THE SOUTH THEATRE AT JARASH, 1994 CAMPAIGN

by

Frank Sear

Introduction

In June 1994 a team of architects and archaeologists from the Universities of Melbourne and Adelaide was granted permission to survey the South Theatre at Jarash.[1] The survey was part of the Australian 'Roman Theatres' project, funded by the Australian Research Council, which began in 1990.[2] The choice of the South Theatre was an obvious one by reason of its unusual architectural features. That these have never been the subject of scholarly study is not altogether surprising. In a site as exceptionally well-preserved as Jarash, even so remarkable and unusual a building as the South Theatre would have difficulty competing for scholarly attention with the site's many other archaeological riches. As a result publication has been patchy and no detailed survey of the South Theatre has ever been published. In recent years greater attention has been paid to the North Theatre which has now been excavated, while the main focus of the South Theatre has been as the restored venue for the Jarash Festival. It may be useful at this point to give a brief outline of the work that has been conducted upon the two theatres to date.

Previous Work on the North and the South Theatre at Jarash

The first western traveller to visit Jarash was Ulrich Seetzen in 1806. In the account of his travels, published in 1810, he mentions 'two superb amphitheatres.'[3] In 1812 John Burckhart made a brief visit to Jarash and in 1816 John Buckingham visited the site and published the first, rudimentary, plan of the city.[4] When Irby and Mangles visited in 1818 they spent a week there and praised the scene of the large theatre as 'singularly perfect'.[5] The Palestine Exploration Fund was established in 1865 and in 1867 a small party led by Charles Warren brought back some of the earliest photographs of Jerash. A photo of the theatre from the north taken in 1877-1889 [6] shows the *ima* and most of the *summa cavea* standing as well as several columns of the *scaenae frons*, including the two with a section of architrave at the east end of the *scaenae frons*.[7]

The North Theatre or odeum was surveyed by Krencker in 1902, but the plan was not published until 1934.[8] An unpublished plan and section of the South Theatre by O. Puchstein appeared in Fiech-

1. I would like to take this opportunity to thank the Director-General of the Department of Antiquities for granting us permission to conduct this survey and to record our gratitude to William Lancaster, then the Director of the British Institute of History and Archaeology at Amman, and Pamela Watson, the Assistant Director, for their unfailing help and support. The 1994 team consisted of Frank Sear (director), Andrew Hutson and Zig Kapelis (architects), and Scott Newman and Maurice Smith (students).

2. The theatres surveyed so far are those at Gubbio, Volterra and Taormina.

3. U.J.Seetzen, *A Brief Account of the Countries adjoining the Lake of Tiberias, the Jordan and the Dead Sea,* London 1810.

4. J.S.Buckingham,*Travels in Palestine, through the Countries of Bashan and Gilead,* London 1821.

5. C. L. Irby and J.Mangles, *Travels in Egypt and Nubia, Syria and the Holy Land,* London 1832.

6. Cliché Bonfils. Neg. H.S.M. 976, fiche 8C.5, in the Harvard Semitic Museum.

7. The photo is published by J.Seigne, 'Monuments disparus sur photographies oubliées.' Pp. 99-116, Fig.15 in *Jerash archaeological Project 1984-1988*, II (Syria 66, 1989), Paris 1989.

8. D.Krencker, 'Römische Städtebaukunst an den Rändern des römischen Weltreiches.' Pp.22-9 in *Bericht der 72. Hauptversammlung des Vereins deutscher Ingenieure in Trier 1934.* See also G.Schumacher, 'Dscherasch,' *ZDPV* 25, 1902: 145-50.

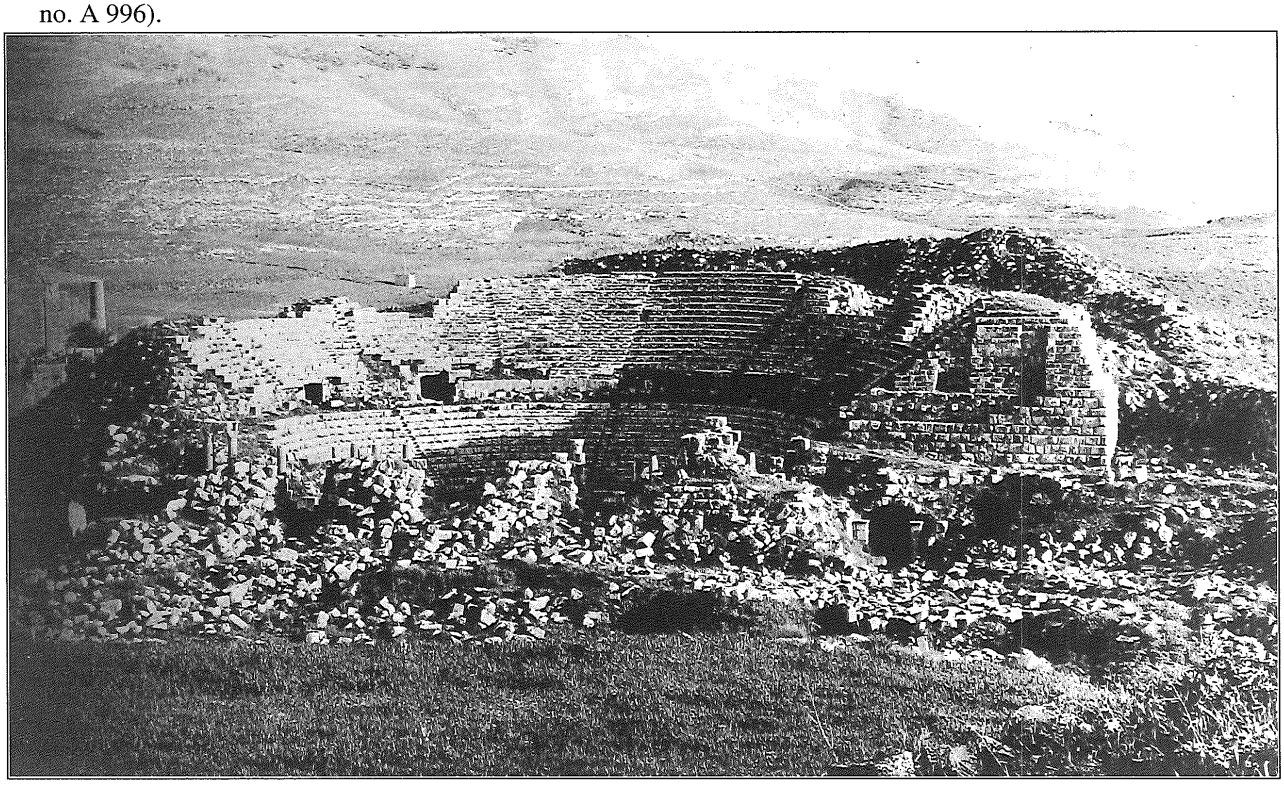
ter's history of theatre buildings in 1914.[9] In 1925, following the appointment of John Garstang as the first Director of the Department of Antiquities in Jordan, conservation work began on the South Theatre under the direction of George Horsfield.[10] Horsfield cleared the orchestra and revealed the whole stage area, and the architectural fragments from the upper part of the *scaenae frons* were collected and placed in the orchestra to await study.[11] Clearance of the North Theatre also began in 1925.[12] The inscriptions found in the South Theatre were published by Jones in 1928.[13] Both the North and the South Theatre were briefly described in Kraeling's monumental work on Jarash which appeared in 1938, and Welles published further inscriptions found in the south theatre.[14] However, greater attention was paid to the small theatre outside Jarash at Birketein, and the first plan of this theatre was published.[15] In 1953 it was decided to restore the South Theatre with a view to establishing the Jarash Festival and in the period of 1953-6 a great deal of restoration work was done, particularly in the area of the *scaenae frons* and *tribunalia*.[16] Work continued on the theatre throughout the 1970's and early 1980's as part of the Petra/Jarash project and at this time three further inscriptions were discovered in cleaning work.[17] In 1982-3 excavation of the North Theatre was resumed and consolidation and restoration are still proceeding at the time of writing.[18] In a book published in 1982 Browning discusses both the North and the South Theatre, although at the time his book was written the North Theatre was still in the same half-buried state it had been in 1925.[19] Browning comments at some length upon the most recent restoration work to the South Theatre. He also offers a graphic reconstruction of the *scaenae frons*.

The Present State of Preservation of the South Theatre

When the restoration of the South Theatre began in 1953 most of the *ima cavea* was relatively intact including the vaults over the *aditus maximi*, but little survived of the *tribunalia* or the rows of seats behind them (Fig.1). The central two *cunei* of the *summa cavea* stood almost to their full height and only the top few rows of seats were damaged in the lateral parts of the *summa cavea* (Fig.2). Most of the outer casing around the *summa cavea* had been destroyed. Only the footings of the stage front survived *in situ* and the foundations of the stage, which was apparently a solid masonry structure. All the podia of the *co-*

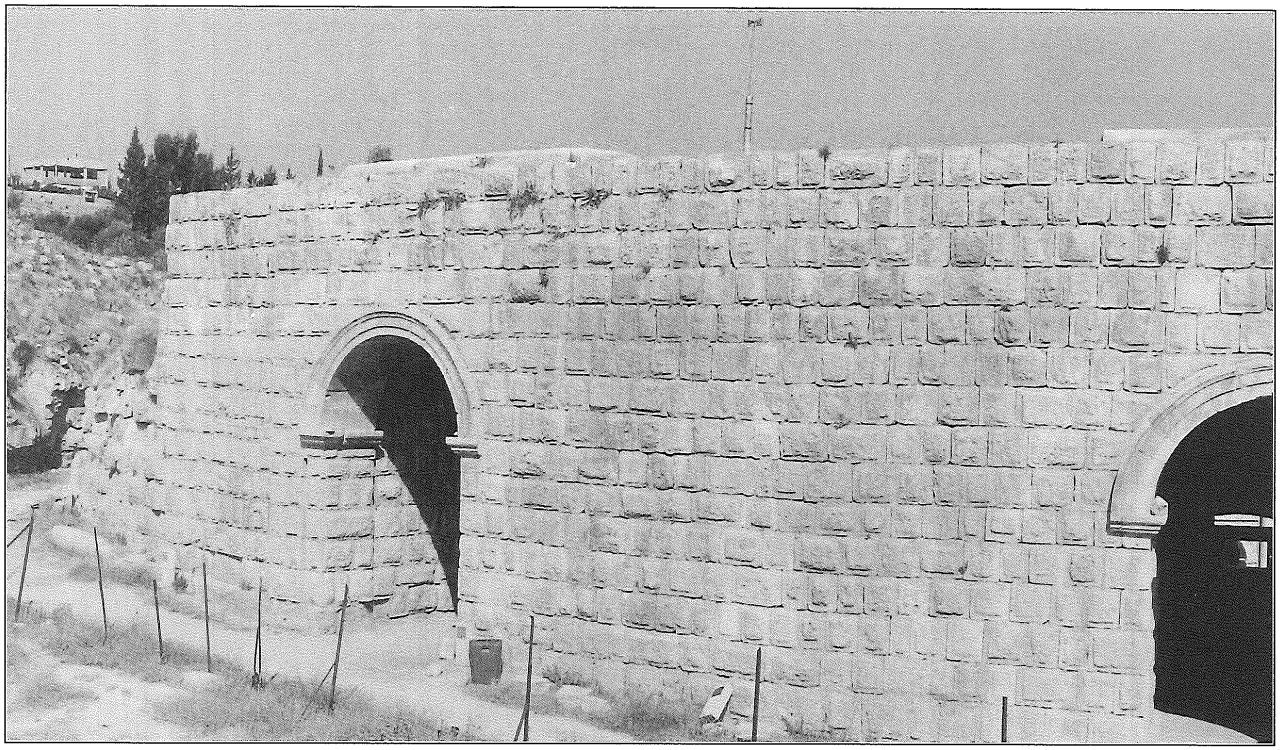
9. E.R.Fiechter, *Die baugeschichtliche Entwicklung des antiken Theaters,* Munich 1914:Abb.95. The plan however marks three, instead of two, radial corridors under the west side of the *summa cavea.*
10. A plan of the building appeared in an article by A.Harrison, *BSAJ* 7, 1925: Pl. 1.
11. C.S.Fisher, in C.H.Kraeling, *Gerasa - City of the Decapolis,* New Haven 1938: 20.
12. G.Horsfield, Jerash: Annual Report on Works of Conservation, *Government of Trans-Jordan, Antiquities Bulletin,* no. 1, 1926.
13. A.H.M.Jones, 'Inscriptions from Jerash,' *JRS* 18, 1928: 144-78, nos.12-14, 16, 33.
14. C.B.Welles, 'The Inscriptions'. Pp.355-494, nos. 51-55, 161, 192 in C.H.Kraeling, *Gerasa - City of the Decapolis,* New Haven 1938. For the theatres see C.S.Fisher, *ibid:* 19-20 (South Theatre); 22-3 (North Theatre).
15. C.McCown, 'The Festival Theatre at the Birketein,' *ibid*: 159-67.
16. G.Lankester Harding, 'Chronique archéologique,' *RB* 63, 1956: 68; D.Kirkbride, 'A brief Outline of the Restoration of the South Theatre at Jerash,' *ADAJ* 4-5, 1960: 123-7.
17. J.Pouilloux, 'Deux inscriptions au théâtre sud de Gérasa,' *LA* 27, 1977: 246-54; J.Pouilloux, 'Une troisième dedicace au théâtre sud de Gerasa,' *LA* 29, 1979: 276-78.
18. V.A.Clark, J.M.C.Bowsher, J.D.Stewart, C.M. Meyer and B.K.Falkner, 'The Jerash North Theatre: Architecture and Archaeology 1982-1983.' Pp. 205-302 in F.Zayadine (ed.), *Jerash Archaeological Project 1981-1983,* I, Amman 1986.
19. I.F.Browning, *Jerash and the Decapolis,* London 1982: 125-31.

1. The *scaenae frons* and eastern *aditus* of the South Theatre at Jarash in 1946 (Dept of Antiquities Archive, photo no. A 996).



2. General view of the South Theatre at Jarash from the north in 1946 (Dept. of Antiquities Archive, photo no. A 797).

lumnatio stood and some columns. A pair of columns at the west end and another on the east side survived complete with capitals along with the architrave they supported. *The scaenae frons* wall itself stood in parts to a height of 10 or 11 courses of masonry, almost to capital height. Little survived of the two side entrances onto the stage or the three doorways in the *scaenae frons* wall. The vaults over the *aditus maximi* leading into the orchestra had survived, but the uninscribed plaque over the western entrance had to be recomposed from fragments on the basis of an old photograph. Between 1953-1955 the *postscaenium* passage was excavated and the *scaenae frons* wall was dismantled and rebuilt. The three doors of the *scaenae frons* were rebuilt using new material in the pediments to substitute for parts which were missing and reinforced concrete beams were inserted inside the lintels. The arched entrances at the sides of the stage were rebuilt, as well as both arched entrances into the orchestra and the *tribunalia* above them. In the course of this work the west end of the *scaenae frons* wall and the pair of columns carrying a portion of architrave at were found to be in such bad condition that a structural engineer was be needed for advice. However the work was terminated before such advice could be sought. Meanwhile some rebuilding took place but the new work was not bonded to the old. Kirkbride warns: "It must be stressed most strongly that if any future campaign of restoration is contemplated at the theatre, this section of the wall must receive priority treatment."[20] In 1956 funding ran out and it was some years before the stage and *proscaenium* wall were finished. Eventually the orchestra and *cavea* were cleared and the upper seating consolidated. The area behind the *cavea* was also cleared so that there is once again a passage around the back of the *cavea* (Fig. 3). Work continued on the theatre throughout the 1970's and large sections of the outer wall of the theatre were rebuilt as part of the Petra/



3. Back of the *cavea* of the South Theatre at Jarash showing the outer wall and the passage behind (173.25A).

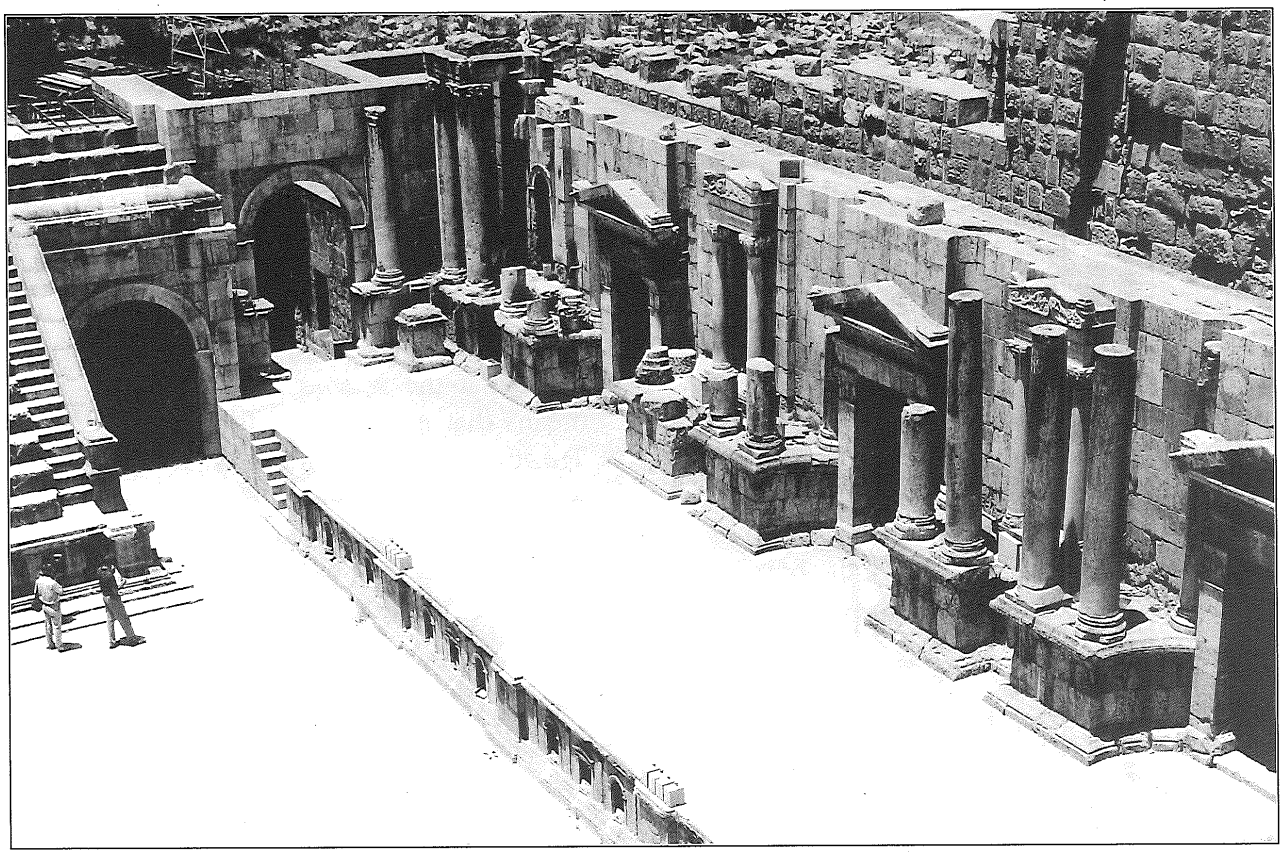
20. D.Kirkbride, 'A brief Outline of the Restoration of the South Theatre at Jerash,' *ADAJ* 4-5, 1960: 125.

Jarash project.

The Design of the South Theatre

The reason the South Theatre was chosen for the present study is a peculiarity in the design of its *scaenae frons*. The South Theatre at Jarash is unusual in that, although it has a rectilinear *scaenae frons*, its architect has attempted to give the impression that the three doorways are enclosed in semicircular niches by curving the ends of the podia nearest to the doorways (Fig. 4). These curves are repeated in the entablatures, and the illusion is completed by columns partially slotted into the wall surface immediately to the sides of the doorways. The resultant 'niches' are formed by the podia and *columnatio* alone. However because the slotted columns are actually behind the edges of the doorways, the effect is a carefully contrived illusion of fully formed curved niches (see below Fig. 7). Thus in its completed state the *scaenae frons* of the South Theatre must have had something of the appearance of that of Sabratha where there are in fact curved niches enclosing the three doorways.[21]

Jarash is not the only Roman theatre with this feature. Another example was unexpectedly discovered in July 1992 when the theatre at Taormina in Sicily was being surveyed by the team. The *scaenae frons* is of the rectilinear type and in front of it are podia carrying a conventional *columnatio* consisting of a single line of columns (Fig. 5). However it was soon discovered that the columns were set up in their present position at a later period when the orchestra was transformed into an arena. Underneath the podia of the present *columnatio* are the partly demolished remains of earlier podia. We measured them and found that the podia



4. Stage and *scaenae frons* of the South Theatre from the south-east (167.32).

21. This theory is discussed at greater length in a recent article, F.B.Sear, 'The *Scaenae Frons* of the Theater of Pompey,' *AJA* 97, 1993: 687-96.

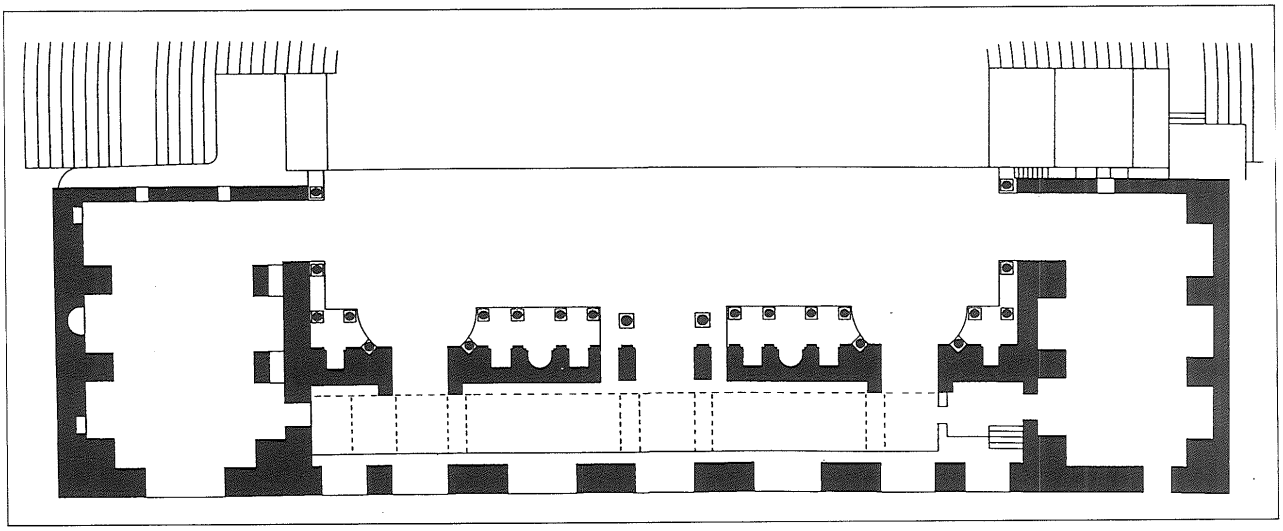
5. Theatre at Taormina, Sicily.

framing the *hospitalia* curve inwards to form semicircular 'niches' in a similar manner to Jarash. It also became clear that in addition to the columns along the edge of the podia there must have been a column immediately adjacent to each of the lateral doorways. These columns must have fitted into the V-shaped slots in the *scaenae frons* wall, which are otherwise inexplicable. It will be observed that the slots correspond exactly to the ends of the curved podia and the reconstructed drawing of the *scaenae frons* shows how the columns must have been arranged (Fig. 6).

The theatre at Taormina is thought to be late Trajanic/early Hadrianic on the basis of the architectural ornament of the columns.[22]

In the case of the South Theatre at Jarash an inscription dating to between AD 83-96 records that a certain T. Flavius donated 3,000 drachmas to build a *kerkis* of the theatre.[23] An inscription dating to AD 90 records the consecration of the *theatron,*[24] but the whole theatre was not complete at this time.[25] A cylindrical stone basis found near the west end of the stage with a long inscription dating to between AD 102-114 suggests that the *scaena* is Trajanic.[26] This means that the scene building of the South Theatre at Jarash was almost contemporary with that of Taormina.[27] This discovery is of particular interest because the theatre at Taormina has long been thought to be related to theatres of the eastern Mediterranean.[28]

22. R.J.A.Wilson, *Sicily under the Roman Empire,* Warminster 1990: 76.
23. A.H.M.Jones, 'Inscriptions from Jerash,' *JRS* 18, 1928, no. 13: 152-3.
24. By *theatron* I understand the place where the audience sat. See *CIL* X 833-5 from the Large Theatre at Pompeii where *theatrum* is distinguished from *crypta* and *tribunalia* and can only refer to the seating of the cavea.
25. J.Pouilloux, 'Deux inscriptions au théâtre sud de Gérasa,' *LA* 27, 1977: 246-54; J.Pouilloux, 'Une troisième dedicace au théâtre sud de Gérasa,' *LA* 29, 1979: 276-8.
26. A.H.M.Jones, *loc.cit,* no. 14: 153-6.
27. It may be noted that the capitals of the doorways are of a similar type to those on the South Gate and the Hadrianic Arch. The latter was built in AD 129/30.
28. O.Belvedere, 'Opere pubblichi ed edifici per lo spettacolo nella Sicilia di età imperiale,' *ANRW* 2.11.1 (Berlin/New York 1988): 364-66.



6. Taormina, Roman Theatre. Restored plan of the *scaenae frons* (Barry Rowney).

There are of course a number of differences between the two theatres. Firstly the slots into which the columns are inserted are semicircular at Jarash, while those at Taormina are V-shaped. However the V-shaped slots at the theatre at Taormina are explicable by the fact that the building material was concrete faced with bricks, which do not lend themselves to curved shapes as easily as stone. In both cases the aim is the same - to slot the columns halfway into the wall. Secondly, whereas at Jarash all three niches are semicircular, at Taormina only the outer ones are semicircular, while the central one is a wide rectangular niche containing a triple doorway. As I have argued elsewhere this feature links the theatre at Taormina stylistically to the theatre at Beneventum and ultimately to the Theatre of Pompey in Rome.[29] However the triple doorway was short-lived and for most of the second and early third centuries AD architects preferred the simpler design of three curved niches, as is found at Jarash.

As for other theatres in Arabia and nearby provinces with related features, the animated profile of the *scaenae frons* of the theatre at Philadelphia (Amman), which seems to date to the Antonine period, is also formed by the podia and *columnatio* alone.[30] As at Jarash the *scaenae frons* is rectilinear, but because the *scaenae frons* has all but disappeared it is impossible to tell whether there were columns slotted into the wall. Parts of the eastern *aditus maximus* and the east end of the stage of the Roman theatre at Heliopolis (Baalbek) were revealed in an excavation in 1904.[31] The podium arrangements are similar to the South Theatre at Gerasa: a rectilinear *scaenae frons* with a podium forming projecting curved niches. The sharp cut-off of the podium on the west side looks rather like the central break in each podium in the South Theatre at Gerasa. Finally, it has come to my attention that the scene building of the theatre at Hierapolis in Asia Minor has recently been cleared to reveal a rectilinear *scaenae frons* with five doorways, the central three enclosed in curving podia. The

29. F.B.Sear, *loc.cit*: 687-96.
30. The architrave of the *scaenae frons* bore an inscription in Greek commemorating Antoninus Pius. A headless statue of an emperor in armour, perhaps Antoninus Pius and a draped female statue of Faustina Major filled two niches of the *scaenae frons* (F.el Fakharani, 'Das Theater von Amman in Jordanien,' *ArAnz* 90, 3, 1975: 377-403).
31. B.Schulz, H.Winnefeld, *Baalbek. Ergebnisse der Ausgrabungen und Untersuchungen in der Jahren 1898 bis 1905*, i. Text (Berlin-Leipzig 1921): 42-3.

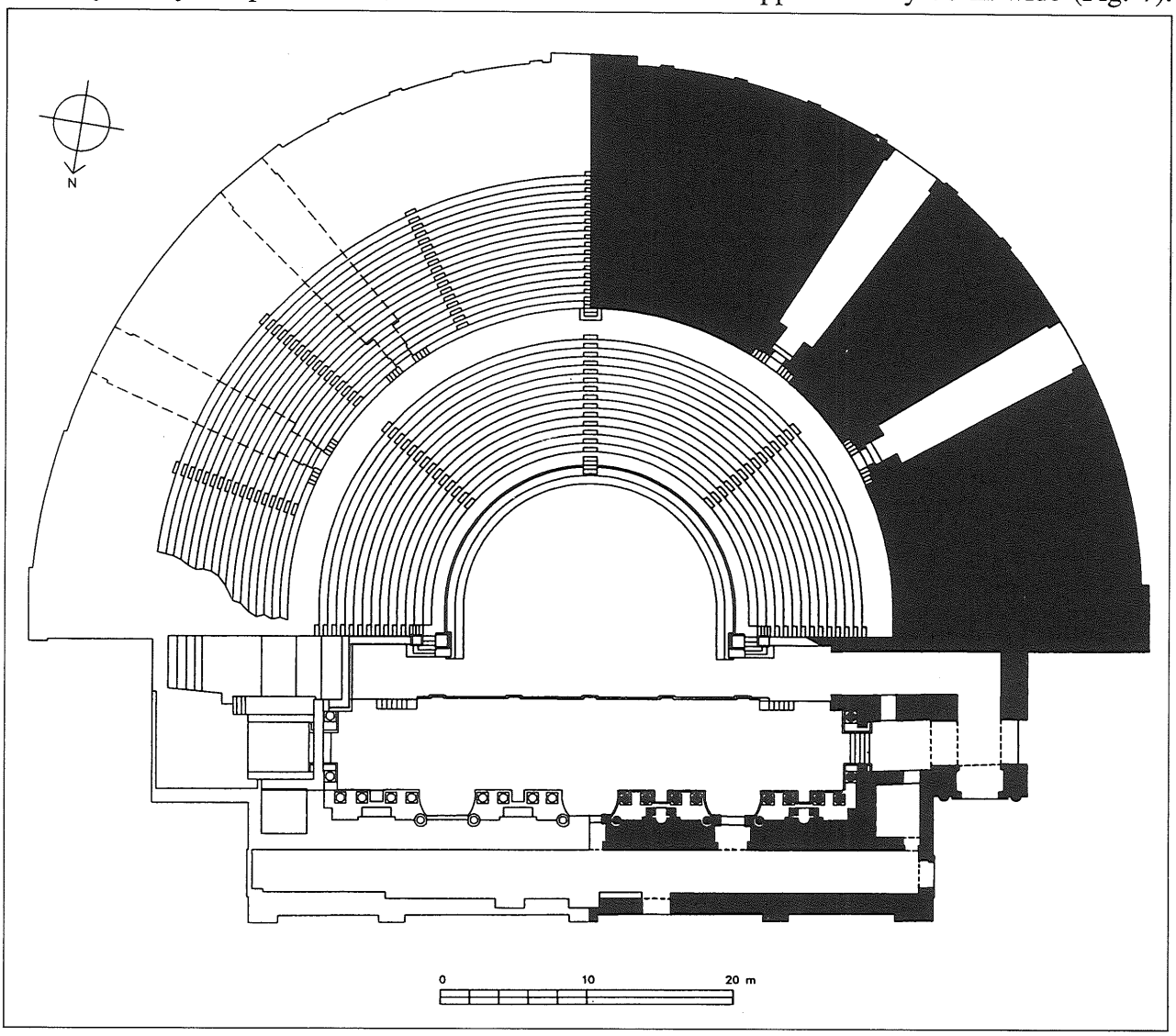
building was completed at the time of Hadrian, although the *scaenae frons* was rebuilt at the time of Septimius Severus.[32]

The 1994 Campaign

These unusual design features were the starting point of our interest in the South Theatre at Jarash. The first step was to make a detailed study of the building and to produce detailed plans, sections and drawings of it. However as our preliminary survey proceeded it became clear that this is an exceptionally well-preserved theatre with not only a very complete *cavea*, but with an enormous quantity of well-preserved architectural material belonging to the *scaenae frons* behind the theatre. It seemed to us that the sheer quantity of material which had survived warranted a total restoration of the building, at least on paper. The following is a brief description of the various parts of the theatre with some indications of what form the restoration might take.

The Cavea

The South Theatre faces north and rests against the hill of the Temple of Zeus. It has a *cavea* approximately 76 m wide (Fig. 7).

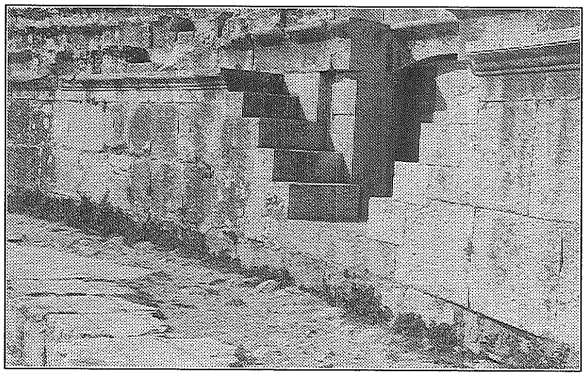


7. Plan of the South Theatre at Jarash (Andrew Hutson, Zig. Kapelis).

32. P.Verzone, 'Hierapolis di Frigia nei lavori della Missione archeologica italiana.' Pp. 396, 417-22, 426-36 in *Un decennio di recerche archeologiche,* I, Rome 1978.

The *ima cavea* cut into the hillside has 14 rows of seats, divided into four *cunei.* The seats of the outer *cunei* are numbered, starting from the bottom row, from right to left, from A to COH (=278). The lettering shows at least three different hands. A *praecinctio* surrounded by a podium separates the *ima* from the *summa cavea*. The *praecinctio* is 2.19 - 2.21 m wide, including the top row of backless seats, which are 32 cm deep. Behind them is a space, 33-34 cm wide, which was used as a foot-rest for the row behind. The row behind, the top row of seats of the *ima cavea,* had high backs which suggests that they were for persons of importance. Most of these seats have disappeared, although 15 fragments can still be seen at intervals along the corridor. They are 56 cm deep, including the overhang at the front and 49 cm without it. When placed over the cuttings behind the top row of seats they reduce the width of the *praecinctio* to 1.04 - 1.06 m. The best-preserved seat (the last one on the west side) has a back 87 cm high and a seat 44 cm high (Fig. 8). The back is broken at the top and was originally somewhat higher. On the analogy of similar high-backed seats in the theatre of 'Ammān and the West Theatre at Umm Qays, the Jarash seat can be restored as a little over a metre high.[33] The floor level of the *praecinctio* was probably at the bottom of the two rows of orthostates which form the podium around the *praecinctio* (Fig. 9). This is about 29 cm above the level of the foot-rests of the seats with high backs. Thus the paving of the *praecinctio* would have been about 70 -75 cm below the top of the backs of the seats around the *praecinctio*. These would have formed a kind of inner wall to the *praecinctio*. The diverging staircases built into the thickness of the podium wall separating the *ima* from the *summa cavea* look extremely odd because they are totally exposed to view (Fig.9). Normally one would expect a thin section of walling to hide them as can be seen for example in both the large and small theatre at Amman, the theatre at Philippopolis, and the theatre at Bostra. The present arrangement looks very much like Butler's restoration of the

8. Part of a high-backed seat in the *praecinctio* between the *ima* and the *summa cavea* (174.26).



9. Staircases linking the *ima* and *summa cavea* (173.14A).

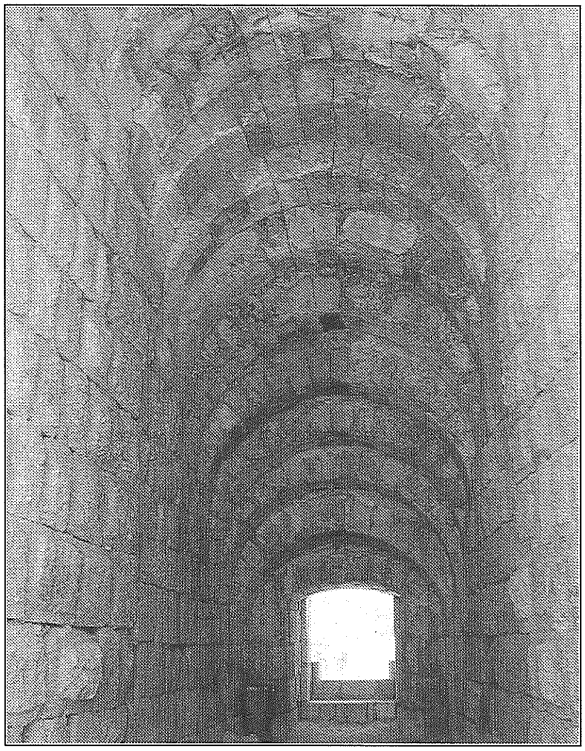
33. At Amman the back is 1.08 m high and the seat 47 cm high x 57 cm deep. At Umm Qais the seat is 43 cm high and the back 1.12 m high x 65 cm deep.

large theatre at Amman.[34]

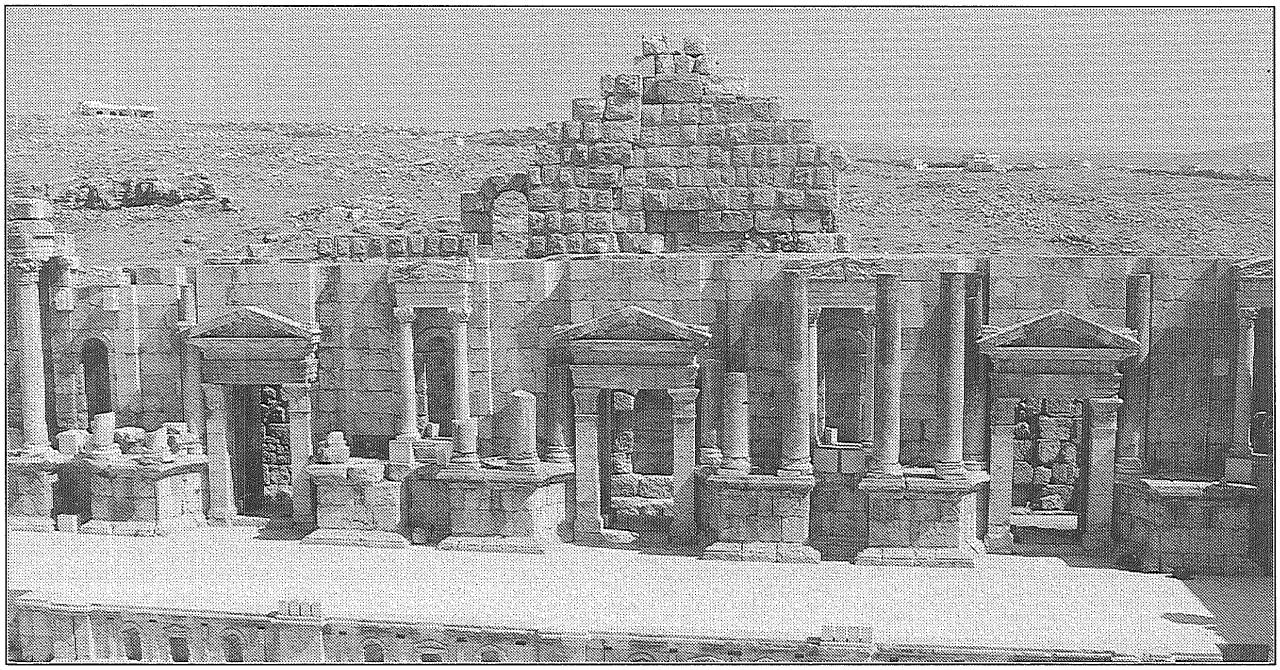
The hillside flattens out a little above the level of the *praecinctio* with the result that the *summa cavea* had to be supported on an *aggestus* or earth fill. The fill, which probably came mainly from the earth removed to shape the *ima cavea*, was contained by the heavy walls of the *analemmata*. It was further compartmentalised by six pairs of walls between which are passageways leading from the hill behind the theatre into the *praecinctio*. These passages are vaulted over with rising vaults composed of a series of stone arches, which correspond to the rows of seats above them (Fig. 10). The *summa cavea* is divided by staircases into 8 *cunei* and has been restored with 15 rows of seats, bringing the present overall height of the theatre, measured from the orchestra, to 16.28 m.

Orchestra and Proscaenium Wall

The orchestra, 19.91 m in diameter, is paved with stone. The *proscaenium* wall is 1.51 m high at the west end, 1.56 m high at the east, and because of the slope of the orchestra it is 1.61 m high in the middle. It is divided by five broad pilasters, 87 cm wide x 16 cm deep, into four sections in each of which is a small pedimented niche and a pair of round-headed ones (Fig. 11). Con-



10. Passage into the *praecinctio* from outside the *cavea* (174.21).



11. General view of the *scaenae frons* (173.34A).

34. H.C.Butler, *PUAES,* Div.2 - *Ancient Architecture in Syria,* Sec.A - *Southern Syria,* Leyden 1907: pl. IV.

tinuous base and cornice mouldings run along the whole stage front following the projections of the pilasters. At each end of the stage is a staircase rising away from the centre of the orchestra. The staircases have treads, 60 cm wide and mainly 32.5 cm deep with risers mainly 22.5 cm high. There are six risers.[35] The stage is 6.32 m wide to the podia which support the *columnatio* and 8.36 m to the back wall.

The Doorways in the Scaenae Frons

The rectilinear *scaenae frons* wall is pierced by three doorways, 1.82-1.86 m wide flanked by square pilasters 49-50 cm wide (Fig. 11). The pilasters have 3-sided square capitals, 69 cm high and about 51 cm wide at the base. The capitals have two acanthus leaves on each face and 7 vertical channels, which are also a feature of the friezes of the *columnatio*. They support an entablature with a 3-stepped architrave, 60 cm high, and a frieze, 37 cm high, decorated with vertical channels capped with an egg-and-dart carved from the same block. The cornice, 23 cm high, has a row of small square dentils at the bottom, an egg-and-dart, modillions and coffered panels with flowers and an egg-and-dart framing them. On the corona is the vertical channel motif with a bead-and-reel above. The raking cornice of the pediment is similar but with a cyma recta sima with palmettes. In the tympanum is a disc.

The Niches in the Scaenae Frons

Flanking each doorway is a round-headed niche framed by a pedimented *aedicule* supported on two columns (Fig. 11). There are four niches on the lower storey and the architectural fragments behind the theatre suggest that there were corresponding niches in the storey above. The shell block from the head of the niche, which includes the hood moulding is 1.30 m wide x 65 cm high. The hood moulding is 22.50 cm wide including the cyma recta moulding at the top. There is also a horizontal cyma recta moulding at the bottom of the head of the niche which runs round across the top of the 'pilaster' at the side of the drum, which is also 22.50 cm wide. There are flat pilasters at the sides of the niche, 61 cm wide, each with a capital consisting of an ovolo and a big cyma recta. In front of each niche is a pair of columns each on a square podium. The shafts are 2.75 m high and taper from 40 cm to 37 cm. The architrave has two fascias and is capped by a cyma reversa. The frieze has vertical channels or flutings and is carved out of the same block as the architrave. Above it is an egg-and-dart, which is carved out of the same block as the pediment which has a running acanthus scroll with flame palmettes at the corners.

The Podia and Columns of the Columnatio

The *columnatio* originally had two storeys with a sloping roof extending over the area of the stage. There were 26 columns on each storey, including the ones flanking the doorways at each end of the stage, as well as the 8 smaller columns flanking the niches - a total of 68 columns for the whole *scaenae frons*. The columns on the west side of the *scaenae frons* are 5.23 m high, including base and capital; those on the east side are 5.31 m high. The columns rest on four podia, 1.89 m high x 2.04 m deep, and are arranged four to a podium. The central pair of columns is more widely spaced than the outer pair and each podium is cut back in the middle. The edges of the podia nearest to the doorways and the corresponding entablatures curve round to enclose the doorways giving the impression of a niche, even though the *scaenae frons* wall is in fact rectilinear. Pairs of columns at the ends of the podia nearest to the doorways, slotted into

35. These staircases have no outer wall to hide them and are totally modern. I am suspicious of them. Also note that a large amount of the *proscaenium* wall is modern restoration.

semicircular recesses in the *scaenae frons* wall, serve to emphasise this illusion. The column bases (including plinth) are mostly 82 cm wide x 32 cm high, but the height can vary between 31- 42 cm. The lower diameter of the columns is 62 cm, including anathyrosis; without 57 cm. The shafts vary between 4.06 - 4.32 m high (there is a complete column shaft in the *postscaenium*, which is 4.24 m high).[36] The capitals vary in height between 66 -77 cm high. The slotted columns have round bases, 36 - 41 cm high, and shafts 4.04 - 4.26 m high.

The Entablature

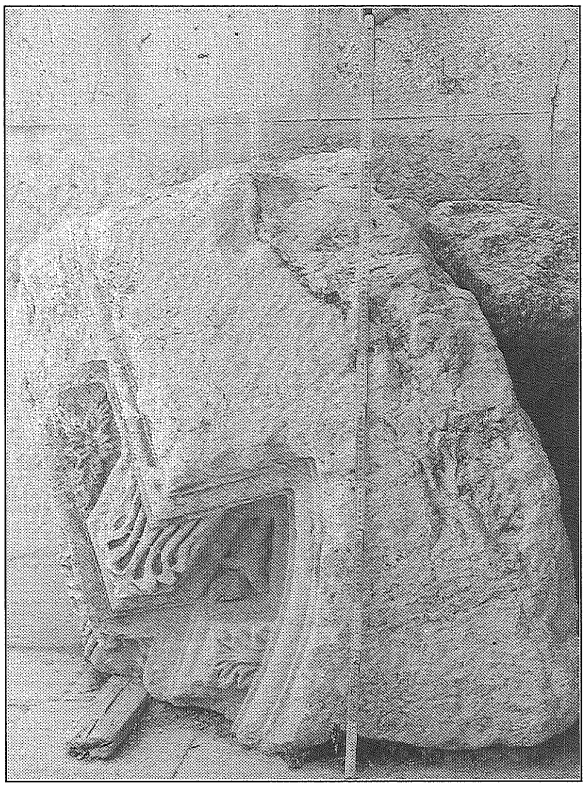
The architrave of the lower order projects 1.14 m from the wall face at the west end (Fig. 4). One end of the projecting block, 1.80 m long, is engaged into the wall, while the other end rests upon a column. The rear 92 cm of the block, engaged into the wall, is uncarved, while the projecting 88 cm is carved. At the front it is joined to another block 2.24 m wide x 26 cm wide at the bottom, which rests upon a pair of columns and is carved on three sides. The width of the soffit is 50 cm. The overall height of the architrave is 57 cm. The friezes are less than 40 cm high.

Cornices

The cornices of the lower order are 57-59 cm high, with dentils about 6.5 cm square, and an undecorated ovolo above. The modillions have acanthus scrolls on their undersides and are 12-13 cm wide x 12-13 cm deep x 6 cm high at the back. They are 19 cm apart, and in between is a coffer with a flower in the middle. Around coffer and modillion runs a rough ovolo unadorned. On the corona are vertical channels, 6 cm high with a bead-and-reel above. The sima is a cyma recta, 18 cm high, decorated with alternately flame and upright palmettes. There are two fragments in the east *aditus* (Fig. 12). One is from a corner and measures 63 x 78 cm on the underside (without the dentils) and the other is from an inner angle of one of the curved niches. It has a curved section 57 cm long; a projection of 28 cm and a straight section 44 cm long. Its decorative detail is like the first fragment.

Architectural Fragments behind the Postscaenium

Behind the *postscaenium* are large numbers of architectural blocks, most of them identifiably from the *columnatio*. In the short time available after we had surveyed the cavea and the scene building we examined these blocks in order to estimate whether a restoration of both orders of the *scaenae frons* would be feasible.[37] The ma-



12. One of the cornice fragments in the eastern *aditus* (175.22).

36. In some cases the wrong capital has been restored. For example the column on the south side of the door at the east end of the stage is about 18 cm too low.

37. I am referring to a paper restoration, although a physical anastylosis of the *columnatio* may also prove possible.

terial proved to be embarrassingly rich and a preliminary examination suggested that very few of the architectural components of the lower storey of the *columnatio* were missing. In addition to the parts of the *columnatio* which have already been restored innumerable other fragments, demonstrably belonging to the lower order, were identified. Frieze blocks were the main components of the lower storey which were conspicuously lacking. This may explain why the restoration of the *columnatio* extends only as far as the architraves. The restored lower order of the *columnatio* has ten columns missing or incomplete. However behind the *postscaenium* there is a number of column drums about 57- 8 cm in lower diameter tapering to 53 cm which may belong to the lower order. A large number of architrave and cornice blocks from the lower order survive and because the portions which were inserted into the wall face are left uncarved it may be possible to assign them more or less to their original position. The main aim of a future campaign will be to make a detailed inventory of the blocks and, having assigned those which demonstrably belong to the lower order, to identify the material belonging to the upper order. A preliminary examination suggests that a great deal can be learnt about the upper order from the surviving fragments. They are of similar type to those of the lower order, but smaller in scale. The upper order probably had columns 4.20 m high with shafts about 47 cm in diameter. The upper order, like the lower, was probably Corinthian to judge by a capital with an underside about 43 cm in diameter. Another find was a small column base with a plinth approximately 58 cm across, which seems of the right scale for the upper order. Another column base on a plinth has an upper torus, 50 cm wide, which suggests a column with a lower diameter of about 45- 47 cm. Large numbers of three-stepped architrave blocks, between 45 - 49 cm high, presumably belong to the upper order. Although few frieze blocks from the lower order have turned up, a large number of frieze blocks, on average about 30 cm high, apparently belonging to the upper order, have been identified. There are several upper cornice blocks with dentils and consoles, mainly 43 - 44 cm high. There are several complete shell niches, one metre wide including mouldings, with flanking pilasters, 14.5 cm wide. As the fragments make up more than four niches, it is likely that there may have been seven niches in the upper storey, four corresponding to the niches of the lower storey and three over the doorways.

Towards a Reconstruction

The lower order consists of podium (1.89 m high), columns (on average 5.27 m high), architrave (57 cm high), frieze (c. 40 cm high) and cornice (57 cm high). Therefore the total height of the lower order from stage level to the top of the cornice is 8.70 m. The upper order probably had podia about 90 cm high,[38] columns 4.20 m high, architrave 46 cm high, frieze c. 30 cm high, cornice c. 44 cm high–a total height of 6.30 m. The overall height of the *scaenae frons* must therefore have been about 15 m. Including the stage, at 1.54 m, the overall height measured from the bottom of the podium running around the orchestra in front of the *proscaenium* wall would have been 16.54 m.

The *cavea* is 16.28 m from the orchestra to the top surviving seat. However there is room for many more rows of seats. The distance from the outer wall of the *cavea* to the edge of the rim of the top surviving seat is 7.80 m. As the seats near the top of the *cavea* are 46 cm high x 66 cm deep and their edges project 10 cm, there is 7.14 m to the rim of

38. Vitruvius prescribes that the height of the upper podia should be half that of the lower (*De Arch.* 5.6.6).

the seat above or the back of the top surviving seat block. If we assume a wall, 1.50 m thick around the top of the *cavea* and a *praecinctio*, 1.02 m wide (like the lower one) then there is a space, 4.62 m wide, for further seating, 7 rows in all, adding a another 3.22 m to the height of the *cavea*. To this we should add a further 1.50 m for a protective balustrade around the top of the *cavea*, making the *cavea* 21 m in total height, measured from the orchestra.

Some of these calculations may have to be modified when all of the fragments have been measured and studied more closely and when a complete inventory has been made. However it seems likely that, if we assume a stage roof sloping at about 22.5° and about one metre thick including roof tiles, the overall height of the stage building to the apex of the roof would have come to almost exactly the same height as the balustrade around the top of the cavea. This is what Vitruvius prescribes[39] and what can been seen in a number of well-preserved Roman theatres of the second century AD such as those at Aspendos and Bosra. [40]

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39. *De Arch.* 5.6.4.
40. For Aspendos see D. De Bernardi Ferrero, *Teatri classici in Asia Minore,* 3, Rome 1970: 161-174; for Bosra, see H.Finsen, *Le Levé du Théâtre Romain à Bosra* (Analecta Romana Instituti Danici, suppl VI,) Copenhagen 1972.