

## THE PETRA CHURCH PROJECT, 1992-93 A PRELIMINARY REPORT

by  
Robert Schick, Zbigniew T. Fiema and Khairieh 'Amr

Between May 1992 and March 1993 excavations were conducted at a Byzantine church in Petra. The project was funded by a grant from the United States Agency for International Development (USAID), organized by the American Center of Oriental Research in Amman, and supported by the Ministry of Tourism and Antiquities of Jordan. The goal of the Petra Church Project is to enhance tourism in Petra by excavating the church, conserving the building and mosaics, and constructing a protective shelter over the site to protect the mosaics and so that it will be attractive for visitors. After the end of the excavation phase, work continued on the consolidation of the mosaics and construction of the shelter.

The director of the project, Kenneth W. Russell, who had identified the church in 1990, died tragically in May 1992, just as the excavation was to begin. Pierre Bikai, director of the American Center of Oriental Research (ACOR), then became overall project director, while Zbigniew T. Fiema and Robert Schick of ACOR, and Khairieh 'Amr of the Department of Antiquities of Jordan co-directed the excavation work in the field. Although data collected during the excavation phase are still being processed, the following preliminary observations can be offered.

### THE CHURCH

The church is located in the heart of the city, east of the Temple of the Winged Lions, on a ridge north of the colonnaded street. The building is a standard triple-apsed basilica with the nave divided from the aisles by two east-west rows of eight columns (Pl. I). At the east end of the north and south aisles are semicircular apses, while the nave ends in an elevated *bema*

and a larger semicircular apse. The church building proper is about 25 m long and 16 m wide. An atrium is to the west of the church, and a room, which may originally have been three-stories high, is at the southwest corner of the atrium.

The walls of the church are preserved to a height of three meters in places and their interior faces display extensively preserved white plaster. The walls are built with (mostly sandstone) ashlar facing, rubble fill and ash mortar. Some capitals, column drums and other architectural elements were used as ordinary building stones in the walls. Many of the ashlar blocks are dressed in the typical Nabataean fashion.

There may have been wooden benches along the north and south walls, next to which concentrations of charred beams were found. The wall plaster on these walls breaks off at a uniform height of about 0.45 m above the floor, indicating the placement of the benches that would have been secured by fixtures placed in a row of holes in the north and south walls, ca. 0.5 to 1.00 m apart and ca 0.40 m above the floor.

The two east-west rows of columns were placed on stylobates made of sandstone slabs. Later, marble slabs were laid over the sandstone stylobates. In no case do the marble slabs support the column bases; they are often carved to accommodate the curvature of column bases, and seem to be purely decorative. Many drums, especially those in the atrium, were shifted or removed during a "post-church" phase which makes it difficult to estimate the original height of the columns. The capitals of the columns show a variety of decorative styles and clearly were taken from earlier buildings and reused in the church. Many drums and capitals were found to have been shattered by



the heat of the fire that destroyed the building.

Three doors lead into the church from the atrium to the west. The door into the nave is wider than the doors into the side aisles, and is decorated with finely carved door jambs, reused from an earlier building (Pl. II, 1). Two doors in the north wall of the church, and a third door in the northeast corner of the atrium, lead to a series of rooms adjoining the church on the north; these were left largely unexcavated. Most of the copper alloy door hinges and sockets were recovered, some found still *in situ*.

The roof structure appears to have been the standard type with a framework of wooden beams and with a clerestory over the nave. Large quantities of wooden roof beams were found along with thousands of iron nails and tens of thousands of roof tile fragments. Fragments of window pane glass found in the central apse and near the central west door point to the location of windows there.

The north and south aisles are paved with mosaics, while the nave, *bema*, and central apse were paved with an *opus sectile* pavement of marble and purple sandstone, which was mostly robbed out.

The *bema* is raised two steps above the aisles and nave and projects westward into the nave as far as the second set of columns from the east. The *bema* was enclosed by marble panels along the west side; many pieces of the broken panels were recovered, although the bases for the panels were totally robbed out. Along the north and south sides of the *bema*, walls four courses high were constructed between the first and second columns, while between the easternmost columns and the east church wall were marble panels and steps leading up from the side aisles. No clear evidence for the location of the altar survives.

On the northwest corner of the *bema* are the remains of the *ambo*. Still in place are the steps up from the *bema* and their founda-

tion, but the marble hexagonal base, columns, platform and panels were badly broken up, and most pieces removed from the church in antiquity.

The central apse contains four curved rows of a *synthronon*, now badly preserved. There was no evidence for a bishop's throne.

Only a portion of the atrium was excavated. It has the standard form of an open-air courtyard with a flagstone pavement, surrounded on all sides by a portico. In the southwest corner a cooking/storage installation was found, obviously constructed when the church was no longer in use.

The southwest room adjoining the atrium reveals evidence for two phases of building. The door in the north wall was blocked, and two column drums were brought in for use as tables in conjunction with benches along the north and east walls. A cupboard in the south wall has a marble shelf. An elaborate door frame, which could have originally been installed in one of the room's doors, was found among the stones of the tumble inside the room.

### The Floor Mosaics

The mosaic floors in the north and south aisles are the major art historical find of the excavation. The mosaic in the north aisle, measuring 22.6 m x 3 m, consists of rows of circular medallions formed by vine scrolls (Pl. II, 2). Each of the 28 horizontal rows contains three medallions. The central vertical row of medallions depicts objects such as amphorae, vases, goblets, candle sticks, baskets, etc. The vertical rows on either side contain flanking pairs of birds, other animals, and people. At the western end two peacocks flank an amphora from which the vine scrolls emanate. The background outside the medallions is yellow, while white marble cubes are used as background within the medallions; the contrast in color is particularly pleasing. Glass cubes are liberally used in the floor, espe-



cially for details of faces.

The south aisle, measuring 23.2 m x 3.3 m has a central row of rectangular medallions with images of persons, some of which are identified by short Greek inscriptions as personifications of the four seasons, Ocean, Land, and Wisdom (Pl. III, 1). Flanking the central row are square and circular medallions depicting fish, birds and animals. Many glass tesserae are used in this aisle, as well as red-fired ceramic tesserae. Portions of the mosaic along the south wall were broken away and patched with marble pavers.

The two side apses are paved with mosaics in a simple yellow and white checkerboard pattern.

While there was some accidental damage to the mosaics, a few of the animal and human figures also suffered damage that appears deliberate, due to the fact that the breaks follow closely the outlines of the figures. None of these were repaired. The majority of the images, however, were untouched, and the existence of many intact figures, sometimes just centimeters away from damaged figures, presents a problem of interpretation; it could be that the damage, while appearing to be deliberate, is the result of the disintegration of the smaller and more fragile tesserae used for figures.

## Phasing

### *Pre-Church Phase*

The site was intensively used in the Nabataean-Roman period. Part of a water channel was found under the floor of the north apse. Another portion of a channel (perhaps the same one) was found outside the southeast corner of the church. There the channel is associated with an east-west wall showing two phases of use. Below the channel was a well-preserved beaten earth floor with exclusively classical Nabataean sherds embedded in it. Further down, at the level matching the bottom of the foundation trench for the south church wall, black-

glazed Late Hellenistic pottery was found. Remains of east-west and north-south walls were also found under the floors of the atrium and the nave respectively.

### *Construction and Use Phase*

Evidence from the northeast corner of the church and east of the northern apse suggest that parts of walls of some earlier structure were incorporated in the church. It is, however, clear that the church, atrium, and southwest room were constructed as a unit. Some evidence also points to several remodelings of the church. A layer of shale rubble containing several shale paving stones was found ca. 0.15 m under the mortar bedding of the nave pavement. It is possible that they are remains of an early floor which was replaced by the combined marble-shale pavement. That remodelling could be associated with the placement of the marble stylobate slabs upon the original sandstone stylobates.

The existence of a non-design, "abstract" mosaic underneath the southern edge of the *bema* and abutting the sandstone stylobate suggests that the original design of the space in the front of the central apse included a lower and smaller *bema* flanked by the mosaic on both southern and northern sides. The large raised *bema* as now extant is a second-phase feature. The marble and sandstone *opus sectile* pavement in the *bema* is at the same level, and is similar in type to the original pavement in the central apse. A later remodelling of the central apse involved the addition of the four *synthronon* rows and a new higher marble pavement.

### *Post-Church Use and the Fire Episode*

Evidence for post-church occupation of the building comes from sherds of 21 large storage vessels found mostly over the main level of the charred remains of the wooden superstructure along the south wall of the church. The cooking/food processing and storage installation in the southwest corner



of the atrium, which suggests squatter occupation, may have been constructed then and continued even beyond the structural collapse of the church.

There is no doubt that the church suffered a major conflagration shortly after it was abandoned. Both aisles were strewn with burnt wooden beams and planks from the ceiling and clerestory. In those layers iron nails and ceramic roof tiles were abundant.

The conspicuous absence of a massive ash and charcoal debris layer in the nave must be explained as a result of post-fire human activity. The layer of ash ends sharply on the border of the stylobates with the nave, leaving only a minimal amount of ash over the mortar bedding for the robbed out marble pavement of the nave. It is possible that the robbing out of the nave pavement involved the large scale removal of the charred debris from the nave and its placement in the side aisles to expose the nave pavement. However, the removal of the movable furnishings and of some structural elements could have preceded the fire as well.

One puzzling phenomenon is the large number of sandstone paving slabs found exclusively in the north aisle and the atrium. The slabs are found predominantly above the layer of charred wood, although a few were found almost directly upon the mosaic floor. The slabs are embedded in layers of destruction debris (ash, charcoal, discolored soil) mixed with pockets of pure wind-blown sand. Their position—some upright and others laying flat—may suggest that they were tossed away rather than fallen from above. Furthermore, their average size (ca. 60 x 40 x 10 cm) and weight seems to preclude their being a pavement of an upper gallery. The slabs could have been a late phase floor of the nave that the robbers had to remove to reach the marble pavement below, however, this preliminary hypothesis needs further elaboration.

Perhaps during the same episode of robbing, the entire northern half of the *synthronon* was removed. The curved stones in the northern half were not found in the tumble layers, and so must have been removed due to the robbers' desire for the specifically shaped stones.

#### *Structural Destruction Phase*

The massive collapse of the walls and columns is clear throughout the church. Furthermore, the collapse occurs in two distinct layers in the areas adjacent to the walls of the church. It is possible that the earliest destruction, most reasonably associated with one of Petra's frequent earthquakes, was followed by further minor episodes of destruction, involving parts of the walls that had survived the initial collapse. It is not unlikely that some of the structural collapse was associated with the fire.

#### *Most Recent Deposits*

It is known that the area was farmed in the past 100 years. The very evenly preserved top of the walls in some areas can be explained as the attempts of the farmers to clear the ground from protruding stones. A crude wall with no foundations was located in front of the southwest room in the southwest corner of the atrium, and a second poorly-built wall was constructed in the northeast corner of the atrium. They may have served as simple retaining walls. The upper, naturally deposited soil layers were much disturbed by the farming activities and were generally sterile. Traces of a plough edge were found on a stone ca. 0.40 m below the modern surface.

#### **Dating**

Although no dedicatory inscriptions were found, and the coins and ceramics provide only very general dating for the history of the church, it appears that the church may have been constructed in the later fifth century, and continued as a



church throughout the first half of the sixth century. The structural collapse may have been due to an earthquake, and the one in AD 551, also evidenced in the nearby Temple of the Winged Lions seems a likely candidate, although later earthquakes cannot be excluded. The fire episode and robbing activities would have preceded the collapse of church's walls and columns, while the squatter occupation would have continued into the early seventh century AD.

### **The Finds**

Almost all the soil from below the generally sterile layers on top was sifted, so near complete recovery of a wide variety of objects was achieved. The analysis of the objects has only begun, but a few comments are in order.

#### *Iron*

Many thousands of iron nails from the roof were recovered throughout the church; they constitute the majority of the iron finds. A study of their sizes and angles of bend holds great promise for understanding the details of the roof construction. Other iron finds include a grill, the function of which is not yet certain.

#### *Copper Alloy*

The amount of copper alloy objects found was slight, indicating that the metal liturgical furnishings were removed when the church went out of use. Only a few scraps of chain and some hooks for hanging lamps remained and only one wick holder was found. The metal structural elements of the building, such as brackets, door hinges and sockets, however, remained and provide an unusually clear picture of the doors and other constructional details.

#### *Other Metal*

One substantial piece of a lead pipe was recovered from the east area of the south aisle, where a concentration of hypocaust

tiles was found just above the mosaic floor. Another piece of lead pipe remains in place along the southeast corner of the south aisle. The significance of these objects for the phasing of the church is uncertain. Only a small piece of gold foil was found, and no pieces of any vessels.

#### *Ceramics*

Many thousands of sherds were recorded, ranging from ubiquitous small Nabataean sherds through types datable to the fifth and sixth centuries, with only limited amounts of seventh and early eighth century sherds. The top levels contained some examples of Late Islamic hand-made pottery, they were concentrated in the area of the atrium.

Along the central and western area of the south aisle, sherds belonging to 21 restorable large storage jars, one small jar and two funnels were found. All the storage jars have the same basic form with four handles (Pl. III, 2). They vary in size but the range is not yet known as only three jars were restored. The rim profiles show slight variations although all the jars were made in the same manner, starting with a central plug for the base, around which the body was built up in coils. The rims were wheel turned and then attached to the hand-made bodies. Most of the jars have a slip on the upper body that drips down to a horizontal level, indicating that the jars were supported inside a pit or a large container. All the jars are of a coarse ware with high sand content, but the colours vary through the shades of grey, into olive green and yellow, to various shades of red. Several jars have two contrasting colours on the upper and lower parts due to the applied slip. Three jars, all of a red colour, have an all-over rouletted design (Pl. III, 2).

Other less impressive concentrations of restorable vessels were found on or near the floor in the nave and north aisle, mainly jars and cooking pots. The repertoire is



quite similar to that of the AD 551 destruction at al-Lejjun<sup>1</sup>.

The soundings within the elevated *bema* produced sherds belonging to the same types of pottery found in the main destruction level of the church, indicating that the second phase of the *bema* was completed shortly before the destruction of the building.

In the fill within the nave, a few rim sherds belonging to bowls with combed decoration were found. These are closely related to the "Mahesh" ware bowls and may be of a slightly earlier date<sup>2</sup>. Sherds datable to the seventh century AD were found in some fill layers within the church, but mostly from the limited excavation of the northern rooms. Many of these belonged to large amphorae.

Other reconstructible vessels were found associated with the installation in the southwest corner of the atrium, and an "Antioch" jar was found in the southwestern room. These vessels still await restoration.

The foundation levels of the church produced little pottery, dated up to the late fifth/early sixth century AD. The soundings in the southeast corner outside the church produced several thousand Nabataean and Hellenistic sherds but only one complete lamp, a common Nabataean imitation of Brünnow 24.

### Marble

Close to 4000 of pieces of marble were recovered. Best preserved are the complete furnishings of the south apse consisting of a panel, post, two colonnettes and table, which have been restored and returned to their original positions. The identical furnishings of the north apse were less well preserved, while only portions of the badly broken up panels and other furnishings from the *bema* and *ambo* were recovered.

Many pieces clearly were removed from the church.

Four panels with the identical design were used in the side apses and the *bema*, consisting of a central eight-sided cross enclosed by a wreath, with ribbons that curved from the bottom of the wreath, turned up at the lower corners, and terminated in crosses to the sides of the wreath (Pl. IV, 1). One open work lattice screen with a pattern of crosses within circles was broken up into hundreds of pieces; its reconstruction will take much time. Hundreds of fragments of the altar table from the *bema* were found and also await reconstruction. The broken pieces of a large footed basin with two lion-shaped handles were found along the middle of the stylobate for the south row of columns (Pl. IV, 2). Its function remains unclear and may be reused in the church. Two other complete marble panels of uncertain function were also found nearby.

### Plaster

Substantial portions of plain white wall plaster remain on the walls of the church. Only a very few pieces of painted plaster were recovered of solid red or yellow; none had any design.

### Glass

Many pieces of glass were found. They await analysis, but a number of standard liturgical glass oil lamps and window pane fragments clearly are among the corpus.

### Faunal and Floral Remains

Substantial quantities of bones were recovered. Although the bones have not yet been studied, they include many fish bones. Only a very few fragments of ostrich egg shells were found.

Thick charcoal deposits from the burned

1. S.T. Parker, *The Roman Frontier in Central Jordan*. Oxford: BAR Int. Ser. 340 (ii), 1987, pp. 542-546, Figs. 112-115, 118-120.

2. D. Whitcomb, 'Mahesh Ware: Evidence of Early Abbasid Occupation from Southern Jordan', *ADAJ* 33 (1989), Figs. 2-3.



wooden roof beams were found. A number of intact charred beams were saved for analysis. The soil samples taken for flotation have not been processed yet.

### *Inscriptions*

Other than one piece of a marble panel with four Greek letters, and the labels of the seasons, Ocean, Land, and Wisdom in the mosaic floor of the south aisle, no inscriptions relating to the church were found.

Pre-church inscriptions include a Nabataean inscription on a column drum found in the nave, that refers to King Aretas IV (9 BC-AD 40). A block with the left half of a Greek inscription was placed upside down in the exterior face of the east wall of the church. This seemingly commemorative inscription includes the name of Athemos son of Markianos (Marcianus), and mentions an act of *benefactio*. A few ostraca written in poorly preserved red ink and one in black ink, either in cursive Greek or Nabataean are still under study.

### *Coins*

Although numerous coins were found during the excavation, none seem useful in dating the church. Among the coins cleaned so far the majority can be dated to the first half of the fourth century AD, issued by the members of the House of Constantine. They give only a general *terminus post quem* for the church construction.

A follis issued by Tiberius II Constantine (AD 578-82) was found in one of the disturbed post-destruction layers. In a similar context was a sestertius of Trajan, commemorating the annexation of the Nabataean Kingdom in AD 106 (ARABIA ADQUISITA).

### *Wall Mosaics*

The two east-west rows of arches and the walls of the semidomes above the apses were decorated with mosaics. While hundreds of thousands of loose stone and glass cubes were recovered, many small frag-

ments were also collected. Parts of the border design and a portion of a human face can be ascertained. Some of the stone cubes were painted red and orange —colors that are difficult to produce by firing glass. The processing of these fallen fragments continues.

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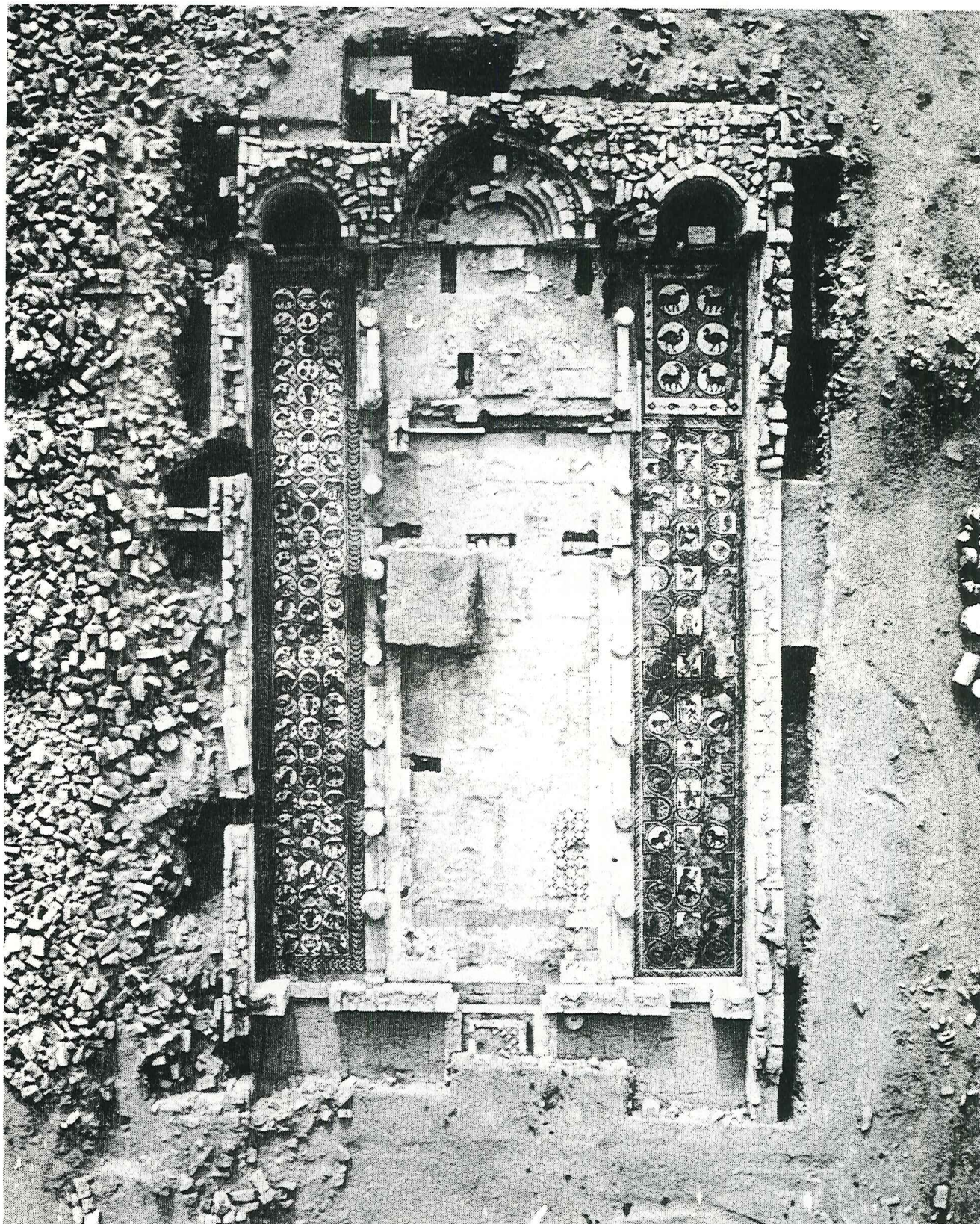
R. Schick  
Z. T. Fiema  
American Center of  
Oriental Research

K. 'Amr  
Department of Antiquities









Aerial view of the church. Photo by J. W. Myers and E. Myers.





1. Northern door jambs of the central doorway. Photo by B. Douglas.

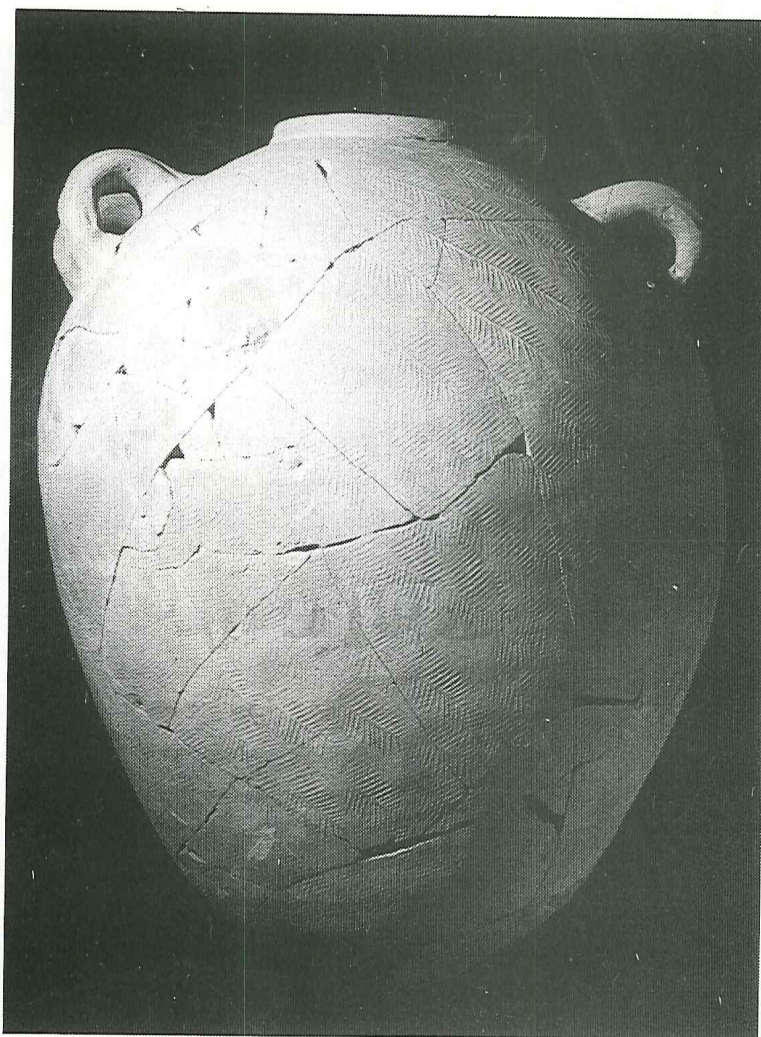


2. Part of the mosaic in the northern aisle. Photo by B. Douglas.



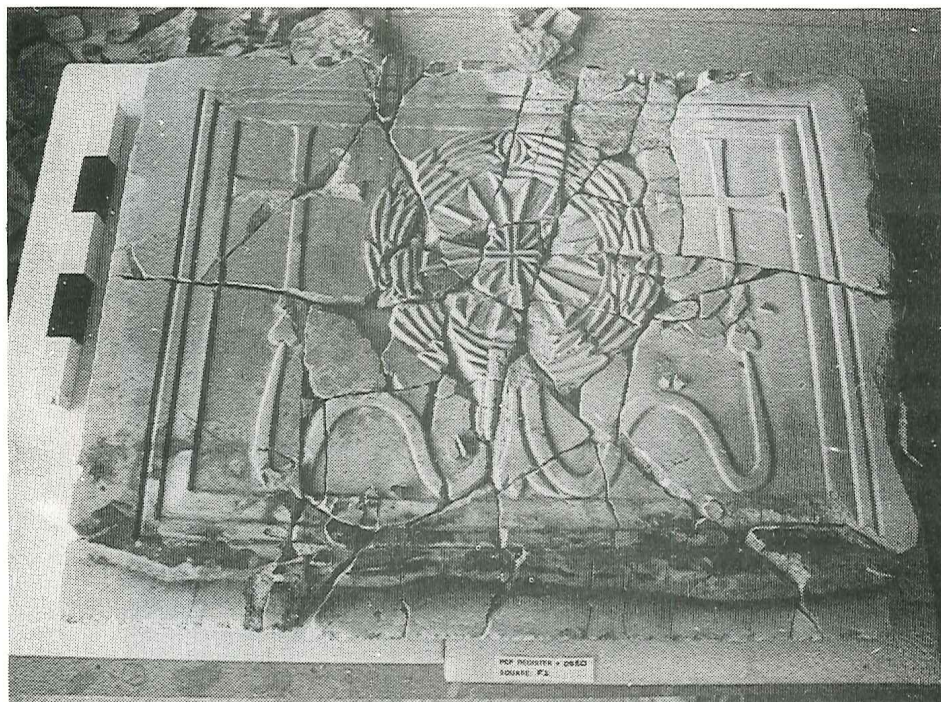


1. Personification of Spring. Southern aisle. Photo by B. Douglas.



2. One of the storage jars found in the southern aisle. Photo by B. Douglas.





1. Marble panel. Photo by B. Douglas.



2. Marble basin with lioness handles. Photo by B. Douglas.