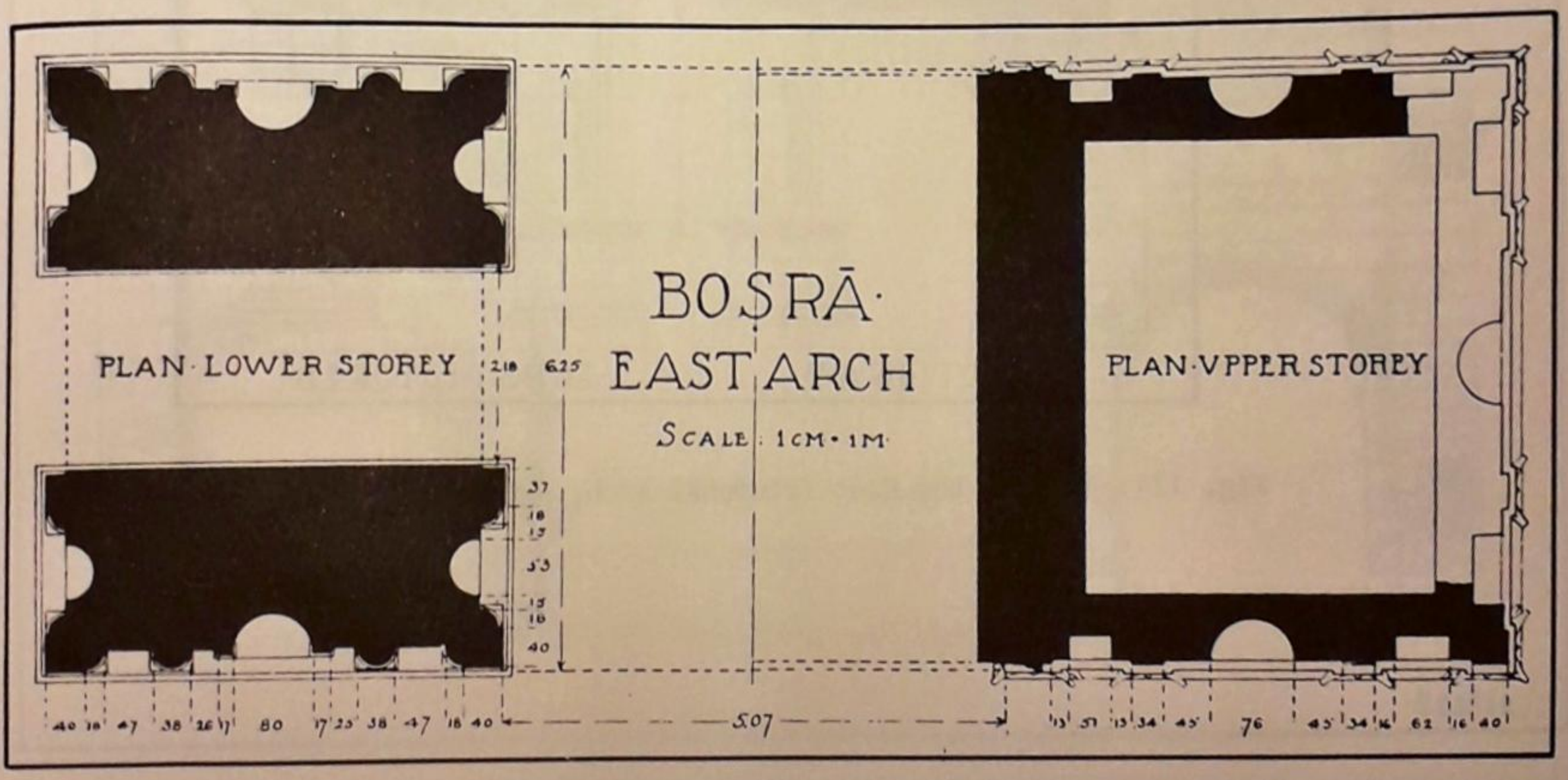


Fig. 123. Bostra, the East Triumphal Arch.

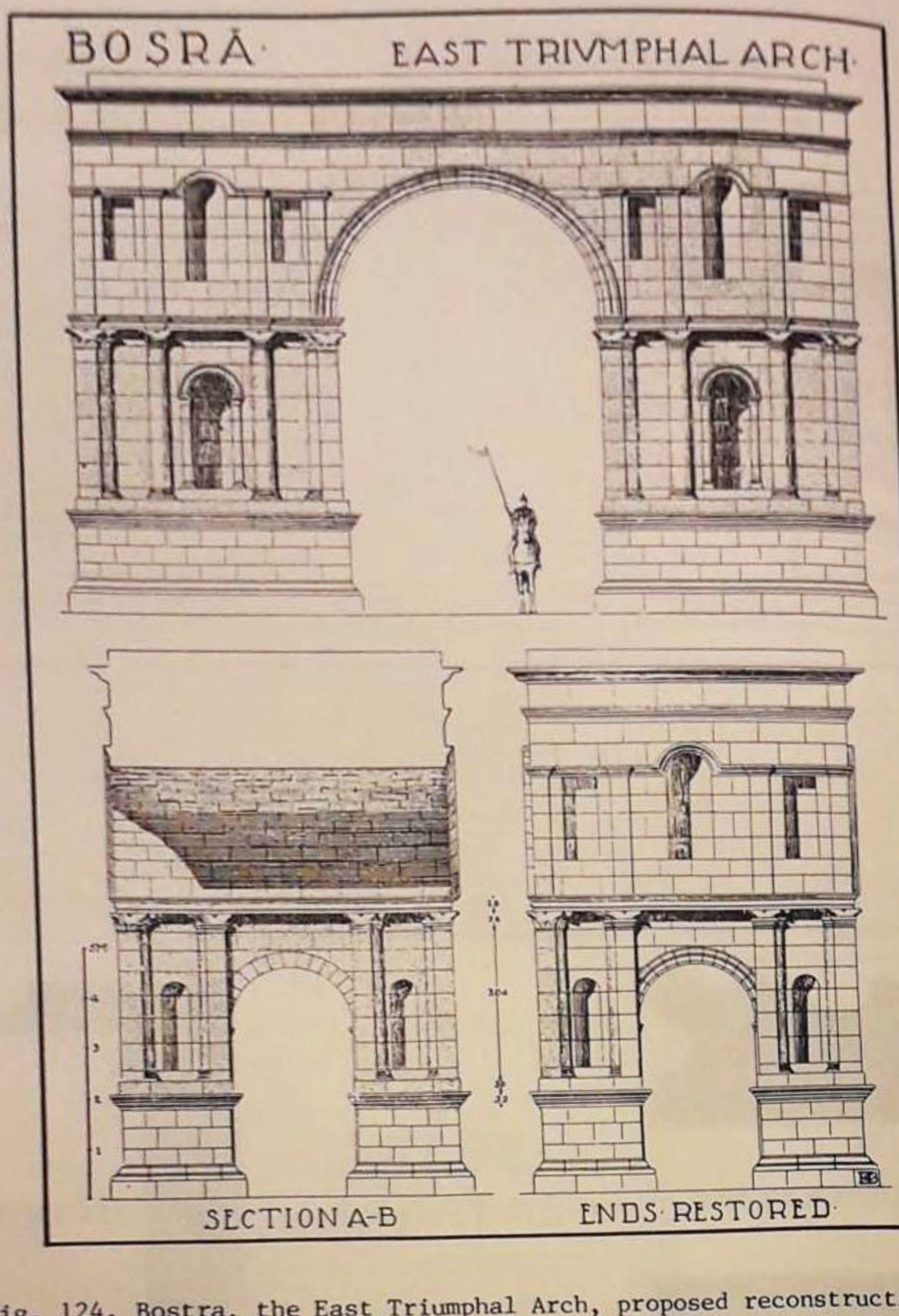


Fig. 124. Bostra, the East Triumphal Arch, proposed reconstruction.

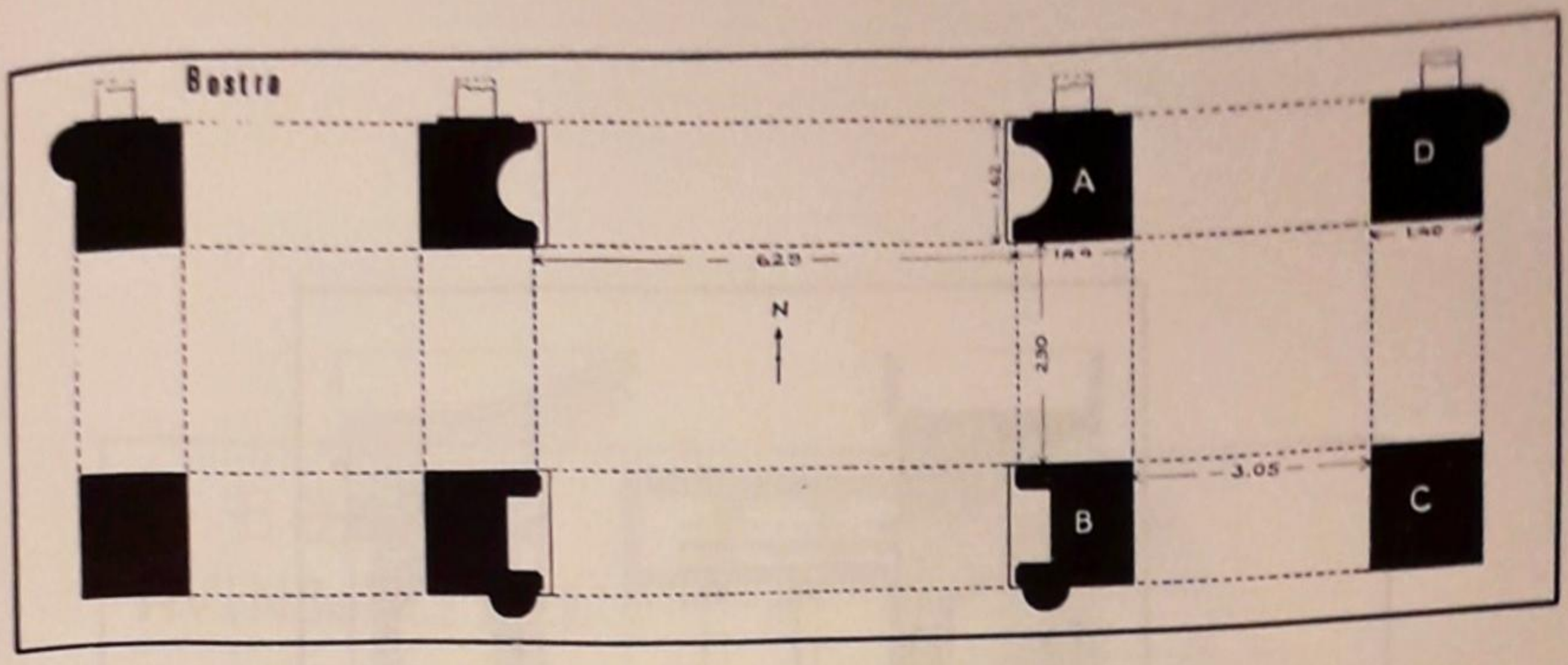


Fig. 125. Bostra, the Central Triumphal Arch.

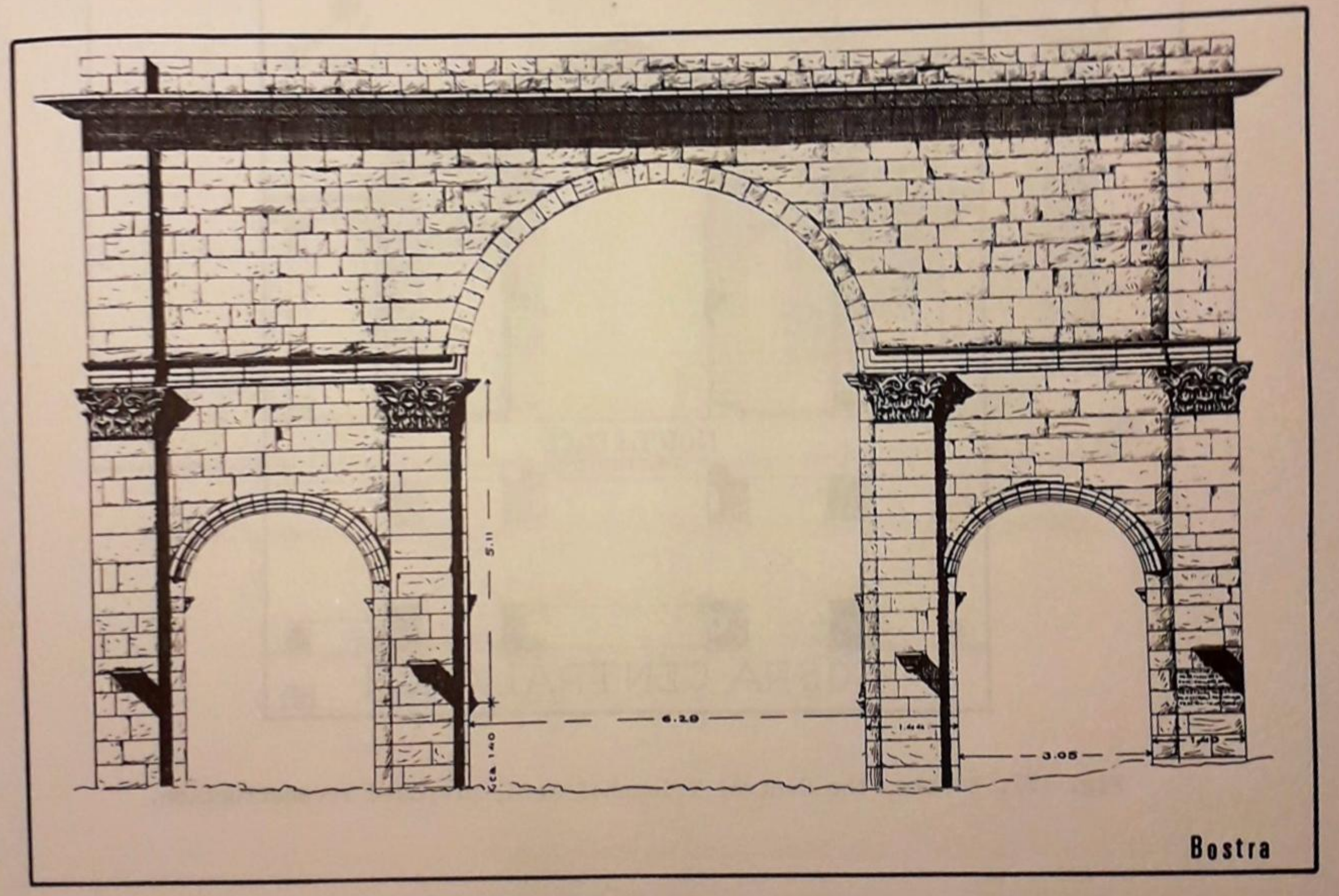


Fig. 126. Bostra, the Central Triumphal Arch, photographed in c.1900.

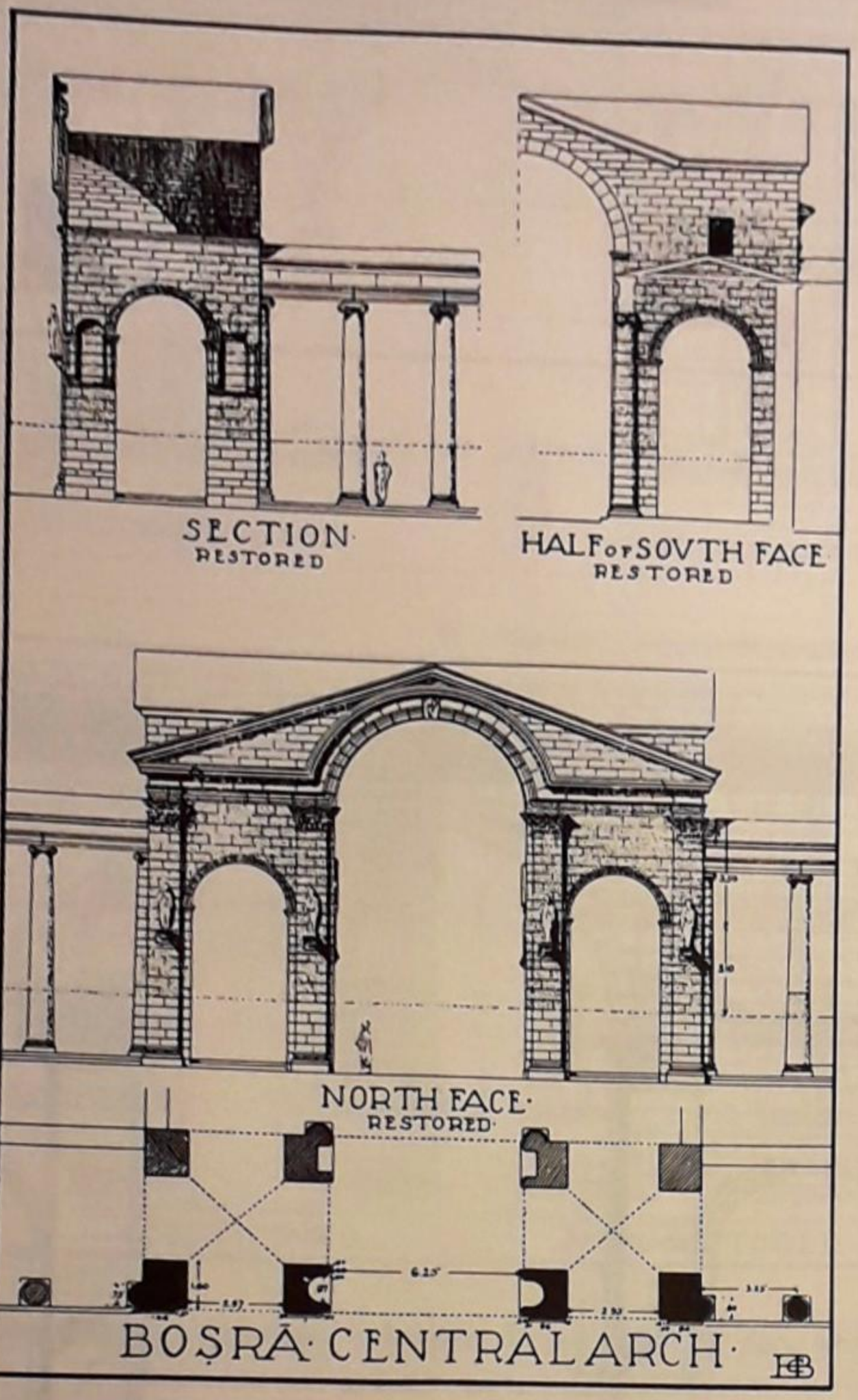


Fig. 127. Bostra, the Central Triumphal Arch, proposed reconstruction.

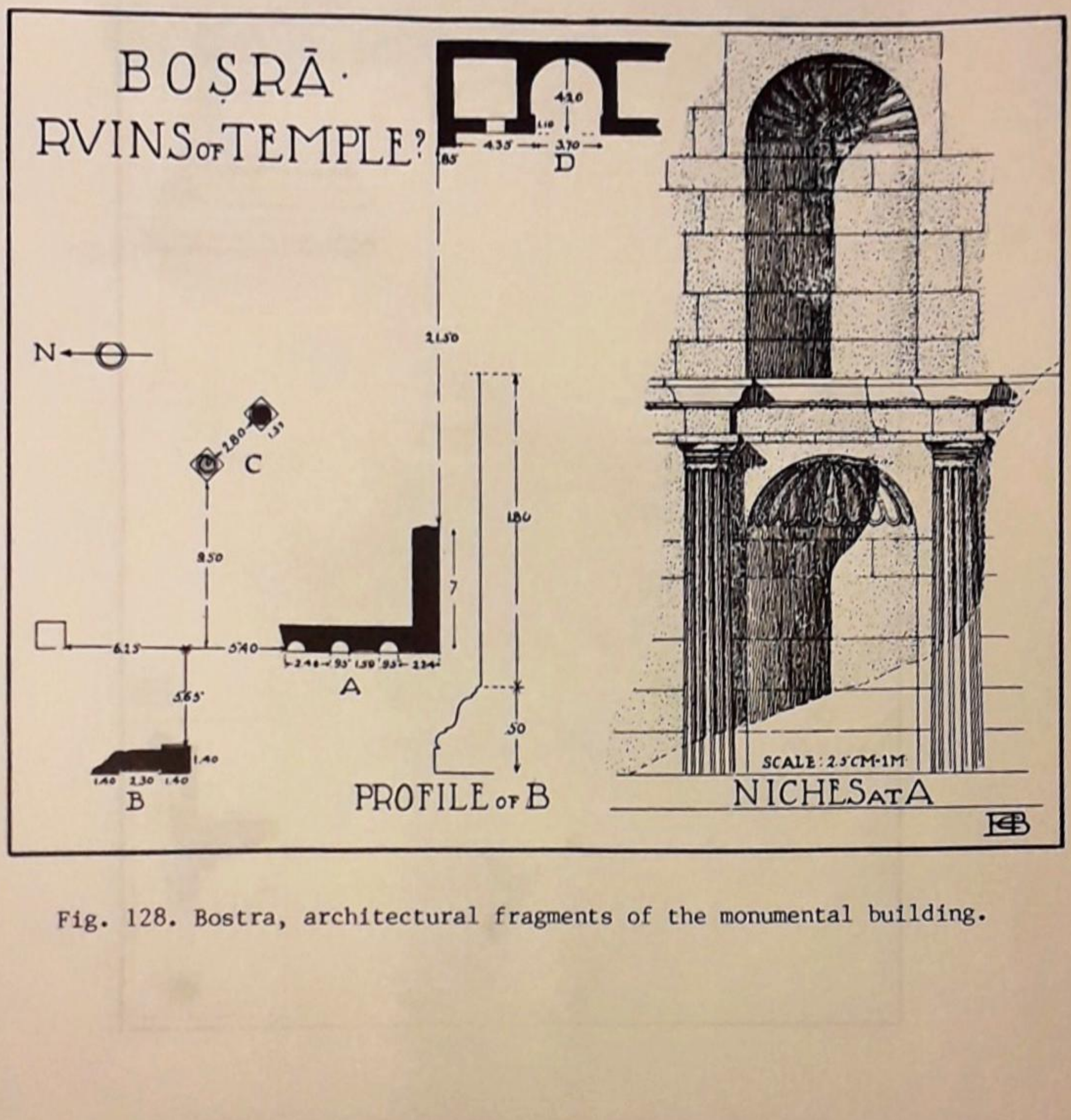


Fig. 128. Bostra, architectural fragments of the monumental building.

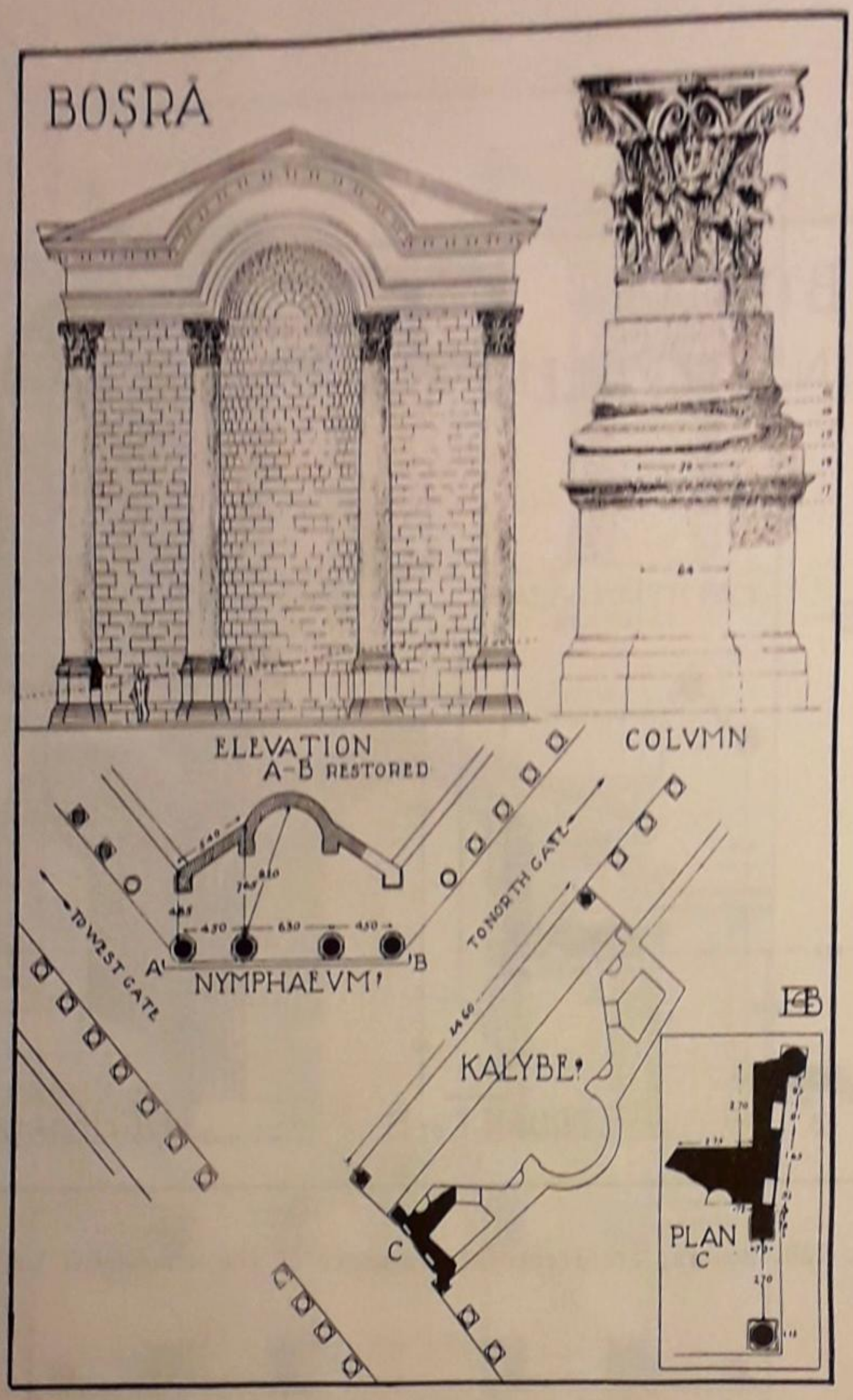


Fig. 129. Bostra, the Nymphaeon and the "Kalybe".

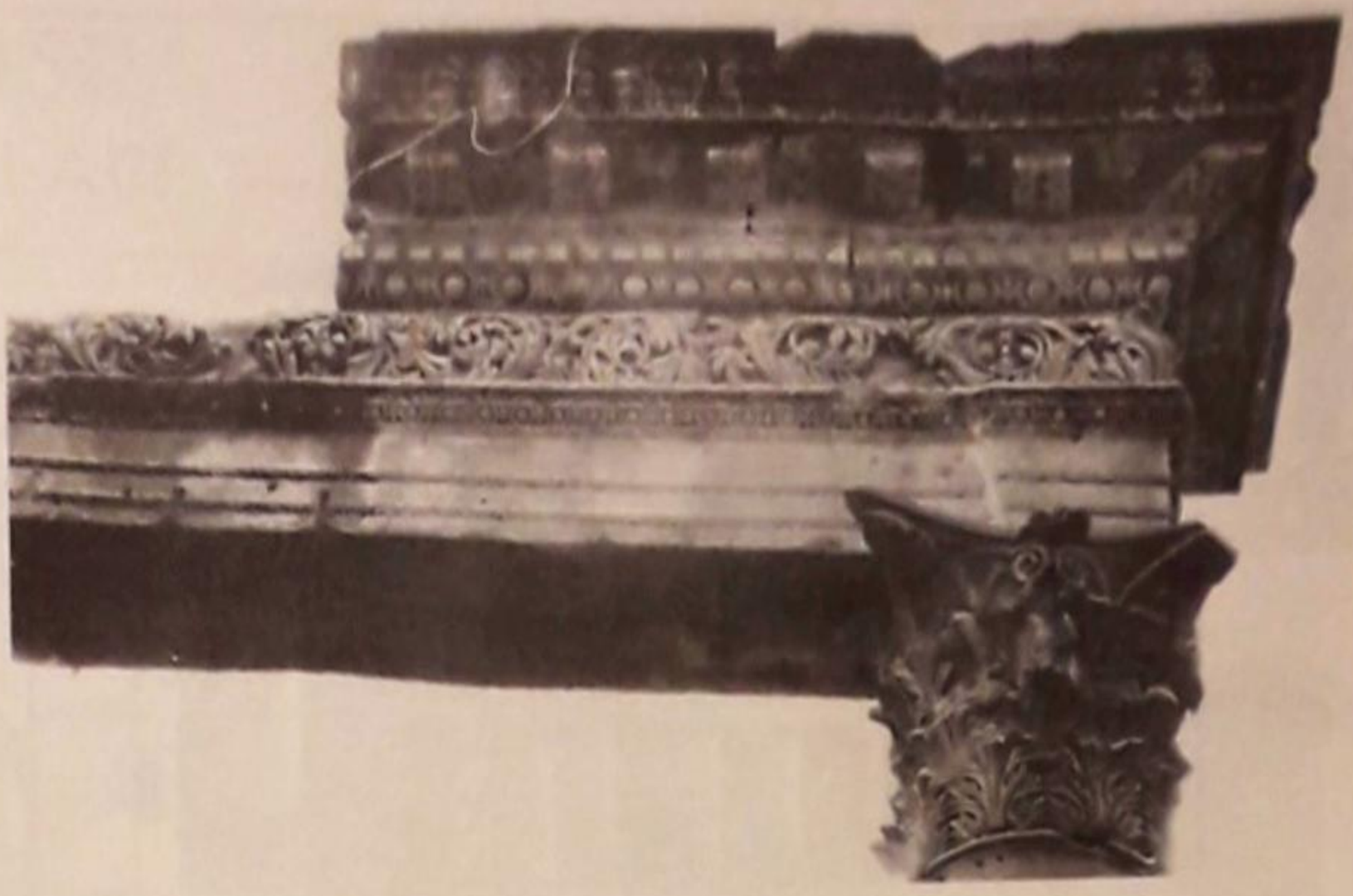


Fig. 130. Bostra, the "Kalybe", section of the architrave and one of the corinthian capitals.

Fig. 131. Bostra, the "Kalybe", a corinthian capital.

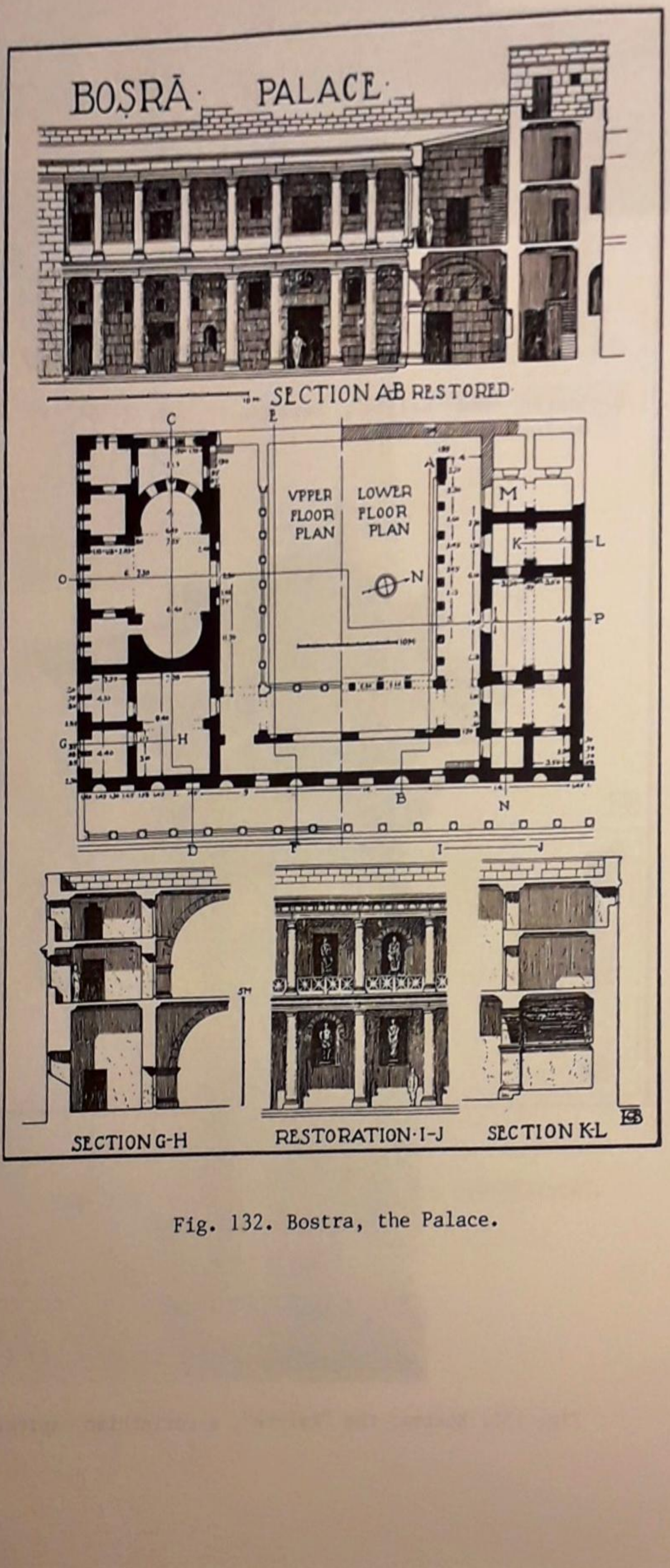


Fig. 132. Bostra, the Palace.

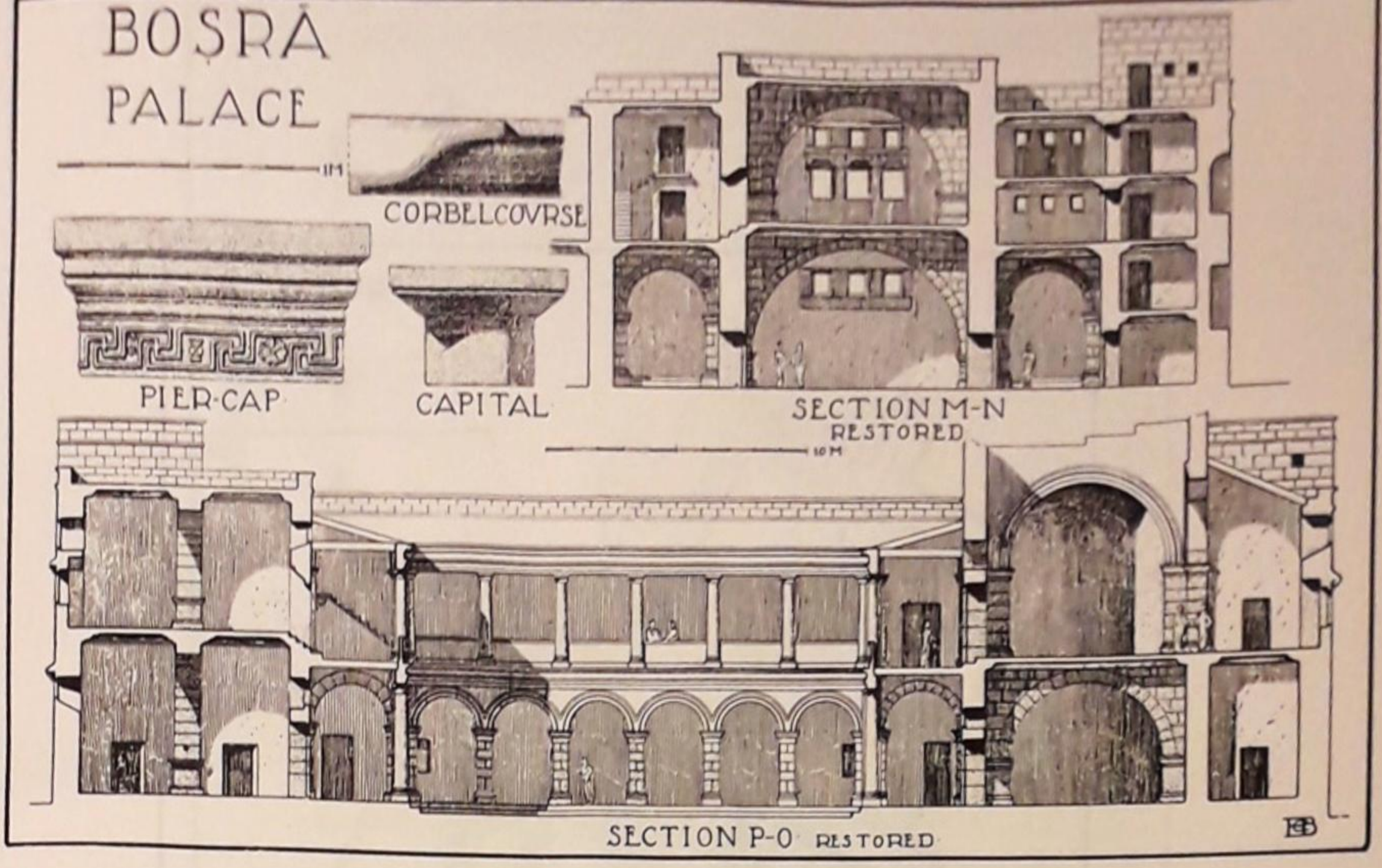


Fig. 133. Bostra, the Palace.

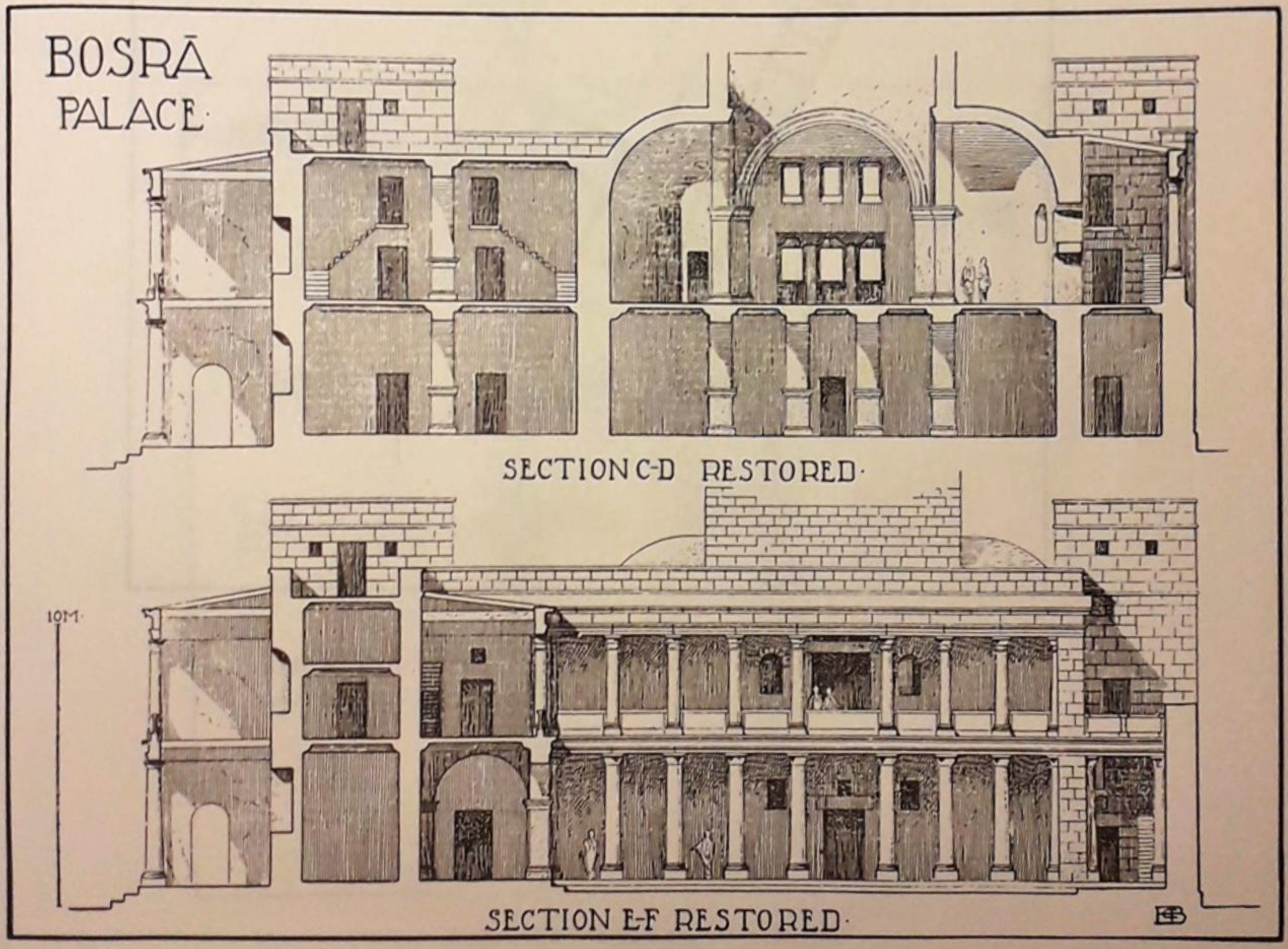


Fig. 134. Bostra, the Palace.

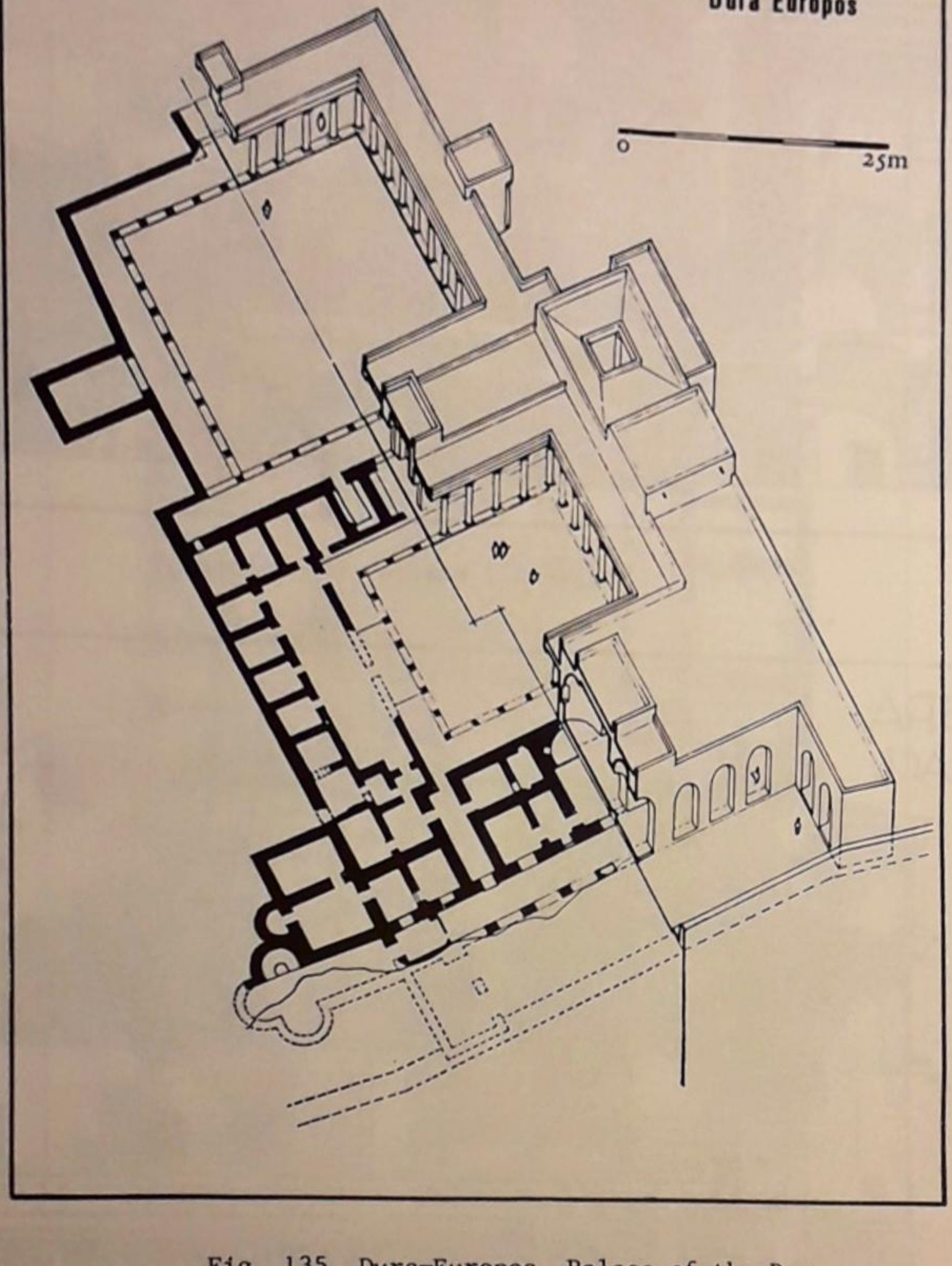


Fig. 135. Dura-Europos, Palace of the Dux.

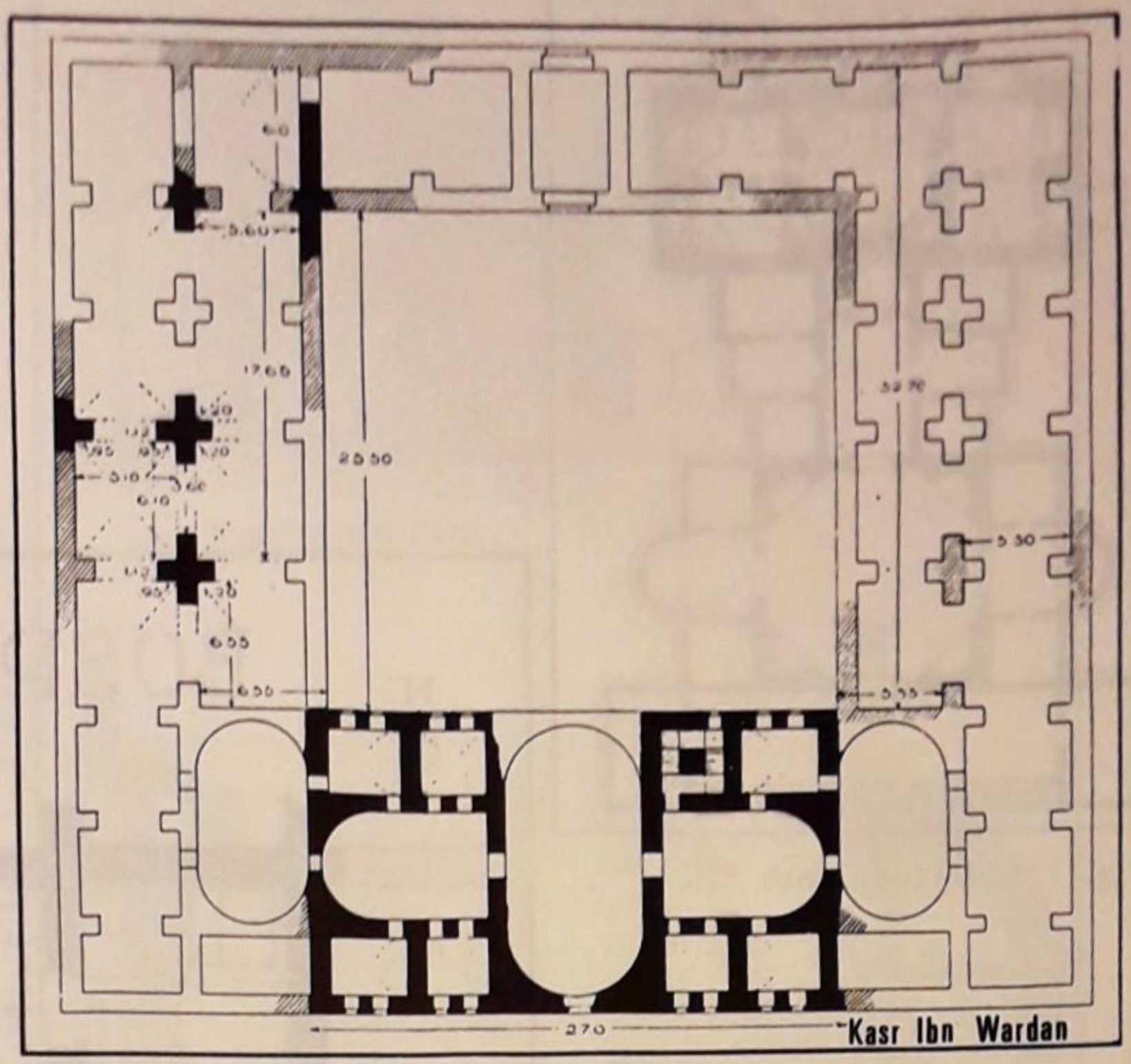


Fig. 136. Kasr Ibn Wardan, the Palace.

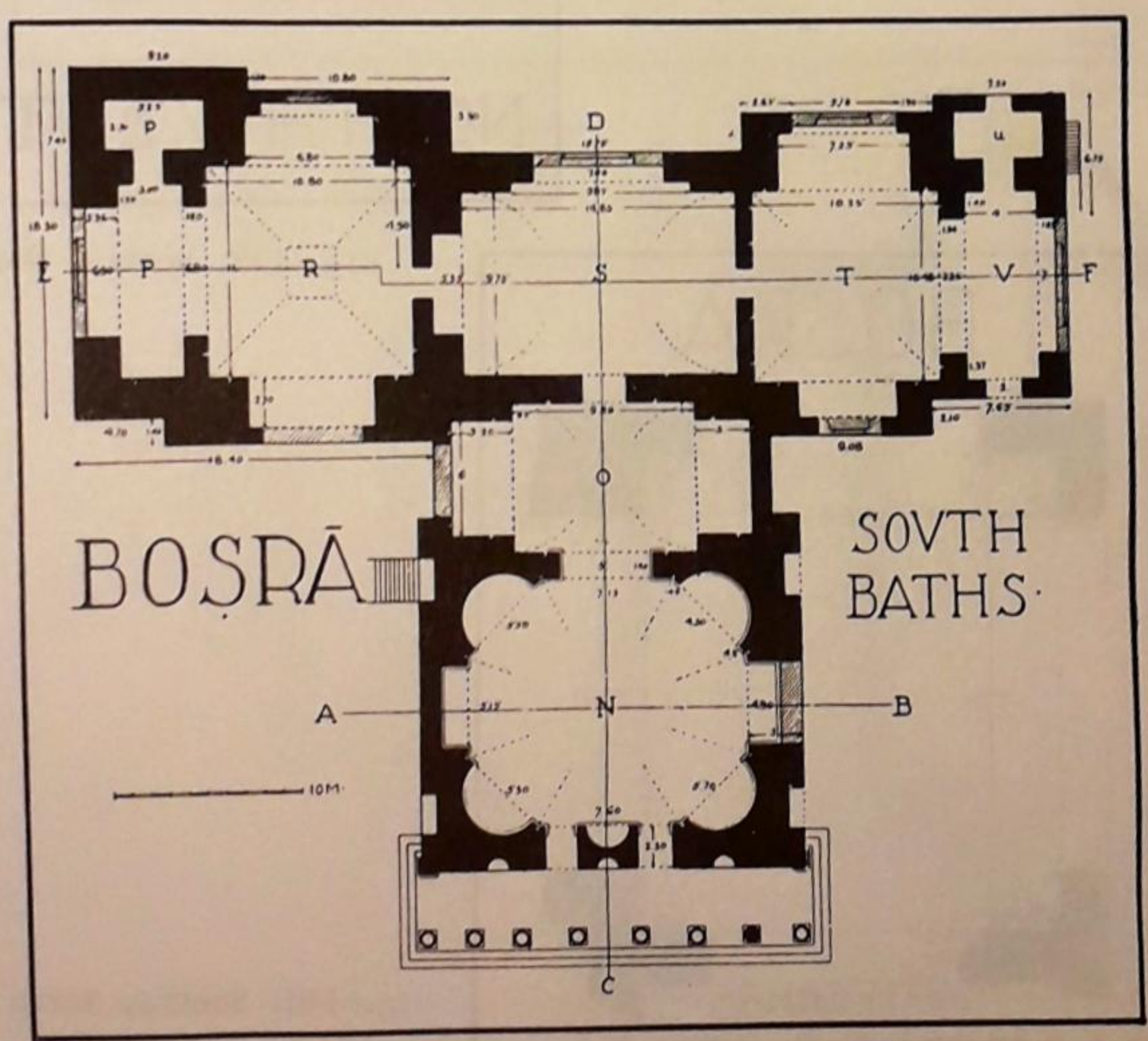


Fig. 137. Bostra, the South Bath.

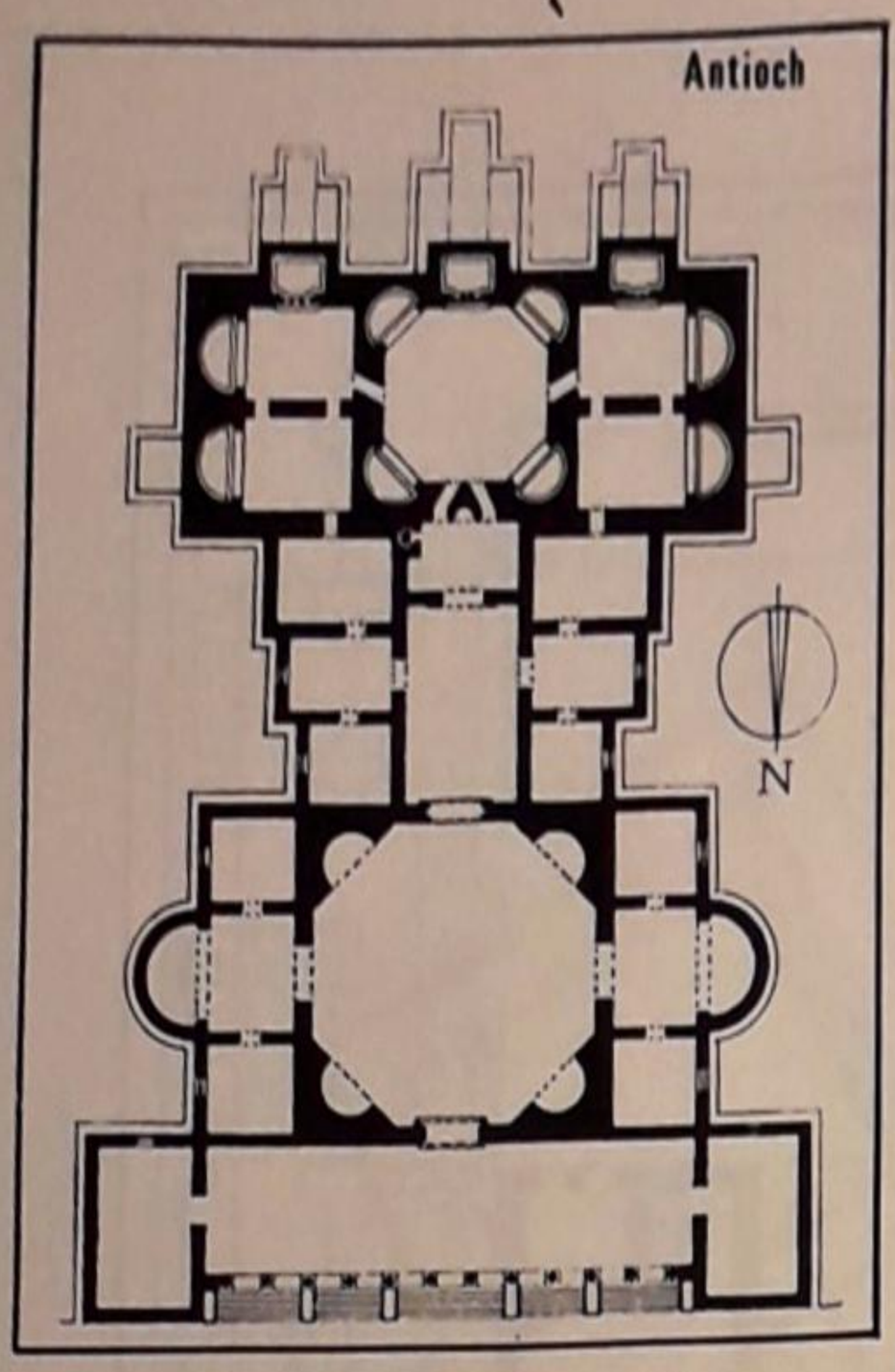


Fig. 138. Antioch, Bath "C".

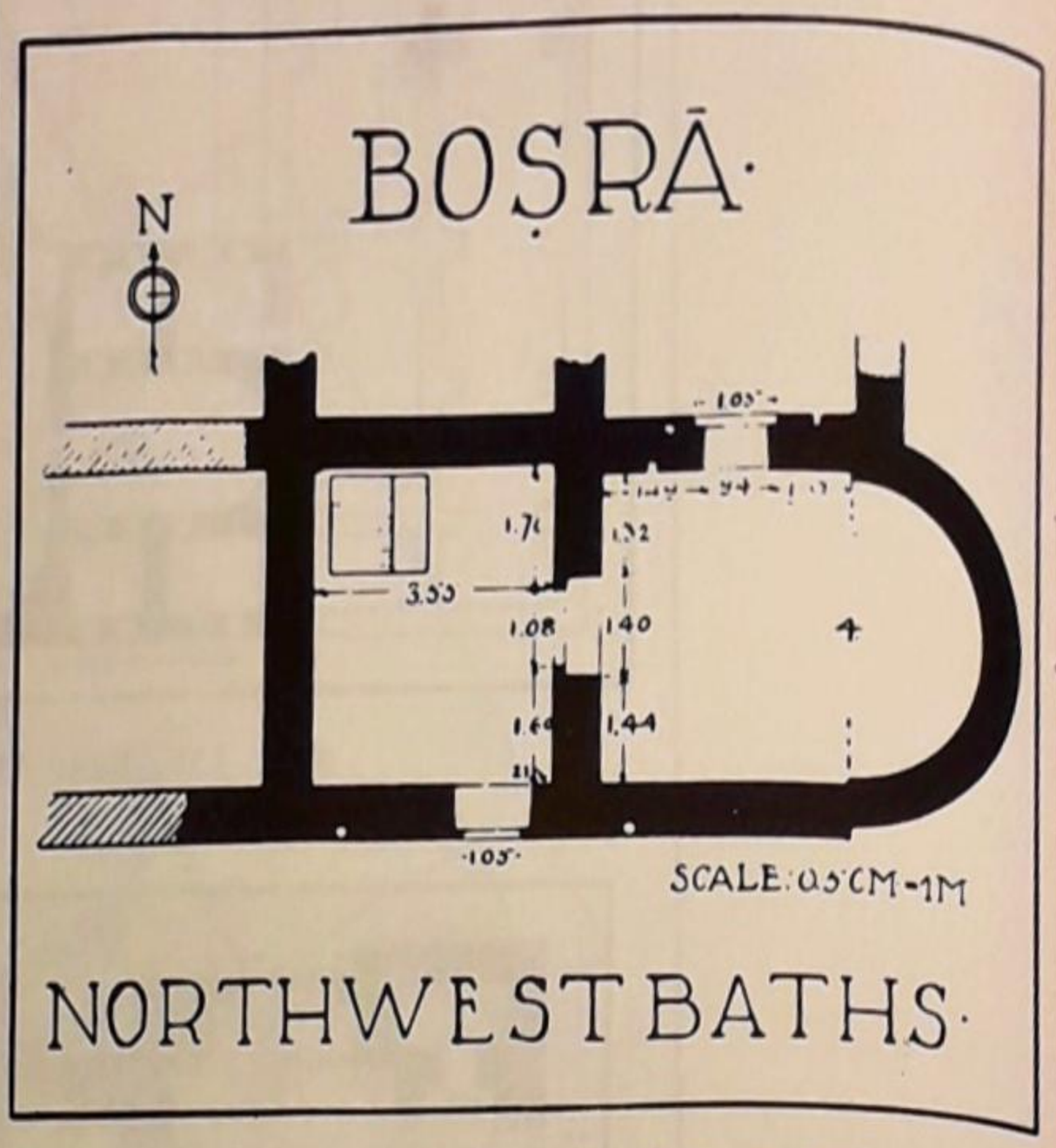


Fig. 139. Bostra, North-West Bath.

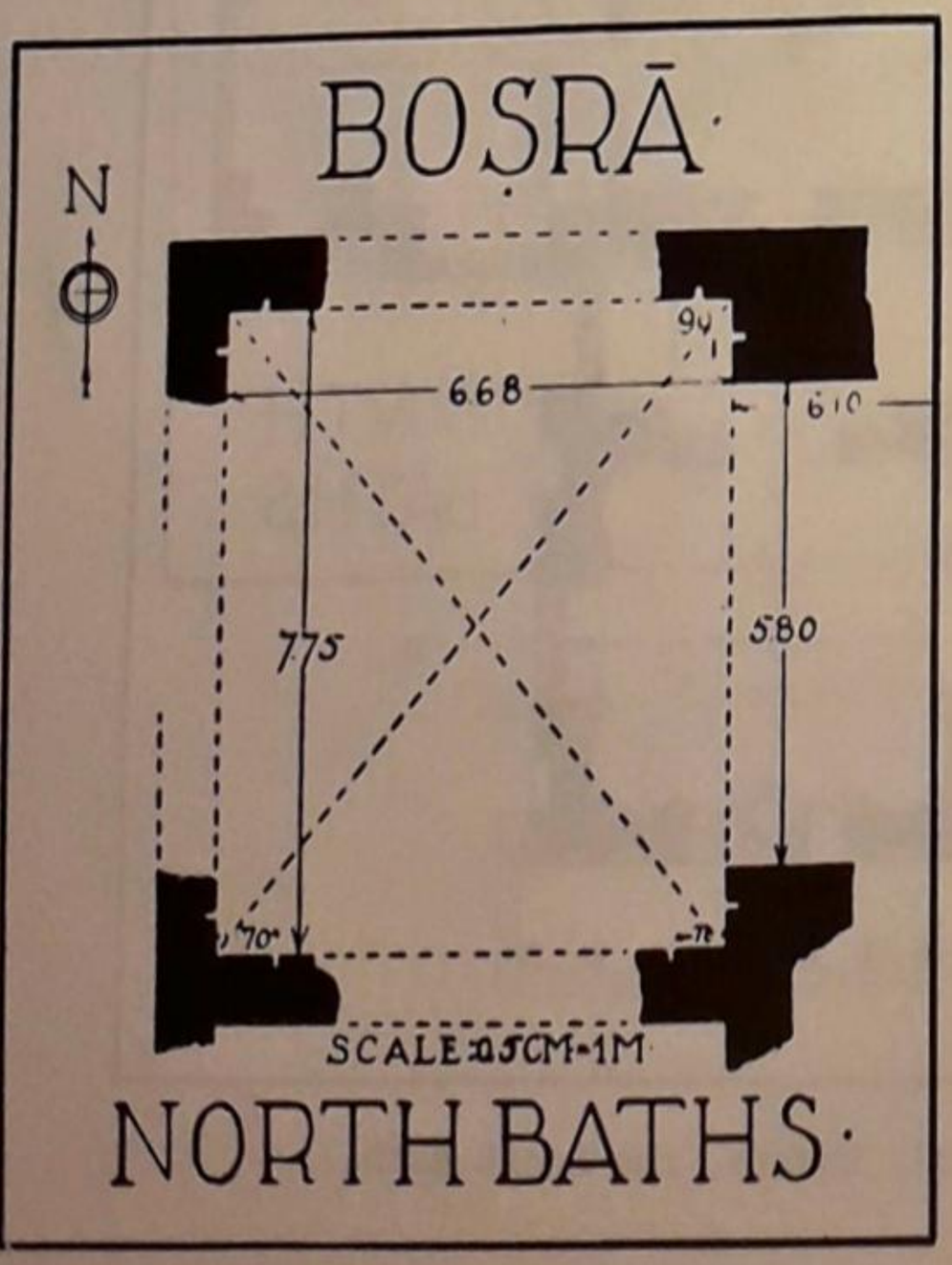


Fig. 140. Bostra, North Bath.

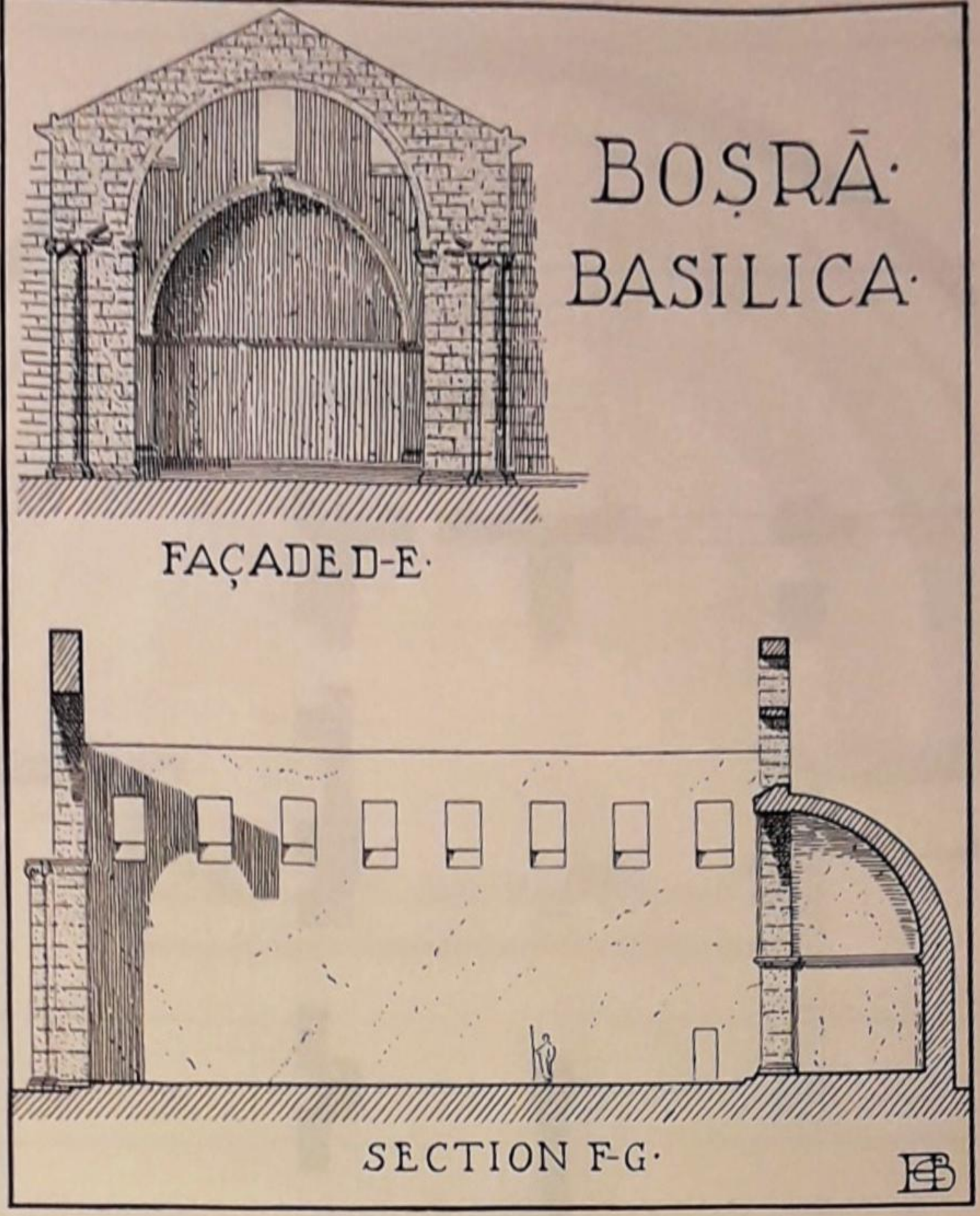


Fig. 141. Bostra, the Basilica.

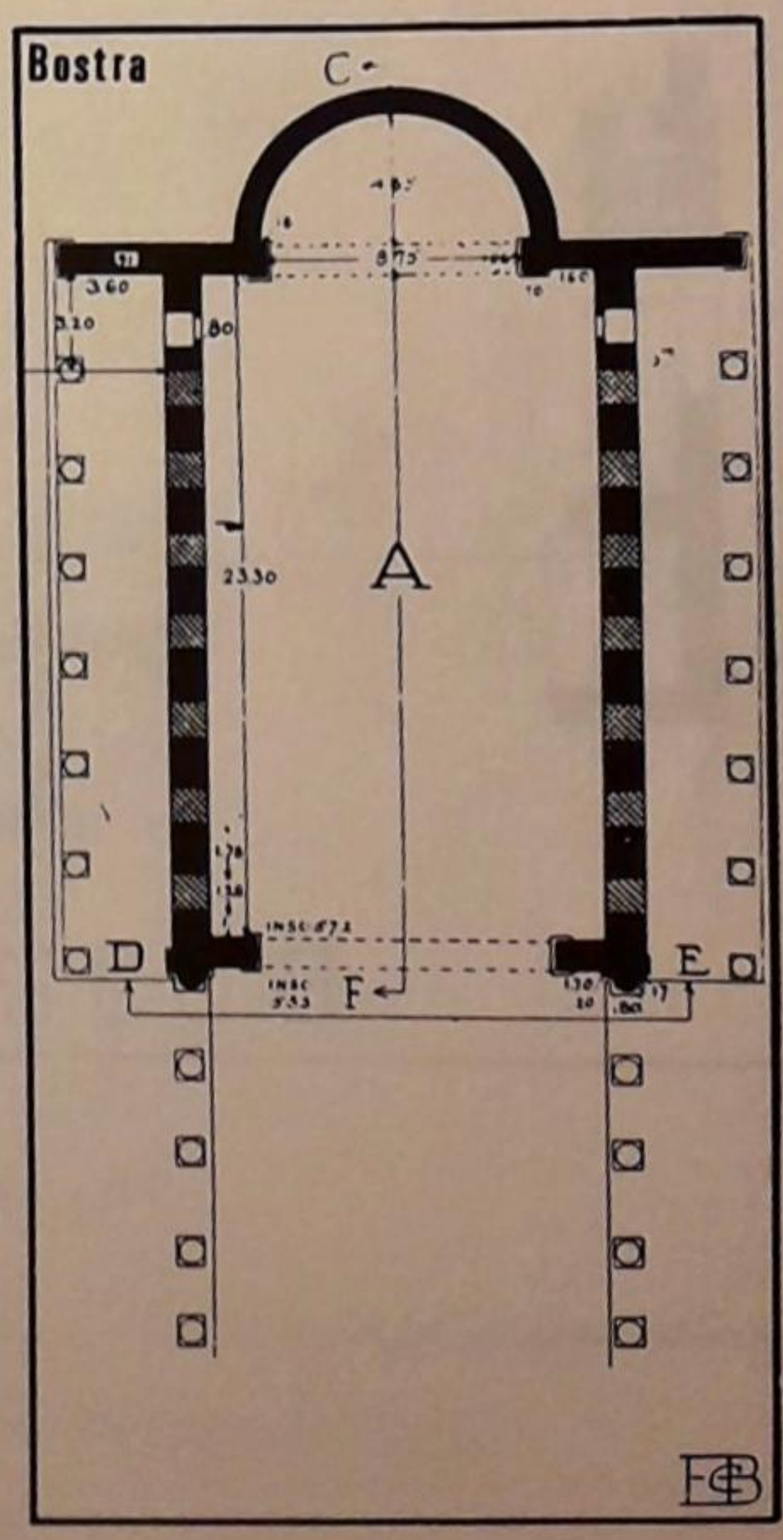


Fig. 142. Bostra, the Basilica.

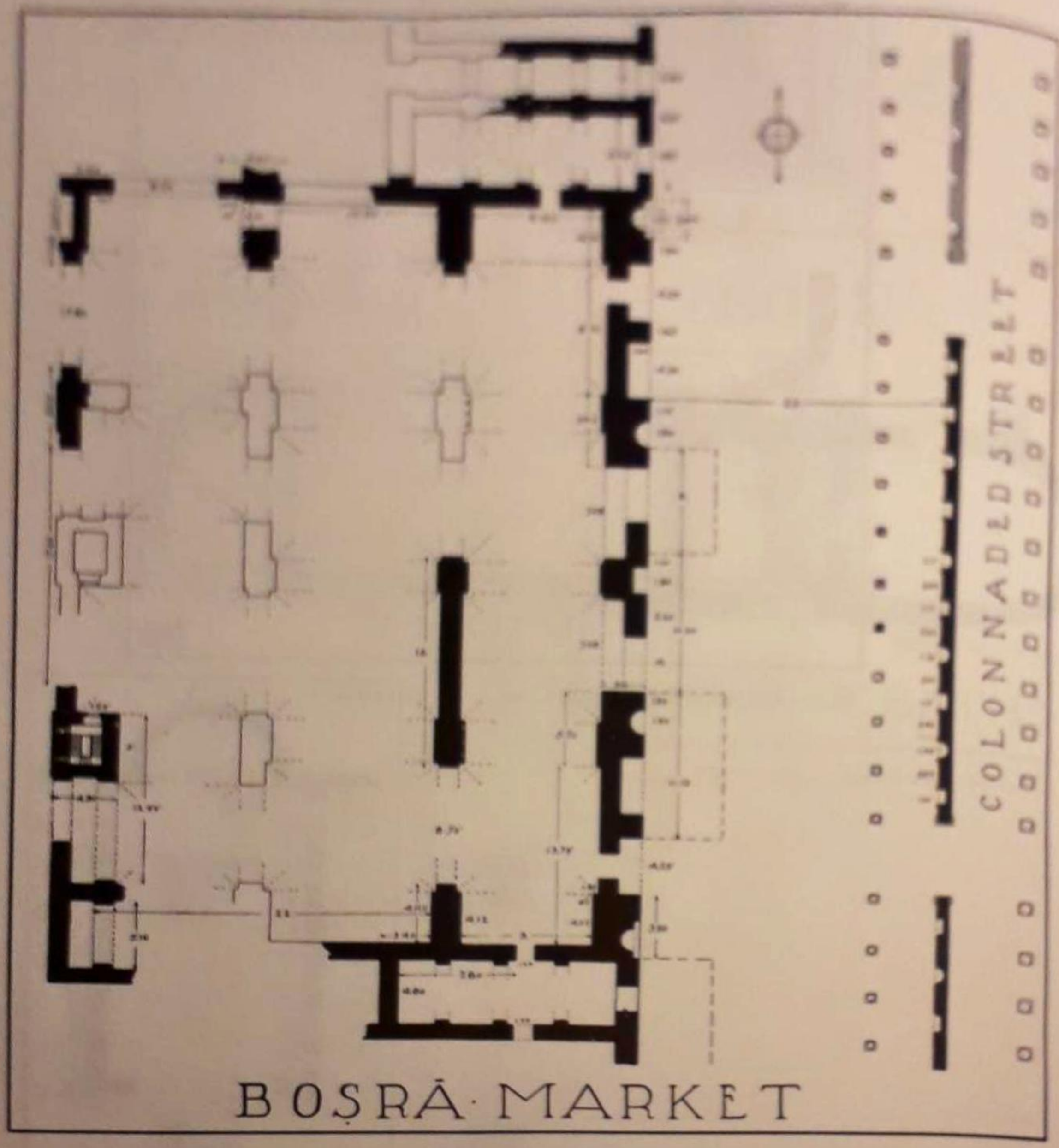


Fig. 143. Bostra, section of the Forum.

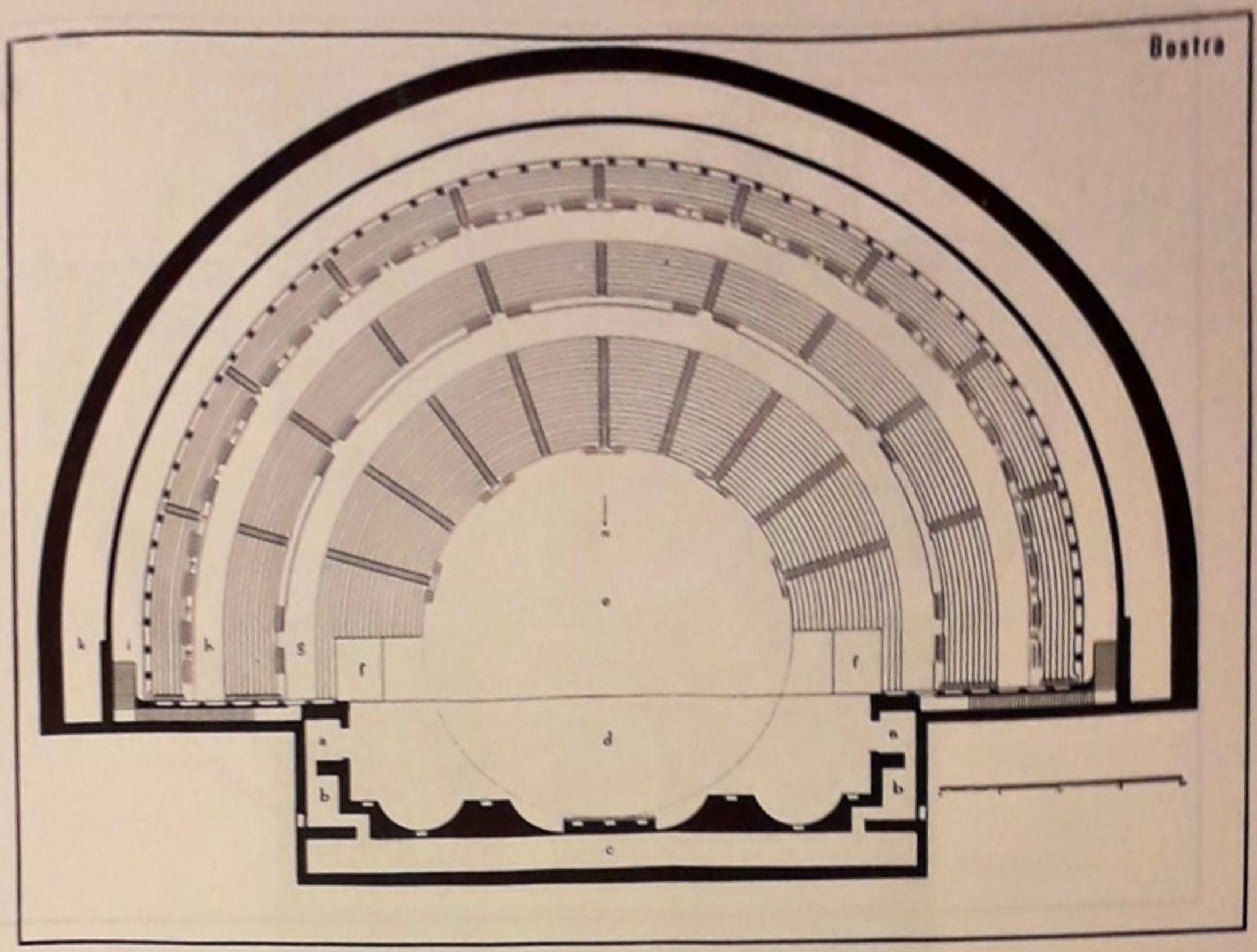


Fig. 144. Bostra, the Theatre.

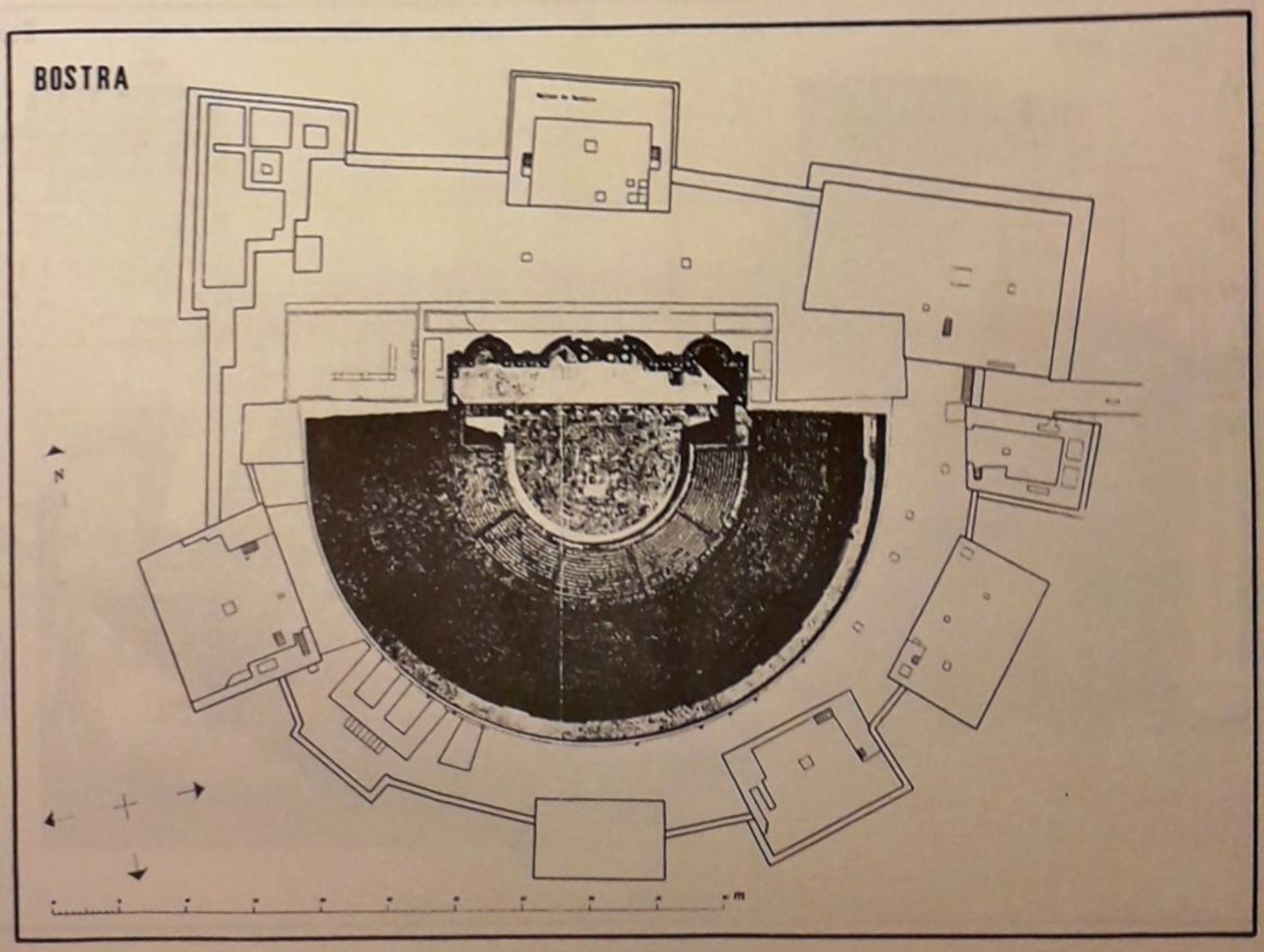


Fig. 145. Bostra, the Theatre and the Medieval Fortress.

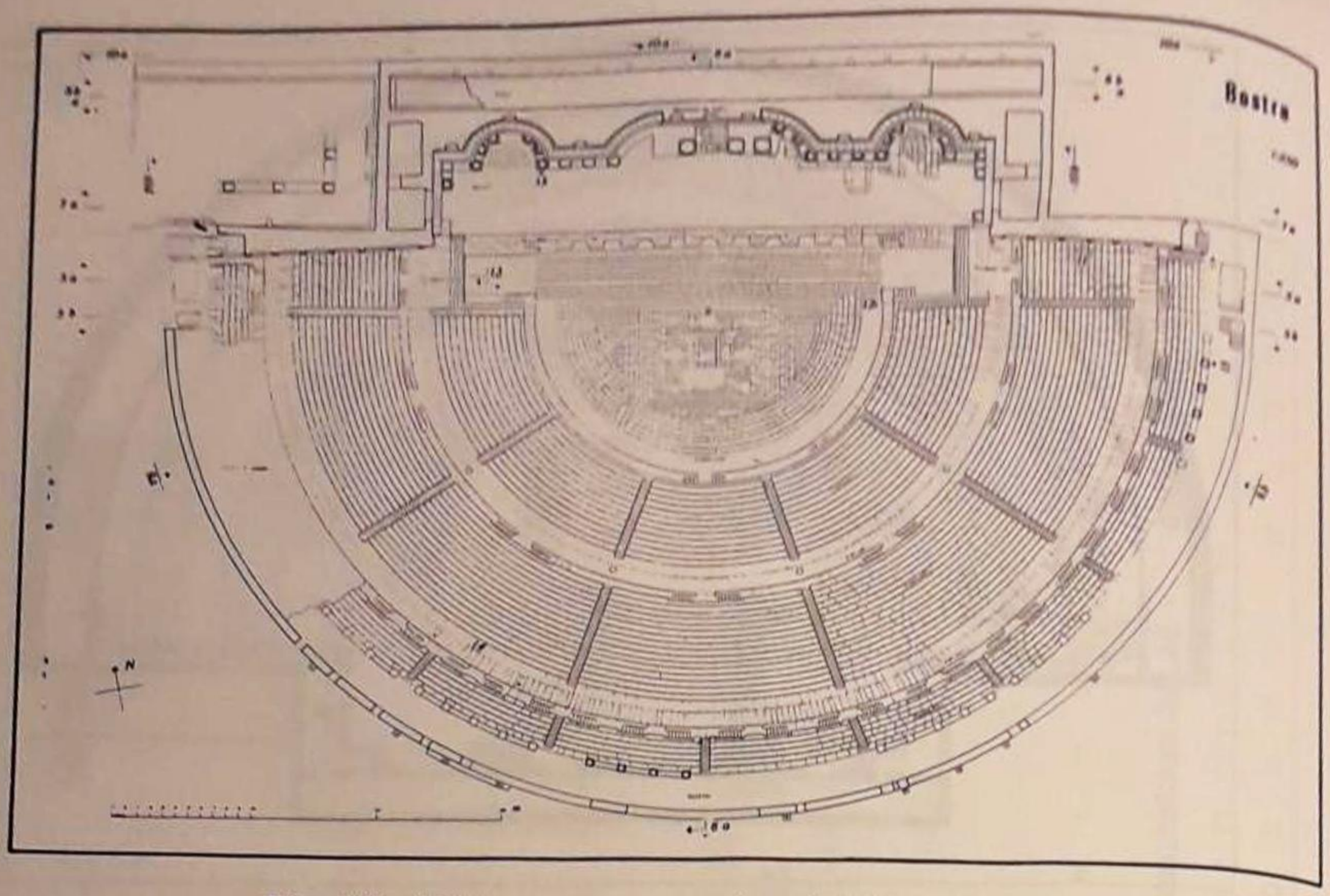


Fig. 146. Bostra, the Theatre, skene building and cavea.

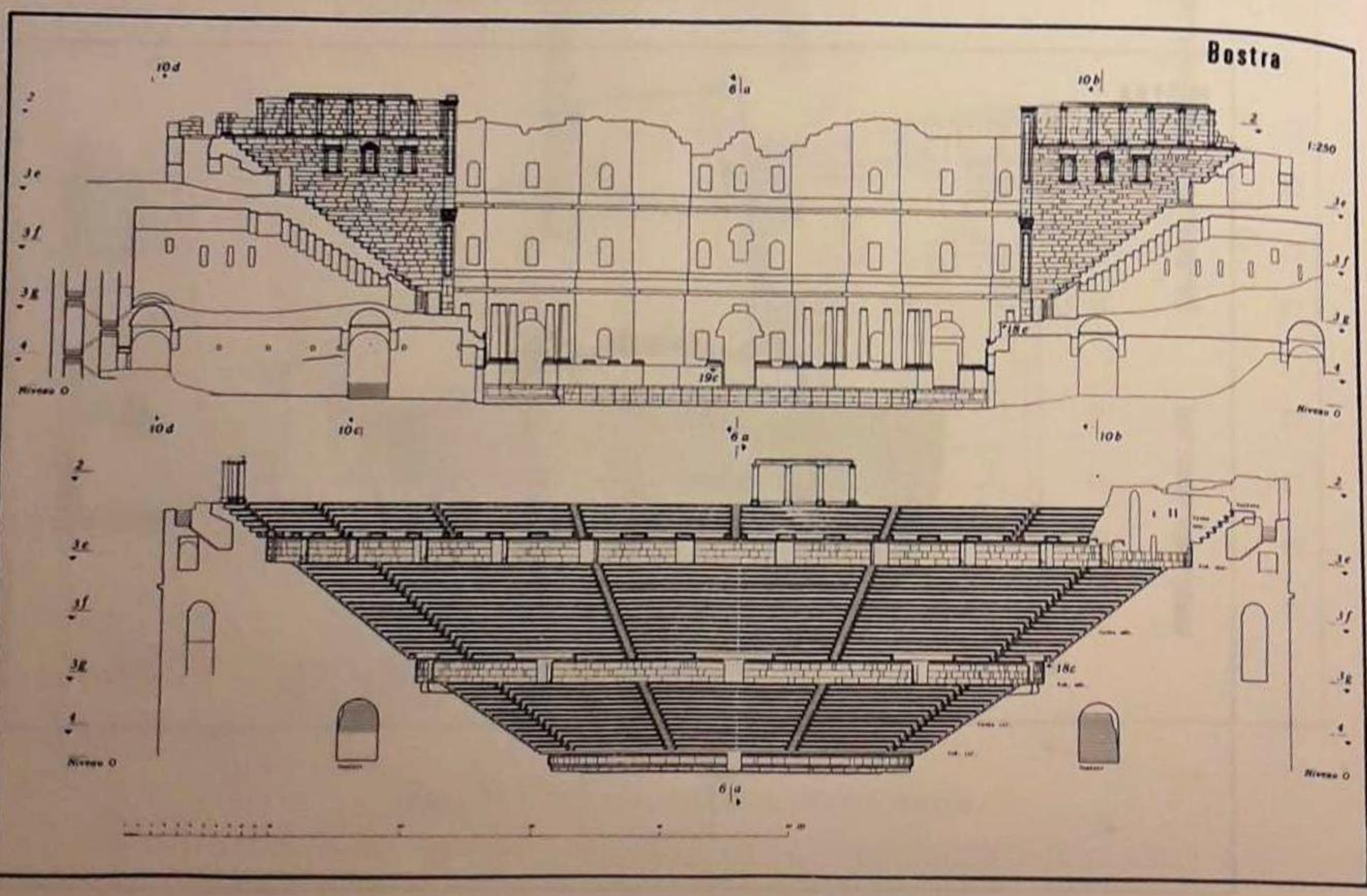


Fig. 147. Bostra, the Theatre (sections).

Fig. 148. Bostra, the Theatre, view of the cavea.

Fig. 149. Rome, Theatre of Marcellus.

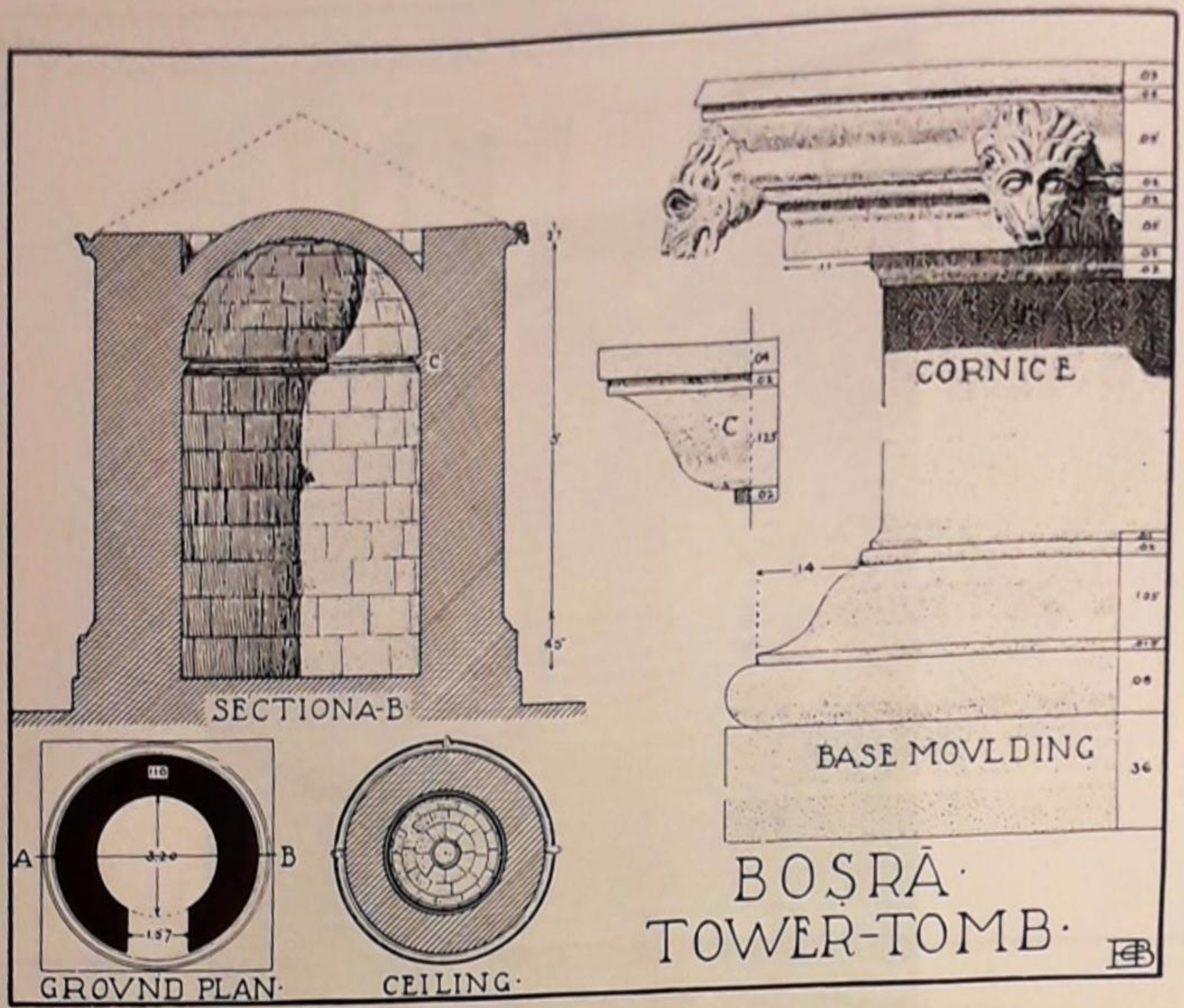


Fig. 150. Bostra, "Tholos" Tomb.

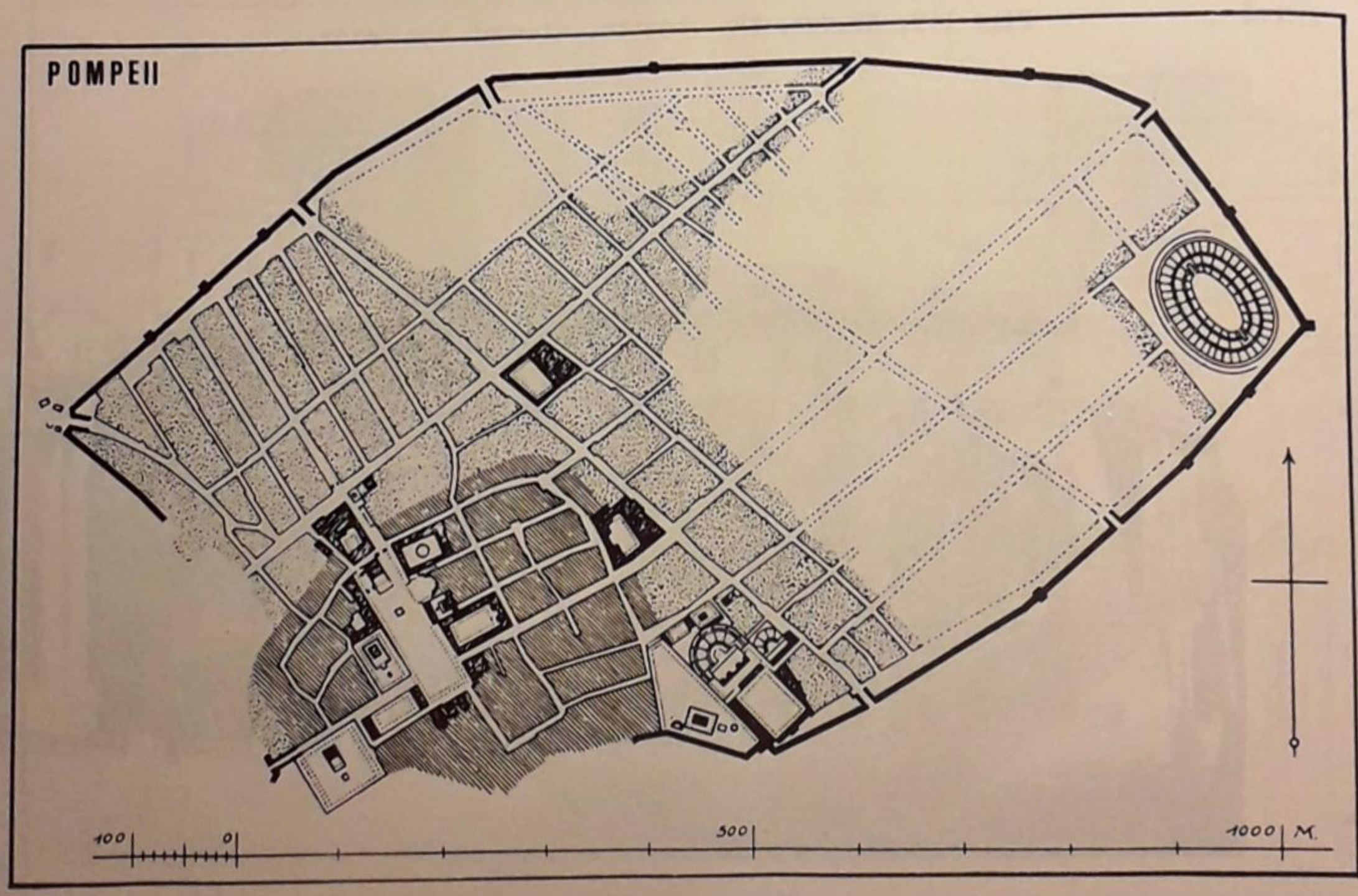


Fig. 151. Pompeii, city plan.

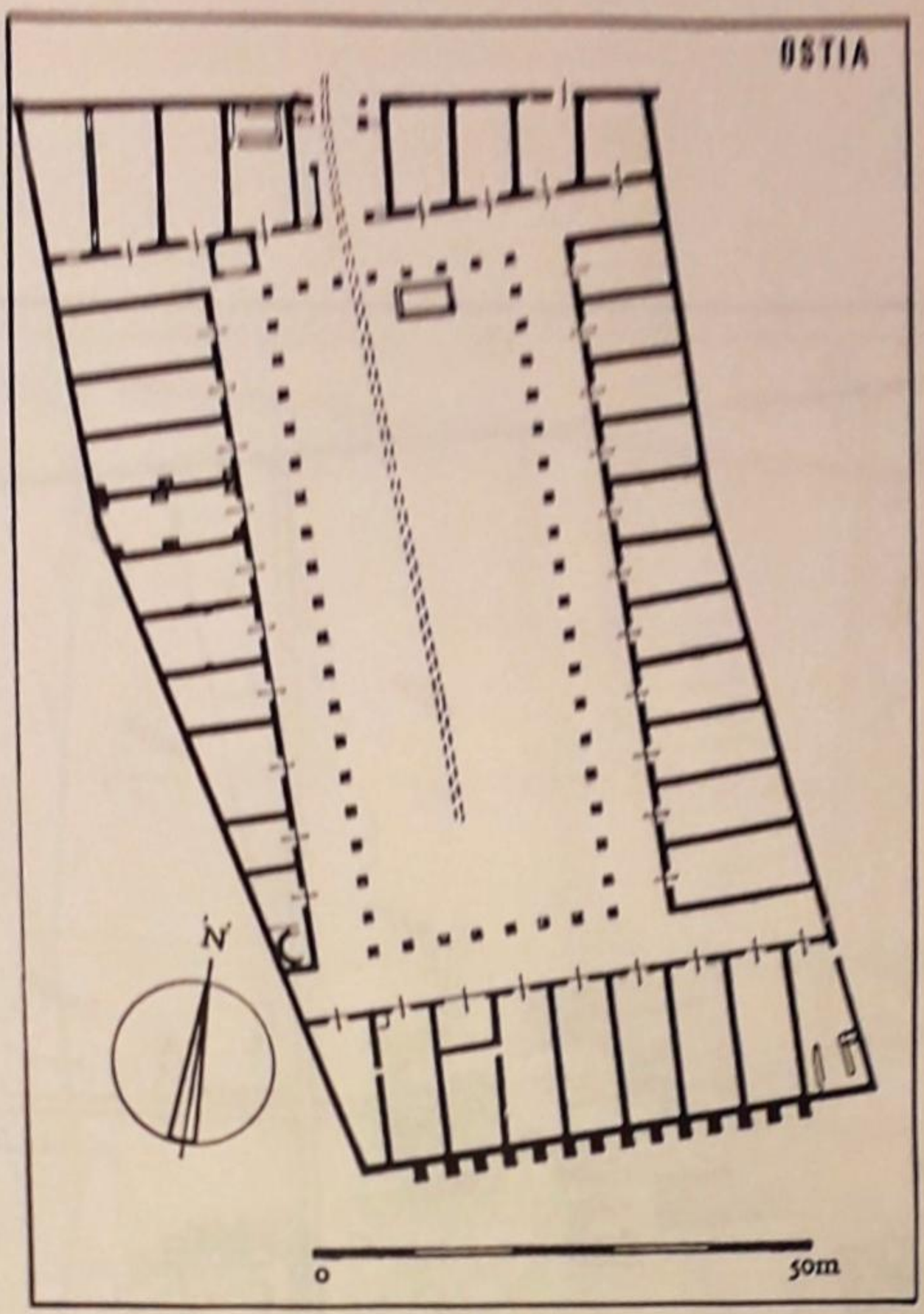


Fig. 152. Ostia, Horrea (granaries) of Hortensius.

Fig. 153. Shuhba, a map (scale 1:50,000).

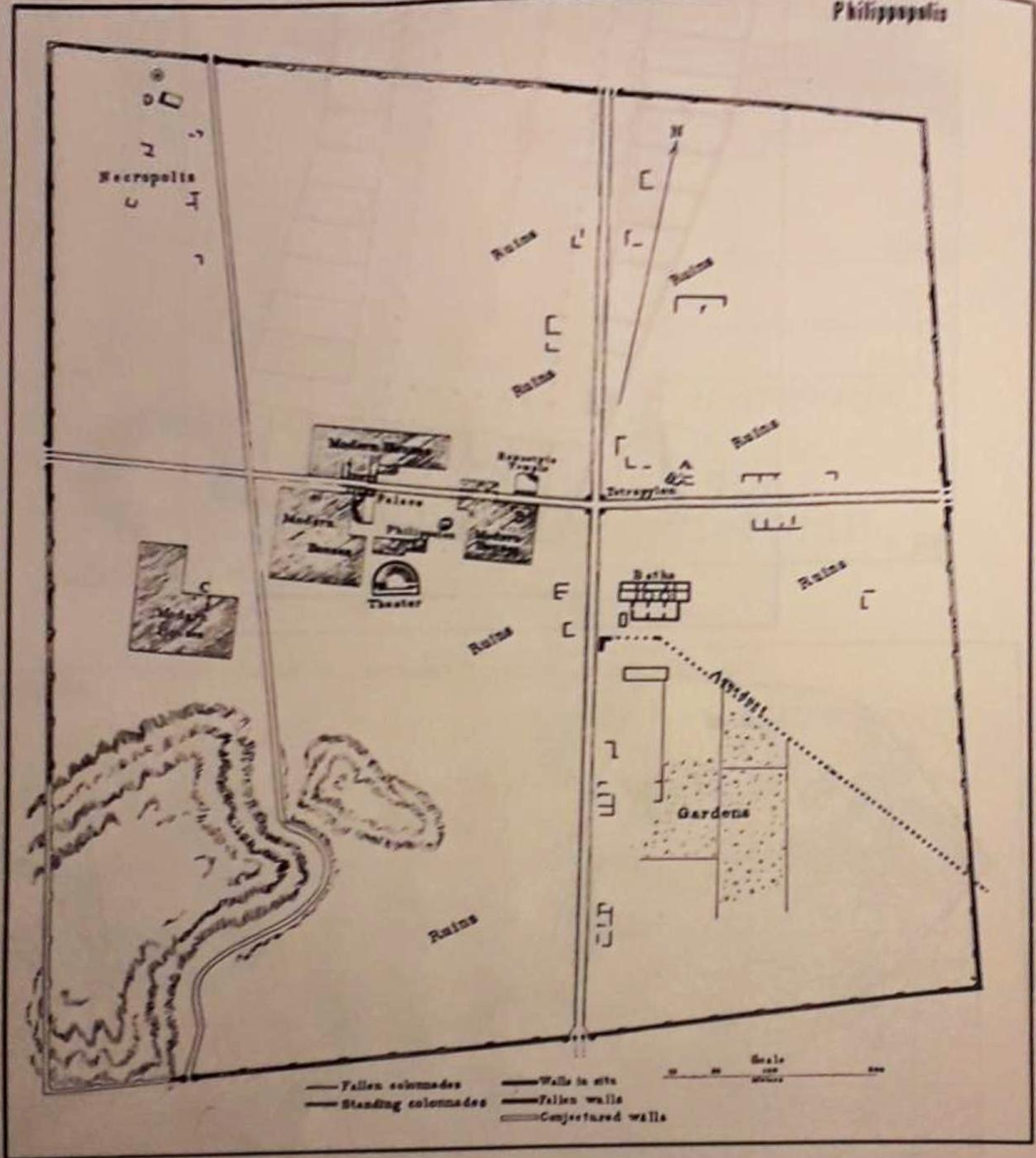


Fig. 154. Philippopolis, city plan.

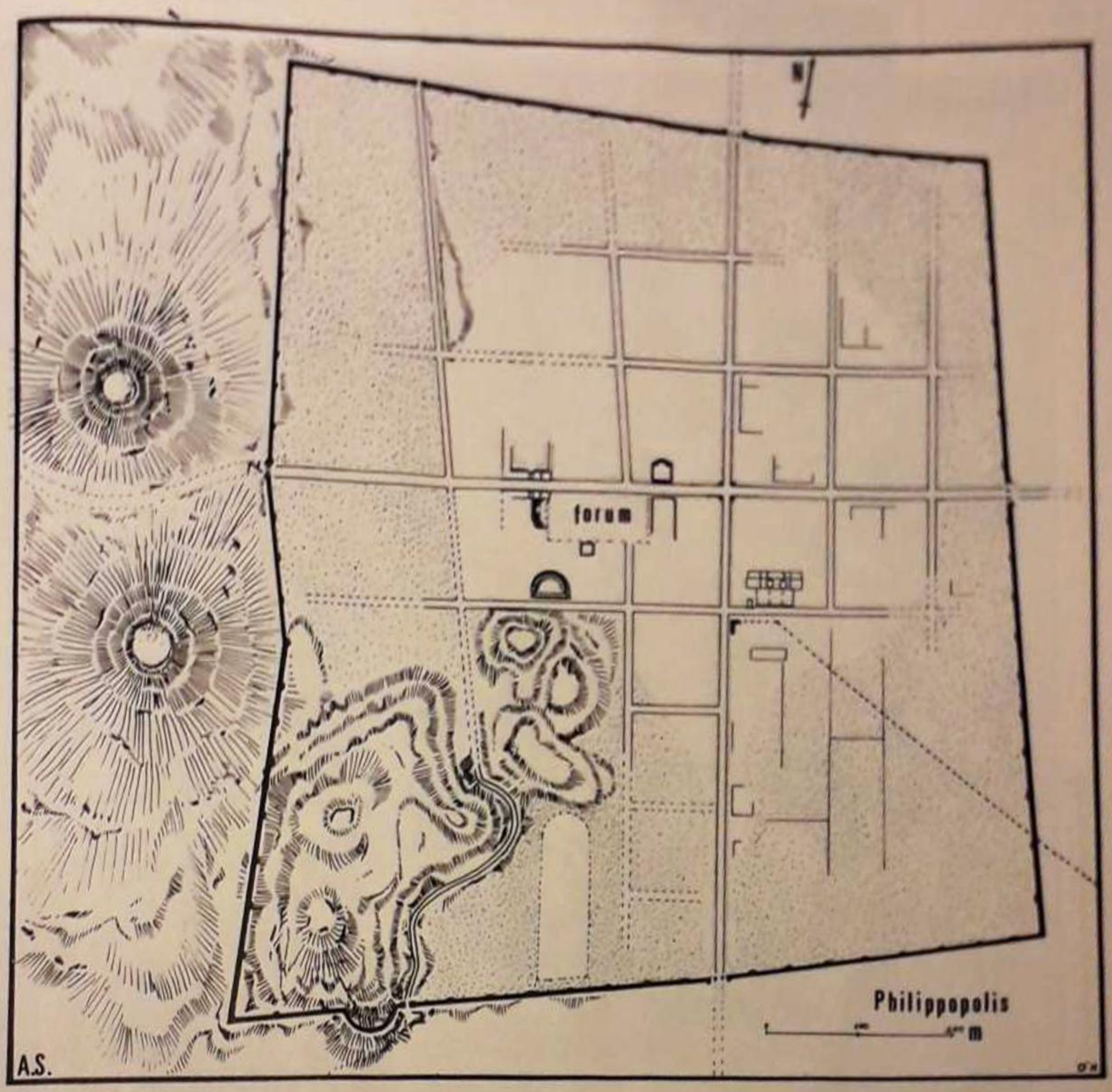


Fig. 155. Philippopolis, city plan.

Fig. 156. Philippopolis, aerial photograph.

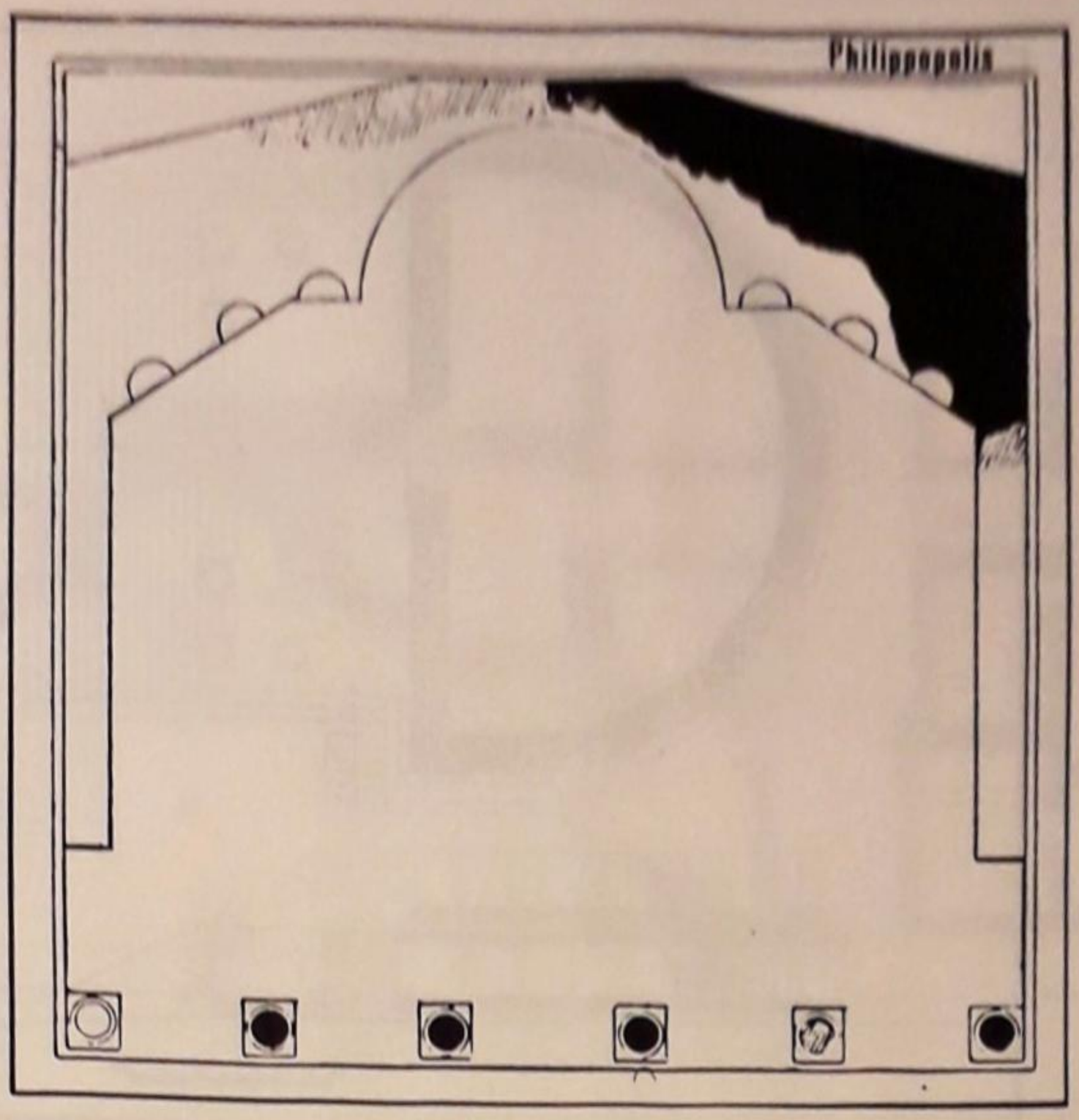


Fig. 157. Philippopolis, the Hexastyle Temple.

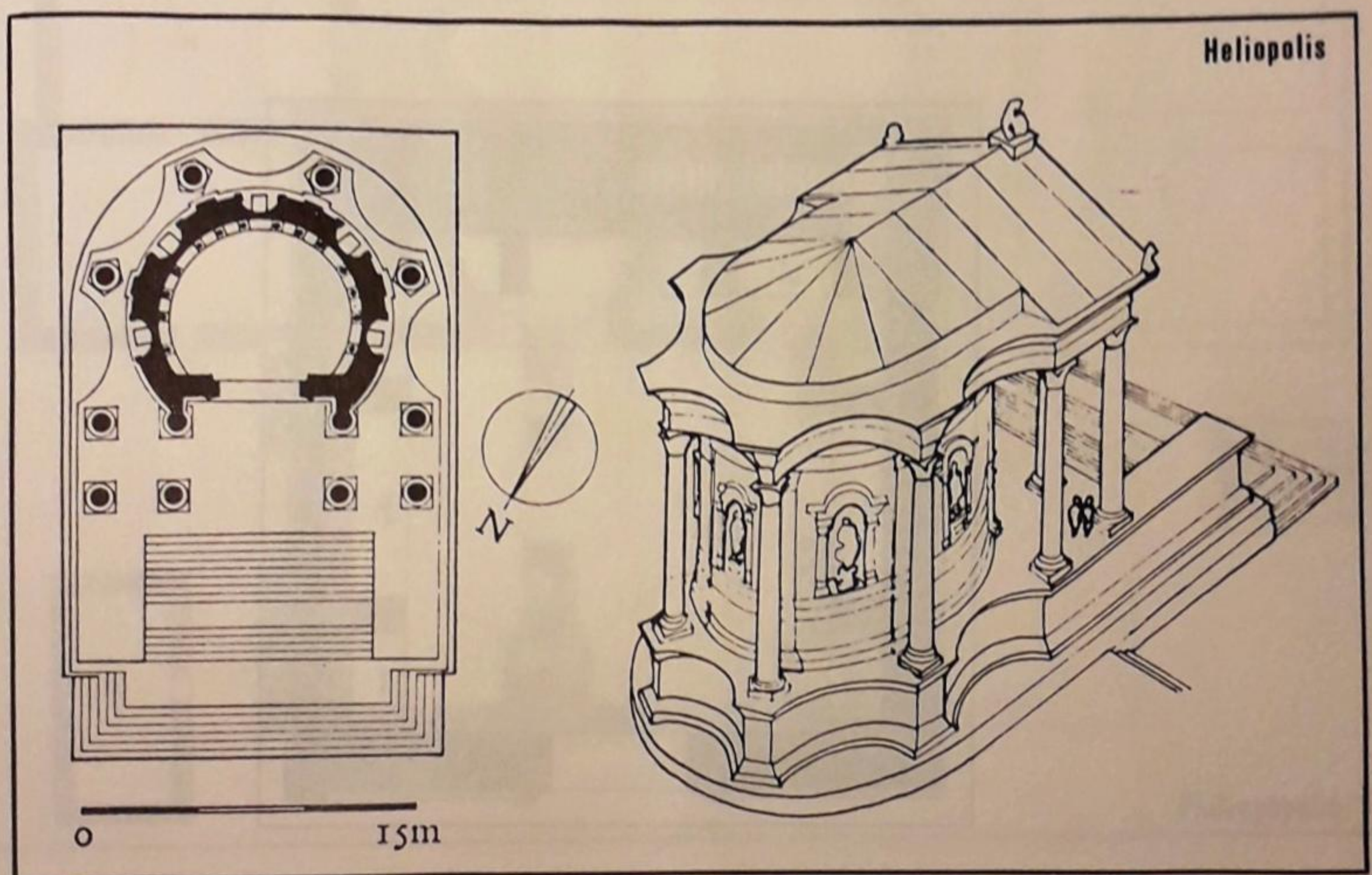


Fig. 158. Baalbek (Heliopolis), Temple of Venus.

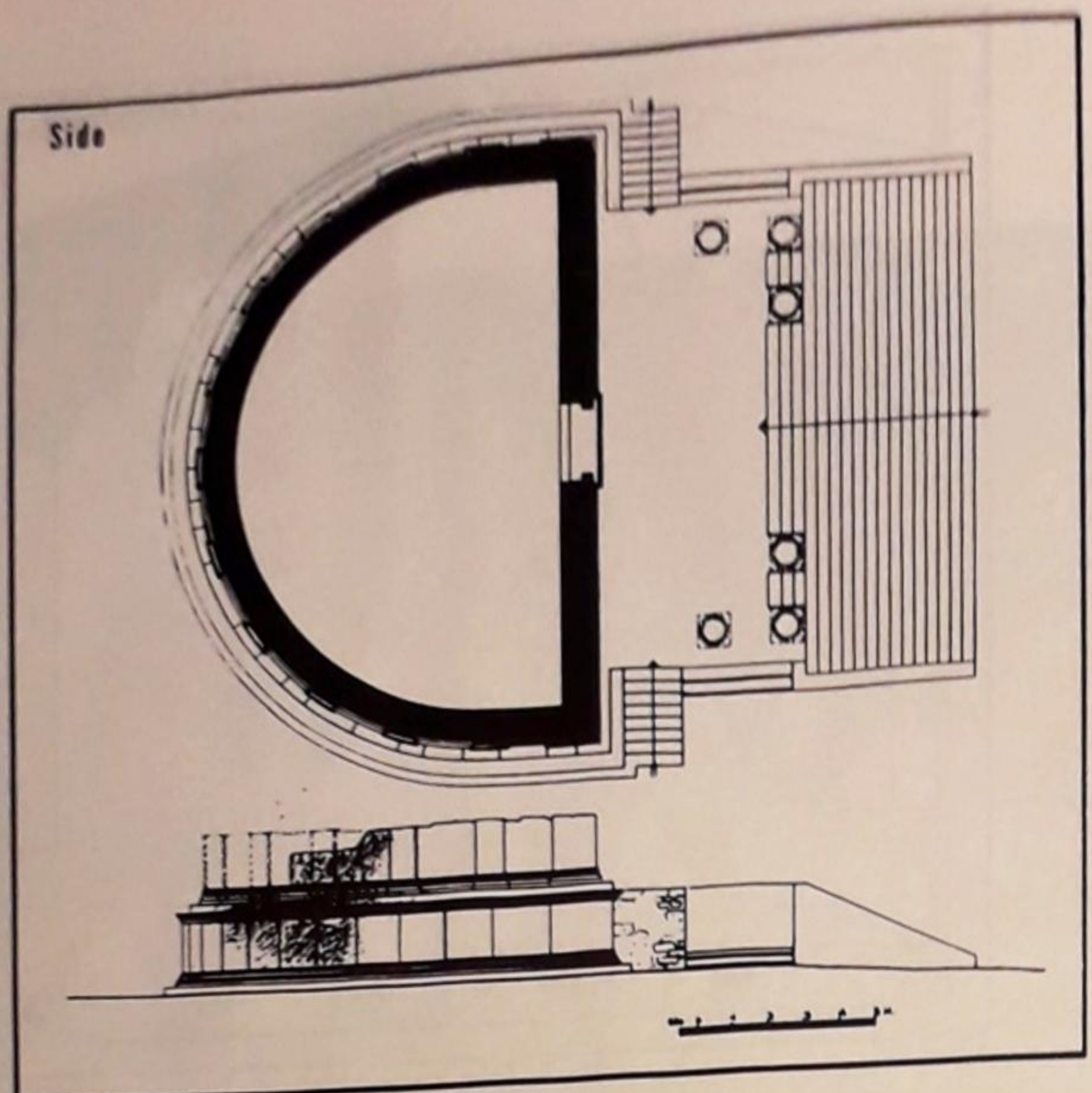


Fig. 159. Side, Temple "C".

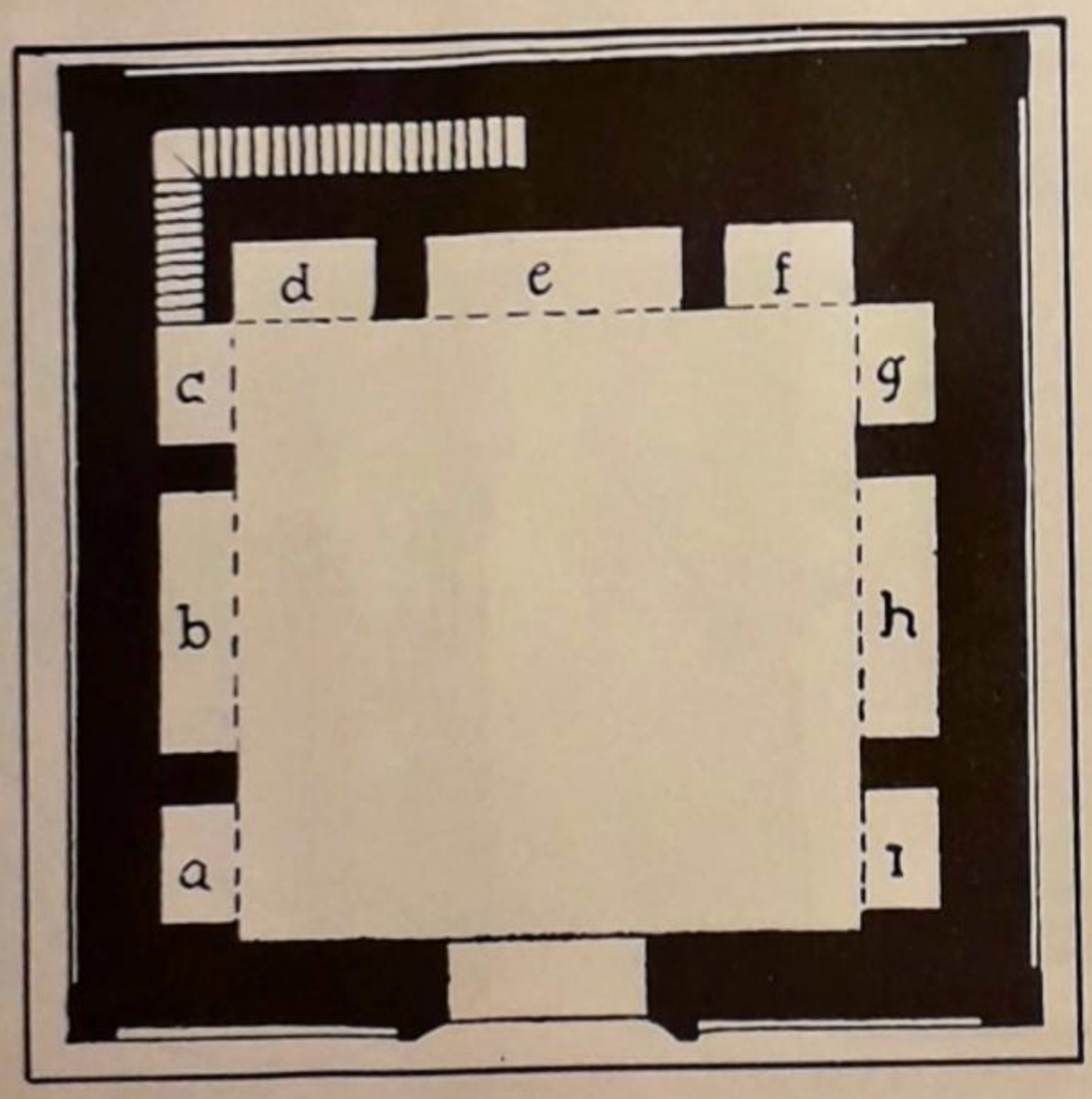


Fig. 160. Philippopolis, the "Philippaeon".

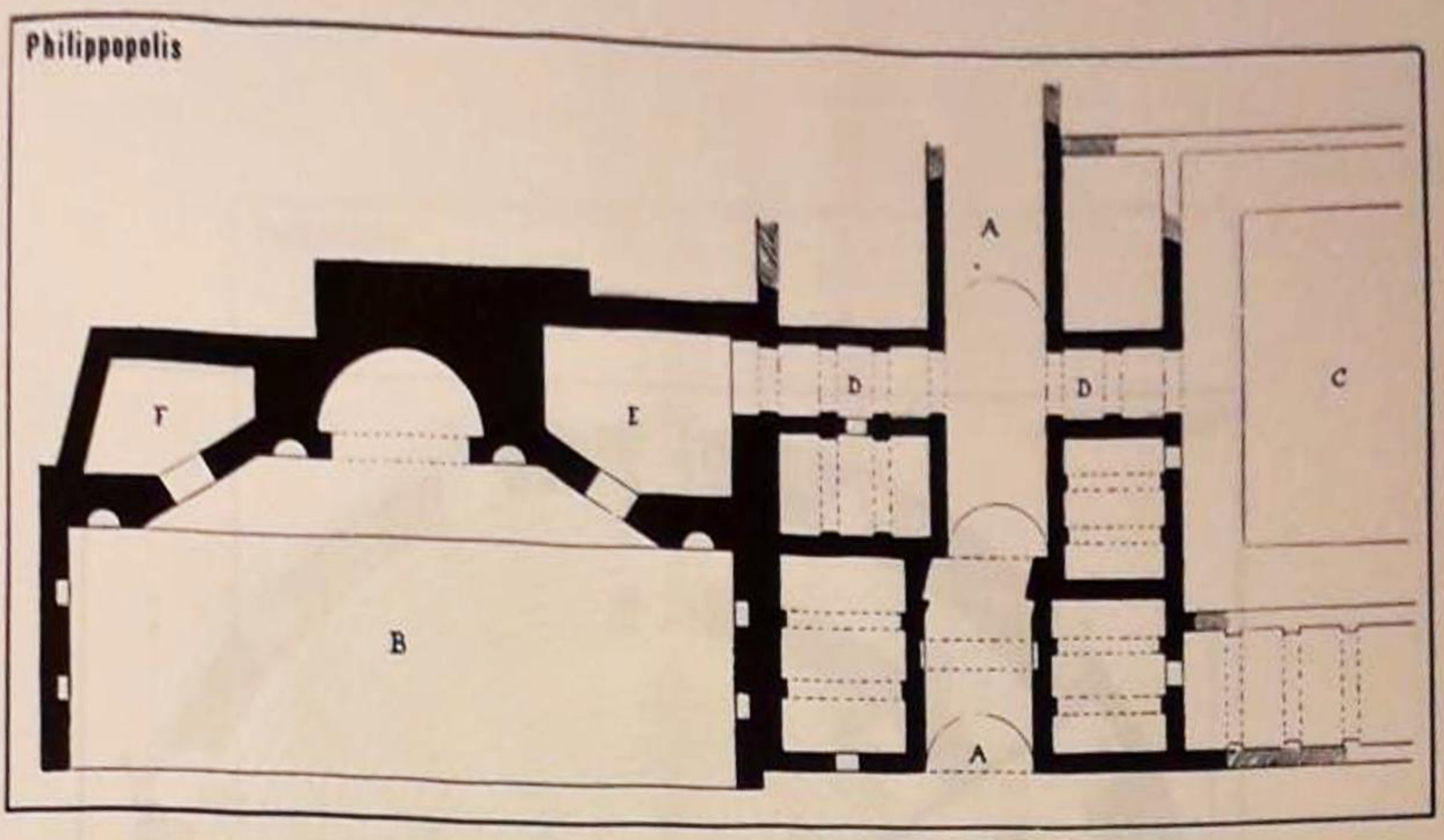


Fig. 161. Philippopolis, the Palace.

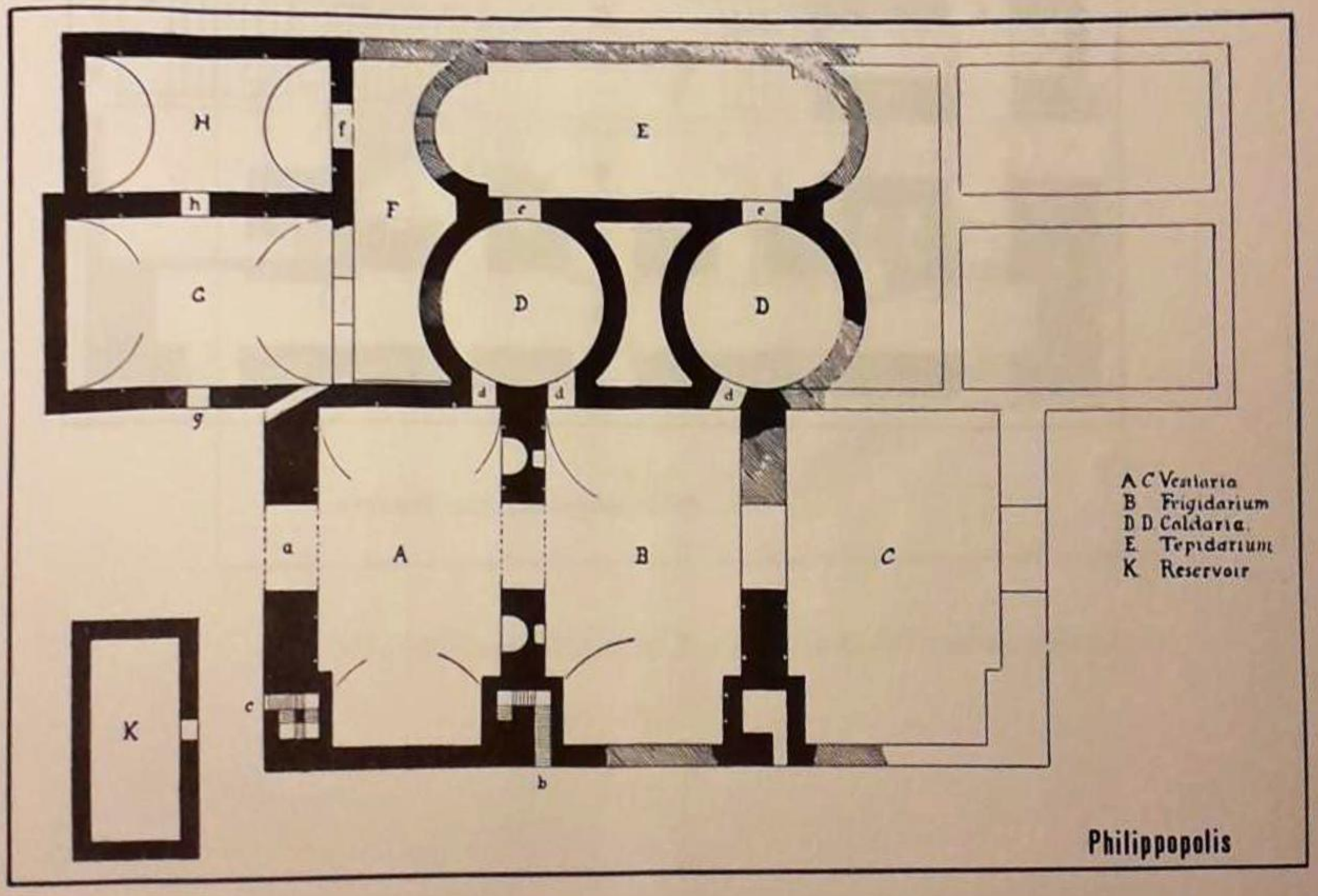


Fig. 162. Philippopolis, the Bath.

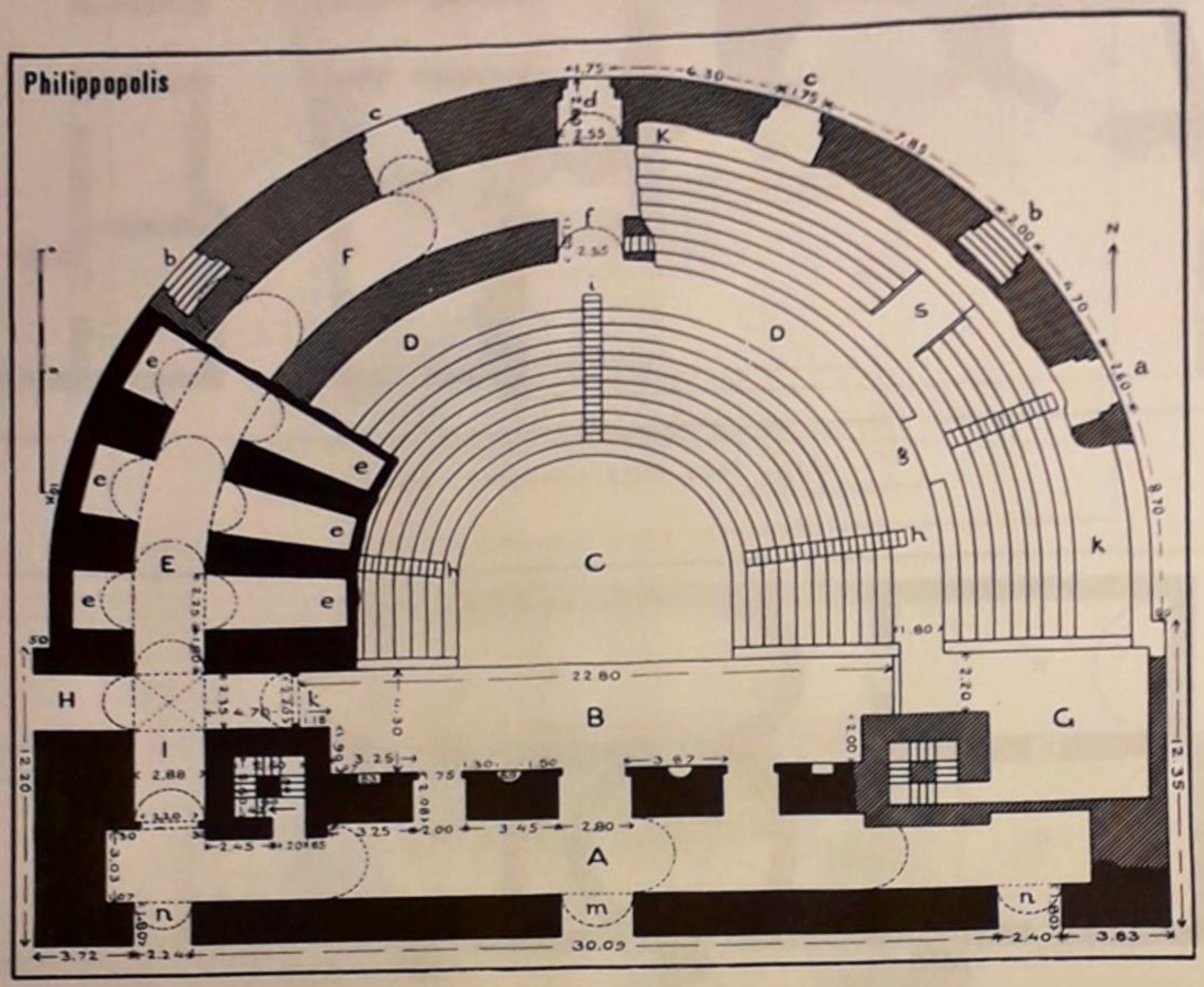


Fig. 163. Philippopolis, the Theatre.

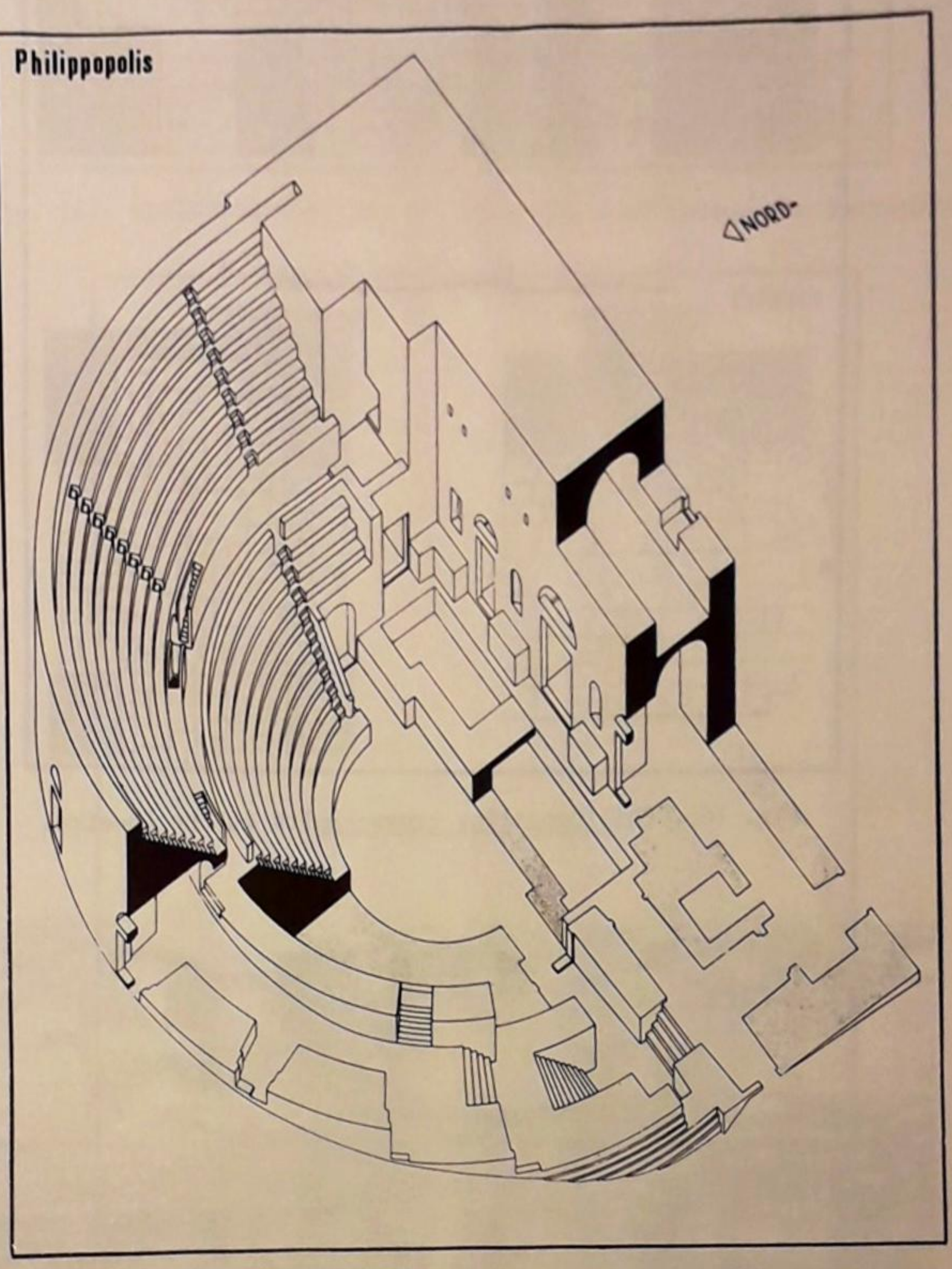


Fig. 164. Philippopolis, the Theatre, proposed reconstruction.

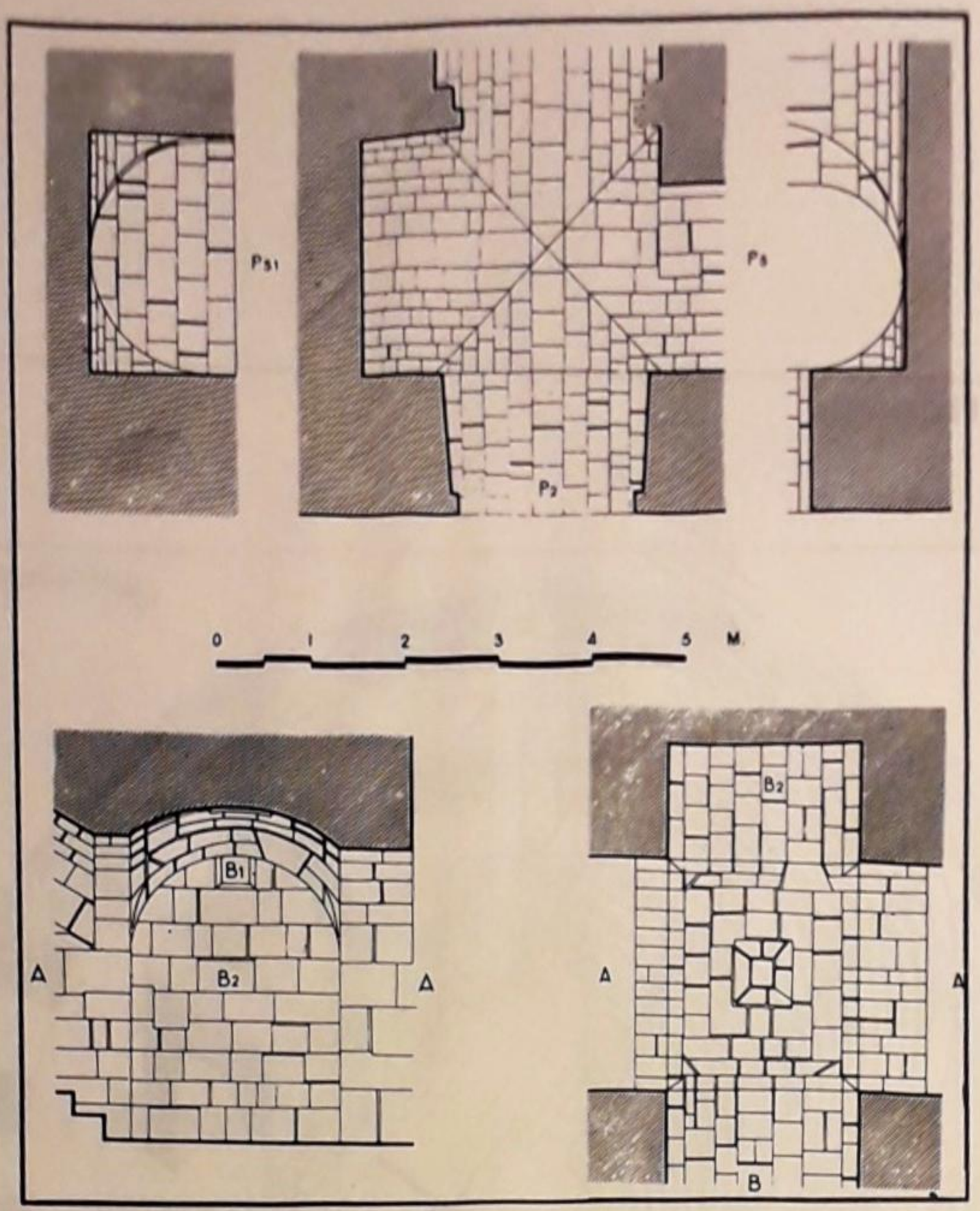


Fig. 165. Philippopolis, cross-vaults in the theatre.

Fig. 166. Philippopolis, the theatre, view of the cavea.

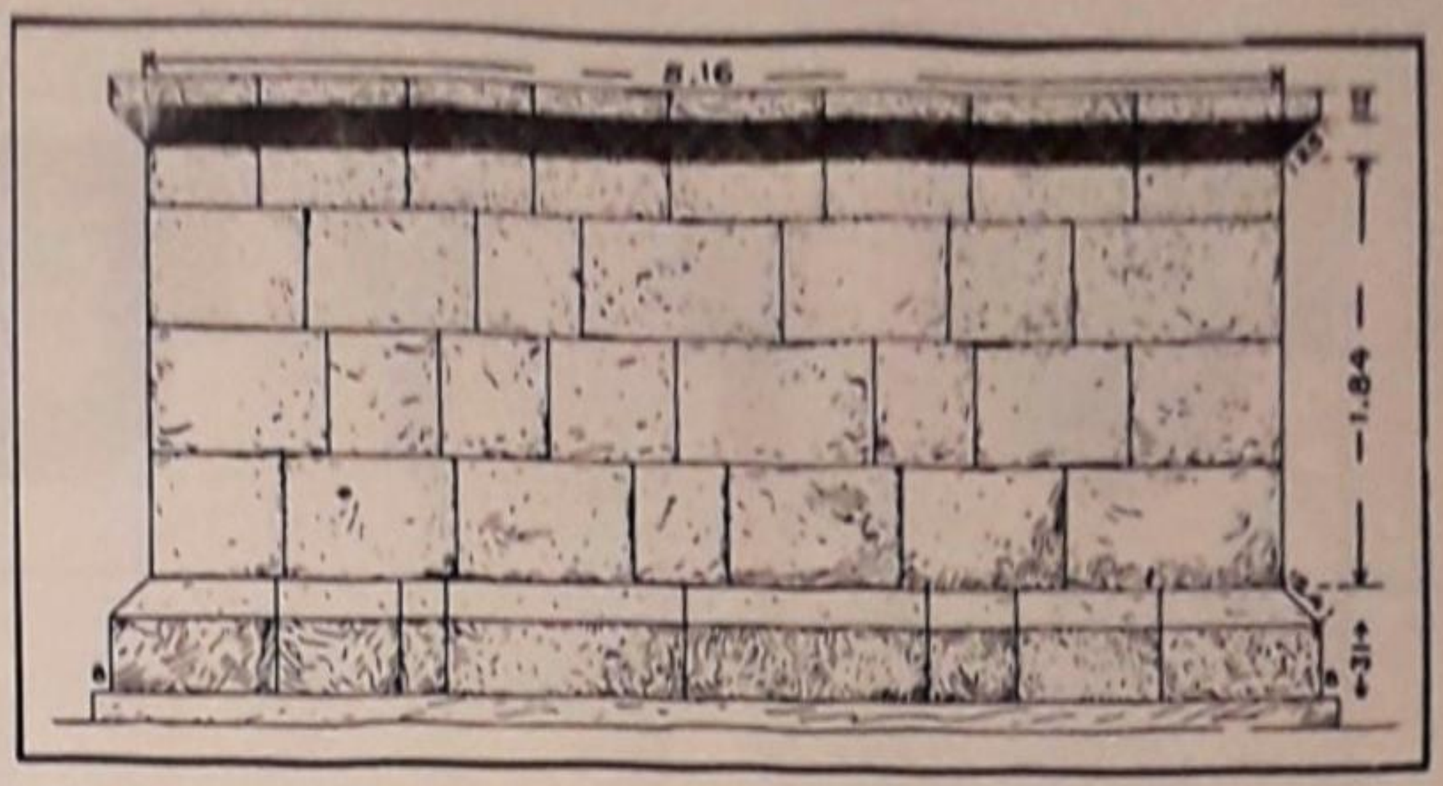


Fig. 167. Philippopolis, one of the podia that formed the Tetrapylon.

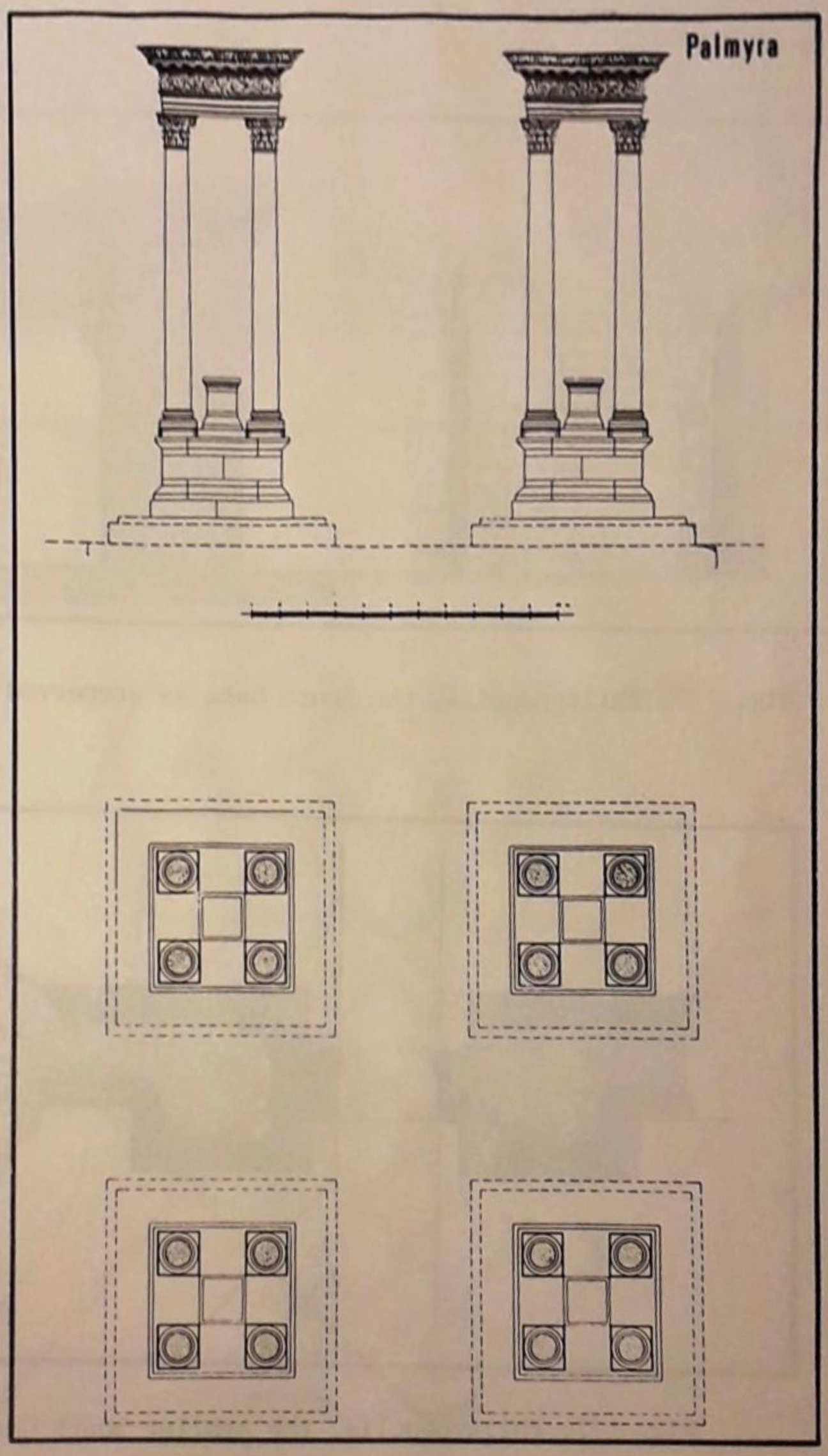


Fig. 168. Palmyra, the Tetrapylon.

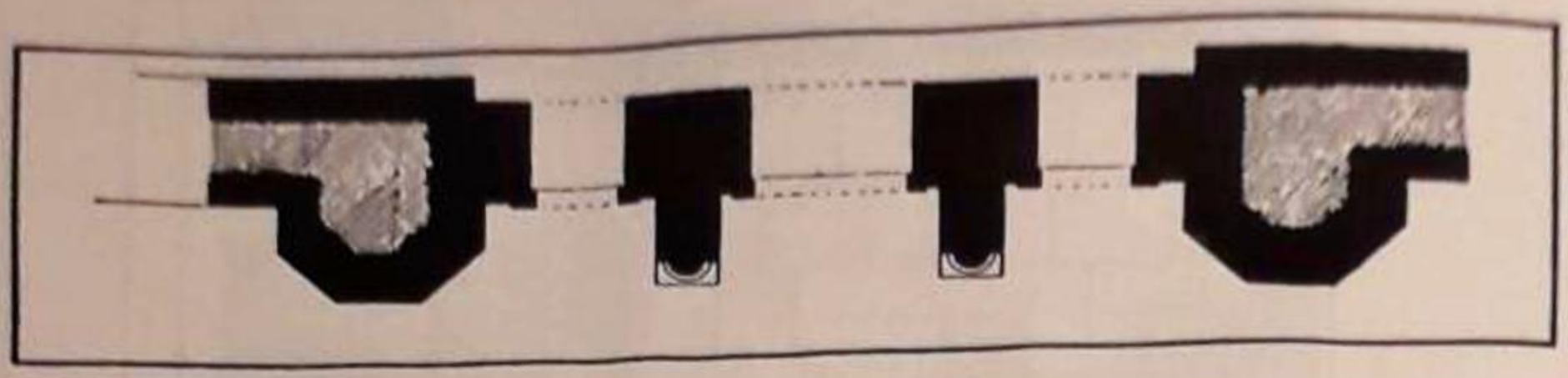


Fig. 169. Philippopolis, the South Gate.

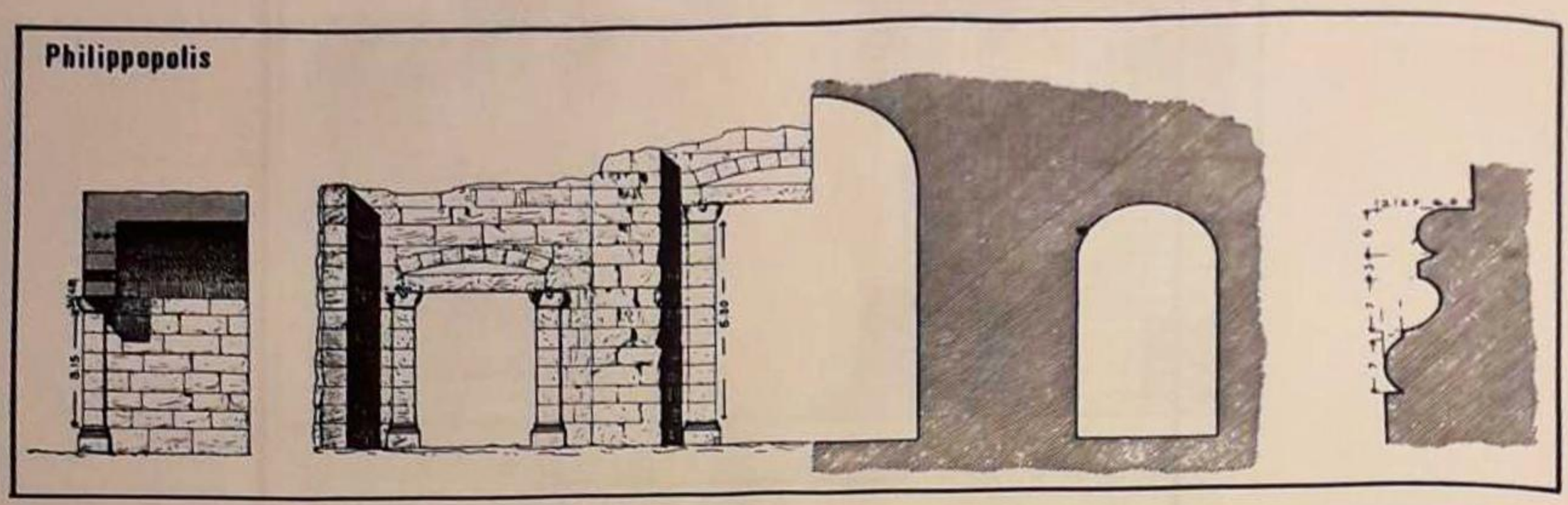


Fig. 170. Philippopolis, the South Gate as preserved in c.1900.

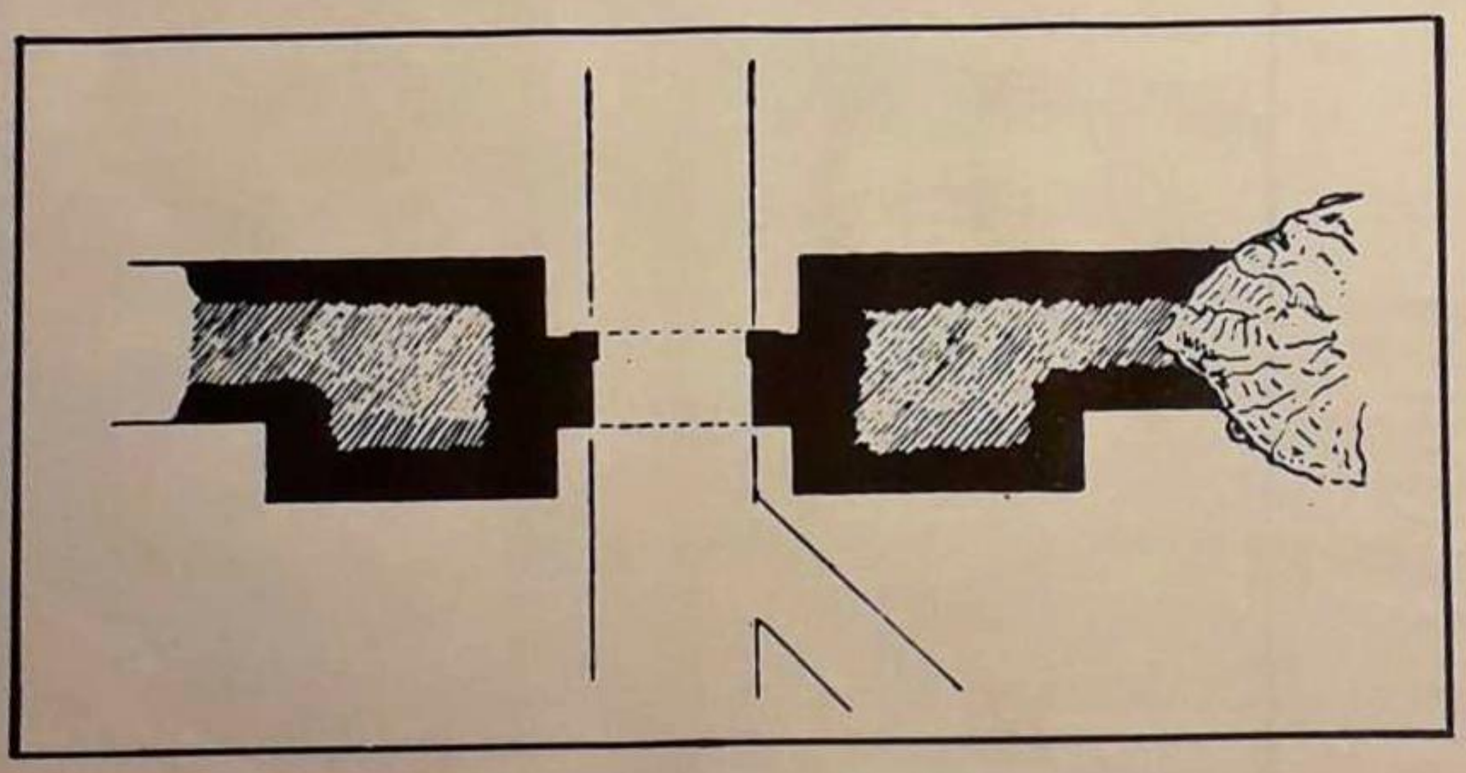


Fig. 171. Philippopolis, the smaller South Gate.

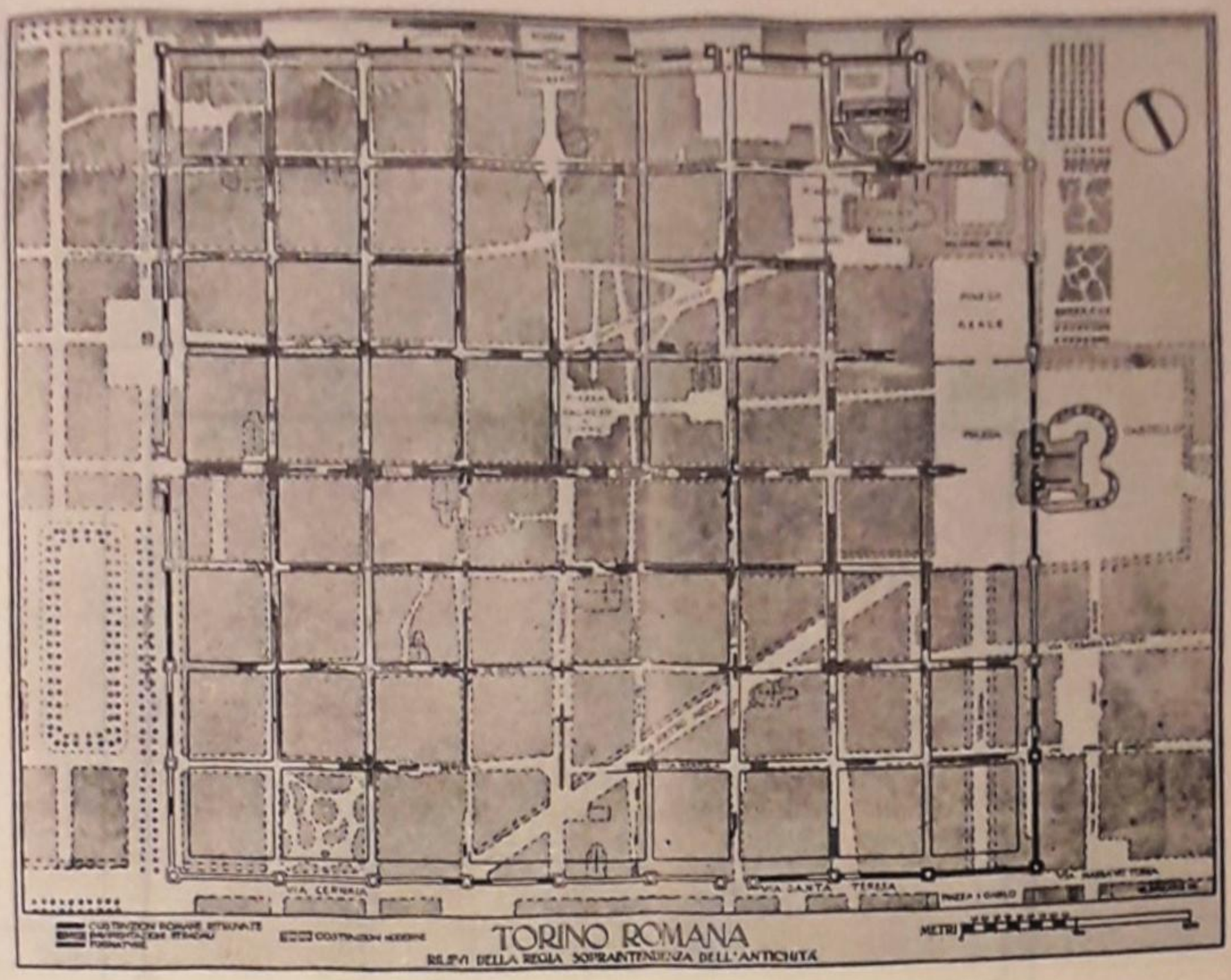


Fig. 172. Turin (Italy), city-plan.

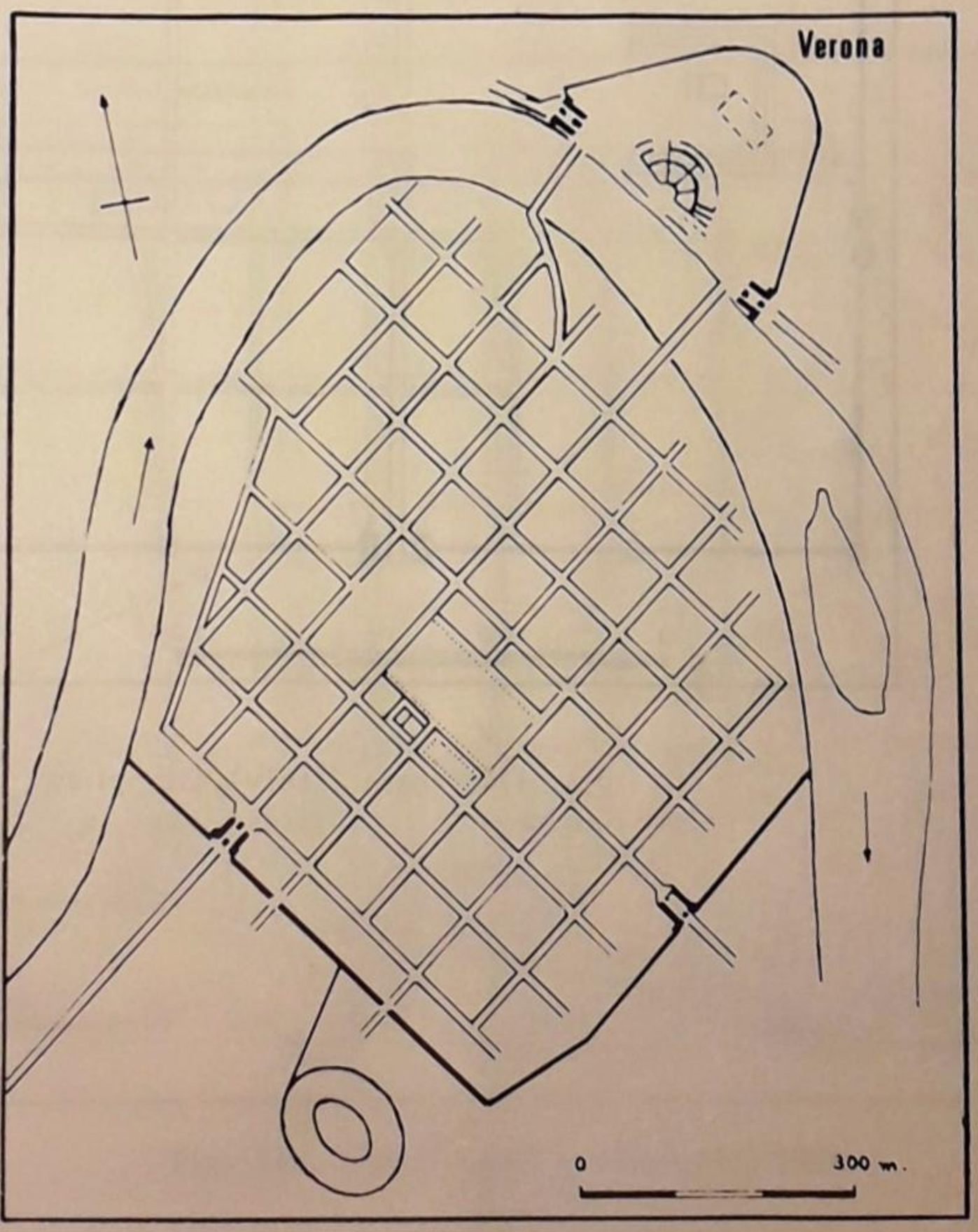


Fig. 173. Verona (Italy), city-plan.

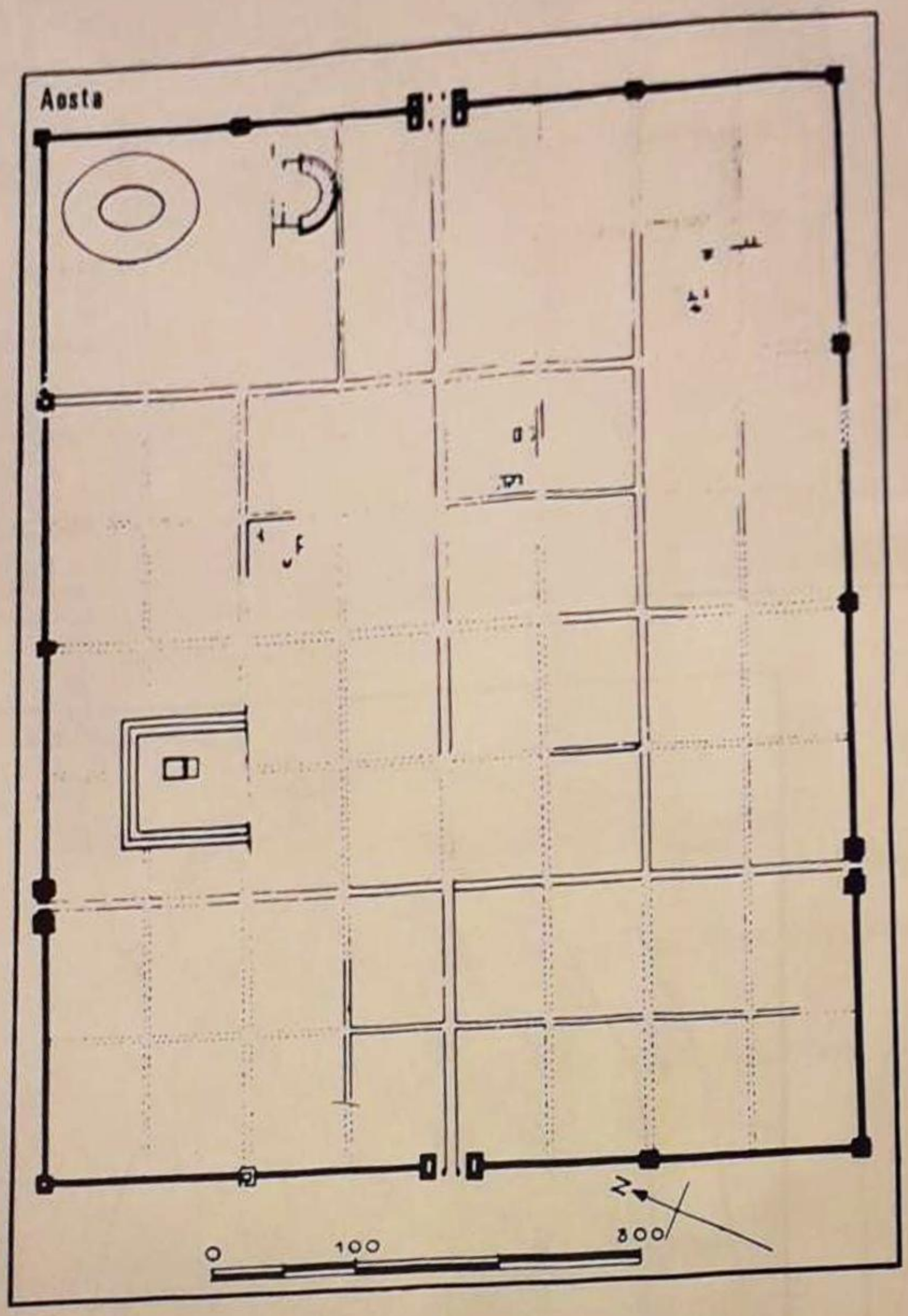


Fig. 174. Aosta (Italy),city-plan.

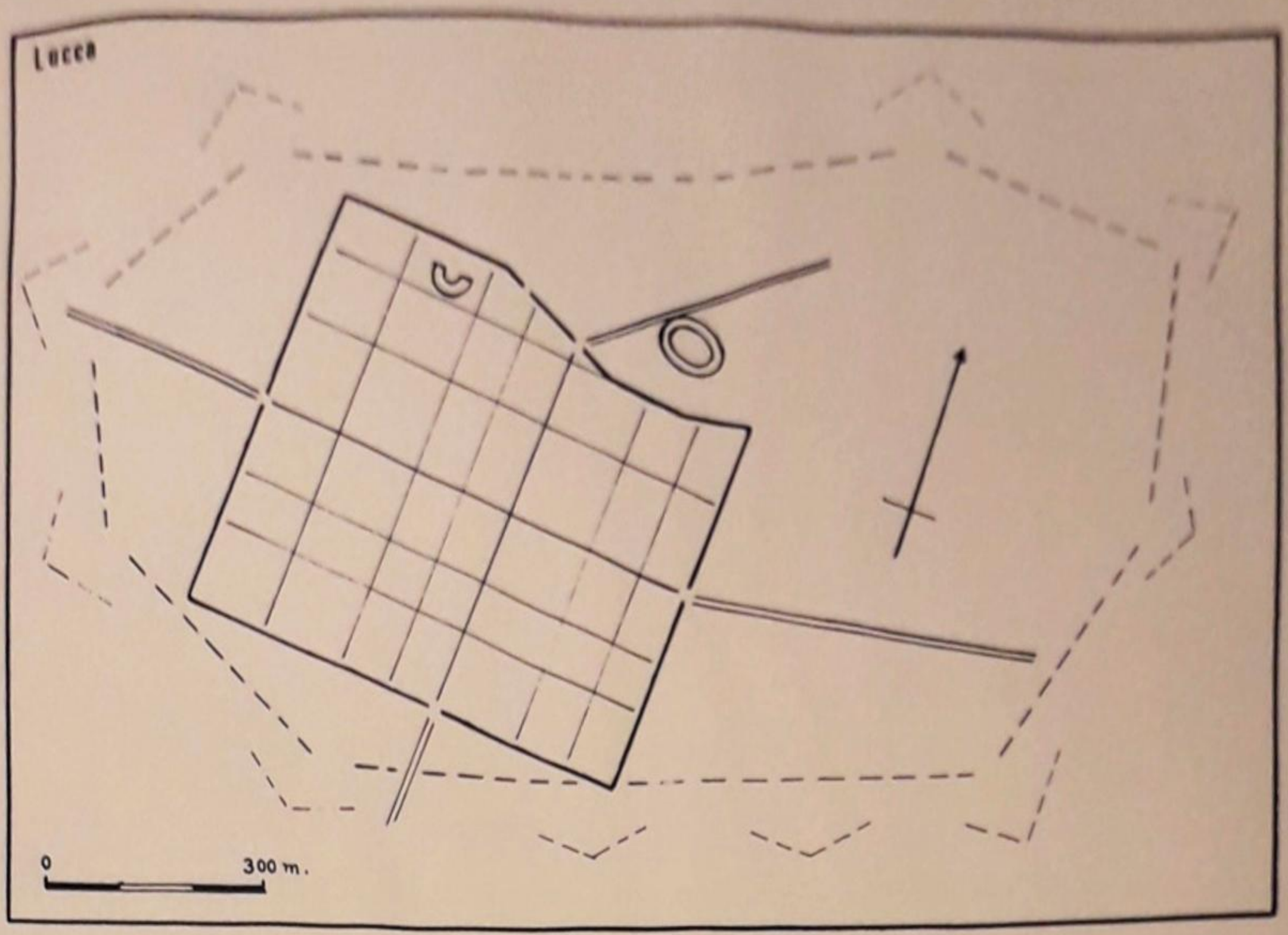


Fig. 175. Lucca (Italy), city-plan.

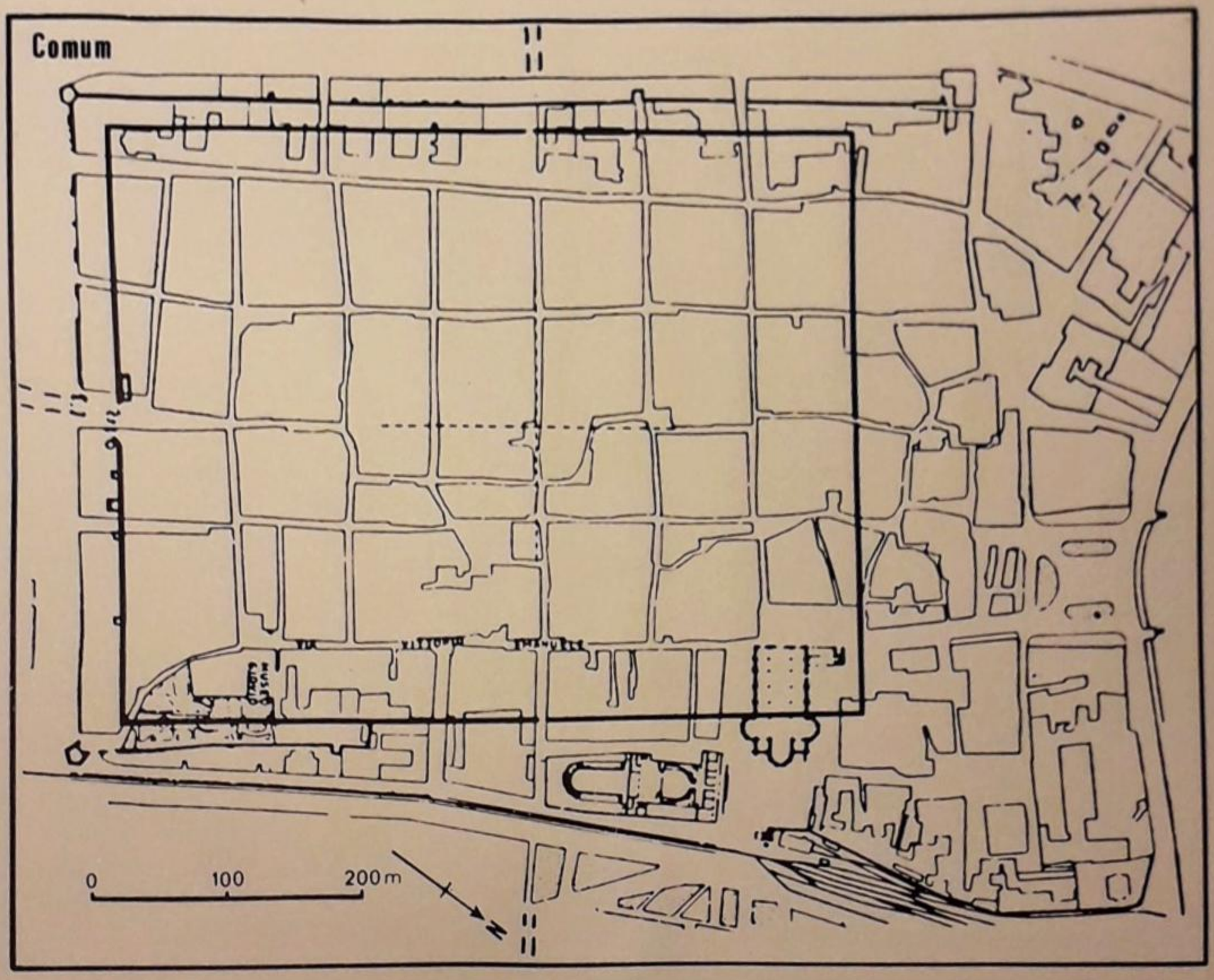


Fig. 176. Como (Comum) (Italy), city-plan.