

**PRELIMINARY REPORT ON THE 1983
SEASON OF THE SYDNEY/WOOSTER
JOINT EXPEDITION TO PELLA
(SPRING SESSION)**

by
Robert H. Smith

Introduction

The spring session of the 1983 field season at Pella was carried out from 23 March through 24 May under the auspices of The College of Wooster. The staff numbered twenty-five persons.¹ The session was funded largely by a grant from the National Geographic Society, with additional financial support from The College of Wooster. Field work was carried out under license from the Department of Antiquities, with the endorsement of the American Schools of Oriental Research and the cooperation of the American Center of Oriental Research in Amman.

By design, this was the last spring that a Wooster team would be in the field at Pella. Consequently, efforts were directed towards the obtaining of maximal information from the two major areas, VIII and IX, where the Wooster team had been conducting excavations since the inception of the Joint Expedition in 1979.² The only new exploration was a small probe, given the designation Area XXV, on the southern crest of the mound (Fig. 1) which yielded significant new information about the early occupation of the site. In as much as operations in these three areas required the full utilization of staff, no tombs were excavated.

Area XXV

South Slope Excavation

This small probe, carried out over a seven-week period by a single crew of workmen under the direction of Dr. Ellen McAdam, was exceptionally productive of information about the history of Pella. Begun as a 3.00 x 3.00 m. square on the crest of the south slope of the mound, the excavation was extended by two more squares to the north, with 1.00 m. baulks (later removed) between the squares, for a total area of 3.00 x 11.00 m. Staff geologist Dr. Frank Koucky had noticed that reddish natural gravels were visible quite high on the steep slope, and that just above the gravel and cut into it were pits containing Chalcolithic sherds. Upon examination, the pottery exposed by the continuing erosion of these pits down into the Wadi Jirm proved to be in phase with the pottery found by the Expedition at the Chalcolithic site excavated during 1981-1983 on Jebel Sartaba (Area XIV).

Just beneath the surface several walls of poor quality appeared. These proved to be the remains of a simple habitation, the floor of which had been paved with mudbricks. The potsherds recovered in association with this occupation ranged

¹ The staff consisted of Dr. Robert H. Smith, director; Mr. Omar Reshaidat and Mr. Hefzi Haddad, representatives of the Department of Antiquities; Dr. Leslie P. Day, supervisor of Area IX; Dr. Cherie Lenzen, supervisor of Area VIII; Dr. Ellen McAdam, supervisor of Area XXV; Mr. Peter Donaldson, assistant supervisor of Area IX; Ms. Alison McQuitty, assistant supervisor of Area VIII; Mr. Douglas Kuylenstierna, photographer; Mrs. Beryl Jolowicz, registrar; Dr. Frank Koucky, geologist; Mr. Curtis Marean, surveyor; Mrs. Kathleen Baker, draughtsperson; Ms. Barbara

Hughes, camp manager; Mr. Dale Martin, Dr. B. Narasimhaiah, Ms. Ann West, Ms. Margaret Mook, Mr. Robert Merrill, Ms. Gretchen Shearer, Ms. Lizanne Sprowls and Mr. David Benson, excavators; Mr. Badri Madi, foreman; and Mr. Mohammed Qaraeen, cook.

² For previous archaeological work in these areas, see A. W. McNicoll, R. H. Smith and J. B. Hennessy, *Pella in Jordan; Interim Report on the 1979-1981 Excavations*, Canberra, 1982. Annual preliminary reports have also appeared in *ADAJ*, and in *BASOR*.

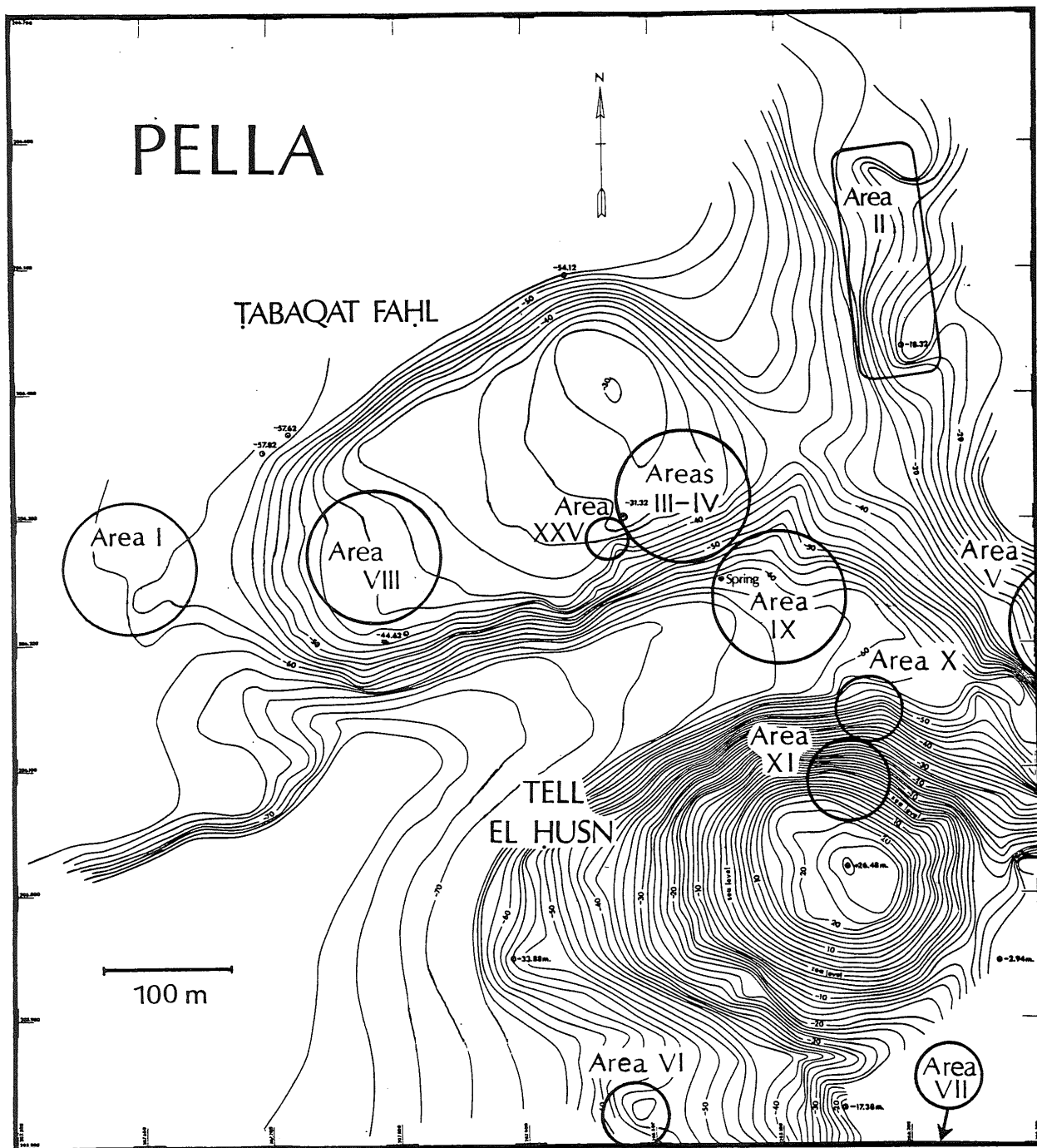


Fig. 1: Map of Pella, showing excavations. Some areas lie beyond the map.

typologically from MB IIC into early LB I, with a very few stray Iron Age sherds that probably had entered the stratum through rodent holes. Immediately below the building was a fill as much as 2.00 m. deep, containing a mixture of three typologically separate corpora of potsherds: Middle Chalcolithic, Early Bronze I, and Middle Bronze IIA, each chronologically separated from the other by six or more centuries. The fill had been cut by numerous pits of the MB IIC-LB IA occupation, but was otherwise largely undifferentiated and had generally been deposited in relatively level layers. The quantity of Early Bronze I postsherds was noteworthy, particularly the abundance of grain-wash ware which (as several massive sherds that could be reassembled indicated) came from large storage jars.

At the bottom of the excavation, a shallow stratum was encountered which represented Middle Chalcolithic domestic occupation. Aside from a few bits of wall, the chief feature was a group of round pits of various depths and sizes dug into the gravel (Pl. LXXV,1). The pits and associated soil layers contained a large number of chert implements and debitage, the latter indicating that the rock had been flaked and knapped on the spot or a very short distance away. Only a few fragments of basalt vessels were found, and relatively few ceramic vessels which could even be partially restored. It is evident that the Chalcolithic levels had suffered disturbance prior to and during the early phases of the deposition of the fill.

In the Chalcolithic stratum were a few Late Neolithic sherds. Particularly significant was the fact that in two of the pits the few potsherds were mostly Neolithic, in phase with the Late Neolithic pottery excavated in 1979 in the fill beneath the West Church.³ It would seem that when the Chalcolithic inhabitants began to occupy the crest of the mound there were remains of Neolithic occupation on the surface, which became

mingled with the debris of the Chalcolithic occupation. Some of the chert implements found in the Chalcolithic levels may be of Neolithic date, probably both pre-pottery Neolithic and pottery Neolithic.⁴

From this probe new dimensions have been added to our knowledge of Pella's history. The discovery that the occupational deposition on the mound is relatively shallow at some places has made it possible for excavators to probe to the very earliest occupation of the mound with a minimal amount of excavation. At certain times in both the Neolithic and Chalcolithic Ages habitation sprawled shallowly across the gravel mound above the spring. The gravel provided excellent drainage for occupation, a factor of some importance in view of the likelihood that at this early date people occupied the site only during the rainy winter season. At this early time annual precipitation was probably much greater than it is today.

Since no evidence of Early Bronze Age structures was found between the Chalcolithic and Middle Bronze Age habitations, some spot higher on the mound can be assumed to be the source of the large number of EB I potsherds found in the fill. There is not much ground on the mound that can be supposed to have been higher than the top of the fill, but if the topography of the gravels had somewhat the same contours as the present mound the Early Bronze Age town lay to the north and east of Area XXV. The same may be said for the MB IIA occupation represented in the fill. It will not be surprising if excavation someday reveals the existence of a walled Early Bronze or Middle Bronze IIA city covering a small area of high ground in that part of the city. How significant the gaps between the Chalcolithic, EB and MB IIA pottery in the fill are remains to be seen, but it would appear that the periods found in this probe correspond to phases of greatest vigor in the city's early history.

³ Ibid, p. 27ff.

⁴ Pre-pottery Neolithic chert tools are, in fact, to be found at several occupational sites along the

northern crest of the Wadi Jirm between Pella and the scarp overlooking the Jordan Valley.

Area VIII

The West Cut

The Wooster team first began the excavation of Area VIII in 1979, and has continued to deepen this major stratigraphic probe with each passing season. The area supervisor in 1983 was Dr. Cherie Lenzen. Originally 39.00 m. long, the area of excavation was somewhat reduced at each end in 1980 and 1981. In order that greater depths could be reached, in 1983 the area was further reduced at the southern end and that portion of the trench was backfilled. As a precaution against the possible collapse of the baulks as greater depths were reached, the width of the trench was reduced by 1.00 m. The resulting area of excavation was 4.00 x 17.50 m., a size which permitted excavation to progress downward at a relatively rapid rate, though with the inevitable concomitant that only portions of any surviving structures would be exposed in so limited an area. If there was any regret at the end of the season, it was that an even more restricted area had not been chosen for excavation, so unexpectedly deep did the Iron Age deposits prove to be.

In the 1981 season, excavation had stopped in Stratum 5, an Iron IIC and early Persian Period context. Occupation and soil layers were almost level across the trench, as they had also usually been in higher strata. At a depth of approximately 4.50 m. almost all architectural features (which were never more than flimsy throughout the stratum) had ceased, leaving the entire bottom of the excavation almost bare and level. Early in the 1983 excavations it became apparent that this almost featureless level represented virtually the end of Stratum 5. Although largely devoid of architectural features, the levels of this stratum were relatively rich in potsherds and by the end of the 1981 excavations it was clear that a street occupied much of the length of the area (Pl. LXXVI,3).

Unpaved, poorly laid out and frequently lacking sharp architectural boundaries, the street proved to have had

an extremely long history, being found successively in Strata 6 through 8. Consisting of successive layers of gravel mixed with soil and sherds, the roadway became a source of frustration, not only because of its lack of architectural features but also because of abundant potsherds within it constituted fill rather than narrowly stratified domestic occupation. Only rarely were restorable vessels found within the levels of the roadway.

As the excavators proceeded through Strata 6, 7 and 8, the ceramic corpus underwent gradual changes. Each stratum appeared, however, to span a relatively wide range in time, particularly in the street. Preliminary study suggests that the latest pottery in Stratum 6 was from about the 9th or possibly 8th century B.C., that the Stratum 7 (a relatively small stratum) from around the 11th-10th century, and that of Stratum 8 from the 13th-12th centuries. In all three strata there was a considerable amount of pottery of LB IIB date, and occasionally earlier sherds. Small finds, though not abundant, included a cylinder seal (Pl. LXXVI,1) and a Horus-eye pierced faience amulet (Pl. LXXVI,2).

The ceramic and architectural evidence suggests that Pella was particularly vigorous at the end of LB and the beginning of Iron I, and thereafter went through a long phase of somewhat lower population and cultural decline in the Iron IB-C and Iron IIA-B periods, from around 1150-1100 B.C. to perhaps 800-750 B.C. This circumstance finds support in the fact that in Area III on the eastern side of the mound the Sydney team has found occupation from both the beginning and end of the Iron Age, but little between those times.

The corner of a domestic courtyard was exposed at the extreme southwest end of the trench. Inside the angle formed by two stone walls which had been successively rebuilt were numerous levels, some of which contained burned brick fragments and dung, *tabun* fragments, and other evidences of domestic activities, including a broken but largely complete cooking pot. In the packed-earth floor about 0.50 m. away from the walls several

postholes about 0.12 m. in diameter were found, containing fragments of charred wood. Their placement suggested that a narrow roof had been constructed close to the wall at one phase. The postsherds recovered from the various levels of the courtyard showed no typological changes, hence it is likely that the use of the courtyard may have extended over little more than a quarter-century or half-century, around 1200 B.C.

Relatively unencumbered in the roadway by any architectural features, excavation proceeded rapidly to a depth of 8.00 m., at which point there was still no end to Stratum 8. At this depth a total of some 4.50 m. of Iron Age deposition had been removed. It was decided at that point to utilize the remaining time of the spring session to concentrate efforts on a probe at the northern end of the excavational area, where there already existed a baulk that would give good continuity between the probe and the rest of the excavations in the area.

The probe rapidly demonstrated its utility by revealing that Stratum 8 continued for another 2.50 m., without any walls, floors or other features being encountered. At 10.50 m. below the surface a large stone wall oriented north-south appeared in the middle of the probe, and was soon joined by a cross wall that disappeared into the eastern baulk. At a depth of 12.20 m. a stone paving was encountered that abutted the north-south wall (Pl. LXXV,2). The potsherds that were found just above the paving and in the course of the walls which were removed, though not large in quantity, dated to the Late Bronze Age. This a new stratum, 9, was notably lacking in imported ceramics except for a few fine-ware sherds of north-Canaanite provenience.

The walls represented a fairly large building which had been used from MB II into LB. Beneath the paving was found a Canaanite wine jar that had been used for the burial of a neonate. The jar contained, along with the bones of the infant, an MB IIB burnished juglet. In the 1.60 m. of soil excavated beneath the paving were MB II sherds, none of them apparently later than

MB IIB. The corpus of pottery of this new stratum, 10, included, along with MB IIB sherds, a notable admixture of MB IIA pottery of the same horizon as that found in Area XXV.

Excavation continued to a depth of 14.00 m. below the surface, with MB IIA-B sherds continuing to predominate but an increasing number of Chalcolithic sherds mingled with them. The increase in proportion of Chalcolithic sherds amid the MB II sherds suggests that Chalcolithic occupation may exist below the Middle Bronze city. There was no ceramic evidence of Early Bronze occupation, and indeed the findings in Area XXV suggest that the Early Bronze Age city may well not have extended so far west on the mound.

At the end of the 1983 season, the excavators in the West Cut still had not reached the natural gravel which underlies the mound of Pella, but the excavations in Area XXV suggest that it is unlikely that the Chalcolithic stratum, if indeed there is such below the Canaanite at this place on the mound, is thick; in that case, natural gravels can be expected only a few metres below the depth at which excavation ceased in the West Cut. The topography of the gravels, so far as it is visible in the eroded south slope of the mound, tends to support this conclusion.

Area IX

The Civic Complex

The Wooster team began the excavation of the Civic Complex in 1979 under area supervisor Dr. Leslie Day, and has continued in each of the subsequent seasons that it has been in the field. By the end of the 1981 season, the church which dominates the area had been identified and its atrium excavated, the small theater had been excavated, and buildings or chambers on both the north and south sides of the church had been partially explored. Many questions remained, however, and it was to answer these, so far as possible, that in 1983 emphasis was placed on excavations in this area. Over half of the spring session's excavators and

the greater portion of the hired workmen were assigned responsibilities in the Civic Complex, where six locations were under excavation throughout the spring session.

One of the requirements for excavation in this area was that of heavy machinery. The earthquakes of A.D. 717 and 746 had left heaps of architectural stones lying about. A few of these had been moved during the excavations of 1979-81, and several times the Department of Antiquities had brought in crews of workmen between seasons to remove some of the stone debris, reset columns and other architectural features in their proper places, and consolidate the surviving walls. This season Dr. Hadidi agreed to provide heavy equipment and skilled workmen to work at the site while excavation was in progress, so that excavation could proceed more efficiently and restorations could be made more promptly. The result was that excavation proceeded at least twice as effectively as previously and considerable architectural restoration was completed (Pl. LXXVII,1). It is to be hoped that the Department can continue clearing, consolidation and restoration at selected places in the future.

One goal of the spring excavations in 1983 was to obtain as much information as possible about the form and history of the Civic Complex Church. Since the entire building could not be cleared, efforts were focused on the western and eastern ends of the sanctuary. By the end of the season all three apses and approximately one-fourth of the floor space of the aisles had been excavated, and several of the columns of the central aisle had been entirely or partly reset on their proper bases (Pl. LXXVII,2). The columns, numbering twenty in all, were not of uniform manufacture, but appear to have been taken from various Roman-period buildings at Pella or elsewhere. Their height, exclusive of their capitals (which also varied in size) was approximately 4.10 m., about the same height as the columns of the atrium.

Where unrobbed, the paving in the aisles showed a mixture of kinds of flagstone; the assortment apparently

having been the result of repairs made to the floor during the church's three hundred years of existence. The earliest paving in the wide central aisle, so far as excavated, consisted of large, thin pavers of fine marble that varied in size but averaged approximately 0.35 m. on each side; it is possible, however, that some other form of paving lies in the unexcavated central part of the aisle. After the earthquake of 746, most of the marble paving was robbed; the only places where it was left were those where the paving was crushed or hidden by fallen architectural blocks (Pl. LXXVIII,1). A sounding made in the southwest corner of the sanctuary, where pavers had been robbed out, showed no evidence of any earlier kind of paving. In the south aisle the paving ranged from designs made of small marble squares about 0.15 m. on each side to mosaic paving, and again showed signs of considerable repair. Wherever it appeared, the repair was less attractive and skillfully done than the earlier workmanship.

An unexpected discovery in the sanctuary of the church was the presence of heaps of pre-746/47 trash at several places on the floor. Careful study of baulks showed that the debris had accumulated in several successive stages. The lowest accumulation was chiefly aeolian soil a few centimetres thick (except near some walls, where it accumulated more deeply), which suggested a period of disuse of the sanctuary. Above this soil were piles of debris from the church itself, consisting particularly of coarse white mosaic tesserae, roof tiles and pieces of decorative stone (Pl. LXXXI,1). On top of this was debris from the earthquake of 746/47. This sequence suggests that the church suffered extensive damage in the earthquake of 717, after which a protracted attempt was made to clean up and repair the sanctuary so as to make it once again serviceable. When indigence, political factors or other reasons made the renovation of the church impossible, the church's leaders removed all of the ecclesiastical fittings they could and abandoned the building. The earthquake of 746/47 completed the destruction of the structure.

A sounding was made at the southwestern corner of the central aisle of the church, where paving no longer survived. The bedding for the paving of the sanctuary was relatively thin and poor, and the foundation for the church's walls was small and shallow. The potsherds found in the first half-metre beneath the floor were mostly small body sherds of Roman and Early Byzantine types, plus a few earlier strays. From a half-metre depth onward there was no pottery later than the Early Roman period. At that depth a modest wall was encountered, running at an angle quite different from the church's orientation. The sounding thus showed that there was no major structure beneath that part of the sanctuary, and that there was no construction of any kind from a point some time in the Early Roman Period.

By diligent effort, all three apses of the church were excavated (Pl. LXXVIII,2). There was evidence of extensive and frequent repairs of them, like all other parts of the church. In all cases, the modifications were of lower quality than the original workmanship. Small soundings revealed that the east wall of the church had in an earlier phase been straight, and only subsequently been massively rebuilt with curving walls for each of the apses. No inscription was found which would date the church precisely, but preliminary architectural comparisons suggest a late fourth-century or early fifth century date.

The earlier form of the building had apparently had a *prothesis* in the southeast corner, a *diakonikon* in the northeast corner, and a single altar at the eastern end of the central aisle. These two side chambers would have had entrances opening onto the church's north and south aisles, respectively. The *prothesis* was also entered by a doorway in the south church wall that opened outward and led to a vestry or other ecclesiastical chamber, all traces of which have disappeared because of erosion on the steep slope down to the wadi. All other doors in the church's north and south walls were larger and opened inward into the sanctuary in the customary fashion. In the *prothesis* the eastern half of

a square mosaic paving was found *in situ*, its presence having been concealed since the fifth-sixth century beneath a new floor, 0.42 m. higher than the original floor level (Pl. LXXIX,1). The later floor, a simple flagstone paving that was largely robbed following the earthquakes of the first half of the eighth century, had been installed at the time of the remodelling of the east end of the sanctuary. The earlier mosaic floor had a multi-coloured geometric pattern of considerable intricacy.

The *diakonikon*, on the north side of the sanctuary, had no corresponding exterior doorway. It, too, had originally had a multi-coloured mosaic, although of somewhat simpler pattern, which had probably had approximately the same dimensions as that in the south chamber (Pl. LXXIX,3). This chamber had also had its floor raised 0.42 m. and repaved with simple flagstones during the rebuilding of the eastern end of the sanctuary. Subsequently there were various repairs to the apses, often accompanied by the reuse of earlier decorative stone from the church.

A similar phenomenon was found in the central apse, where the floor level was either originally raised or had been raised at the time of the elevation of the floors in the north and south apses. In any case, the original straight eastern wall had later been replaced by a massive curved apse wall. It may be that this wall was made exceptionally thick because the builders feared that its shape and size would make it unstable. At a later time builders had constructed a low, curving buttress against the apse, possibly because tremors had raised new fears about the structure's stability. The excavators did not dismantle any part of this construction, so there is no way of knowing if it conceals any previous earthquake damage to the lower portion of the apse wall.

Because the eastern end of the church was built against the hillside, the wall of the central apse survived to window-level. The curved wall had three large windows, one at the centre one on each side. Many fragments of window glass were found in the vicinity of the windows, the panes originally having been large rectangles.

Parts of the stone windows, the panes originally having been large rectangles. Parts of the stone window jambs were found, as well as the base and plinth of a small column that may have flanked one of the windows (Pl. LXXX,1). The window frames were of wood, and hence no trace of them was found. Numerous small peices of lead which were probably used to hold the window glass in place were found, and the panes retained traces of putty.

No trace of a mosaic floor was found in the central apse. There was, however, a crescent-shaped platform about 0.30 m. high, later concealed by the raising of the apse's floor level, which originally may have provided a base for the altar. Embedded horizontally in clay and mortar in the centre of the platform, on the central east-west axis of the church and flush with the raised floor, was a marble chancel screen that had been reused. It had been laid in a carefully-prepared bedding, directly below the place where the altar stood. At the time of its discovery portions of the screen were missing, presumably having been robbed after earthquake damage to the church in A.D. 717 or 746/47. Like others found at Pella and elsewhere, the slab had been designed to stand upright between two marble posts between the altar and the rest of the worshippers. It had a heavily moulded border on each side, and on its reverse (which could not have been seen after the screen was installed in the floor) was a simple cross with its lowest arm longer than the other three. The design on the obverse was both more elaborate and more finely executed; it consisted of a large cross in the center, flanked by two rams with lowered heads, each the virtual mirror-image of the other. These well-known symbolic representations of Christ and his followers had at some time offended someone, possibly one of the Muslim conquerors after A.D. 635 who adhered strictly to the Prophet Mohammed's proscription of images, for the animals' figures had been carefully hacked away, leaving only their out-lines. The screen, which has dimensions similar to those of other altar screens from Pella, was cleaned and repaired prior to the end

of the 1983 spring session.

Excavation was also continued in the paved area north of the atrium of the church. At one spot on the paving a pile of trash was found which contained a sledgehammer, a pick, a bolt for a lock, a small wheel rim, a pair of shears, a door socket, and assorted nails—all of iron. These objects seem to have been refuse from a blacksmith's shop. Other kinds of debris also had been tossed on the pile, including glass windowpane fragments and an Umayyad ceramic funnel. The most significant aspect of this refuse heap is not its contents, interesting though they are, but the fact that the trash had already been accumulating on the paving at the time of the earthquake of A.D. 746/47. This along, with the trash heaps in the sanctuary of the Civic Complex Church, provides clear evidence of the growing abandonment of portions of the city and the increasing decay of the city generally — a circumstance that excavations in previous years have already tended to indicate.

Archaeological investigation was continued in a limited fashion in the structure adjoining the church on the north, where in 1980 and 1981 the "hall of the camels" was excavated. It was not feasible to engage in extensive excavation in this building, but probing was carried out east of the "guard-room" of the chamber, where the system of drains in the courtyard north of the church had lead to suspicions that there might be a cistern. Dark earth similar to the Roman-period bedding for the seats in the theater appeared below the level of the paving, containing virtually no pottery, but there was no evidence of a cistern and probing was discontinued. During excavation two more skeletons of domestic animals, a cow and a donkey, were found (Pl. LXXXI,2).

It now appears likely that the entire area occupied by the building north of the Civic Complex Church was a courtyard prior to Late Roman or Byzantine times. The courtyard may have been laid out by the leaders of Pella in the Early Roman Period to create a forum-like area between the Old City and the new, or planned, Roman-style theater and nymphaeum or

baths that flanked the wadi. This theory affords for the first time an explanation as to why it is that no major Roman buildings underlie the Civic Complex Church, for the spot chosen for the church was probably on one side of this forum-like area. The ecclesiastical leaders chose that spot for the church precisely because there were no other available large areas inside the city. Forum-like areas were perhaps also constructed during the Roman period in the wadi itself, but as that part of the city is inaccessible because of the high water table nothing further can be said at present.

The purpose and history of the structure that adjoins the Civic Complex Church on the north still cannot be more than conjectural. The indifferent manner in which the Ionic columns were installed shows that the structure is not pre-Roman, but rather a fairly late construction in which the builders utilized columns that they took from some earlier building. A possible hypothesis is that this structure was constructed in Late Byzantine or even Umayyad times, as the old forum area north of the church was gradually being encroached upon for assorted commercial purposes.

The spring session saw the completion of the excavation of the monumental stairway, built late in Pella's history, which led to the atrium of the Civic Complex Church (Pl. LXXXII). The stairway came to an abrupt termination at its northern end, with a potentially dangerous drop-off to the level of the lower paving. The late paving at the foot of the stairway terminated at its northern end in a stairway that ascended to the Old City via the saddle that lies to the north of the Civic Complex.

Another major structure in the Civic Complex that was the object of archaeological investigation during the spring session was a semicircular wall which had been discovered just west of the monumental stairway at the end of the 1981 season. This large, well-constructed wall was the subject of considerable interest, since it was located close to the theater and the wadi. In the interests of efficiency it was decided to excavate only

the northern half of the *exedra*. Excavation showed that on its north side the wall extended for several metres toward the west before terminating in a short stub that extended in the direction of the wadi. This extension represented a modification of the original form and function of the structure. Like the other buildings excavated in the Civic Complex, the *exedra* had undergone extensive modification in the Byzantine Period, and possibly in Umayyad times as well.

The uppermost surviving course of the wall proved to be only one to two metres above the water table in the Wadi Jirm, and pumps had to be used constantly while excavation was in progress. No one anticipated the increasingly large volume of water that flowed in as excavation proceeded. Water began to trickle into the interior of the *exedra* after the first metre of debris had been excavated, and as excavation probed more deeply it began to gush in through the water-worn corners of individual wall stones, until pumps pulling the equivalent of a 0.20 m. column of water were insufficient to withdraw all of the water. For days the excavators and their workmen waded hip deep in water attempting unsuccessfully to reach the floor of the structure.

Two metres below the top of the surviving wall of the *exedra* a 0.50 m. wide stone bench came to light. This buttress-like addition to the wall of the *exedra* was surmounted by several layers of mudstone pavers, on top of which was a channel made of fired-clay paving blocks designed to conduct water on a semicircular path along the *exedra's* wall. This bench probably was not part of the original design of the *exedra*. The period during which the channel functioned could not be determined precisely, but it clearly was late in Pella's history.

The quality of the *exedra's* construction is excellent, and can be compared with little else in the Civic Complex but the theatre, which almost certainly is of Early Roman date. The function of the building remains uncertain. It is possible that it is a remnant of the *nymphaeum* of Pella which is shown on several of the city's coins; it may be,

however, that it was a part of the public baths at Pella. Whether *nymphaeum* or bath, the *exedra* was designed to have something to do with water. Its very position beside the wadi suggests that water figured in its use, and the presence of a water-channel running around the wall of the *exedra* attests that in fairly late times it continued to be involved with the spring. During the course of excavation fragments of scores of funnel-like, ribbed ceramic jars, open at both the large and the small ends, were found amid the soil and mud. Although these vessels bear some resemblance to ones used in Roman times to construct barrel vaults, the presence of two of them virtually *in situ* at the southern end of the water channel suggests that they were intended as water-supply pipes, the tapering end having been designed so that each pipe could fit into another and at the same time the entire line of them could be bent to any necessary curve. (Pl. LXXIX, 4)

Whatever its original function, the structure underwent adaptation at the hands of Late Byzantine or Umayyad inhabitants of Pella, and as usual the workmanship was of much lower quality. A westward extension was made to the north side of the *exedra*, and other walls were built so as to form a partial enclosure west of the *exedra*. It was during this period that the water channel was constructed. This secondary construction was related to three barrel vaults which were discovered adjoining the *exedra* on the northwest. The vaults were built parallel to one another and, so far as they could be measured, had similar dimensions. They shared a common back wall, although that wall may have had more than one phase of construction or reconstruction. Regrettably the water table precluded excavation much below the springing of the arches, and it was impossible to measure the distance to the floors. No stairway leading to the floor of the vaults was found, nor fittings of any

sort. The south wall of the vault nearest the *exedra* had its wall in common with the extension of the *exedra's* wall toward the west, a fact which indicated that the extension of the *exedra* and the vaults were constructed at the same time, which was probably the same time as the installation of the bench and channel in the *exedra*.

The purpose of the vaults may have been to provide cisterns for the storage of water from the spring. A plausible context in which the people of Pella would have had to husband their water supply so carefully was one of drought. The date of this construction cannot be determined closely, but we increasingly know that cisterns were being constructed, or improvised from existing structures, during the Late Byzantine Period beginning of the Umayyad Period, i.e., around A.D. 575-675.⁵ It may be that it was during this time that the *exedra* underwent extensive alterations related to the changed hydrological conditions at Pella.

Contributions to the History of Pella

As has been mentioned previously, the spring excavations of 1983 provided significant information related to Pella's history. Our knowledge of several early periods at the site has been considerably enlarged. There are indications of both a pottery Neolithic phase and possibly a pre-pottery phase as well, which was not limited to the mound proper but also extended to some of the hills in the vicinity of what later was to be Pella. Only one period in the Chalcolithic Age has been clearly identified, but that one is clearly represented on the mound as well as in the somewhat more distant in Area XIV. Again only one period in the Early Bronze Age, EB I, is strongly represented by the 1983 findings, although occasionally EB II-III sherds have appeared in the West Cut and elsewhere.

The new MB IIA evidence is

⁵ Note the cistern excavated in 1980 which had been constructed about this time north of the large West Church (*op. cit.*, p. 126-127). Early in the 1983 season a cistern was discovered not far from down

the slope from the south apse of the Civic Complex, which had been devised by the plastering of a vaulted chamber similar to the barrel vaults under discussion here.

important for our knowledge of Pella in Canaanite times. Egyptian texts name the city over a period of several centuries from the nineteenth century onward, but these allusions alone are insufficient warrant for the assumption that the city was rich and important throughout the second millennium B.C. The evidence from the probe in the West Cut, the discoveries in Area XXV, the findings of the Australian team in Area III, and the Canaanite tombs that have been excavated at Pella over the years, constitute sufficient data to warrant some conclusions. Pella had a vigorous, if undistinguished, existence during the MB IIA period, around 1900-1750 B.C., the time when the earliest known historical allusion to the city occurred in the Egyptian execration texts.⁶ Pella was also certainly occupied during MB IIB, but the extent of the city's vigor at this time cannot yet be fully ascertained. The lack of strong evidence for MB IIB thus far, both on the mound and in tombs, suggests that the eighteenth century may have brought a slight decline in both population and prosperity. For the seventeenth century and transitional MB/LB period of the sixteenth century archaeological evidence excavated in previous seasons suggests fairly robust civic health. There appears, however, to have been a decline in vigor during several centuries of the Late Bronze Age, as the relative absence of strong LB strata in the excavated areas at Pella tends to suggest. By LB IIB the city was again in the ascendancy, though still without extensive international trade.

Strata 5 through 8 in Area VIII suggest that the inhabitants on the western side of the mound of Pella were relatively impoverished and culturally uninventive throughout much of the Iron Age. In view of the findings of the Sydney team in Area III, it is doubtful if the eastern side of the mound will prove to have been much different from the western. Pella's material life in the Iron Age was much like that of many other Iron Age sites in Palestine and Transjordan, but without any evident enriching features. It was distinctly provincial, neither materially rich nor culturally sophisticated. The city did not exist on trade at this period, as the virtual absence of distinctive imported goods indicates. Whatever religious traditions the city may have had have not yet been revealed by excavation. The absence of reference to the city in the Old Testament may well be due to the fact that from at least the end of the twelfth century onward the city was in a depressed state, from which it did not recover until near the end of the Iron Age. Even in the seventh century Pella's growth in population, indicated by the increase in occupation on the mound, was not accompanied by increased trade or other evidences of greatly increased prosperity. The city's vicissitudes in subsequent periods have already been extensively illuminated by excavations in previous seasons.

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⁶ Robert H. Smith, *Pella of the Decapolis, Vol. I: The 1967 Season of The College of Wooster Expedition to Pella*, Wooster, 1973, p. 23-24.