

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/284189261>

The Umayyad Congregational Mosque of Jarash in Jordan and its relationship to early Mosques

Article in *Antiquity* · June 2005

DOI: 10.1017/S0003598X00114152

CITATIONS

37

READS

2,571

2 authors, including:



[Alan Walmsley](#)

Macquarie University

135 PUBLICATIONS 590 CITATIONS

[SEE PROFILE](#)

Some of the authors of this publication are also working on these related projects:



Writing a social history of Syria-Palestine, largely drawn from archaeological sources [View project](#)



Al Zubarah: World Heritage Site, Qatar (archaeology, history) [View project](#)

The Umayyad congregational mosque of Jarash in Jordan and its relationship to early mosques

Alan Walmsley¹ & Kristoffer Damgaard²

The early mosque at Jarash is reconstructed by archaeological excavation and survey and attributed to a wave of urban renewal in the reign of caliph Hisham (AD 724-743).

Keywords: Jordan, Islamic, mosque, urbanism

Introduction

Mosques constitute one of the principal defining features of urban life in Islam (Grabar 1973: Chapter 5; Frishman & Khan 1994; Hillenbrand 1999b: Chapter II; Insoll 1999; see also Johns 1999 for a critical assessment of the origin of the mosque). From the earliest years of the Muslim community the mosque provided an essential focal point for the faithful, regardless of how unsophisticated the first structures were, such as is seen, for instance, with the foundation mosques of Basra (AD 635) and Kufa (AD 637/670) and the first Mosque of 'Amr in al-Fustat (AD 641-642). In the eighth century AD, the social role of the mosque was enhanced significantly. The developing politico-religious primacy of the mosque was expressed in a tangible way, as seen with the huge physical expansion of the Mosque of the Prophet in Madina and by the construction of the Great Mosque of Damascus, both commissioned by the active caliph al-Walid b. 'Abd al-Malik (r. AD 705-715). Urban development in the Umayyad period was not restricted to mosques, however, for new and existing towns were also provided with a range of complementary urban necessities, especially circuit walls, gates, streets, palaces, administrative buildings, markets and industrial installations (see recently Foote 2000; Walmsley 2000).

The clear recognition by a rapidly expanding Islamic state of the vital social, religious and commercial role of towns in empire building was an inheritance from Late Antiquity, especially in Syria-Palestine (Bilad al-Sham) and Egypt (Misr). In these regions the urban elites, primarily those of the church, had by necessity assumed temporal control in addition to providing spiritual leadership in the later sixth century, and the role of running a town was, for the most part, retained by the church hierarchy until superseded by a new and progressively Muslim administration following the reforms of 'Abd al-Malik (r. AD 685-705). It is surely no coincidence that the tax requisition and legal papyri recovered in the churches of Nessana and Petra cease about this date, provincial centres were increasingly provided with mosques symbolising Muslim hegemony while providing

The Carsten Niebuhr Institute, University of Copenhagen, Denmark ¹(Email: walmsley@hum.ku.dk) ²(Email: kristofferdamgaard@hotmail.com)

Received: 22 January 2004; Accepted: 27 May 2004; Revised: 16 August 2004

ANTIQUITY 79 (2005): 362-378

for Muslim residents, and the number of functioning churches decreased as the social role of the ecclesiastical authorities was curtailed, especially in administration and tax collection. This loss of civil authority seemingly prompted greater resistance to Muslim rule by elements within the church hierarchy. For instance the self-martyrdom of St Peter of Capitolias (Bayt Ras) is probably better seen as a revolt against the loss of secular authority, especially in state financial matters, by elements in the church and not a conflict of religious beliefs as interpreted by later Christian sources (Peeters 1939).

The period from 'Abd al-Malik until the fall of the Umayyad dynasty in AD 750 is characterised by a veritable frenzy of innovative building activity, especially in Bilad al-Sham (Creswell & Allan 1989: Chapters 1-9). The emphasis lay equally on religious and secular edifices, both within an urban context and in the countryside. Congregational mosques feature prominently, at least among the surviving monuments. In addition to the renowned imperial mosques of Damascus and Jerusalem, congregational mosques were also constructed in the main and secondary towns of the five provinces (*ajnad*, sing. *jund*) of Bilad al-Sham (Levant), for instance in Halab (Aleppo), al-Ramlah, Rusafah, Anjar and Amman. Likewise mosques were rebuilt on a larger scale in the main centres of neighbouring Iraq, the Hijaz and Egypt, as well as further afield. Right at the end of the Umayyad period a large congregational mosque of a combined Iraqi/Syrian style was built in the Jazirah at Harran, where the last caliph Marwan b. Muhammad (r. AD 744-750) had taken up residence.

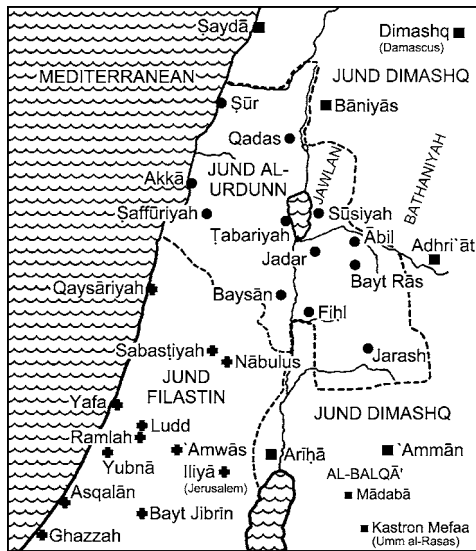


Figure 1. Map of the Jund al-Urdunn, which extended from the strategic naval ports of Sur (Tyre) and Akka on the Mediterranean littoral to Bayt Ras and Jarash in the east.

Belonging to this period of unfettered construction is the recently discovered congregational mosque of Jarash in Jordan. Jarash functioned as the capital of the south-easternmost district (*kurah*) of the Jund al-Urdunn in Early Islamic times, according to four key 'Abbasid-period written sources composed in the third/ninth century (Figure 1). The identification of Jarash as a middle ranking Early Islamic mint producing copper coins in both a Pre-Reform and Post-Reform type additionally confirms the administrative importance of the town (recently for Pre-Reform, Album & Goodwin 2002: 89, with references; also Naghawi 1989; Amitai-Preiss *et al.* 1999). As the preliminary assessment presented in this article shows, both on architectural grounds and from the archaeological evidence so far recovered, the Jarash mosque would appear to have been built sometime in the second

quarter of the eighth century AD, that is, during the reign of Hisham b. 'Abd al-Malik (r. AD 724-743). His two decades of rule were marked by a deliberate expansion of the urban fabric of Bilad al-Sham, especially the socio-economic resource-base of towns (Foote 2000; and, with some caution, Tsafir & Foerster 1997, for Baysan).

The settlement at Jarash

Before describing the congregational mosque of Jarash, a brief outline of earlier archaeological discoveries of Early Islamic date is necessary (main excavation reports are Crowfoot 1931; Bellinger 1938; Kraeling 1938; Barghouti 1982; Uscatescu 1996; Marot 1998; Zayadine 1986, 1989). In the last 75 years excavations by various missions have uncovered, mostly incidentally, a significant Islamic presence at the site, including: structures built over the 'Oval Piazza', the *Cardo* and around the South *Tetrakonia*; numerous potters' workshops including a massive industrial complex in the *temenos* of the ruined *Artemis Temple* and another in the North Theatre and its portico; two blacksmiths' shops on the *Cardo*; glassworks; a large courtyard 'house' and shops flanking the South *Decumanus*; and the continuing use in many areas of the town's churches and other buildings, including a bath and housing (Figure 2). In 1982 the discovery of an early mosque in the previous year was announced, but its identification as an Umayyad construction was somewhat doubtful (Naghawi 1982). Unfortunately, these disjointed discoveries did little to produce a detailed and accurate picture of the urban life in Jarash during the Early Islamic period, especially the layout of the town and the nature of occupation within it. Their disparate nature and a poor understanding of the material culture meant that the significance of the finds was not always recognised at the time of excavation. Nevertheless, recent advances in the classification of ceramics and coins, the recognition of a disconnection between social change and dynastic succession, and new interpretations of the character of human settlement have allowed a reinterpretation of this material, and opened up the prospect for new work on Islamic Jarash.

When considered together the written sources, the results of earlier archaeological work and, most critically, the presence of a mint, presented a compelling argument that Jarash in the Early Islamic period would have hosted a Muslim community of some size, and the presence of Muslims in the town would have required a congregational mosque, an administrative building and markets to facilitate exchange and produce income, all in addition to the already existing urban fabric. Locating the mosque was, obviously, a critical first step in accurately reconstructing the Umayyad town, but even before new field work was commenced two decisive clues pinpointed its likely location in the heart of the settlement.

Discovery

The first clue came from excavations undertaken between 1929 and 1934 by the Yale Joint Mission at the circular plaza surrounding the South *Tetrakonia*. In excavating down to the Roman period paving, housing of the Early Islamic period was exposed and removed. Also uncovered in the south-west quadrant of the plaza was a "well built Arabic edifice . . . laid out in the form of a hollow square with at least one corner tower and colonnaded porticoes" (Kraeling 1938: 114). It was suggested in the publication that this structure was a guardhouse placed at the crossroads of a much-decayed but still occupied town, an implausible explanation and more a reflection of the excavators' distorted vision of the nature of Islamic authority in *Bilad al-Sham*. Given its centralised location at the main crossroads of Jarash it was much more likely that the Yale Joint Mission had uncovered part of a major public building dating to Early Islamic times.

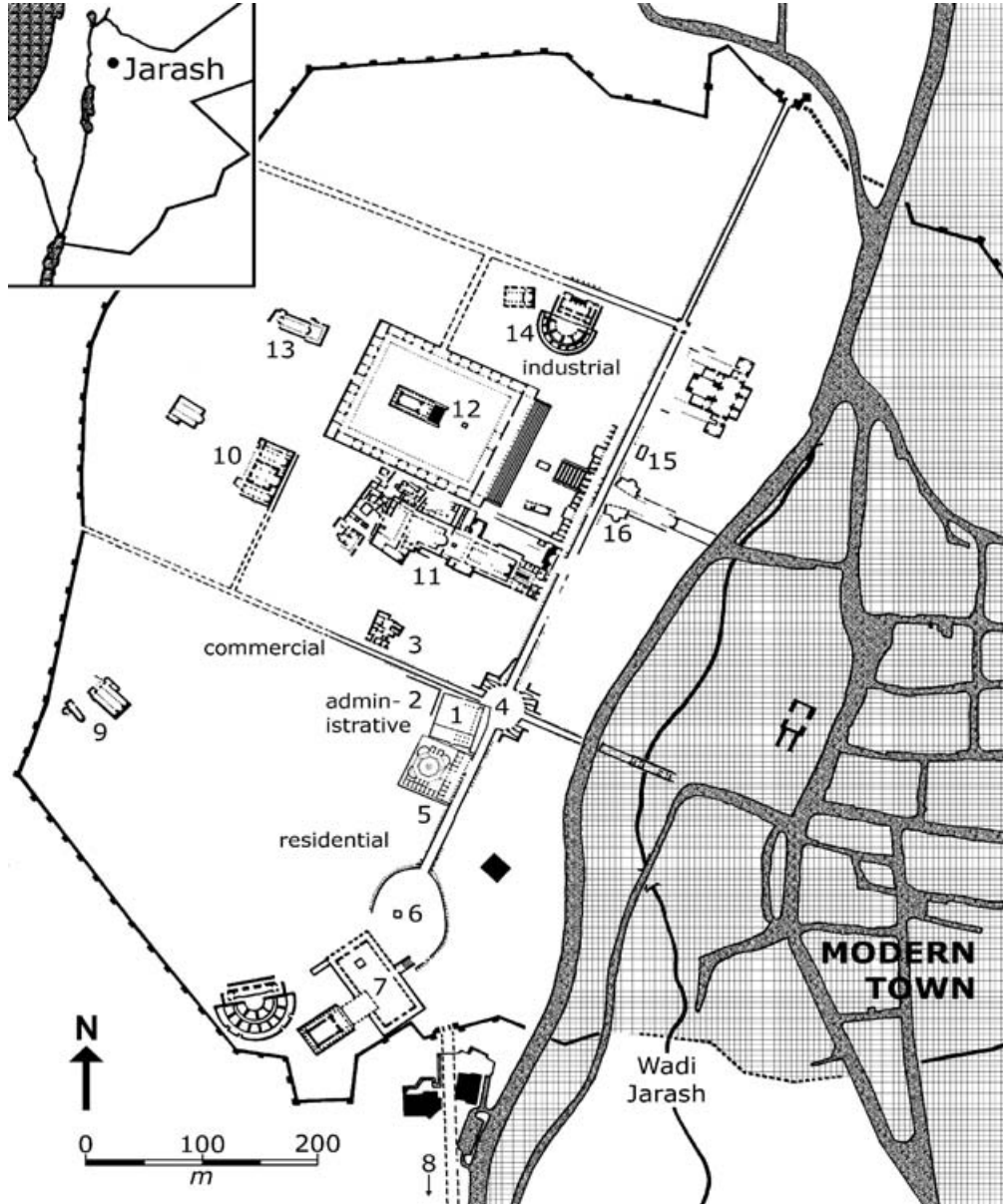


Figure 2. Plan summarising the principal urban features of Umayyad Jarash. 1: Umayyad mosque; 2: possible Islamic administrative centre; 3: market (suq); 4: South Tetrakonia piazza (built over); 5: Macellum, with Umayyad–Abbasid rebuilding, and south cardo, encroached by structures; 6: Oval piazza domestic quarter with fountain; 7: Zeus temple forecourt (kiln, monastery?); 8: hippodrome and Bishop Marianos church, eighth century use; 9: church of SS Peter and Paul and Mortuary Church (Umayyad construction date?); 10: churches of SS Cosmas and Damianus, St George and St John the Baptist, with Umayyad–Abbasid occupation and iconoclastic-effected mosaics (later eighth century); 11: Christian complex of two churches (Cathedral to the east with stairs from the street, St Theodore’s to the west), mid-fifth to late sixth century Bath of Placcus (north of St Theodore’s) and houses west of St Theodore’s with extensive Umayyad occupation including a kiln and oil press; 12: Artemis compound used for ceramic manufacture; 13: Synagogue church with iconoclastic-effected mosaics; 14: North Theatre, also industrialised with kilns; 15: the 1981 ‘mosque’, 16: central Cardo with blacksmith’s shop and offices. Map modified from R.E. Pillein in Zayadine (1986).

A second clue was gained from an old overhead aerial photograph of the site, probably taken in about 1928. On close examination (by scanning and enhancement) a sizable courtyard building measuring about 43.32 by 38.4m could be clearly identified on the photograph southwest of the South Tetrakonia. More revealingly, it was apparent that this building had been erected deliberately out of alignment with the earlier Roman-period urban grid. The remains of a tower, that exposed by the Yale Joint Mission, could be seen in the photograph at the north-east corner of the rectangular building. Along its southern edge a separate broad room could be discerned, running the full width of the structure. This was interpreted as the prayer hall of the mosque, located in front of the principal *qiblah* wall. The open rectangular shape of the building was seen as strongly indicative of an Early Islamic congregational mosque, placed centrally near the crossroads of the town as at Anjar and al-Ramlah.

Fieldwork in the summer of 2002 confirmed that this building was, as suspected, Jarash's congregational mosque. The excavations focused on locating and recording the critical features of the mosque: the prayer hall, the entrance façade and doorway, the corner tower and, most importantly, the *mihrab*. Some architectural features belonging to the mosque were already visible before the excavations began, including the tower in the north-east corner excavated by the Yale Joint Mission, a section of the east enclosure wall, and the entrance façade and doorway. Nevertheless, the exposure of the prayer hall and main *mihrab* was a priority if conclusive evidence of a mosque was to be found. Excavation squares conforming to a 10 by 10m grid aligned to the building's orientation were laid out at strategic locations, including at the midpoint of the *qiblah* wall where it would be expected to find the *mihrab*. This strategy was very successful, in that most of the primary features of the mosque were identified, including not one but two *mihrab*.

Description

The mosque can be almost fully reconstructed in plan from the visible surface features, mostly enclosure wall lines, supplemented with the many architectural details that were exposed during the excavations (Figure 3). The main enclosure wall of the mosque, constructed in courses from stone blocks and incorporating recycled building material including street colonnade architraves, measures 38.9m east to west by 44.5m north to south. The wall, 0.7m wide, was built in two faces and packed internally with red earth (*terra rossa*) and small stones. Generally, no hard mortar was used in constructing the walls except for a projecting mortar edging, decorated with incised lines in a herringbone pattern, which concealed the joints between the wall stones on both the inside and outside façades. No other plastering or decoration is apparent on the extant walls.

A single, centrally placed doorway gave access to the building through the north enclosure wall (Figure 4). Accordingly, the principal axial entry to the mosque, at least originally, was from the South Decumanus of the Roman-period town, for this street – not the *Cardo* – functioned as Jarash's main thoroughfare in the Early Islamic period. Because of the attempt to orientate the mosque in the direction of the *qiblah*, the building was set at an angle to the Roman urban grid. The displacement of the building is particularly apparent along the north and east walls, which face out on to the South Decumanus and *Cardo* respectively. In the

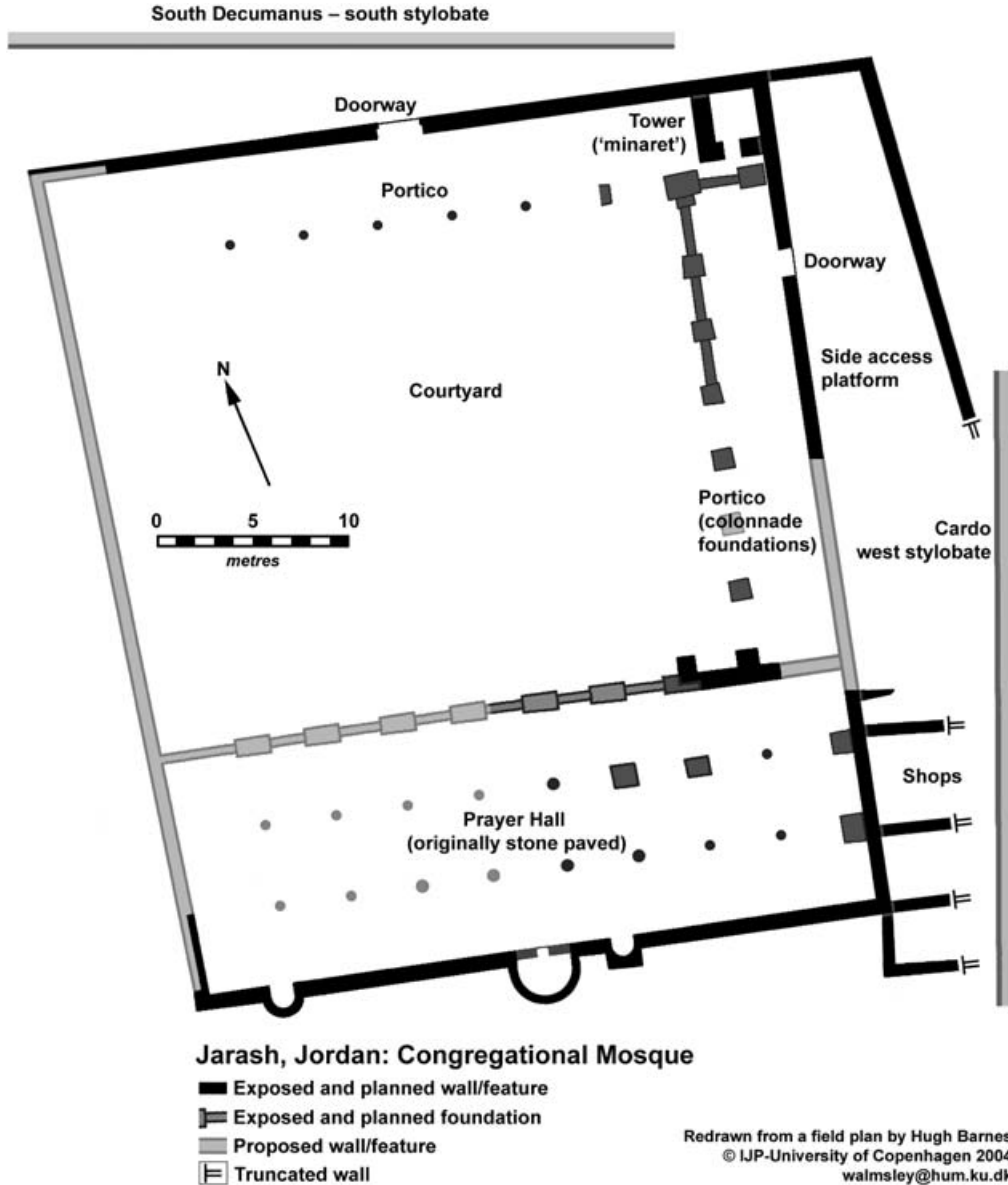


Figure 3. Preliminary outline plan of the Umayyad mosque of Jarash (as after 2004 season).

Early Islamic period the outfacing (entry or anti-qiblah) wall of a mosque was consistently built parallel to the qiblah wall to preserve symmetry, and hence at Jarash it had to be offset from the Decumanus.

The threshold of a second doorway has been preserved in the east enclosure wall at a level corresponding to the threshold in the north wall. This side entry, seemingly part of the original structure, was approached by way of a platform from the built-over cardo. Much of the detail concerning the precise arrangement of the eastern entry was lost with the Yale Joint



Figure 4. General view over the northern sector of the mosque, showing the entrance doorway, portico foundations and tower base (IJP_D080). It should be noted that the columns in front of the mosque were re-erected in the recent past.

Mission excavations, although the retaining wall for the platform, built over demolished Byzantine shops and paving, has survived. There may have been another doorway in the west wall, mirroring that in the east wall, but the area is unexcavated.

These doorways gave access to a spacious but mostly unpaved courtyard. On the north, east and probably west sides stood porticos, 4.8m deep and beginning at solid corner piers with intervening columns. The spacing between the columns on the east side was 3.5m, and on the north a slightly wider 3.8m. Whether arches or flat lintels spanned these columns is unclear; only one displaced voussoir has been recognised so far. The open centre of the courtyard measured 28.2m east to west and 24.6m north to south, the latter measurement assuming the absence of a portico in front of the prayer hall façade.

In the north-east corner of the courtyard, at the junction of the north and west porticos, there once stood a 4.5m² square tower, almost certainly an early type of minaret for the mosque (Figure 4). To carry the greater weight of a tower, the internal walls were of a thicker construction, about a metre instead of the standard 0.7m of the enclosure wall, and stood on solid foundations that extended a further 0.1m on each side. The tower could be entered from the northern end of the eastern portico through a small doorway in the south wall, the threshold of which survives. Any internal arrangements, such as a staircase or floor, are lost due to earlier work, but the space within the tower is limited (2.4m²) indicating, perhaps, that a ladder was used to ascend the tower.

On the south side of the courtyard, only roughly aligned towards Makkah (the qiblah), was the central feature of the mosque: the prayer hall (Figure 5). The total depth (north to south)



Figure 5. View of the excavations over the central part of the prayer hall (IJP_D072).

of the prayer hall was 13.8m and it probably extended the full width of the building, although the western half is unexcavated. The prayer hall was of a hypostyle type, with the roof of the prayer hall once resting on two rows of columns running parallel with the qiblah wall, making three bays. Matching the column positions at the entry point into the prayer

hall from the courtyard was a line of stone piers, rather than columns. The prayer hall was probably open to the courtyard, at least originally, while no evidence for a portico in front could be identified.

The floor of the prayer hall was originally paved with stone slabs, but only a small area has survived. Quite possibly reed mats like the famed types from Tabariyah and mentioned by the geographer al-Maqdisi (d. 390/1000), but probably of local manufacture (riverbank reeds were available in the wadi of Jarash), were used to cover the stone paving of the prayer hall to make a more serviceable floor surface. The paving continued beyond the north-facing opening of the prayer hall some metres into the courtyard, stopping perhaps in line with the first column of the east and west porticos (about 4m out from the entrance into the prayer hall).

In the centre of the principal south (qiblah) wall of the prayer hall the excavations exposed unequivocal evidence for two mihrabs (Figure 5). Although this discovery proved beyond doubt that the building was a mosque, the presence of two niches was a surprise, especially given their propinquity. However, it would seem as though only one mihrab was in use at any one time. The probable original mihrab was the larger of the two, with an internal diameter of 2.85m and a circular rear (external) wall, a not uncommon feature of smaller mosques in the later Umayyad period. This niche was constructed out of reused stone blocks, including pilaster Corinthian capitals, which had been cemented together with a light grey ashy mortar with black specks. It was slightly (1.2m) offset to the east from the central axis of the mosque (as determined by the entrance doorway in the north enclosure wall). At some later stage the opening in the qiblah wall of the original mihrab was closed, leaving only a narrow doorway. Probably at the same time a second, smaller niche (diameter *c.* 1.2m) was inserted into the qiblah wall 4m further to the east. Unlike the circular external wall of the first mihrab, this niche was backed with a heavy square salient that projected some 0.8m beyond the outside face of the qiblah wall. In addition, the second mihrab was built using a quite different mortar, very hard and brilliant white in hue. The widespread presence of fragmentary volcanic scoria rock in the mihrab area may suggest that a dome once existed somewhere here. Most probably, it originated from the half-dome that would have topped the original large mihrab.

The reason, or reasons, for a change in the location and size of the mosque's mihrab cannot be given yet; more excavation will be required to both the east and west. Also unclear is to what use the original mihrab was put after the insertion of the new one, which matches closely the niche of the later downtown mosque at Amman (Northedge 1989, 1992: Chapter 6). Nevertheless, the change in mihrab is but one further piece of evidence that the mosque had a long life in at least three major stages before its destruction, probably by natural means, at an unknown date.

Both the prayer hall and the courtyard porticos were roofed with large ceramic tiles. Many broken pieces of these were found during the excavations. From two squares covering just over 120m², 1.72ton of tile were recovered from the final destruction level in the mosque. As a single tile weighed 5.2kg, this represents some 330 tiles. In total over 5ton were collected during the 2002 excavations. The volume of tile fragments indicates that the prayer hall was covered with a triple gabled roof similar to that of the Great Mosque of Damascus and that at Rusafah. The tiles were probably carried on wooden beams, but these have either

decayed or were reused later elsewhere. Both materials were available locally. The potters' kilns at Jarash produced, amongst other products, roof tiles, while the nearby mountains of Ajlun (Jabal 'Awf in Early Islamic times) were a source of fuel.

The main stages in the construction of the Jarash mosque can be reconstructed from the work so far. In order to build at the junction of Jarash's primary streets an earlier public building had to be acquired (by means unknown) and removed. From the excavations it is clear that this building was a bathhouse, probably of Late Roman date but seemingly in a state of advanced decay before its demolition. Once the levelling of the bathhouse and the adjoining shops in the south-west quadrant of the tetrakonia piazza was completed, a large area of some 50 by 50m was created in which the mosque could be erected. The external enclosure walls were built first, probably beginning with the qiblah wall. However, the wall was not correctly aligned (in Jarash the qiblah is *c.* 160° south-east; the mosque points decidedly south-west), but it may have been believed that the existing Roman grid was oriented towards the cardinal points. Next, an earth fill was placed within the four outside walls of the mosque, thereby burying the wall stumps and floors of the bathhouse and shops while presenting a level surface for the completion of the mosque.

The tower/minaret in the north-east corner of the building and the portico arcades would appear to have been later additions to the mosque. Neither exhibit the plaster edging on the masonry joins of the enclosure wall, while the thicker west and south walls of the tower butt the outer enclosure wall and the foundations of the porticos had been cut into the fill. The later addition of a minaret and porticos is known elsewhere with other early mosques. At Jarash, the date of these additions, and whether the tower and porticos were added contemporaneously, is not known. Unfortunately, the excavations of the Yale Joint Mission removed all the evidence associated with the tower so the date of its addition can never be known, a most unfortunate situation considering the unclear origin and chronology of mosque towers (Bloom 1989).

The Jarash mosque shares many architectural features with the congregational mosques of Rusafah in northern Syria (Sack 1996), the Qasr al-Hayr al-Sharqi mosque (Grabar *et al.* 1978), and the Umayyad downtown mosque of Amman as reconstructed by Alastair Northedge (1989; 1992). All four were of the courtyard type, with a three-bay prayer hall covered by a gabled roof against the qiblah wall and single-arcaded porticos on the other three sides. Of these, Jarash was the smallest mosque in total area covered, with Qasr al-Hayr al-Sharqi being a little larger (6 per cent), Amman 31 per cent larger and Rusafah a generous 40 per cent more. Nevertheless, the Jarash mosque was sizable enough for its provincial role. As a rough calculation, the prayer hall could have held over 450 worshippers and the full mosque obviously many more. It suggests, perhaps, the presence of a sizable Muslim community at Jarash, at least at times, during the first Muslim centuries, and a town population, probably mostly Christian, of several thousands to match.

The highly visual construction of a large congregational mosque at the central crossroads of the town brought it into line with an established Islamic urban tradition of the Umayyad eighth century. Like, for example, 'Anjar in Lebanon and Aylah in Jordan, a centrally placed mosque became one of the defining features of urban life under the Marwanid Umayyads (on Anjar, see especially Sauvaget 1939; Chehab 1993; Hillenbrand 1999a; and for Aylah (al-Aqabah) Whitcomb 1994a,b, 2001). Within an existing town such as Jarash, the insertion

of a mosque would have been associated with some degree of urban disruption, making clear the growing permanency of Islamic rule in the local district, more broadly in the Jund al-Urdunn, and Bilad al-Sham generally.

The Jarash mosque in its architectural context

The Jarash mosque and the detailed architectural features revealed by the 2002 season of excavations should not be studied in isolation, and could benefit from a consideration of these findings within the context of mosques similar in style and/or date. Such an approach will assist in attaining a broader understanding of the information retrieved. A contextual view may further illuminate aspects of Early Islamic settlement in Jarash, which would not be as evident otherwise. By correlating the data available on other Early Islamic mosques with the features of the Jarash mosque, a series of plausible observations may be offered.

The boundaries within which an archaeological site can be viewed are determined by the data applied in the analysis: in this case a correlation of mosque dimensions within a chronological and geographical framework that encompasses our excavation satisfactorily. Although this study is in its early stages, with much more to do, it seems that by comparing these measurements and their proportions certain facets of Early Islamic mosque architecture stand out, and it is through an examination of these comparisons that a contextual basis will be provided.

The total area of a mosque is often subject to numerous conditions and circumstances affecting its design (for example, limits to available space, small, large or expanding congregations, and political or religious factors). This is exemplified in the large areas covered by certain mosques such as the Umayyad Mosque of the Prophet in Madina or the Abbasid-period Great Mosque of Samarra, a reflection of the religious and political importance of these two buildings (Figure 6). It is generally noticeable that congregational mosques of the most important urban communities cover areas substantially larger than their counterparts in urban centres of lesser ranking – often out of proportion to other factors such as demography and economy. Hence, the two previously mentioned mosques along with the Great Mosque of Damascus, the Abu Dulaf mosque, Ibn Tulun's mosque in al-Qata'i' and Córdoba 4 of 987 – six in all – are the only mosques that exceeded 15 000m². Each served the needs of a major Islamic community both large in number and politically powerful, namely Umayyad Madina and Damascus, Abbasid Samarra–Mutawakkiliah, Tulunid Cairo and Spanish Umayyad Córdoba.

A middle ranking group of nine mosques fell within the size range of just over 5000–15 000m². Into this group the near-rectangular Iraqi-style mosques of Kufa, Wasit, Harran and Raqqah belonged, as did the regional mosques of Isfahan, Córdoba (1-3) al-Fustat (Amr 2) and Qayrawan.

A more modest mosque size ranged between 1500 and 5000m² in area. While mosques of this size range were to be found in some reasonably important sites such as Rusafah and San'a', most served centres of only regional significance, for instance Amman (downtown mosque), Anjar, Aylah, Siraf and Susa. This is the category into which the mosque at Jarash fits, and it is interesting to note the spatial similarity of its regional and chronological contemporaries. It seems that following al-Walid I's architecturally inspired rule the

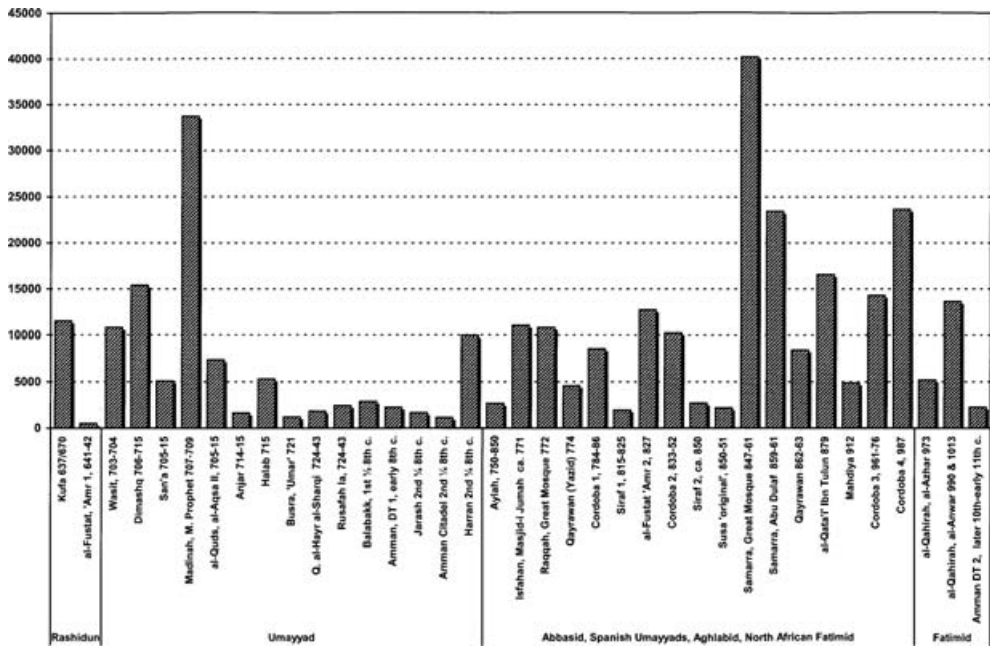


Figure 6. Early Islamic mosques: total area in square metres.

Marwanid Umayyads commenced a more widespread scheme of mosque construction in the provincial centres of Bilad al-Sham, building moderately sized mosques that generally conformed to a standardised plan. Most of the examples in this group do not cover an area in excess of 2000m² (Figure 6). The modest scale and style of these mosques reflect, on one hand, the continuing social role of these centres in Umayyad times, and on the other their lower ranking, the more limited financial resources made available, and the smaller Muslim communities permanently or temporarily resident in them. The shared architectural tradition of this group of mosques, nearly all belonging to the reign of the caliph Hisham (105/724-125/743) or immediately after, becomes even more apparent when their areas are compared according to the length and width of each building (Figure 7; discussed further below).

Figure 7 shows that, in general terms, the variability in the proportional relationship between the length (depth) and width of mosques was influenced by regional and chronological factors. The earliest mosques included in this study, the congregational mosques of Kufa and Wasit, have an almost square plan. That at Kufa was established under the Rashidun caliphs (11/632-40/661) in a time before the construction of mosques had acquired overt imperial implications, and was repeated almost exactly at Wasit. Both would appear to conform to an already accepted Iraqi model. After the establishment of the Umayyad dynasty and until the long rule of Hisham most mosques in Bilad al-Sham are broad enclosures of greater width than their length (Figures 7 and 8). The only major mosques to be constructed longer than wider in this period were located on the Arabian Peninsula (at San'a' and Madina; the latter a huge construction).

Umayyad congregational mosque of Jarash

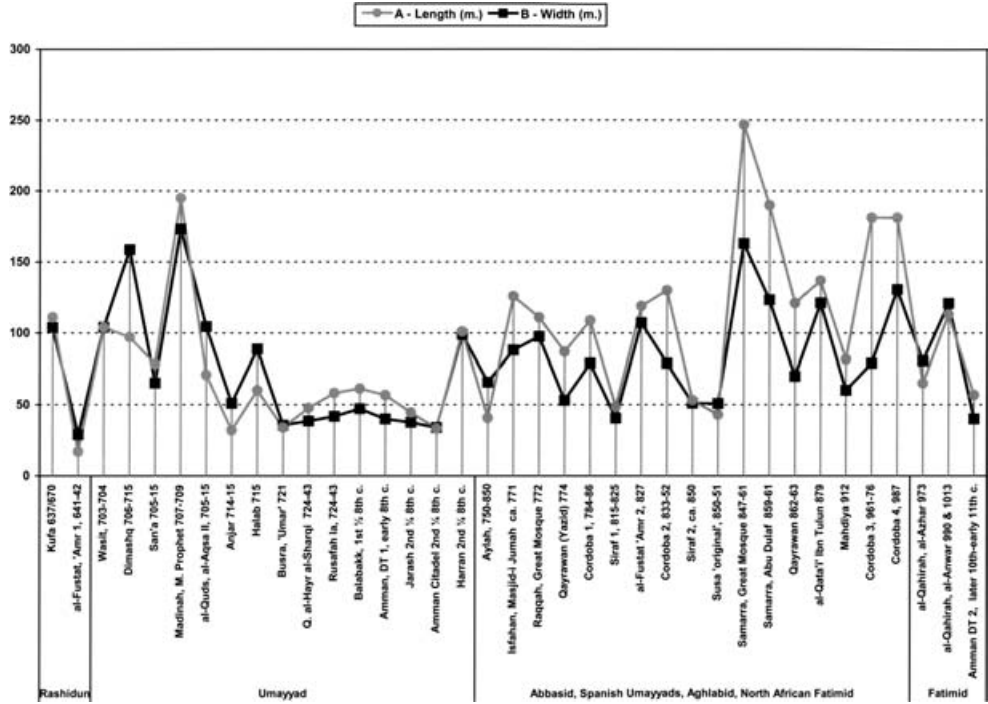


Figure 7. Early Islamic mosques: length to width relationship of each mosque in absolute values.

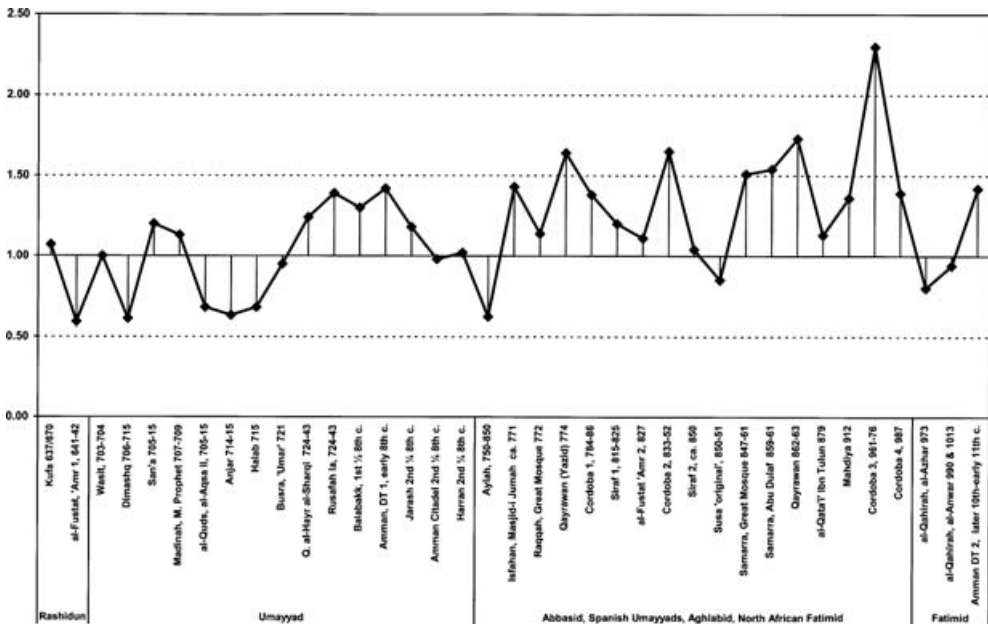


Figure 8. Early Islamic mosques: length to width relationship of each mosque converted as a ratio. The width of each mosque is set according to a fixed point of 1.00, while the alternating line shows the relative proportion (greater or less) of a mosque's length to its width (hence more than 1.00 = longer; less than 1.00 = wider).

A greater standardisation in the length to width ratio of mosques in favour of longer enclosures is apparent after the reign of al-Walid in Bilad al-Sham, and becomes the standard during the reign of Hisham. This realignment in proportions from wide to long enclosures is unambiguous (Figure 8). The trend is initiated by the construction of the so-called 'Mosque of Umar' in Busra, probably erected under Yazid II, and then prevailed strongly throughout the reign of Hisham. The proportions of the Jarash mosque clearly fit into the cluster of mosques constructed under Hisham, and within the general change in architectural design prevalent in the last quarter century of Umayyad rule. The types of sites to which the mosque corresponds may give us an idea of the stature of Islamic Jarash.

At the end of the Umayyad period two exceptions to the 'Hisham provincial model' appear: the Great Mosque of Harran and the Citadel Mosque of Amman. The Harran mosque conforms almost exactly to the earlier Iraqi model noted at Kufa and Wasit, and in absolute size is very close to them. It was the largest mosque built since the reign of al-Walid due to Harran being the official residence of the last Umayyad caliph Marwan b. Muhammad. The Iraqi style adopted for its construction resulted from Harran's location in the Jazirah, although Syrian influence is apparent in the layout of the prayer hall. The Citadel mosque in Amman is a curious exception, very Persian in style and showing greater affinity in plan and decoration with mosques dated to the ninth and tenth centuries on the Iranian Plateau. Nevertheless, a late Umayyad date for the Citadel mosque may be stylistically credible when considered in light of al-Walid II's folly at Mushatta (Hillenbrand 1981). Shortly after a third exception was built, this being the Aylah mosque. As Figures 8 and 9 show its dimensions are completely at variance with the mosques around it. Rather, it sits more comfortably with the pre-Hisham mosques of Bilad al-Sham, which confirms Whitcomb's early dating (certainly pre-715) for the original construction and his suggestion that the mosque as excavated was a later rebuilding (Whitcomb 2001).

Identifying a standardised architectural model during Hisham's reign does more than just correctly identify the correct chronological placement and architectural milieu of the Jarash mosque. It would appear as though the establishment of a preferred architectural model favouring depth over width in later Umayyad mosque architecture is also adopted and adapted by the succeeding Abbasid period, although not by any means universally due to regional factors. Notable exceptions are the Great Mosque at Raqqah in a near-square Iraqi style, and Ibn Tulun's large mosque, really closer to Amr 2 at al-Fustat than Iraqi models (see Figures 8 and 9). The preference for a broader-plan mosque is a feature of the late tenth century in Egypt with the establishment of a rival caliphate by the Shi'ite Fatimids (Figures 8 and 9).

From the measurements of the external dimensions of Early Islamic mosques, a definable 'red thread' is perceivable which, in addition to the archaeological evidence, greatly assists to locate chronologically and culturally the congregational mosque of Jarash. Yet, as Figure 9 shows, variable ratios between length and width had little effect on the preferred proportion of the area of a mosque devoted to the prayer hall. Many of the mosques listed in Figure 9 were provided with prayer halls that occupied between 20 and 40 per cent of the total area of the mosque, with most within a band measuring 30 ± 5 per cent. In the eighth century only three mosques fell outside the 20-40 per cent range. Two come in above: the al-Aqsa II mosque (which is practically one large sanctuary) and the mosque of Qasr al-Hayr

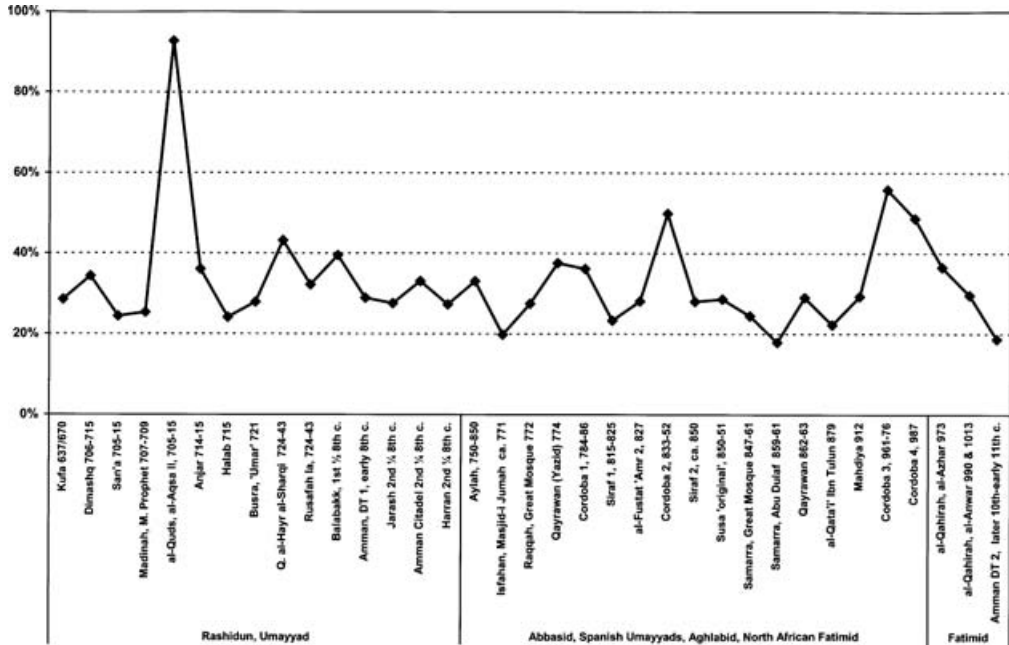


Figure 9. Percentage of the total area of a mosque occupied by its prayer hall, the latter calculated from internal measurements.

al-Sharqi; and only one just under the 20 per cent mark, the Masjid-i Jumah in Isfahan. As is the case in Isfahan, the discrepancy of Qasr al-Hayr is not excessive (43 per cent), but is noteworthy as it belongs within the ‘Hisham provincial cluster’. Qasr al-Hayr was, however, an anomalous settlement which, although probably hosting members of the royal family at times, was mostly perceived as a khan and road station supplemented with an agricultural economy based on olive cultivation. The rest of the mosques constructed under Hisham – Rusafah Ia, the Downtown 1 in Amman and, presumably, the Jarash mosque – all fall within a narrow field in which the prayer hall constitutes between 27.5 and 32.5 per cent of the entire structure in question. The Mosque of Umar in Busra, the Citadel Mosque in Amman and the Great Mosque of Harran also fit roughly into this span.

Prominent from the graph in Figure 9 is the large size of the prayer hall at Córdoba in the ninth and tenth centuries, and even the late eighth century original has a prayer hall at the upper end of the standard range (36 per cent of the total area). This figure rose even higher with the enlargement of the mosque, peaking at 56 per cent with the expansion of the building under al-Hakam (961-976). The Fatimid congregational mosques of Cairo are also at the higher end of the scale, with al-Azhar at 37 per cent and al-Anwar (the mosque of al-Hakim) at 30 per cent.

The Jarash mosque and Umayyad urban policies

The congregational mosque at Jarash is more than just another example of Umayyad religious architecture, as interesting as that may be. Its size and location, and its relationship to adjacent structures, as yet largely unexplored, will require a re-evaluation of the status of Jarash in

Early Islamic times and, more generally, Umayyad policies on regional centres especially in the eighth century. The presence of a mosque of sizable proportions demonstrates the continuing role of Jarash in the social, economic and administrative life of Bilad al-Sham after the Islamic Conquest and its status as a significant regional centre in the Umayyad period and probably for a while after. While written and numismatic sources have long suggested the ongoing significance of Jarash, the fragmented archaeological evidence has been less than conclusive until now. On both stratigraphic and architectural grounds the Jarash mosque fits into a cluster of urban mosques built during the reign of Hisham, sharing many characteristics with the mosques at Amman (downtown), Rusafah and, to some extent, Qasr al-Hayr al-Sharqi. A comparison of the dimensions of these buildings reveals the application of a standardised style in the construction of provincial urban mosques under Hisham, almost certainly as part of a policy of urban renewal most clearly seen in the construction of markets at centres such as Baysan, Rusafah and Palmyra and administrative complexes at Amman and Baysan. At Jarash the evidence suggests that a similar programme of commercial expansion was undertaken along the western section of the South Decumanus, but details of this development and the likely presence of an administrative centre just west of the mosque await future investigation.

Acknowledgements

The director and members of the Islamic Jarash Project in 2002 would especially like to extend their thanks to HE Dr Fawwaz al-Khraysheh, Director-General of the Department of Antiquities of Jordan, for his enthusiastic backing and especially for making available to the team the very comfortable living and working space in the departmental housing at Jarash. Staff of the Department of Antiquities office at Jarash gave unfailing assistance, with special thanks to Mr Abdul-Majid Mejali for his reliable and enthusiastic assistance with equipment and housing. It was a pleasure to have Ms Samira Khouri as the DOA representative, who most ably helped us on a day-to-day basis in the field. The backing of the Amman staff at the Council for British Research in the Levant helped enormously in matters practical, as did the assistance of Mr Tawfiq Kawar, The Royal Danish Honorary Consul to Jordan. The project attracted strong support in Denmark, including critical financial backing from the Faculty of Humanities of the University of Copenhagen and The David Collection and Foundation of Copenhagen. Particular thanks are offered to Professor Ingolf Thuesen, Director of the Carsten Niebuhr Institute for Near Eastern Studies, and Dr Kjeld von Folsach, Director of The David Collection, for their unstinting support. The 2002 field team consisted of thirty staff and students mostly from the Carsten Niebuhr Institute of the University of Copenhagen, and the project director is most grateful for the diligence and hard work of all the team members.

References

- ALBUM, S. & T. GOODWIN. 2002. *Sylloge of Islamic coins in the Ashmolean, vol. 1: the pre-reform coinage of the Early Islamic period*. Oxford: Ashmolean Museum.
- AMITAI-PREISS, N., A. BERMAN & S. QEDAR. 1999. The coinage of Scythopolis-Baysan and Gerasa-Jerash. *Israel Numismatic Journal* 13: 133-51.
- BARGHOUTI, A. 1982. Urbanization of Palestine and Jordan in Hellenistic and Roman Times, in A. Hadidi (ed.), *Studies in the history and archaeology of Jordan*, vol. 1: 209-29. Amman: Department of Antiquities of Jordan.
- BELLINGER, A.R. 1938. *Coins from Jerash, 1928-1934*. Numismatic Notes and Monographs No. 81. New York: American Numismatic Society.
- BLOOM, J.M. 1989. *Minaret, symbol of Islam*. Oxford Studies in Islamic Art 7. Oxford: Oxford University Press.
- CHEHAB, H.K. 1993. On the identification of 'Anjar ('Ayn al-Jarr) as an Umayyad Foundation. *Muqarnas* 10 (Essays in Honor of Oleg Grabar): 42-8.
- CRESWELL, K.A.C. & J.W. ALLAN. 1989. *A short account of Early Muslim architecture*. London: Scholar Press.

Umayyad congregational mosque of Jerash

- CROWFOOT, J.W. 1931. *Churches at Jerash*. British School of Archaeology in Jerusalem, Supplementary Papers 3. London: British School of Archaeology in Jerusalem.
- FOOTE, R. 2000. Commerce, industrial expansion and orthogonal planning: mutually compatible terms in settlements of Bilad al-Sham during the Umayyad period. *Mediterranean Archaeology* 13: 25-38.
- FRISHMAN, M. & H.-U. KHAN (ed.). 1994. *The mosque: history, architectural development and regional diversity*. London: Thames & Hudson.
- GRABAR, O. 1973. *The formation of Islamic art*. New Haven, CT: Yale University Press.
- GRABAR, O., R. HOLOD, J. KNUSTAD & W. TROUSDALE. 1978. *City in the desert: Qasr al Hayr East*. Harvard Middle East Monographs 23 & 24, 2 vols. Cambridge, MA: Harvard University Press.
- HILLENBRAND, R. 1981. Islamic art at the crossroads: East versus West at Mshattā, in A. Daneshvari (ed.). *Essays in Islamic art and architecture in honor of Katharina Otto-Dorn*: 63-86. Malibu: Undena Publications.
- 1999a. 'Anjar and Early Islamic urbanism, in G.P. Brogiolo & B. Ward-Perkins (ed.). *The idea and ideal of the town between Late Antiquity and the Early Middle Ages*: 59-98. The Transformation of the Roman World. Leiden: Brill.
- 1999b. *Islamic art and architecture*. London: Thames & Hudson.
- INSOLL, T. 1999. *The archaeology of Islam*. Oxford: Blackwell.
- JOHNS, J. 1999. The 'House of the Prophet' and the concept of the mosque, in J. Johns (ed.). *Bayt al-Maqdis: Jerusalem and Early Islam*: 59-112. Oxford Studies in Islamic Art IX.2. J. Raby (general ed.). Oxford: Oxford University Press.
- KRAELING, C.H. (ed.). 1938. *Gerasa, city of the Decapolis*. New Haven, CT: American Schools of Oriental Research.
- MAROT, T. 1998. *Las Monedas del Macellum de Gerasa (Yarash, Jordania)*. Madrid: Museo Casa de la Moneda.
- NAGHAWI, A. 1982. An Umayyad mosque at Jerash (Arabic). *Annual of the Department of Antiquities of Jordan* 26: 20-22.
- 1989. Umayyad filices minted at Jerash, in F. Zayadine (ed.). *Jerash Archaeological Project 2 (1984-1988)*: 219-22. Amman/Paris: Department of Antiquities/Paul Geuthner.
- NORTHEGE, A. 1989. The Umayyad mosque of Amman, in M.A. Bakhit & R. Schick (ed.). *Proceedings of the third symposium, the fourth international conference on the history of Bilad al-Sham. Bilad al-Sham during the Umayyad Period*, English Section, vol. 2: 140-63. Amman: History of Bilad al-Sham Committee.
- 1992. *Studies on Roman and Islamic Amman, vol. 1: the excavations of Mrs C.-M. Bennett and other investigations*. British Academy Monographs in Archaeology 3. British Institute at Amman for Archaeology and History. Oxford: Oxford University Press.
- PEETERS, P. 1939. La Passion de S. Pierre de Capitolias. *Analecta Bollandiana* 57: 299-333.
- SACK, D. 1996. *Die Große Moschee von Resafa – Rusafat Hišam*. Resafa IV/Deutsches Archäologisches Institut. Mainz: Philipp von Zabern.
- SAUVAGET, J. 1939. Les Ruins Omeyyades de 'Andjar. *Bulletin du Musée de Beyrouth* 3: 5-11.
- TSAFRIR, Y. & G. FOERSTER. 1997. Urbanism at Scythopolis – Bet Shean in the fourth to seventh centuries. *Dumbarton Oaks Papers* 51: 85-146.
- USCATESCU, A. 1996. *La Cerámica del Macellum de Gerasa (Yarash, Jordania)*. Madrid: Instituto del Patrimonio Histórico Español.
- WALMSLEY, A. 2000. Production, exchange and regional trade in the Islamic East Mediterranean: old structures, new systems? in L. Hansen & C. Wickham (ed.). *The long eighth century. Production, distribution and demand*: 265-343. The Transformation of the Roman World. I. Wood (general ed.). Leiden: Brill.
- WHITCOMB, D. 1994a. *Ayla: art and history in the Islamic port of Aqaba*. Chicago: Oriental Institute.
- 1994b. The *Misr* of Ayla: Settlement at al-'Aqaba in the Early Islamic Period, in G.R.D. King & A. Cameron (ed.). *The Byzantine and Early Islamic Near East II. Land use and settlement patterns. (Papers of the second workshop on Late Antiquity and Early Islam)*: 155-70. Studies in Late Antiquity and Early Islam. Princeton, NJ: Darwin Press.
- 2001. Archaeological evidence of the early mosque in Arabia, in J. Neusner & J.F. Strange (ed.). *Religious texts and material contexts*. Studies in Ancient Judaism. Lanham: University Press of America.
- ZAYADINE, F. (ed.). 1986. *Jerash Archaeological Project 1, 1981-1983*. Amman: Department of Antiquities.
- 1989. *Jerash Archaeological Project 2, 1984-1988*. Amman/Paris: Department of Antiquities/Paul Geuthner.