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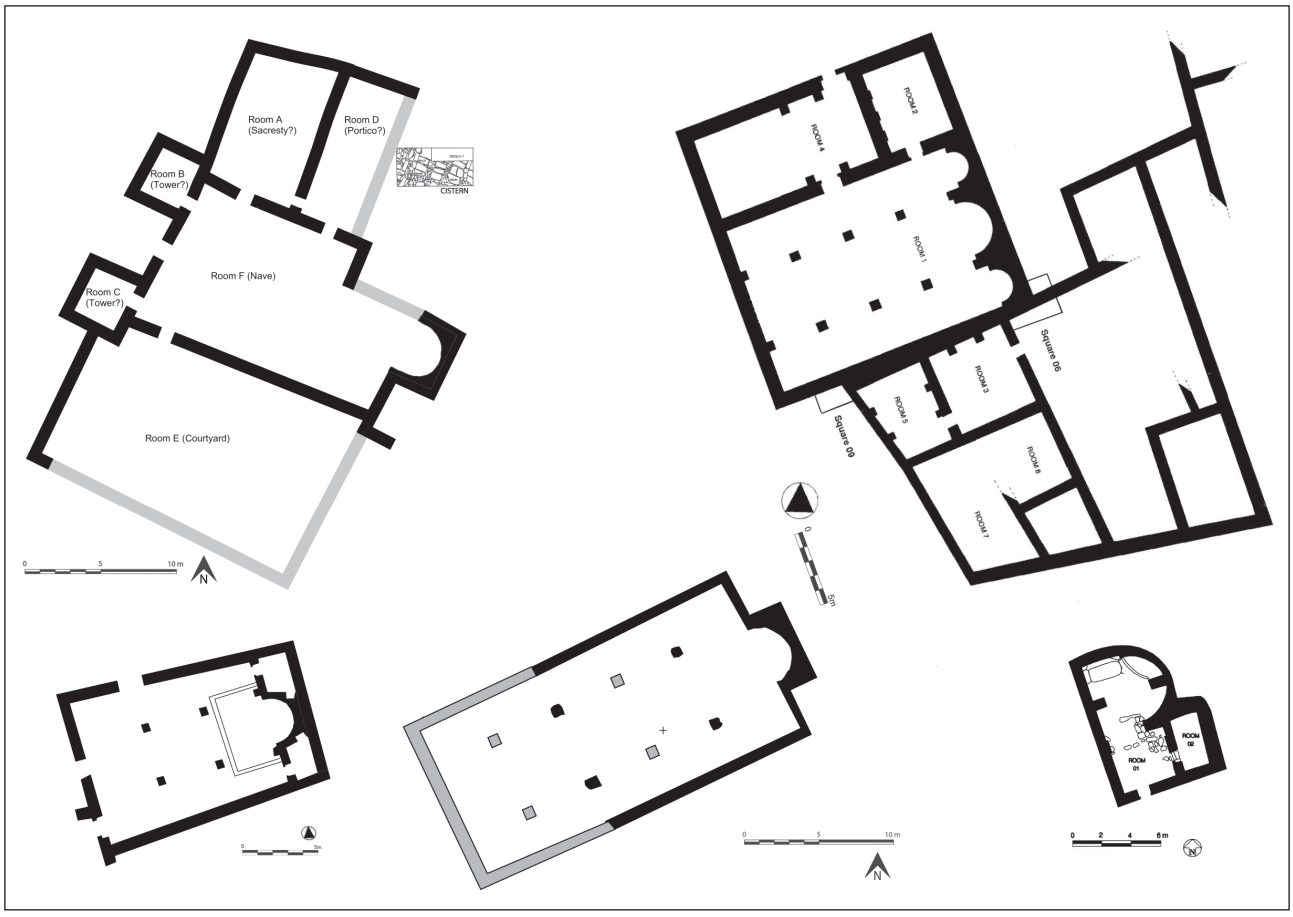
From Church to Farmhouse: The Re-Use of Christian Structures in Early Islamic Ḥumayma

Nabataean Ḥawara, since the early Islamic period called Ḥumayma, was a small desert trading post and caravan way-station in Edom, the desert region of southern Jordan. It is located 80 km north of the Red Sea port of Aqaba (ancient Aila) (Oleson 2010: 22, fig. 2.1). According to Ouranios's *Arabika*, Ḥawara was founded by a Nabataean prince who later becameking under the name Aretas – probably Aretas IV, who ruled from 9 BC to AD 39/40,since archaeological evidence at the site for the most part commences toward the end of the first century BC (Oleson 2010: 50-62).The name Ḥawara involves a pun on the word 'white', supposedly after the white camel that led Aretas to the site; the later name Ḥumayma may also involve the root of 'white'.The location and historical context of the settlement suggest it was intended to serve as a centre for sedentarization of the nomadic Nabataean pastoralists who occupied the region. Through careful management of the meagre spring water and precipitation, the resulting community was able to enjoy a settled existence based on agriculture, stock-raisingand the servicing of caravans. A modest prosperity continued through the Roman, Byzantine and early Islamic periods, based in part on the trade that continued to move along the north-south road, the *Via Nova Traiana* – built by Trajan on the old Nabataean route that extended from Damascus, past Petra, to Aila.The Abbasid family purchased the town site late in the seventh century, built a manor house and mosque, both of which havebeen excavated by the University of Victoria team, and plotted the overthrow of the Umayyad caliphate there (Oleson 2010: 60-62). On the eve of their revolt in 749, the family moved to Kufa in Iraq, perhaps spurred by the great regional earthquake in that same year. Ḥumayma immediately became a quiet backwater, the small population reworking older structures through the ninth or tenth centuries. Subsequently, there were only small groups of squatters, other than in the former Abbasid manor house which seems to have been intensively reoccupied in the earlier Ottoman period. The name and historical associations of the site survived among Arab historians and are still familiar to the local *bedouin*[1].

1. Between 1986 and 2005 the author carried out 12 seasons of survey and excavation in and around the site of Ḥawara/Ḥumayma, funded by the Social Sciences and Humanities Council of Canada, the Taggart Foundation, and the van Berchem Foundation. Over this period the team excavated a Nabataean campground and three Nabataean and Late Roman houses, the Trajanic Roman fort and associated bath, five Byzantine churches, and two Early Islamic farmhouses. Professor M. Barbara Reeves has excavated most of a large mud-brick complex forming part of the vicus, the civilian settlement associated with the Roman fort, along with a bath and a remarkable Nabataean shrine that continued in use into the Late Roman period (Reeves et al. 2009). Part of the team, under the direction of Rebecca Foote, also excavated the residence and mosque of the Abbasid family (Foote 1999, 2007; Oleson 2010: 61). Finally, we have probed miscellaneous structures within the settlement centre and sampled many of the rock-cut tombs surrounding it.

This presentation focuses on some problems involving the Byzantine churches at Ḥumayma and the Early Islamic houses that, in two cases, were built into the church structures after their abandonment. Five churches have been documented at this small site, a total larger than the number of churches so far documented even at the regional centre of Petra (FIG. 1). A sixth may lie hidden under a large, unexcavated structure near the centre of the habitation area. The walls of the latter structure were rebuilt during the twentieth century, obscuring the original plan, but an inscribed cross was found on a block incorporated in the modern wall and several fragments of marble chancel screen were scattered around the area. The five documented churches, designated C101, C119, B126, B100 and F102, were all most likely constructed overthe course of the sixth century, the great period of church-building in the region, although the F102 and C119 churches may date as late as the early seventh century (Oleson and Schick 2013) (FIG. 2).The structuresall fell out of use as churches in the course of the seventh century and their furnishings were salvaged, leaving only fragments behind. The C101 and C119 churches were essentially abandoned after being stripped; the B100 and F102 churcheswere re-used for habitation. The situation in the Early Islamic period remains uncertain for B126. The churches vary somewhat in plan and dimensions, but the types all find parallels in Jordan, Israel

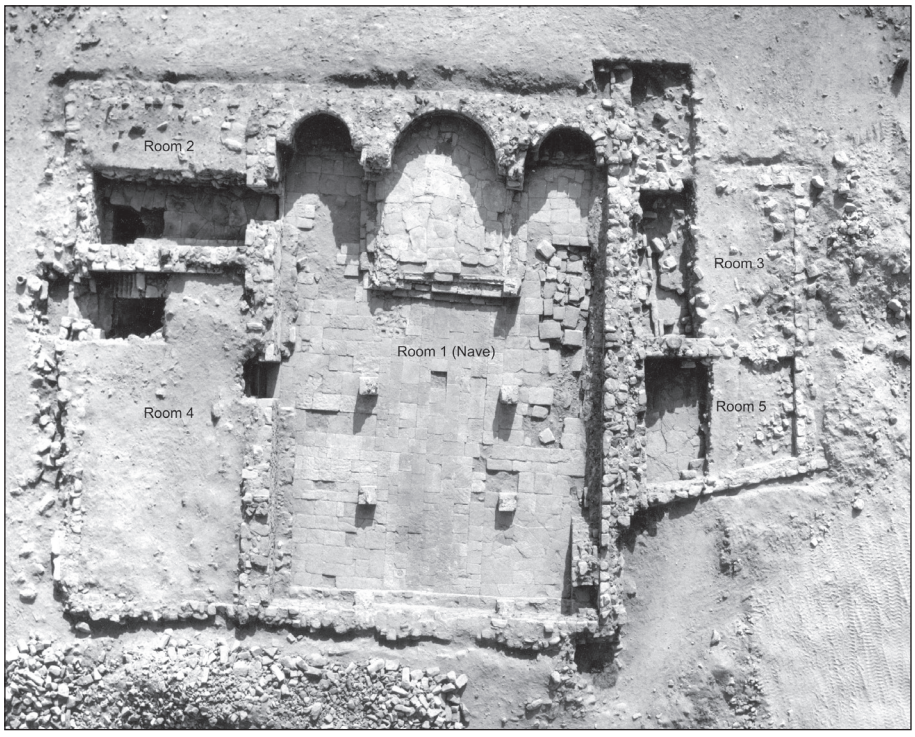
1. Aerial view of Ḥumayma with indication of church locations.



2. Composite plan of Ḥumayma churches.

and Syria (Oleson and Schick 2013: 157-59, 218, 294-96, 551-53).There are also significant parallels within the group in plan, dimensions, modules, materials, construction techniques and furnishings. All the churches except for F102 were oriented 20-30 degrees north of east. The F102 church, in contrast, was oriented 20 degrees south of east (Oleson and Schick 2013: 550-53, fig. 15.1). There is no apparent cause for this anomalous orientation, either in the immediate site or the visible landscape.The plans of all but the B126 church, for which the data are not sufficient, were laid out in orderly multiples of the Byzantine foot of 0.3089 m. All but B126 yielded significant quantities of fragments of marble chancel screens and of bronze supports and glass lamps for *polykandela*, typical ecclesiastical chandeliers (Oleson and Schick 2013: 429-41, 519-46).

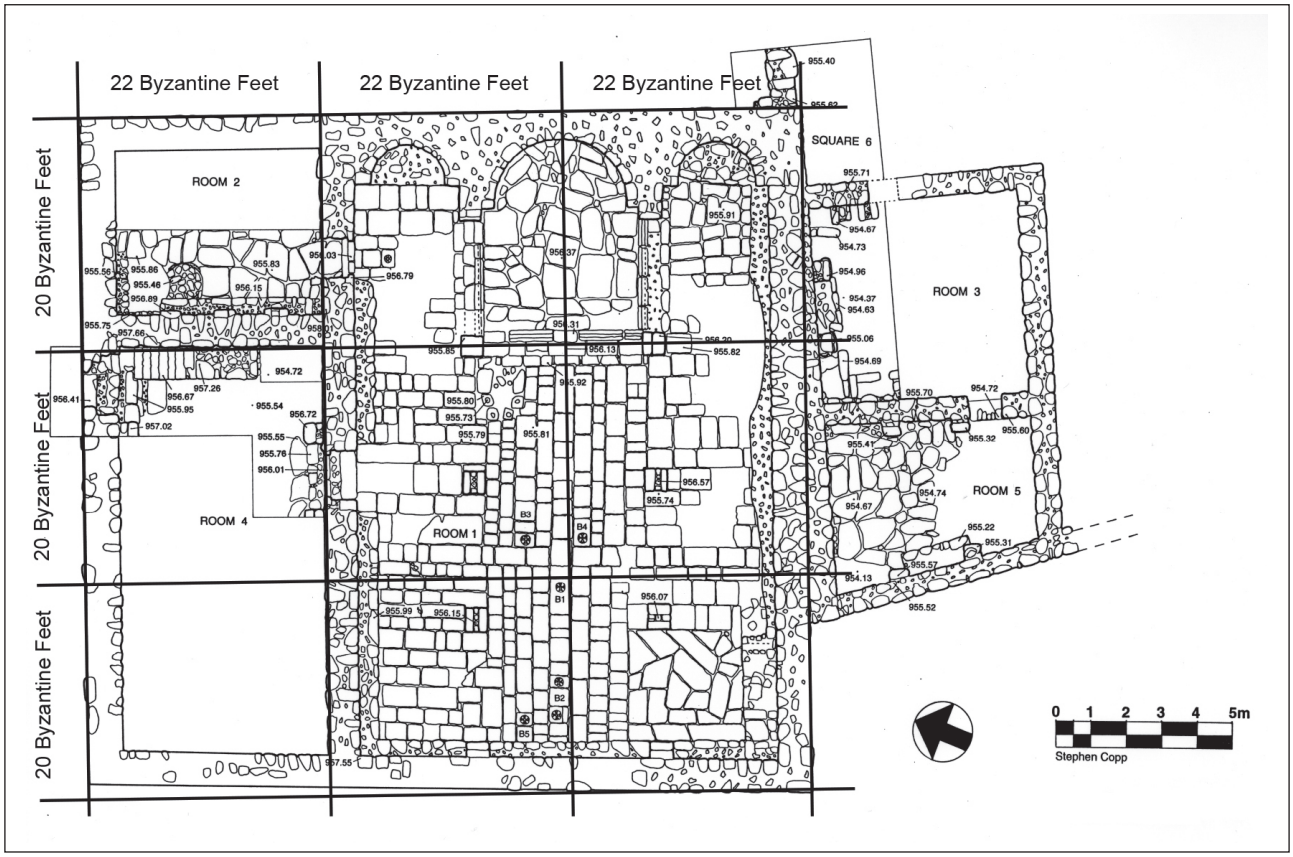
The church in Field C101, located toward the western edge of the ancient occupation centre, is the largest of the group in overall area, the best preserved and most completely excavated, and the only one for which three apses can be conclusively documented (Oleson and Schick 2013: 221-98) (FIG. 3).The B126 church probably had three apses, but further excavation is needed to document such a plan. The C101 church is a typical three-apse basilica, the interior divided into a wide central nave and narrower north and south aisles by two east-west rows of arches. At the east end of the nave there is a raised chancel and a large central apse; the two side aisles also terminate in semicircular apses attheir east ends. The surviving paving in the central apse reveals no evidence for installation of a *synthronon*. Doors in the north aisle connect with a sacristy (Room 2) and large entrance hall (Room 4), while several small rooms are built up against the outside of the south wall. There were no entrance doors in the west wall.



3. Aerial view of Field C101, with indication of room designations (W. Meyers,21 July 1992, neg. H-3 no. 3).

The core of the church complex – the church, sacristy and entrance hall – were the result of a single construction phase. The planners laid out a nearly square outline, 60 Byzantine feet toa side, whichwas divided into three east-west sections laid out in squares of 20 × 22 Byzantine feet (FIG. 4).

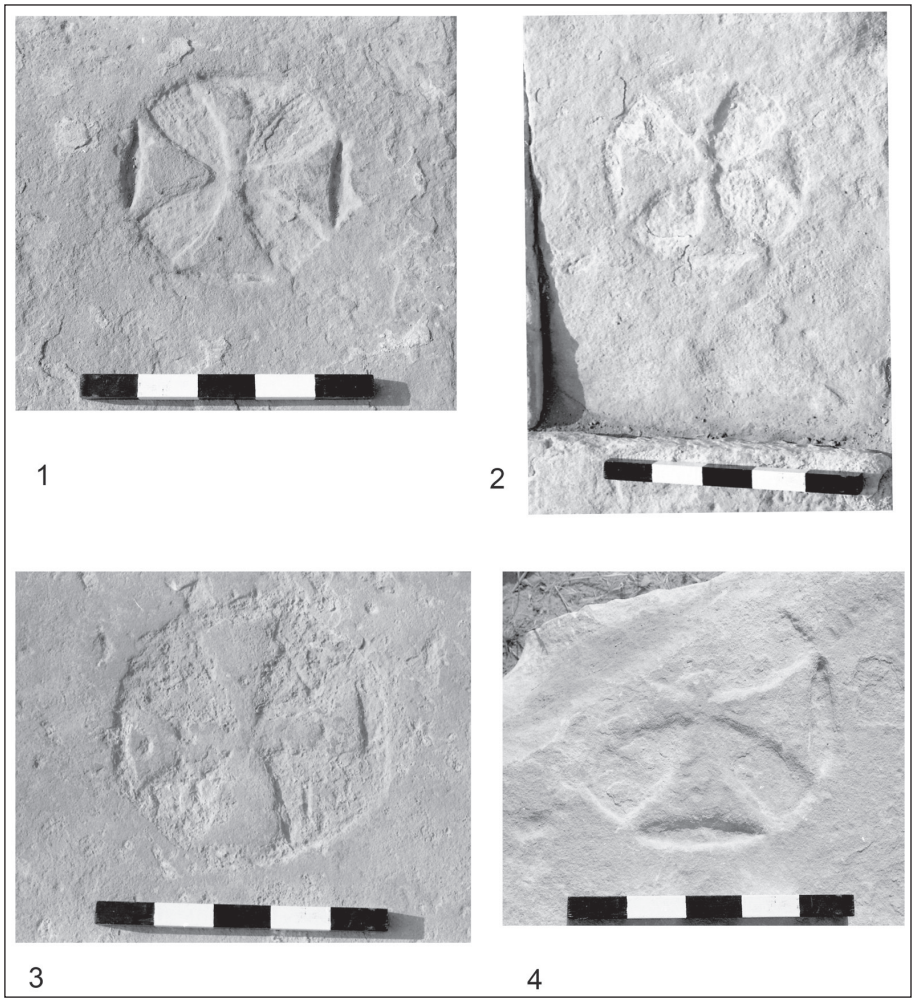
The church did not have a mosaic floor,



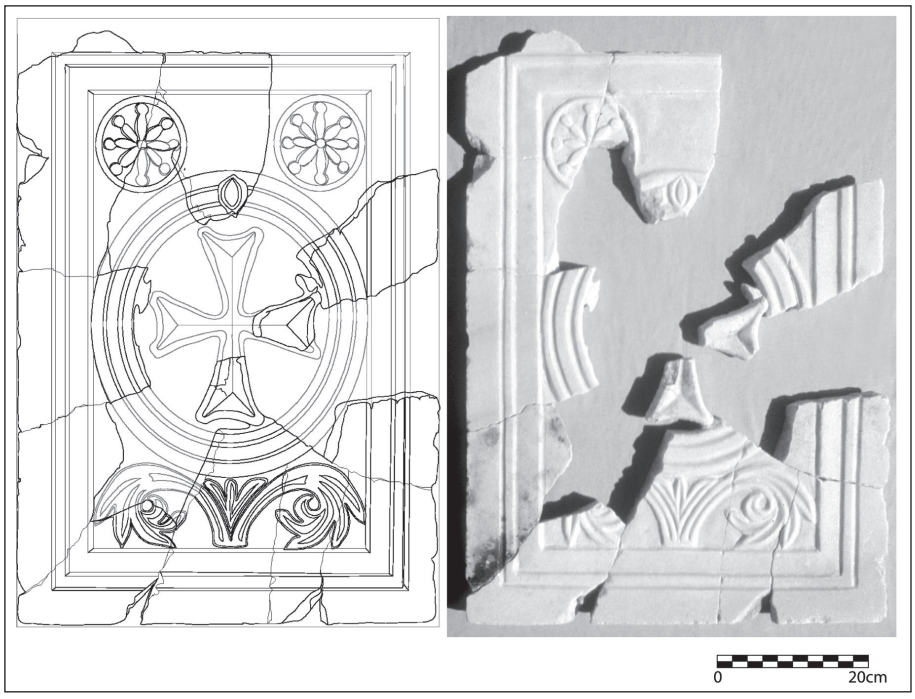
4. C101 church, plan with planning grid (S. Copp; J.P. Oleson).

although it did contain elaborate marble furnishings. At least seven burials were placed below the floor of the nave and side aisles, marked by crosses on the paving stones (FIG. 5).The church appears to have continued in use until around 650 AD, when the building seems to have been peacefully abandoned while still structurally intact. Later on, the marble and other liturgical furnishings were largely robbed out, and the marble broken up for burning into lime. This salvaging took place before the burning and fall of the roof, since some fragments from a single chancel screen were scorched, while adjoining fragments were not (FIG. 6) The only sign of re-use of the building is the installation of a *ṭābūn* oven in Room 2 during the Umayyad period.

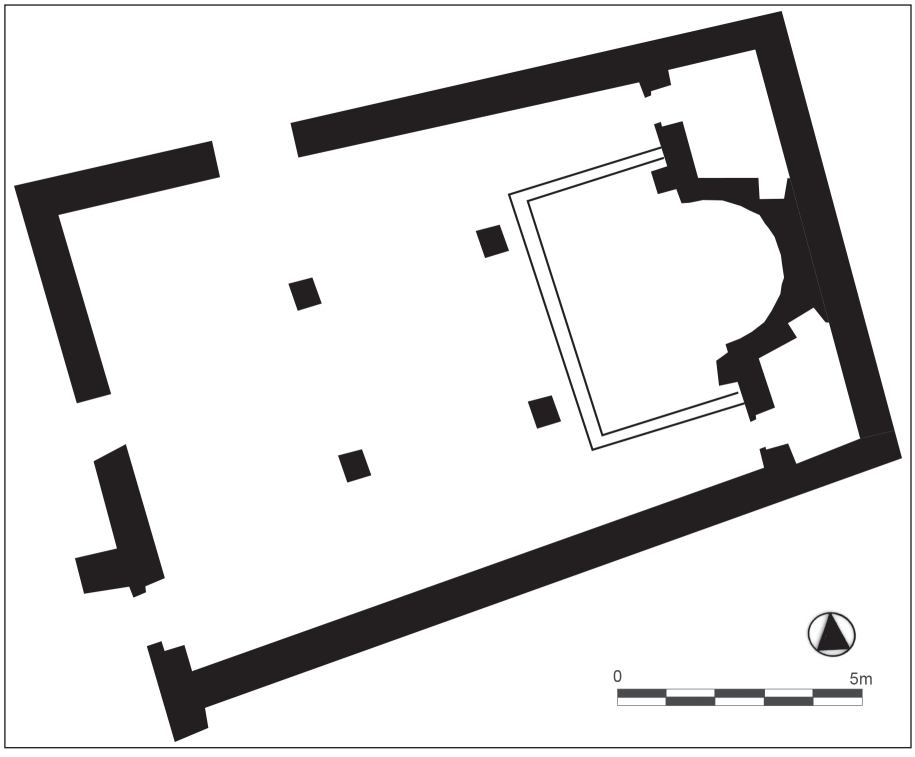
The C119 church was built at the edge of a steep slope on the far west part of the site, 8 m higher than the C101 church and prominently visible from the east at a significant distance (Oleson and Schick 2013: 299-307) (FIG. 7). The C119 church is simpler in plan and somewhat smaller than the others, *ca.* 8.25 × 14.5 m, just above the usual dimensions for a chapel (Michel 2001: 17). With the possible exception of the chancel steps, all of the architectural features appear to belong to a single phase, dating generally to the Late Byzantine or early Umayyad period, *i.e.* the sixth or early seventh centuries. The building was a basilica with a single apse flanked by two small *pastophoria*, with its long axis oriented at about 72 degrees. There was a raised chancel in front of the apse, with a marble chancel screen. There was one door in the middle of the north wall, another door in the middle of the west wall and a third door near the south end of the west wall. There clearly are additional rooms to the south and west of the church, but their wall lines remain



5. C101 church, crosses above Burials 4, 5 and 6.



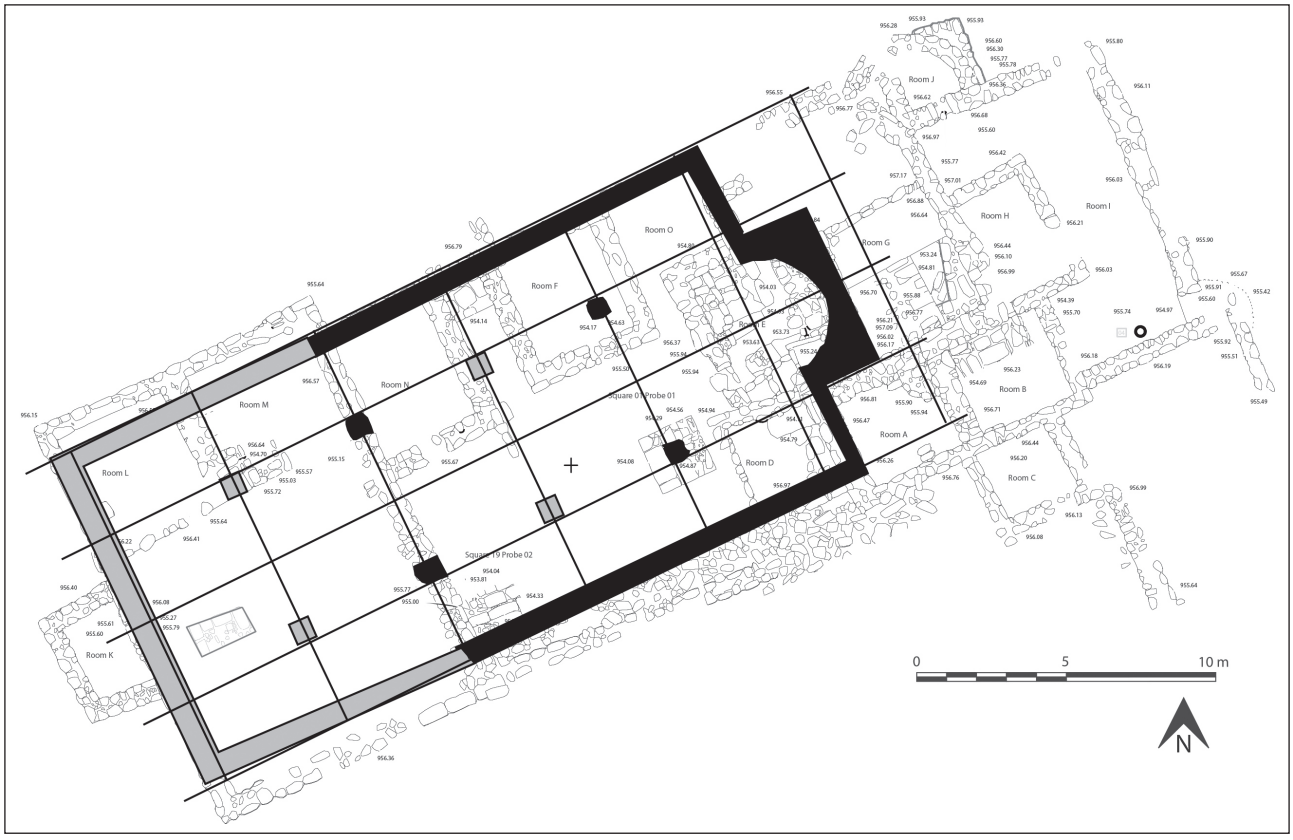
6. C101 church, chancel screen panel 1 (drawing M. Siklenka).



7. C119 church, plan.

only partially traceable and they have not yet been excavated.

The B100 church had a central nave and two side aisles separated by block-built piers, and a single apse set into a block of masonry projecting from the east wall. The long axis was oriented atapproximately 60 degrees (Oleson and Schick 2013: 161-220) (FIG. 8). The floor was paved with neat slabs of sandstone and a large chancel was raised up on two steps.A marble chancel screen was mounted in the gutter groove of Nabataean marl conduit blocks set back on the top step. Traces of hard white plaster were found on some of the surviving wall surfaces. No signs of *pastophoria* survived, but it is possible that such features may lie hidden beneath Room D

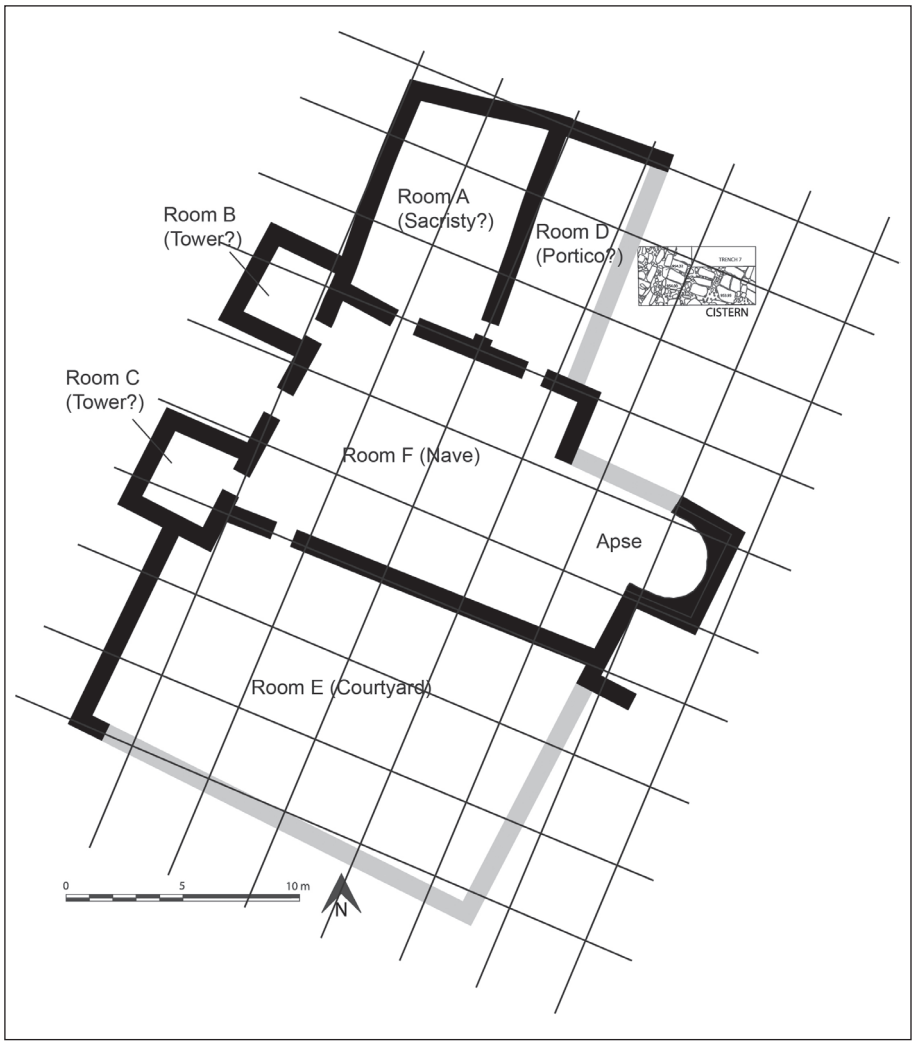


8. B100 church, plan with planning grid.

and Room O. The structure of the church was 12.75 m wide (external dimensions) and at least 19 m long. Unfortunately, several probes west of Wall 03 failed to discover any convincing evidence for the original west wall. It remains possible that the west wall of the Church lies beneath the west wall of the Umayyad complex, but that would produce an extraordinarily long and narrow plan. The church was laid out in blocks of 10 × 15 Byzantine feet.

The church in F102 was at the core of a large complex, all the product of a single construction phase, laid out in squares of 10 × 10 Byzantine feet (Oleson and Schick 2013: 93-160) (FIG. 9). Unlike the other churches at Ḥumayma, for undetermined reasons it was oriented 20 degrees south of east. The nave and two side aisles were delineated by support piers and focussed on a singleapse. There was a raised chancel in front of the apse and a flagstone pavement, which extended through the ancillary rooms and courtyards.The surviving paving in the apse reveals no evidence for installation of a *synthronon*.Although the evidence is not entirely clear, it seems most likely that the F102 nave was not symmetrical, the north wall making a jog to accommodate the pre-existing cistern. There were three symmetrical doorways in the west wall, the north and south doors leading to small square rooms that possibly supported towers, another unique feature at Ḥumayma. The central entrance door was set back between the towers.

A door in the west end of the north wall led to Room A, a long room that may have served any number of purposes, including sacristy, meeting room or rectory. A door toward the east end of the north wall of the nave led to a small, probably unpaved courtyard (Courtyard D) framed by a wall to the north. Steps led down from here to a pre-existing Nabataean cistern. This space, possibly partially roofed with a light portico, may have been used for the storage of equipment or the accommodation of animals. Rooms A and D were connected by a door at the south end of the wall separating them. A door at

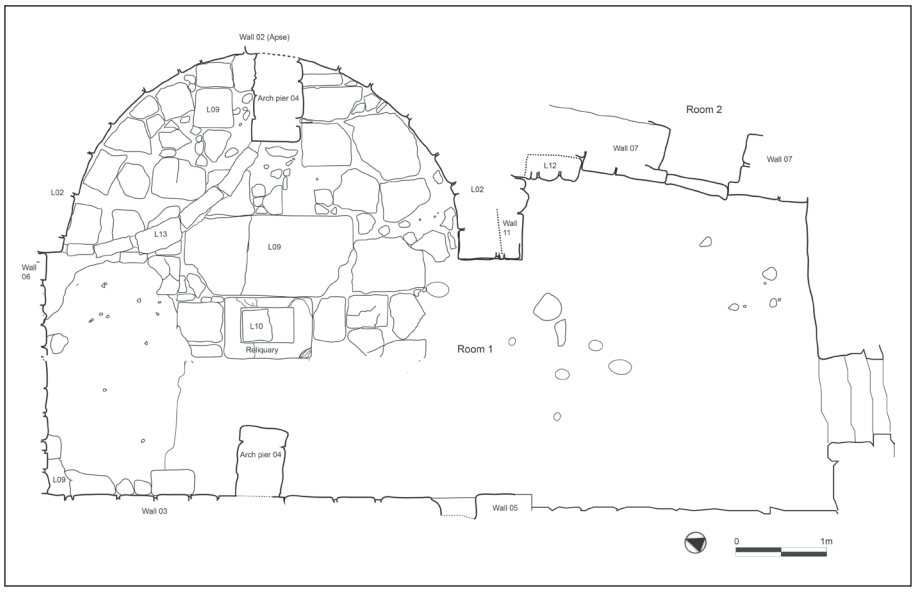


9. F102 church, plan with planning grid.

the west end of the south wall of the nave led to a large, partially paved courtyard (Courtyard E) very close to the dimensions of the nave itself. Courtyards are commonly associated with Byzantine church complexes in this region.

The B126 church was built in the centre of the habitation area, nearlarge reservoir no. 68 (Oleson and Schick 2013: 309-20). During his brief visit to Ḥumayma in 1935, Albrecht Alt mentioned the three apses of a Byzantine church and published a photograph that shows the east end of the church, with portions of the central and southern apses (Alt 1936: 94-95, pl. 3B; Oleson and Schick 2013: 309, fig. 9.1).The church building was incorporated into a modern barn built in the 1960s, and the remains of the church were not recognizeduntil the 1996 season, when the owner had ceased to use it and left the door open.The remains of the church have been badly disturbed by the rebuilding and by some clandestine digging since 1996. Schick was able to probe only the core of the nave, revealing a stepped chancel in front of an apse, all paved with stone slabs (FIGS. 10 and 11).Unique at Ḥumayma was a reliquary carved into a large stone slab, with access holes from the surface (FIGS. 12 and 13), but no remains of marble furnishings were found.No evidence was recovered that could serve to date the construction, use or abandonment of the church, beyond the generic designation that it must belong to the Late Byzantine or Umayyad period.

This quick perusal of the five known Byzantine churches at Ḥumayma brings up a number of questions (FIG. 2). Why were there so many churches at this small, isolated site and what was the relationship between them, and among their clergy and congregations? Why were these particular plans chosen for



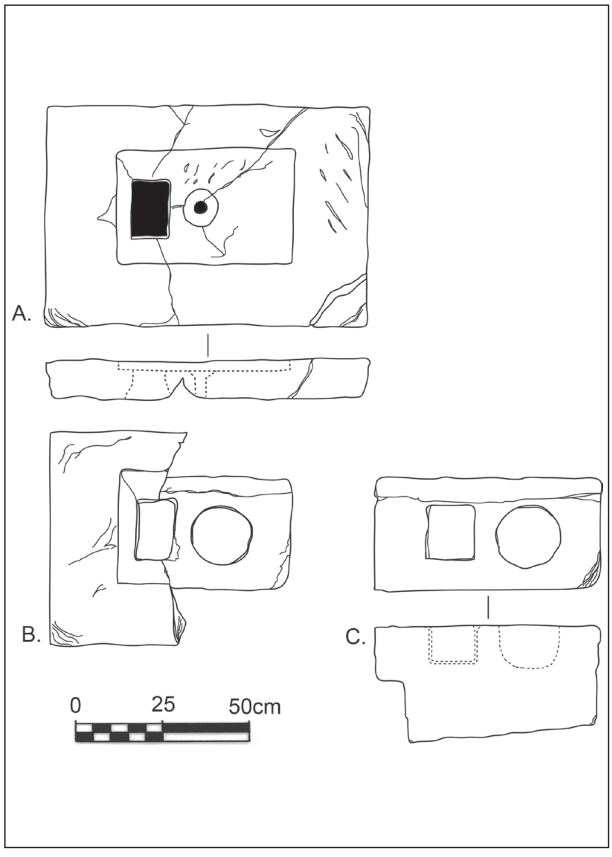
10. B126 church, plan.

11. B126 church, view of central apse with modern roofing arch.

the churches? Did the large, three-apse C101 church, with its intramural burials, enjoy some sort of prominence in the community? How were the churches roofed? If they had gabled roofs, why have so few rooftiles survived? Where did the ecclesiastical marble come from and where was it carved? How did it get to Ḥumayma? How did the advent of Islam affect the Christians of Hauarra? Were the churches destroyed intentionally, or did they simply fall out of use?

These issues have been discussed by Oleson and Schick (2013) and only a summary can be provided here. Why so many churches for an apparently small population? A significant portion of the population of Ḥawara was probably absent for at least part of the year, leading herds to seasonal grazing land. Those in nearby tents could frequent the churches and provide sufficient congregation. Some of the churches mayhave been built to fulfil special vows, or have had specific clan associations. The C101 church may have had some precedence over the others, since it is the only one for which intramural burials have been documented, one of them with rich funerary offerings. The issue of roof design remains unresolved.The rarity of rooftile fragments suggests flat, mud

12. B126 church, view of chancel area with reliquaryin situ.



13. B126 church, drawing of reliquary (A. Heidenreich; I. Sturkenboom; M. Siklenka).

roofs, but thorough salvage and recycling of the tiles in structures outside of Hauarra is another possibility. All of the ecclesiastical marble originated in the Aegean area, most of it probably from Prokonnesos (Oleson and Schick 2013: 484-91). The motifs and carving style most resemble the ecclesiastical marble at Petra, so the panels most likely were carved there, or shipped in rough form through Petra, and then finished at Hauarra by an itinerant team of sculptors. The importation of these panels by land must have been very difficult and expensive.

What transpired during the transition from the Byzantine to the Umayyad period? The excavation data for the churches has revealed some interesting patterns of parallels and diversity, both in plan and history. Two of the churches, field nos C101 and C119, appear to have been abandoned in the seventh century, stripped of their furnishings and allowed to fall into ruin.There was no evidence for burning or other sudden destruction in the nave of the small C119 church and the marble furnishings had been removed prior to the collapse of the walls. Shelving in the south-east room had been used for the storage of glass lamps. After the abandonment of the church and the breakage of the lamps stored there, enough time passed for wind-blown silt to accumulate before the marble furnishings of the church were robbed out, with a few pieces being dumped in the south-east room. The major structural collapse of the building occurred after all but a few fragments of the marble had been removed (Oleson and Schick 2013: 305-7).

The careful analysis of the intact deposits in the nave of the C101 church revealed a slightly different sequence of events. A thin layer of yellowish clay directly above the pavement in some parts of the nave seems to represent soil introduced during the initial disintegration of the roof. The limited deposit of ash directly above the pavement around the northern aisle may represent the activities of squatters

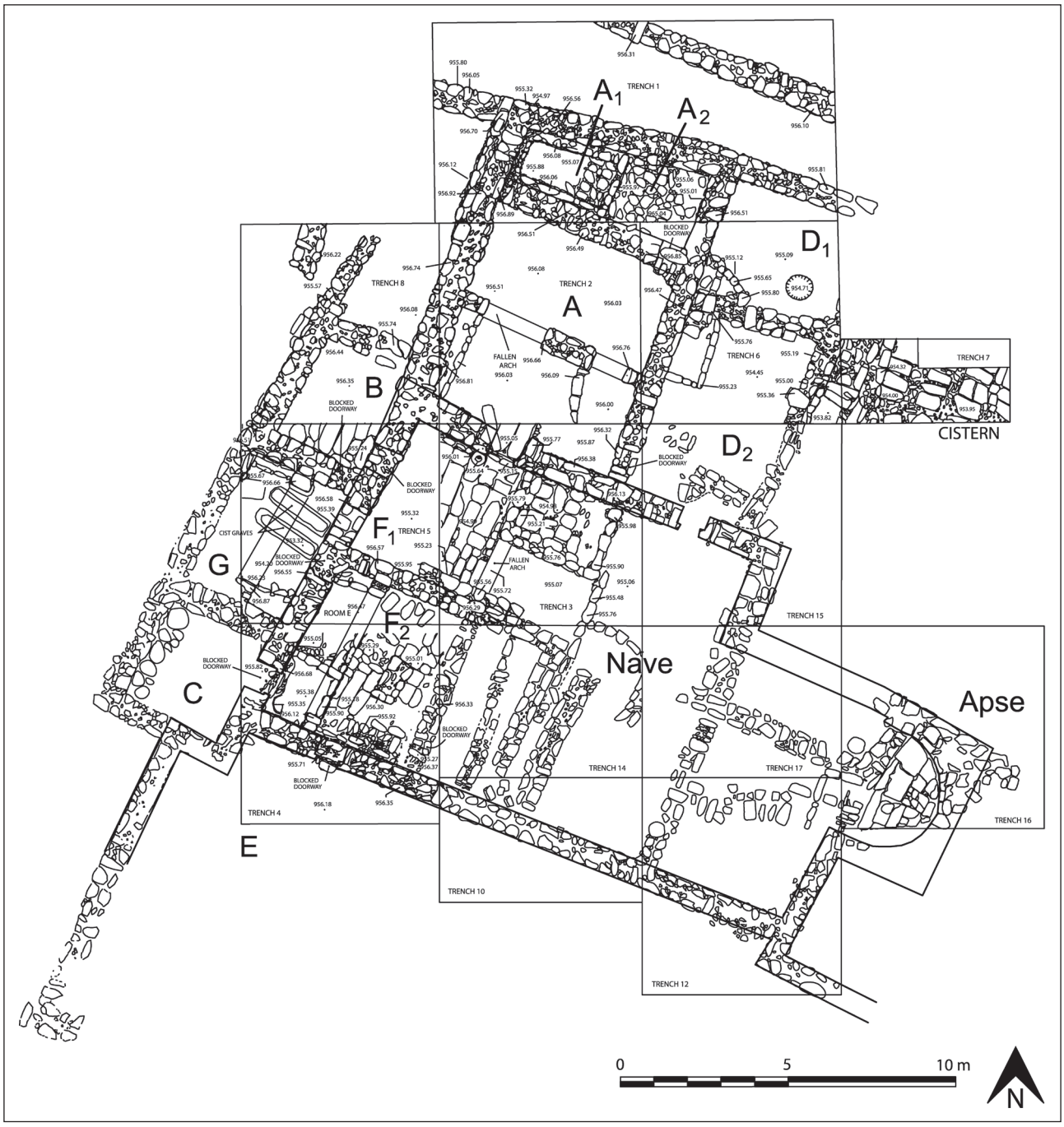
or individuals salvaging church furnishings (Oleson and Schick 2013: 233-40).A compacted silty soil with pieces of charcoal from the burning of the roof lay directly on the thin layer of clay and ash. This stratumreflects a phase during which the liturgical furnishings were removed while the walls of the building remained physically intact, and an initial destruction of the roof. The layer incorporated a great amount of dumped domestic refuse: numerous sherds of large hand-made storage jars, many animal bones, hundreds of fragments of ostrich eggshell and glass, metal objects and many marble fragments, especially in the basalfew centimetres.At some point during this period squatters, possibly resident in the nave or the entrance hall, installed a *ṭābūn* in the sacristy. No other architectural modifications to the church, however, can be recognized.

While several hundred marble fragments were recovered, it is clear that the bulk of the marble had been removed from the church, since only a small proportion of the fragments join. Only about half of the most complete panel could be pieced together, and its fragments were found scattered throughout the area between the chancel, the north-south baulk and the entrance hall (FIG. 6). Several of these fragments were blackened by fire but joined with other unblackened fragments, suggesting destruction of the screen and dispersal of the pieces prior to the loss of the roof (Oleson and Schick 2013: 449-53). The case for intentional salvaging of the marble is clear. Only a couple of pieces may have come from the altar, chancel screen posts or colonnettes. Almost all of the marble fragments were found widely scattered and faceup, which would not be the case had they been left as they had fallen randomly owingto natural destruction, such as an earthquake or accidental fire and collapse of the roof.

Here, as elsewhere at Ḥumayma, the marble was not salvaged for re-use but was broken up for burning to lime. Presumably, with the gradual decline of Christian activity in the region in the eighth century, re-use of ecclesiastical marbles in another church was not an option. The Christian iconography and Christian associations of the marbles also made re-use in secular structures inappropriate.

The other churches, field nos B100 and F102, fell out of use at some point in the seventh and eighth centuries respectively. Unlike the other churches at Ḥumayma, however, these two structures were intensively reoccupied for much of the seventh to ninth centuries and used for occupation, possibly as farmhouses. Such intensive, long-term reoccupation was not, in fact, a common fate for Byzantine churches in the region in the Early Islamic period, so it is worth examining its character.One reason for this reoccupation may have been the easy access to water. The B100 church was only 20 m away from the two Nabataean reservoirs in the centre of the habitation area, while the F102 church was adjacent to a substantial Nabataean-period cistern still in use. In addition, the F102 area was close to the Abbasid manor house, the centre of economic and social activity in Umayyad Ḥumayma. More excavation is needed to determine the fate of the B126 church during the Early Islamic period, but so far there is no obvious evidence for its reoccupation prior to the twentieth century.

The F102 church appears to have remained in use until the early eighth century;its abandonment may be associated with damage from the earthquake of 749 AD (FIG.14). The growing Islamicisation of the region, along with an economic decline after the departure of the Abbasid family for Iraq in the same year, would have made rebuilding difficult. In any case, the church ceased to be used for religious purposes, although the process of abandonment is obscured by the later reoccupation. The nave, apse and Room A were broken up by partition walls. A cross wall near the north end of Room A formed the long, narrow Room A1, with a large bin or storage area. Two imposts toward the southern end of Room A supported a cross



14. Area F102, plan of Early Islamic structure.

arch that helped hold up roof beams or roof slabs. Another bin was built in the south-west corner of Room A, as wassome kind of support pier in the centre of the room between the two imposts.

Beaten earth floors covering the flagstone pavements of the church are typical of this phase throughout the complex. They were either laid down to smooth the floors, or resulted from the gradual accumulation of soil from outside. The cistern remained in use.Walls built across Courtyard D and along its east side formed two rooms. There was a *ṭābūn* in one corner of the northern room, which was possibly open on the east to the cistern. A rough bin was built into the north-west corner of the southern room, which remained accessible to Room A through a door in its south-west corner.

The western half of the nave was divided into two more or less equal spaces by an east-west

wall, forming Rooms F1 and F2, and blocking the in-filled central entrance door to the nave. A large bin occupied the north-east corner of Room F1, the roof of which was supported by at least one north-south arch. A bench was built along the central part of the south wall of this room during this phase. Room B remained in use, accessible from Room F1 through the original door in the west wall of the nave.

Room F2 occupied the space south of the dividing wall, roofed by two north-south arches set on imposts built against the Phase III wall plaster. At some point during this phase the door leading into Room C was walled up, a fire-pit was built in front of it, and ultimately a bin as well. The east end of the room appears to have been closed off by a wall with a door at its south end. A door in the south wall providing access to Courtyard E may belong either to this phase, or to Phase III. A wall built across the face of the apse to create another room may belong to this phase.

The house remained in use in the ninth century as further subdivision of the nave and Room A took place, either to house more persons or families, or to accommodate more functions. The apse was completely closed off during this period. The cistern remained accessible. Sometime around the twelfth century the site was abandoned except for the occasional squatter. During the abandonment period, thick layers of silt and sand accumulated in the apse and several other rooms within the complex, and rubble piled up on the cistern roof.

The artefacts found are typical of a rural farmhouse: fragments of miscellaneous iron tools and fasteners, cooking ware and storage ware ceramics, pounding stones and stone basins, and large quantities of steatite cooking ware, probably imported from Yemen. Some of the designs are uniquely elaborate. An exceptional luxury item is the handle of a bronze incense burner, of a typically Umayyad type (Oleson and Schick 2013: 429-32) (FIG. 15). The openwork handle shows sensitively rendered ivy tendrils and terminates in a

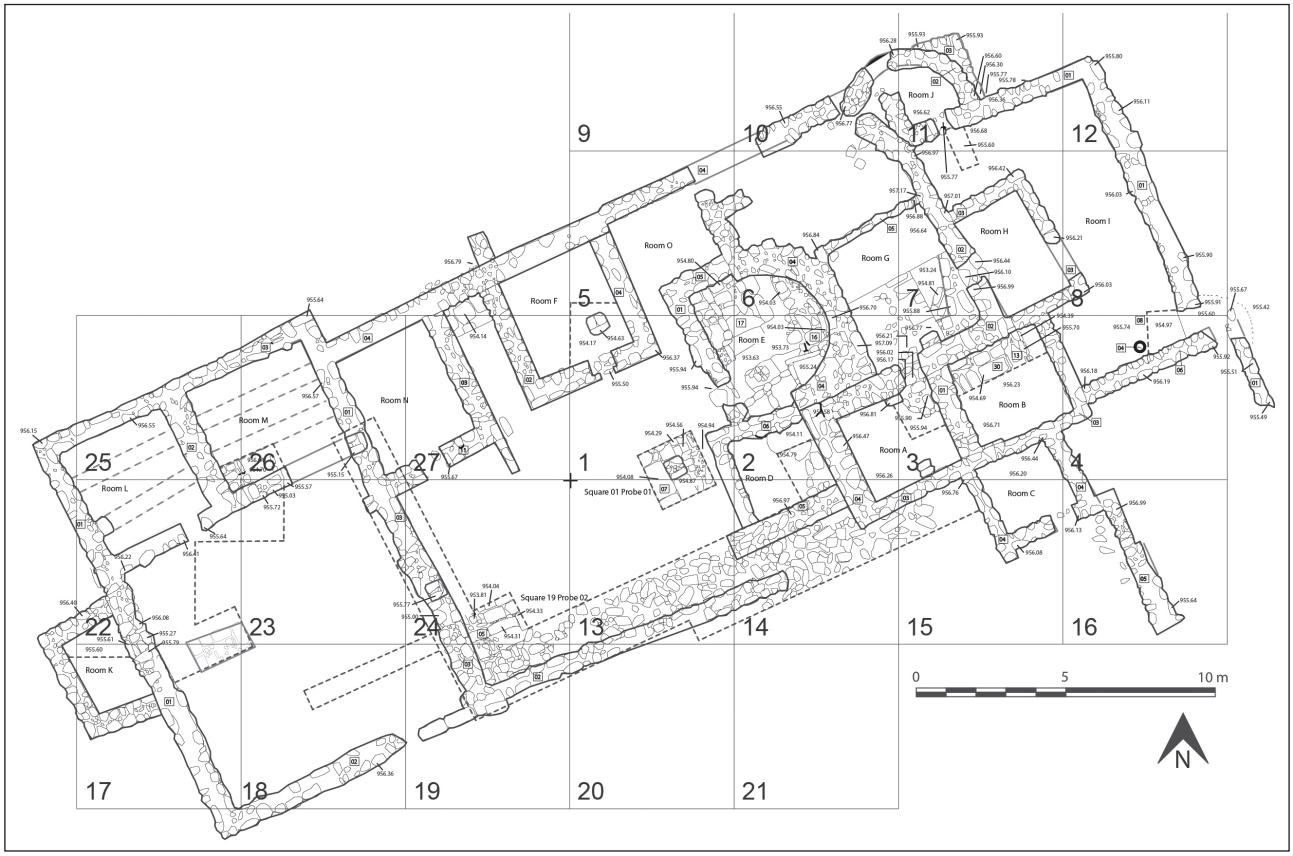
15. Umayyad censer handle from F102.

genial lioness head. It is possible that this object originated in the Abbasid manor house and somehow migrated to the F102 structure sometime after 749 AD.

Any evidence for the precise chronology of the abandonment or destruction of the B100 church has been compromised by its re-use in the Umayyad period (FIG. 16). The floor was re-laid sometime at the beginning of the Islamic period, and the church remained in use for an unknown period of time until its abandonment, possibly associated with destruction by fire. Two thin layers of ash and plaster fragments above a thin layer of fine sand covered the flagstone pavement. The sand may have been deposited by the wind during a short period of abandonment, the ash by a fire that destroyed the roof, probably during the seventh century. Rubbish was dumped or accumulated in the ruins of the church, but at some point in the later seventh century this fill was levelled off and rooms were built along the north wall of the nave, which was closed on the west by a new north - south partition wall. The apse was partitioned off as another room. Transverse arches carried the roofs for all these rooms. Room O may have been open to the sky, perhaps as a small animal pen.

During the eighth century the B100 complex was extended west with a second courtyard, again with rooms on the north. The adjacent Room K belongs to the Ottoman period. The complex extended eastward as well, in a more helter-skelter plan which may result from a longer period of agglomeration.There is no evidence to propose a different function for the expanded complex. It is possible that three related families occupied the three units, and that the growth of the structure reflects the expansion by marriage and birth of a family occupying a prime location in the Umayyad settlement. The gradual decay and abandonment of the complex in the later eighth century is reflected in the accumulation of blown soil, the walling-up of doors and the collapse of roof arches and walls.

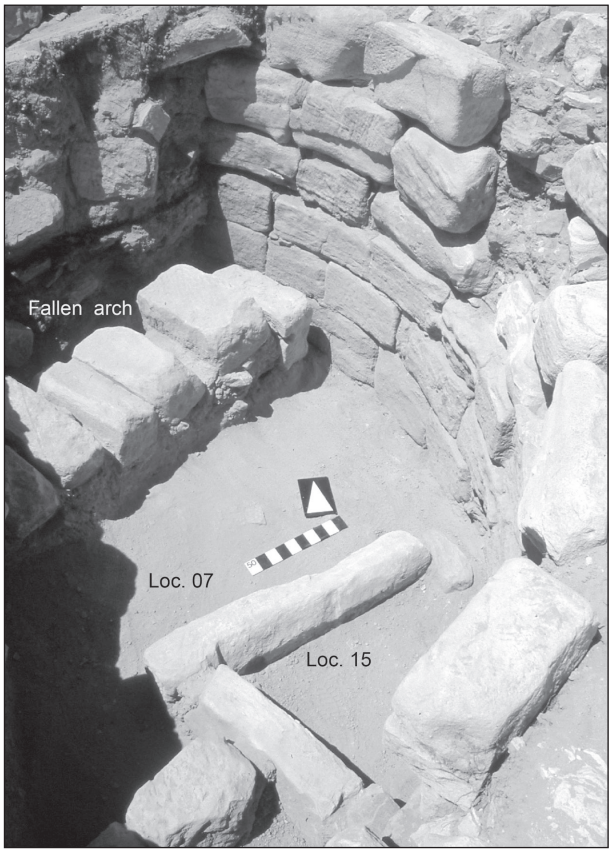
No evidence was recovered for rooms along



16. Area B100, plan of Early Islamic structure.

the south wall of either the eastern or western courtyards, perhaps because this orientation would have exposed the doors to the prevailing north-west wind and would have kept the winter sun from entering the doorways. The traditional, nineteenth-century houses at al-Qasr on the Kerak plateau were also oriented away from the prevailing winter wind (Kana'an and McQuitty 1994: 131). The B100 plan in Phase III resembles that of the "combined cell blocks and courtyards" Helms identifiedatseveral Early Islamic houses at ar-Risha (Helms 1990: 102-7, 123). Haiman (1995: 36, fig. 7) identifies several Early Islamic-period farmhouses in the western Negev highlands with a similar plan.

It is interesting that sometime after Alt's visit to Ḥumayma in 1935, *bedouin* roofed the apse of the Byzantine church B126 in just the same manner as the Umayyad inhabitants had roofed the apse of the B101 church, with an east-west arch springing from an impost built against its back wall (FIGS..11 and 17). There are, in fact, numerous parallels of design and materials between the renovations of the Early Islamic period at Ḥumayma and those carried out by the *bedouin* during the twentieth century: the erection of transverse arches to carry roof rafters; the construction or re-use of doorjambs oriented so the doors open inward, often to steps leading down to a slightly subterranean floor; the construction of recesses in the walls to serve as cupboards; the assembly of upright slabs of stone next to the walls to serve as bins or earth-filled platforms; the walling up of doors to allow rooms to be filled with rubbish or to keep livestock out; and the installation of *ṭābūns* within rooms, either before or after abandonment. There are many parallels for these details in the early modern houses at Khirbat an-Nawāfla ('Amr and Momani 2011:368), 'Aima (Biewers 1992, 1993) and Khirbat Fāris (McQuitty and Falkner 1993).The arches and bins were characteristic enough to give rise to themodern term 'arch and grain-bin house-type', in which bins were



17. Umayyad room with fallen arch, built into church apse.

set up in the space between the arch imposts. This practical arrangement continued in use in the region through the early twentieth century, for example at as-Smakiyah (McQuitty and Falkner 1993: 52-53)and 'Aima (Biewers 1992, 1993). Such details can be seen as well in the early twentieth-century *bedouin* houses built into the ruins at Ḥumayma.The debris found in the bins and occupation levels at Khirbat Fāris sound very similar to that from B100 and F102: *viz*. collapsed building materials, ash and dumped debris including mixed sherds from the Iron Age to Umayyad period (McQuitty and Falkner 1993: 41-43). At Khirbat Fāris, as at both the Ḥumayma structures, collapse of the roof arches was followed by the introduction of *ṭābūn* ovens and handmade pottery, then by a covering of more rubble and wind-blown silt. The B100 plan also resembles that of the combined cell blocks and courtyards in Early Islamic houses at ar-Rīsha, Khirbat adh-Dharīḥ

and in the western Negev highlands (Helms 1990: 102-7, 123; Villeneuve 2011; Haiman 1995: 36, fig. 7). As in the F102complex, the finds are a curious mix of the utilitarian and luxurious.

Although the F102 and B100 Umayyad complexes are larger than any of the other early modern structures built by the *bedouin* at Ḥumayma, they probably served the same purposes. The small rooms served as habitations for one or more related nuclear families, and for storage of agricultural products, foodstuffs and other property. The courtyard and other nooks probably served as shelters for poultry and some of the flocks, and for the storage of tents and farming equipment. The proximity of the two reservoirs allowed an assured supply of water. There were also two cisterns close by, and one of them may have belonged to the family inhabiting B100. Given the relative comfort of the structure, the adjacent water supply and the energizing presence of the Abbasid family as owners of the site by the last quarter of the seventh century, the B100 structure may have been inhabited year-round.

Like the early modern *bedouin*, the proprietors could have sustained themselves with a mix of local and regional pastoralism, local agriculture, the exploitation of travellers, small-scale craft production, and hunting. This switch from ecclesiastical to subsistence functions is an interesting and informative aspect of the history of ancient Ḥumayma.

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