

PETRA NORTH RIDGE PROJECT: THE 2016 SEASON

S. Thomas Parker and Megan A. Perry

Introduction

This preliminary report summarizes results from the third season of renewed work on the Petra North Ridge conducted between 14 May and 21 June 2016, under a permit from the Department of Antiquities.

Personnel

Senior staff included S. Thomas Parker (co-director and ceramicist) and Megan Perry (co-director and bioarchaeologist), Jennifer Ramsay (assistant director and archaeobotanist), Russell Gentry, Sophie Tews and Jessica Walker (area supervisors), James Cayton and Qais Twaissi (draftsmen), Melissa Price (conservator), Heidi Rosenwinkel (small finds registrar), Emily Sussman (assistant osteologist), Sarah Wenner (ceramicist), Craig Harvey (assistant ceramicist), Thad Wasklewicz (spatial analyst), Kailey Adams (assistant spatial analyst), John Rucker (geologist), Riyadh Majali, Muhammad Tweissi, Basil Halasah and Muhammad Mubarak (Department of Antiquities representatives). Trench supervisors were Jordan Karlis, Jana Lanier, Christopher Mansfield, Gabryel McBaine, Jonathan Parker, Akacia Probst, Malory Provan, Alex Garcia-Putnam and John Rucker. Amie Goerlich and Tara Stanko served as assistant trench supervisors. Students included Rebecca Biggerstaff, Jennifer Bumgardner, Sana Chowdhry, Adam Connell, Sydney Grice, Michelle Heeman, Pamela Klasova, Sarah Luther, Victoria Maatta, Danielle Maerlander, Andrew Martin, Nikki Nix, Dennis Paone, Devin Pescara, Gregory Reynolds and Benjamin Tim. Dakhilallah Qublan served as foreman of about twenty local workers.

Project Goals

Since 2012, the Petra North Ridge Project has explored the living spaces and burial places of an apparently non-elite segment of Petra. The 1st century BC/AD tombs and Nabataean and Late Roman (1st to 4th centuries AD) domestic structures on the northern sector of the ancient city have clarified many aspects of the relatively under-excavated ancient site:

- The health and quality of life of the Nabataeans during the city's 1st century AD florescence is being explored through analysis of human skeletal material within the tombs;
- Nabataean concepts of death, burial and commemoration around the turn of the millennium;
- The participation of Nabataean and Late Roman inhabitants in local, regional and international markets through excavating domestic complexes from this period;
- The construction and chronology of Petra's city wall and its relationship to the contraction and expansion of the city's northern limit in the Nabataean through Byzantine periods.

An additional key component of this project is to minimize excavation-related landscape impact through:

- (1) completely filling tomb shafts upon completion of excavation to protect their interiors and prevent accidents;
- (2) backfilling excavation trenches to preserve exposed architecture until full-scale conservation and presentation of the site at the end of the project;
- (3) allowing the Temple of the Winged Lions Cultural Resource Management (TWLCRM) project to utilize our sifted soil for filling sand bags to assist that project after each season.

Previous Research

The Petra North Ridge Project began in 1998 with excavations directed by Patricia M. Bikai of the Ridge Church, the Blue Chapel complex and two 1st century AD tombs uncovered beneath the Ridge Church (**Fig. 1**; Bikai, Perry, and Kanellopoulos 2020). The project continued under the direction of Megan A. Perry until 2010, when S. Thomas Parker joined as project co-director (see Parker and Perry 2013, 2014 for previous ADAJ reports).

In 2012 and 2014 the project excavated six 1st century BC/AD tombs (B.4, B.5, B.6, B.7, B.8 and B.9). One of these (B.8), was never used for mortuary purposes, apparently due to geological instability. Analysis of the skeletal remains evidenced pathological bone lesions indicative of disease, malnutrition or other physiological stressors (Canipe 2014). It also included documentation of bony changes at muscle attachment sites to understand habitual activity patterns (Stanko 2018), in addition to isotopic analysis of diet (Appleton 2015). In addition, the spatial contexts and patterns of commingling of the skeletal remains in addition to mortuary artifacts were unpacked to reveal Nabataean mortuary behaviors (Perry 2017, 2018, in press).

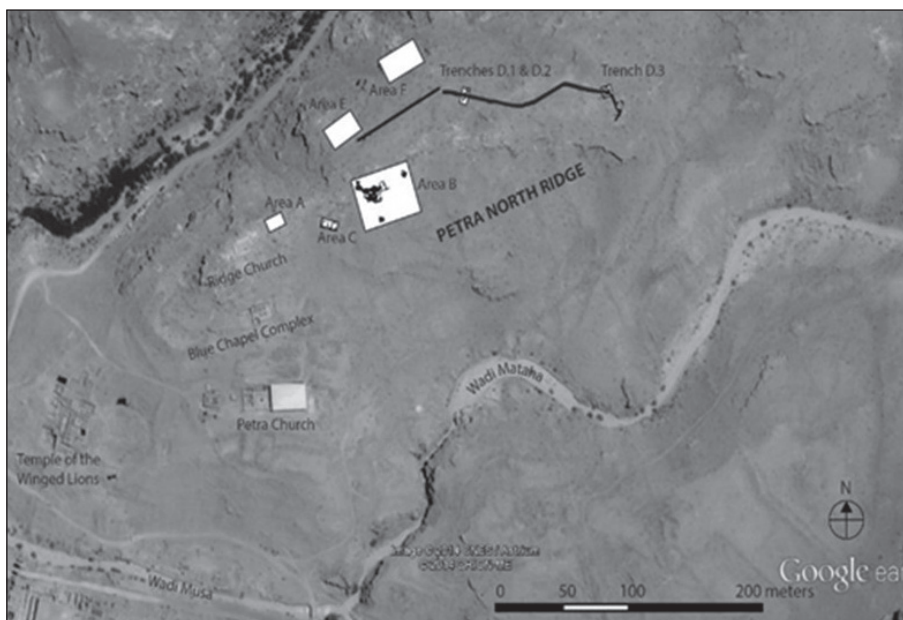
The explorations in 2012 and 2014 of two domestic complexes along the city wall in Area A (A.1, A.2, A.3 and A.4) and Area D (D.1 and D.2), revealed that these structures were abandoned and partially razed for the construction

of the city wall in the late 1st or early 2nd century AD. During the same seasons, excavation of a domestic complex in Area B (B.1, B.2 and B.3), along with the Area B tombs mentioned above, indicated that it was constructed in the early 2nd century AD - almost immediately the tombs went out of use - and was utilised until the mid-4th century AD. The complex seemed to have been abandoned before massive collapse of its walls, perhaps due to the 363 earthquake or its related aftershocks. In addition, a domestic complex in Area C (C.1, C.2, C.3 and C.4), excavated in 2014, was also founded in the early 2nd century and continued in use until a catastrophic destruction, also likely due to the 363 earthquake.

Results from the 2016 Season

Mortuary Contexts: Areas B and F

Area B was opened in 2012 on the North Ridge to achieve two separate goals: (1) to investigate apparent domestic structures (completed in 2014); (2) to excavate rock-cut shaft tombs interspersed among the domestic structures. As noted above, five tombs were excavated in 2012 and 2014. Tomb B.7, located along an exposed bedrock ledge near the top of the ridge, contained a doorway that led to an adjacent tomb. The spatial link between these two tombs identifies them as a continuous mortuary space, making excavation of the unexplored tomb (identified as B.9) necessary to truly understand B.7's mortuary context.



1. Google Earth image showing location of excavations in 2012, 2014 and 2016.

Tomb B.9

The bedrock surface of Tomb B.9 had been modified, likely as part of construction of the rock-cut feature. The surface had been flattened and a small bench-like feature was cut into the rock wall to the northwest. The shaft opening contained ledges for placement of capstones, some of which were found collapsed into the tomb shaft. In addition, a small wall alignment slightly overhanging the tomb opening was uncovered and excavated in the northern corner of the shaft opening.

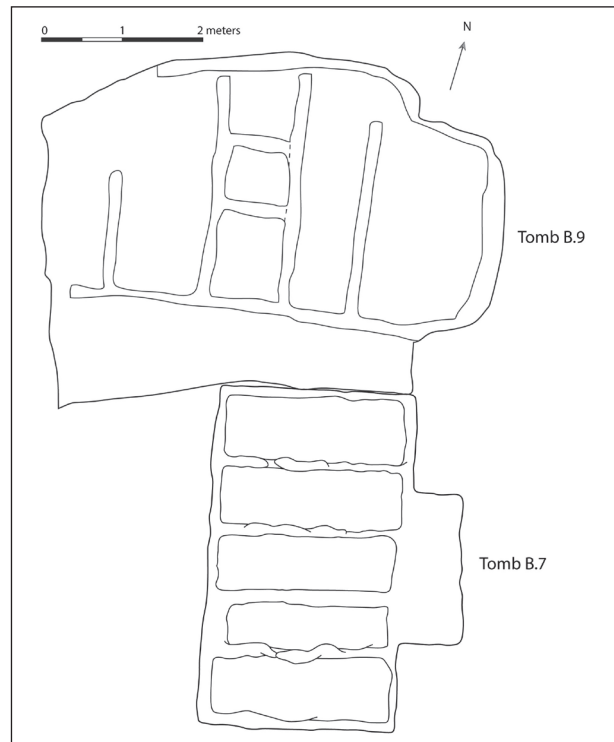
As with previously excavated tombs, the shaft and most of the chamber of Tomb B.9 was filled with successive layers of naturally deposited silt and sand along with episodes of dumping (or tomb disturbance). Locus B.9:3, a largely naturally deposited stratum, contained a large amount of well-preserved ceramics that likely came from dumping activity. The lowest naturally deposited silt and sand layers overlay a series of *ca* 30cm-deep and 15cm-wide channels cut into the floor of the chamber (Figs. 2-4), evidence of the ‘trench and wedge’ quarrying technique identified at other locations in Petra (Rababeh 2005: 59-65). Thus, construction of B.9 stopped for unknown reasons, with approximately 40cm left to remove to match the floor level of Tomb B.7.

Area F Tombs

Another research question addressed in 2016 was whether or not tombs outside Petra’s early 2nd century AD city wall continued in use after its construction. All of the tombs in Area B clearly went of use in the late 1st/early 2nd centuries AD, contemporary with the wall’s construction. Two tombs (F.1 and F.2) were excavated outside the city wall in newly designated Area F, situated on the southern side of Wādī at-Turkmāniyyah, on the northern slope of the North Ridge (Fig. 5).

Tomb F.1

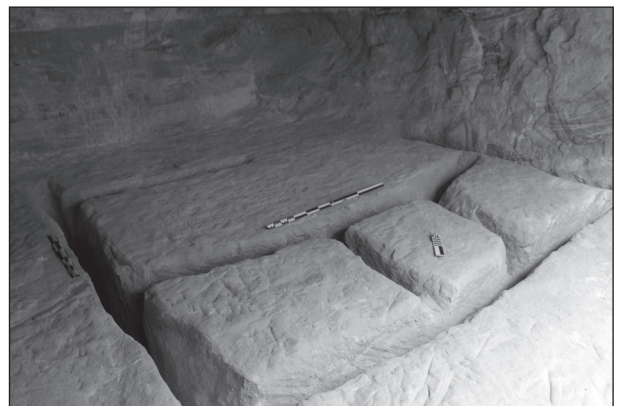
This is a large tomb containing a main central chamber along with a back chamber separated by a section of friable sandstone (Fig. 6). Similar to other tombs at Petra, the chamber had been filled for most of its history by natural fluvial and aeolian deposits. The undisturbed nature of fine striae representing these deposits



2. Floor plans of B.7 (excavated in 2014) and B.9 (excavated in 2016) showing the ‘trench and wedge’ channels remaining in the floor of B.9.



3. Openings from Tomb B.9 into Tomb B.7 (excavated in 2014) and floor channels.



4. Floor of B.9 chamber showing ‘channels’.

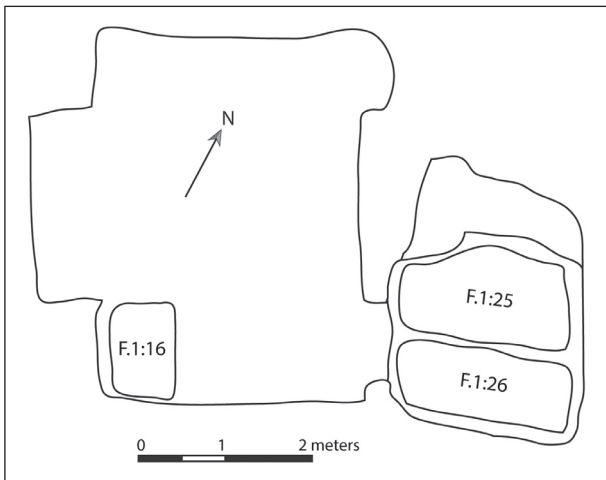
suggests that the tomb had been undisturbed in recent history, a supposition also confirmed by the lack of human skeletal material in any of the chamber fill. However, some lower layers contain elements that indicate the tomb was not only left open, but had experienced some human activity after its mortuary use (Fig. 7). Two naturally deposited strata contained the articulated skeletons of dogs, two *ca* 50cm above the chamber floor, and another - a puppy - *ca* 20cm above the chamber floor. The first two dogs were found in association with one complete and another nearly complete Late Roman cooking pots. Associated with the third dog was a complete iron sword that extended from the shaft into the chamber, sitting upon *ca* 20cm

of sand. This sword (RO# 1746) has been tentatively identified as a *spatha*, a sword from the Late Roman period. Why and how this object ended up within the tomb remains a mystery, but clearly it is not associated with the earlier mortuary activities in the tomb. It also is not clear whether the dogs fell into the tomb and died there, or were placed there postmortem by humans. However, dog skeletons were found in abundance in Tomb B.7 in 2014, and more articulated dog skeletons were found associated with mortuary features of Tomb F.1.

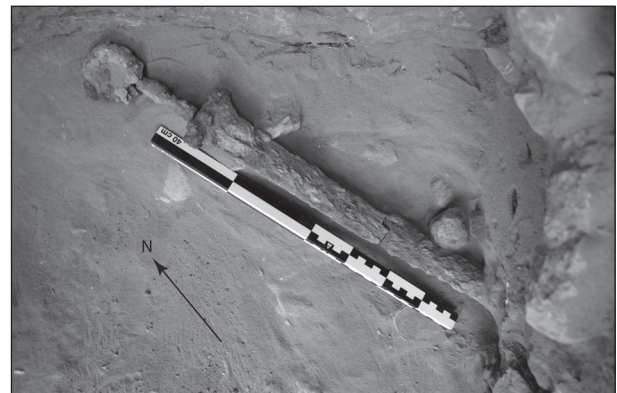
Tomb F.1 had two main areas for the disposal of human bodies. The first was a rectangular floor shaft in the northwestern portion of the chamber (Locus 16), with the second consisting of two floor shaft graves in the chamber's back room (Loci 24 and 25). The Locus 16 shaft contained successive layers from which were recovered the commingled remains of at least ten individuals intermixed with items for personal adornment (earrings; rings; beads), complete lamps and other ceramic objects, such as a hand-molded camel vessel (RO# 2187) (Fig. 8).



5. Area F showing Tombs F.1 to the left and F.2 to the right (view to the southwest).



6. Floor plan of Tomb F.1.



7. The Late Roman *spatha* in situ in the tomb shaft; note the sword extends into the chamber baulk.



8. Commingled remains in Locus 16 of Tomb F.1 with gold earring in situ (indicated by arrow).

The two shaft graves, Loci 24 and 25, in the back of the tomb had originally been covered with capstones that had since fallen into the two graves, likely due to the collapse of the friable sandstone separating the two (**Fig. 9**). Underneath capstones in both Loci 24 and 25 were dog skeletons that in turn overlay human burials. In this case, the provenance of the dogs is less clear, and their position under the capstones suggests they may have been purposive. The eastern floor shaft grave (Locus 24) contained the commingled remains of at least four individuals intermixed with artifacts including disintegrating wood, nails and decorative studs, all indicative of a coffin.

The western floor shaft grave (Locus 25) contained three successive articulated burials (**Fig. 10**). A seven- to nine-year-old child (Individual #3) was placed first in the grave, followed by an adult of ambiguous sex (Individual #2) and an older adult female (Individual #1). Portions of Individual #2 were displaced by the placement of Individual #1 in the grave. There were a few items such as beads and possible earrings found within these floor shaft graves. All evidence from the tomb suggests that it was in use for mortuary purposes during the 1st century AD, and remained a place for the disposal of items (e.g. the *spatha*; dead dogs) until at least the 4th century.

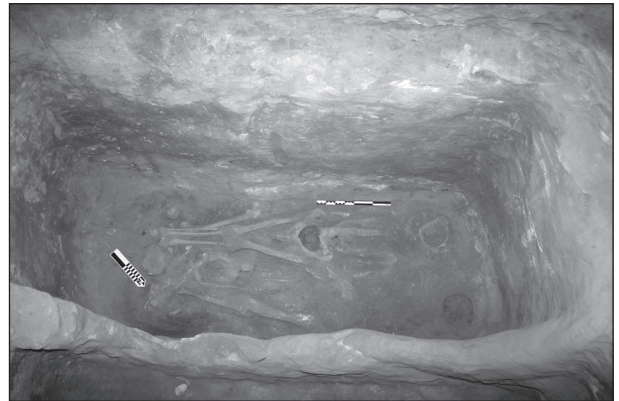
Tomb F.2

The second tomb explored in Area F was located on a bedrock outcrop just below Tomb F.1. The shaped bedrock plateau into which the tomb shaft was carved contained a water channel for diversion of runoff from the chamber opening, in addition to a small rectangular basin (**Fig. 11**). Similar to the other two tombs excavated this season, the shaft and chamber in Tomb F.2 was filled primarily with naturally deposited strata, with two strata (Loci 4 and 20) showing turbation and a pit feature that may be evidence of human intrusion within the tomb. These disturbed layers yielded the majority of artifacts from this tomb.

Removal of the chamber fill revealed numerous etchings and grooves carved into the floor and wall of the tomb chamber, and a narrow channel (Locus 28) running along the western chamber wall (**Fig. 12**). Nine hand bones and



9. Fallen capstones over grave shafts F.1:24 and F.1:25 in Tomb F.1.

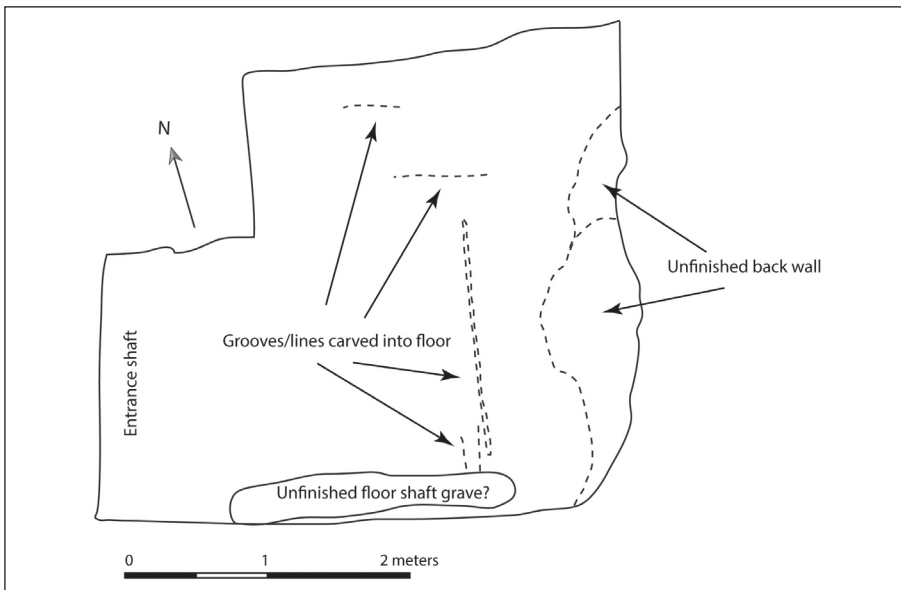


10. The multiple articulated burials in Locus 25 in Tomb F.1.



11. Tomb F.2 shaft along with the water channel and small rock-cut basin.

two leg-bone fragments, the only human skeletal material from this tomb, were found within this channel. Likely these were accidental intrusions into the tomb. The grooves (which seem to mark out the placement of future mortuary features), channel (which has an unfinished/uneven edge) and an unfinished back corner indicate that this tomb was never completely constructed, and for unknown reasons was abandoned before being used for mortuary purposes.



12. Floor plan of Tomb F.2 showing the grooves and etchings possibly indicating later funerary features and the possibly incomplete floor shaft grave.

This could indicate that the family who commissioned the tomb decided not to complete the project for monetary or other reasons, or that these shaft-chamber tombs in Petra were produced *en masse* and then sold to local residents. The developer might also have run out of money or lost a consumer base in Petra, and was thereby dissuaded from finishing the tomb.

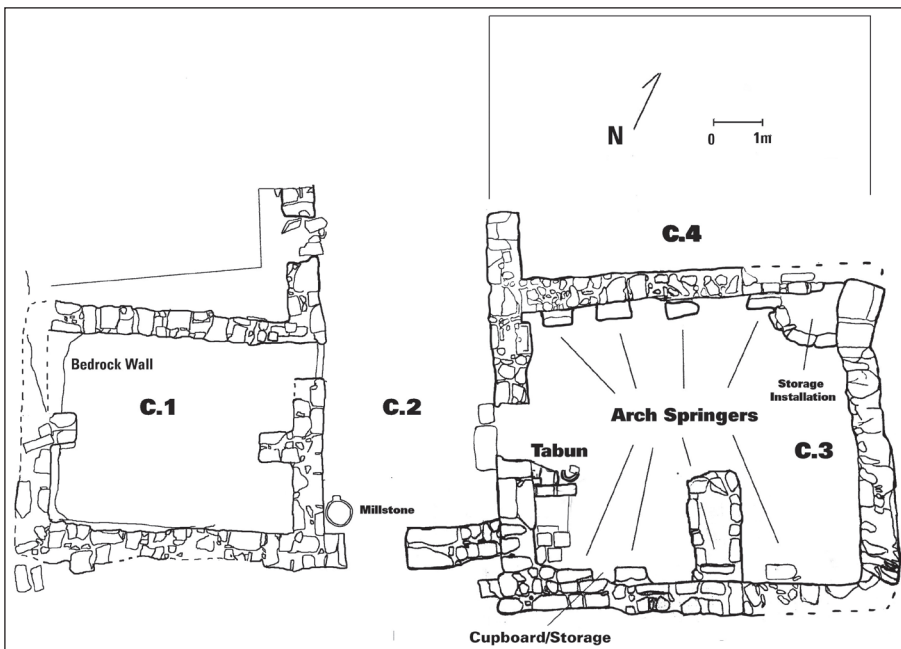
Domestic Contexts: Areas C and E

Area C

The success in Area B in 2012 in investigating non-elite residential structures led us to explore the neighborhood further in 2014. To this end, an area with visible wall lines southwest of

Area B was selected for excavation as Area C (Fig. 13). The ultimate goal in this area was to expose the entire horizontal layout of a single, non-elite domestic structure and, in so doing, contribute to the limited knowledge of Petra’s non-elite population as well as domestic architecture in Nabataea generally and Petra specifically, both areas of relative scholarly neglect (Parker 2016).

In 2014 four trenches (C.1, C.2, C.3 and C.4) were laid out side-by-side. Excavation of the structure from topsoil to bedrock in C.1-3 revealed scant Early Roman/Nabataean remains in small pockets directly overlying bedrock in two of the three trenches, suggesting that at



13. Plan of Area C: the Late Roman house.

least some, if not all, of the Area C domestic complex was initially constructed in the Early Roman/Nabataean period. However, subsequent analysis (including a coin dated 113-114 from the first occupation overlying the lowest floor in C.1) now suggests that the complex was more likely founded in the early 2nd century, *i.e.* right after the Roman annexation of AD 106. The complex was remodeled during later occupation and went out of use after suffering significant damage, presumably in the 363 earthquake. Subsequent collapse and abandonment debris accumulation filled the rooms of the complex to the modern ground level.

Excavation continued in Area C in 2016 in order to complete clearance of the balks left within rooms C.1 and C.3 to recover more occupational evidence. The complex was entered via a doorway in C.2 through a common southern wall shared by all three spaces (**Fig. 14**). From the C.2 central space, doorways in its west and east walls gave access into rooms C.1 and C.3, respectively. In 2016 we also continued to excavate C.4 and extended trench C.2 northward to determine if an east-wall wall closed off access to C.2 to the north. Such a wall would have made this central space a courtyard, whereas its absence would rather suggest that C.2 was in fact a central corridor between rooms C.1 and C.3.

Excavation in C.1 (*ca* 4m E-W × 3m N-S) completed removal of its eastern balk, exposing a pier serving as an arch springer in the middle of its east wall, corresponding to that projecting from its west wall discovered in 2014 (**Fig. 15**). This west wall incorporates bedrock rising upslope to the north, thus reducing the number of stones in each course as the bedrock rises towards the north. The northwest corner of the room is formed by its north wall abutting the bedrock extension of the west wall. Excavation also exposed the doorway giving access to the room from the C.2 corridor. Some walls in C.1 preserved plaster along portions of their faces. An oven built against the north wall and associated artifacts excavated in 2014 clearly suggested the domestic function of this room.

Excavation in both C.4 and in the northern extension of C.2 failed to find any such east-west wall, suggesting that C.2 in fact served as a central corridor rather than as an enclosed

courtyard for the complex. But excavation also revealed another doorway in the western wall of C.2, north of C.1, suggesting the presence of another room farther up the slope of the ridge



14. The central corridor (C.2) at the end of excavation in 2016. Near the southern entrance to the complex is a basalt grinder visible near the top of the photo. Also visible are the doorways from the corridor into the C.3 room (on the left) and C.1 room (on the right). At lower right are stone steps leading to a doorway into a third room (unexcavated). View to south.



15. The C.1 room after complete excavation. The newly exposed pier on the east wall (seen on the left of the photograph) corresponds to the matching western pier on the right (exposed in 2014). The entrance to the C.2 corridor is visible at the lower left of the photograph. View to west.

(**Fig. 13**). However, there was too little time to investigate this room, which was choked with tumble like all other spaces within and without the complex.

Under the massive tumble in the eastern balk of trench C.1 was an occupation layer resting over a beaten-earth floor which appears patchily across the room. The primary occupation level was covered by *ca* 0.20m of leveling fill below *ca* 0.20m of Late Roman occupation horizon. Both earth *loci* contained material dating to the early Late Roman period.

Previous excavation in 2014 of the room in trench C.3 yielded Late Roman artifacts at its lowest levels. Its architectural features include a plastered niche in the south wall. The niche, apparently a cupboard, was constructed between two plastered piers that served as arch springers. The cupboard includes ceramic tiles plastered into the sides for three shelves. It was clearly used right up until the destruction of the room, based on a 4th-century cooking pot found nearby which had apparently fallen from one of the shelves in the final destruction.

Excavation in C.3 in 2016 included removal of its western balk and the extension of the trench to its eastern wall to facilitate complete clearance of the entire room. Excavation this season revealed two additional sets of arch springers (giving a total of four sets) that once spanned the room from north to south (**Fig. 16**). The entire C.3 room was thus much larger than that in C.1.

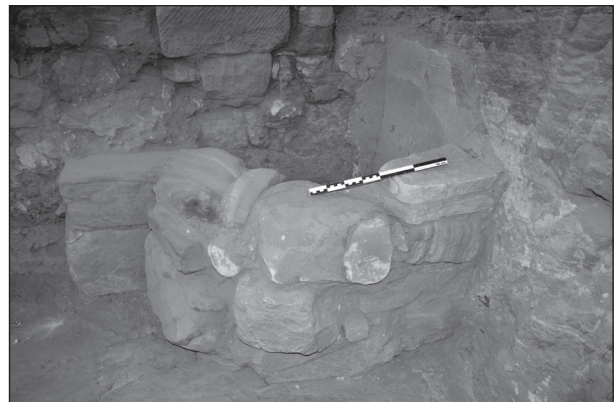
Excavation also revealed a curved wall built against the northeast corner of the room, apparently serving as a storage installation (**Fig. 17**). In the southwest corner of the room, another storage installation, floored with ceramic tiles, was located against the west wall. Just to the north of this installation was an oven (*tannur*), comprised of three ceramic jars placed upside down with their original lower body removed and then one set inside another. The oven was filled with ash which was removed for flotation analysis (**Fig. 18**).

As seen in C.1, a thin layer of soil, patchily preserved, had been laid over bedrock within this room. Overlying this original floor was a sequence of thin occupation layers, the latest pottery from which was early Late Roman (2nd century). Occupation continued through the

3rd and early 4th centuries, ending once again with massive deposits of tumble, likely from the 363 earthquake. However, it appeared that one or more of the arch springers in this room stood for some time after the seismic event, as



16. The C.3 room after complete excavation. The four arch springers are visible against the north wall in the top of the photo. The doorway giving access to the central corridor (C.2) is visible on the left. View to north.



17. Storage installation in northeast corner of room C.3. Its walls rested on bedrock. The plastered face of the room's east wall is visible above the meter stick. View to NE.



18. The oven (*tannur*) composed of three nested ceramic jars is visible right above the smaller meter stick. The larger meter stick rests on a wall which separates a bench (to right of the oven) and a storage installation (behind wall). The cupboard with ceramic shelving exposed in 2014 is visible in the upper left of the photograph, all in room C.3.

the western portion of the room witnessed some squatter occupation within the ruins followed by significant evidence of dumping within the room, all still within the late 4th century.

Finally, excavation continued in trench C.4 in 2016 as work in 2014 had not completed removal of the overlying tumble. Again, the primary goal was to locate the northern end of the building. Complete removal of the tumble (again dated by associated pottery to the mid- to late 4th century) revealed two soil layers of apparently natural accumulation, along with a round stone press and a few other artifacts, overlying bedrock (Figs. 19-20). The evidence suggested that this was an exterior space outside the domestic complex.

Overall, it appears that the Area C domestic complex was built early in the Late Roman period, *i.e.* the early 2nd century, with occupation extending - at least in some areas - to the mid- to late 4th century. An area-wide deposit of dense architectural collapse debris suggests that, like the domestic structure excavated in Area B in 2012, the complex in Area C was destroyed in an earthquake, likely the well-documented seismic event of 363.

Area E

In an attempt to find possible Nabataean domestic structures outside (*i.e.* north) of the city wall, Area E was opened this season (see Fig. 1). To get a clear image of the different features visible on the surface, we first cleared the vegetation from the surface. We then conducted a LiDAR scan and photogrammetry of the entire area. This revealed a series of walls running E-W but no cross walls extending N-S. We thus opened three excavation trenches (E.1-3) laid out north of the city wall in an area with several visible E-W wall lines. Trenches E.1 and E.2 were laid out immediately adjacent to one another. Both E.1 and E.2 originally measured 7.5m N-S×2m E-W, separated by a 2m baulk. This common baulk was later removed in order to elucidate architectural features between the two trenches. Just to the west was trench E.3, which measured 5×5m.

Additional architecture, including several N-S walls, began to appear immediately after removal of topsoil (Fig. 21). The first stratum under topsoil consisted of a series of ashy soil

layers, probably the result of periodic episodes of dumping. Apart from a few modern and obviously intrusive artifacts, the latest pottery from these layers was uniformly Early Byzantine, primarily 4th century. The ashy deposits were especially thick in the southern sector of trench E.1.

Removal of the dump layers revealed a complex series of walls and other architectural features in all three trenches. The southern end of trench E.1 contained a well-preserved hypocaust system with about a dozen columns (*pillae*) still *in situ* (Fig. 22). The *pillae* were constructed of ceramic tiles of varying shapes and sizes (round, rectangular and square). The *pillae* rested on a tile sub-floor. The original elevated floor was not preserved but was likely also composed of flat ceramic tiles. Built into the western wall was an *exedra*. The hypocaust room was entered through a doorway in the northern wall and formed part of a bath.

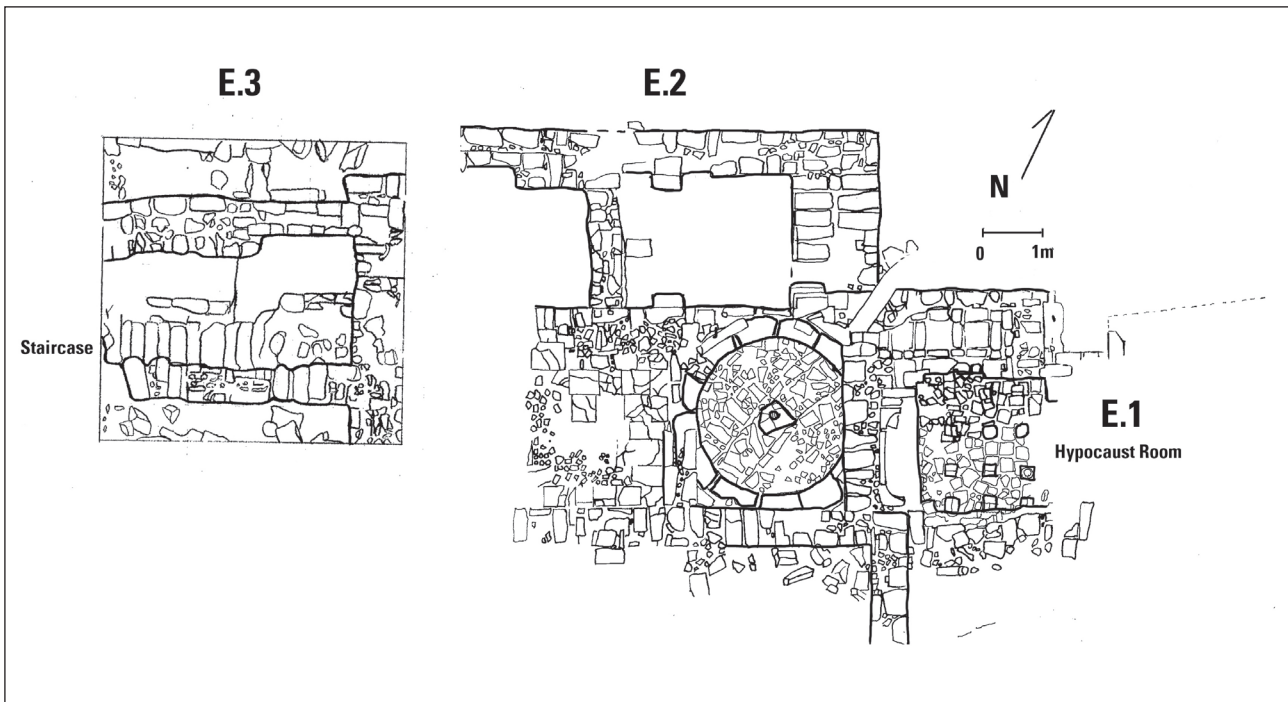
Immediately adjacent to and west of the



19. Trench C.4 at the end of excavation. Note the massive tumble in the balk on the left of the photograph, which almost completely filled this trench. The western wall of the corridor which extends into trench C.2 is visible on the right of the photograph. View to south.



20. Sandstone press (found upside down *in situ*) in trench C.4.



21. Plan of Area E.

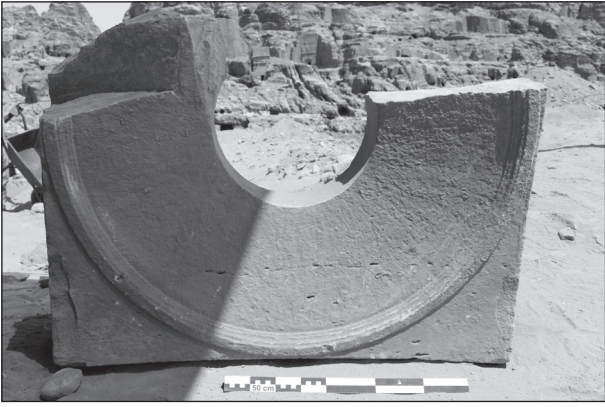


22. Bath of Area E; the hypocaust room is visible in the foreground with its *exedra* in the center of the photo. The circular structure (possible *laconicum*) is visible near the top of the image. View to west.

hypocaust room was another room in trench E.2 which enclosed a circular wall built over a flagstone pavement. In the center of the room was a small hole, apparently opening into a drain which extended from SW to NE under the pavement. The drain emptied into a space just north of the hypocaust room in trench E.1. The soil excavated around the exit of the drain contained an unusually large number of sherds of ceramic *unguentaria* or perfume bottles. The circular structure in E.2 is tentatively identified as a *laconicum*, or dry sweating room of the bath. The discovery just outside the room of a large limestone block with a portion of a circular hole suggested that the room might have been covered by a conical roof with a circular opening (*oculus*) at the top (Fig. 23).

The northern sectors of trenches E.1 and E.2 were choked with large architectural blocks with evidence of collapsed arches, possibly once supporting the roof of a *cryptoporticus*, a covered corridor or passageway, although this must be confirmed by further excavation. Excavation failed to reach the bottom of this space in either E.1 or E.2 by season's end. The latest pottery from these tumble layers was also Early Byzantine.

To the west in trench E.3, exposure of walls revealed one central space (a room or passageway?)



23. Carved architectural fragment possibly once serving as an oculus in the roof of the putative laconicum in trench E.2. The stone was recovered from the adjacent trench (E.1).

and portions of two other rooms to the north and south (Fig. 24). Excavation of the central space revealed at its deepest level a cobble floor built directly over bedrock. Rising from this floor and built against the southern wall of this room was a stone staircase, completely preserved with five treads at its lower levels but with only its foundation of mortared rubble at higher levels. The staircase rose from west to east and likely continued into trench E.2 but this could not be confirmed without further excavation.

The complex appears to have been established in the 1st century AD. The style of architecture, richly painted frescoes, marble used as pavers and/or wall facades, hypocaust room and possible *laconicum* all suggest a non-elite function, perhaps as a *villa urbana* such as that atop az-Zanṭūr to the south of and overlooking the city center.

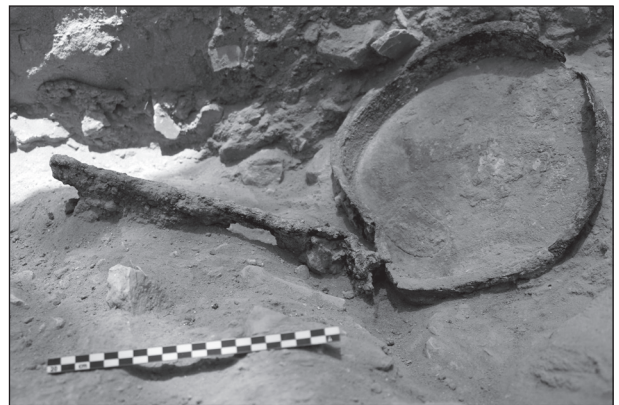
The complex was abandoned in the early 2nd century, *i.e.* the beginning of the Late Roman period. It is tempting to associate this abandonment with the construction of the city wall, which lies just to the south of Area E, in this same period. The abandonment seems to have lasted until the early 4th century, when portions of the complex were reoccupied and some new walls and other structures were built. This occupation ended in the late 4th century with evidence of architectural collapse, probably the earthquake of 363. The complex then witnessed extensive dumping, including two marble statues of Aphrodite (fragmentary but largely restorable [Fig. 25]), several metal artifacts (*e.g.* a bronze frying pan with its lid and iron handle [Fig. 26]) and 44 bronze coins. The latest coin dated to *ca* AD 367-383,



24. The staircase in trench E.3 is visible in the center of the image, flanked by two of the E-W walls. The cobble floor (laid directly over bedrock) is visible to the right of the stairs. View to west.



25. Two fragmentary marble statues of Aphrodite in situ, recovered from trench E.3. View to west.



26. Bronze frying pan from trench E.3 with its iron handle visible on the left side of the image.

providing a crucial *terminus post quem* for the deposition of the marble statues and other associated artifacts. There seems to have been no later occupation of the area.

Historical Conclusions

The 2016 season yielded more evidence of the Nabataean cemetery on the North Ridge,

which seems to have been in use primarily in the 1st centuries BC and AD. This period also witnessed construction of a more substantial complex, including a bath, which may be tentatively identified as a *villa urbana*. All these structures and the cemetery seem to have gone out of use around the turn of the 2nd century, about the same time as the construction of the city wall. The dating evidence currently available does not permit any closer dating, *i.e.* whether the city wall was erected by the Nabataeans just prior to the Roman annexation of AD 106 in an ultimately futile attempt to defend their capital or was constructed soon afterwards by the Romans themselves (Parker 2015). In either case, the city was now under Roman law which typically forbade interment of the dead within the city boundaries. This might explain the abandonment of the cemetery about this time. The domestic complexes previously revealed in Areas A and D, which were cut through by the city wall, were never reoccupied. But the domestic complexes in Areas B and C, both apparently founded soon after the Roman annexation of 106, continued to flourish through the 2nd and 3rd centuries and well into the 4th century. The Area E complex (the former *villa urbana*?) appears to have been reoccupied in the early to mid-4th century. A catastrophic destruction, likely explained by the 363 earthquake, ended occupation in both Areas B and E. Some limited occupation seems to have continued within one room of the Area C house for a little longer. Otherwise there appears to have been little subsequent occupation of any of these areas in the later Byzantine period, despite the well-documented complex of churches not far to the west on the ridge.

Post-Excavation Conservation / Protection Measures

This project is acutely aware of the need for protection and conservation of Jordan's cultural heritage, particularly the structures and features within the heavily-trafficked site of Petra. To that end, we backfilled excavation trenches 50-100% full to preserve the revealed structures by using dumps from these excavation areas, with the future goal of consolidation of the structures and appropriate signage to make them meaningful to visitors. Tombs B.9, F.1 and F.2

were completely backfilled using their own soil dumps, removing these features from the site.

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