

S. Thomas Parker  
Department of History  
North Carolina State University  
Raleigh, North Carolina 27695-8108  
USA  
[thomas\\_parker@ncsu.edu](mailto:thomas_parker@ncsu.edu)

**S. Thomas Parker**

## **The Petra North Ridge Project: Domestic Structures and the City Wall**

Ever since its rediscovery in 1812, archaeological research on Petra has focused on its extraordinary monuments: the rock-cut tomb facades, the temples, the main theater and, more recently, its Byzantine churches. But this has provided a rather unbalanced picture of this city, particularly about its non-elite population. The Petra North Ridge Project is attempting to address this imbalance through excavation of shaft tombs and domestic structures to learn about the non-elite residents of the city. The western end of the North Ridge contains a temple (the so-called ‘Temple of the Winged Lions’) and three Byzantine churches, all excavated since the mid-1970s. East of these structures, the ridge has witnessed little excavation but is covered by the remains of apparently domestic structures post-dating the shaft tombs. This paper focuses on results from excavation of two such domestic complexes excavated during the 2012 season, as well as on soundings of a segment of Petra’s city wall that extends along the crest of the ridge. The initial season of fieldwork in 2012 was conducted under a permit from the Department of Antiquities and was co-directed by Dr Megan A. Perry and the author (Parker and Perry 2013). Obviously, since all this evidence derives from the first season and further fieldwork is planned, these results must be regarded as preliminary.

### **Background and Previous Research**

Petra’s North Ridge lies just north of the main east - west street extending through the center of the city (FIG. 1). The ridge has witnessed several previous archaeological projects, nearly all focused on monumental structures. Perhaps the earliest excavations were conducted around the so-called Conway High Place (Cleveland 1960). Peter Parr conducted soundings along a segment of the northern city wall and some domestic structures nearby (Parr 1986). P.W. Hammond excavated the ‘Temple of the Winged Lions’ and associated structures over several decades beginning in the mid-1970s. Unfortunately, no definitive final report of any of these excavations was ever published (Hammond 1996), although publication of this latter project has now been undertaken by the American Center of Oriental Research (Tuttle 2012). In the 1990s, ACOR excavated the ‘Petra Church’ with its extraordinary mosaics and unique cache of sixth century papyri. The final excavation report appeared promptly (Fiema *et al.* 2001) and several volumes of the papyri have already been published (Frósen *et al.* 2002; Arjava *et al.* 2007, 2011; Koenen *et al.* 2013). ACOR next turned its attention elsewhere on the North Ridge. The Petra North Ridge Project was launched in the 1990s with excavation of the ‘Ridge Church’ and the ‘Blue



1. Aerial photograph showing major features of the North Ridge and the 2012 excavation areas.

Chapel' (Perry and Bikai 2007). Definitive publication of these structures is still in progress. In short, with the exception of Parr's still largely unpublished excavation, all earlier excavation on the North Ridge had focused on its monumental public structures. Yet even a cursory examination of the ridge showed that it was pock-marked by dozens of rock-cut tombs and wall lines, suggesting the presence of many other structures.

During the 1997 season of the Petra North Ridge Project two first century AD tombs were discovered under the Ridge Church. Excavations in 1998–1999, directed by Patricia Bikai and Megan Perry, discovered rich skeletal and artifactual evidence in these tombs, despite some later disturbance. Tomb 1 had been disturbed in the fourth century and Tomb 2 in the sixth century (Bikai and Perry 2001). In 2005 the extent of these tombs and other surface features, such as ancient walls and modern terracing, was explored through a GIS project. Perry recorded 51 recently robbed tombs and numerous structures within a *ca.* 6 km<sup>2</sup> area,

confirming that the North Ridge contains a large cemetery dating to the Nabataean period (Perry 2006). This suggested the potential of the North Ridge for further research.

### Renewed Excavation on the North Ridge

The Petra North Ridge Project seeks to learn about the non-elite population of Petra by excavating Nabataean (primarily first century AD) tombs and Roman/Byzantine (first-sixth centuries) domestic structures along the North Ridge. Analysis of human skeletal material from the tombs should offer insights into the health and quality of life of the Nabataeans during the city's first century AD florescence. The tombs also contain significant evidence of Nabataean mortuary practices, supplementing continued analysis of Petra's rock-carved monumental tombs. Many structures, apparently of Roman and Byzantine date, overlie and are interspersed among the Nabataean shaft tombs. Excavation of such domestic structures will broaden understanding of this still poorly known period at Petra.

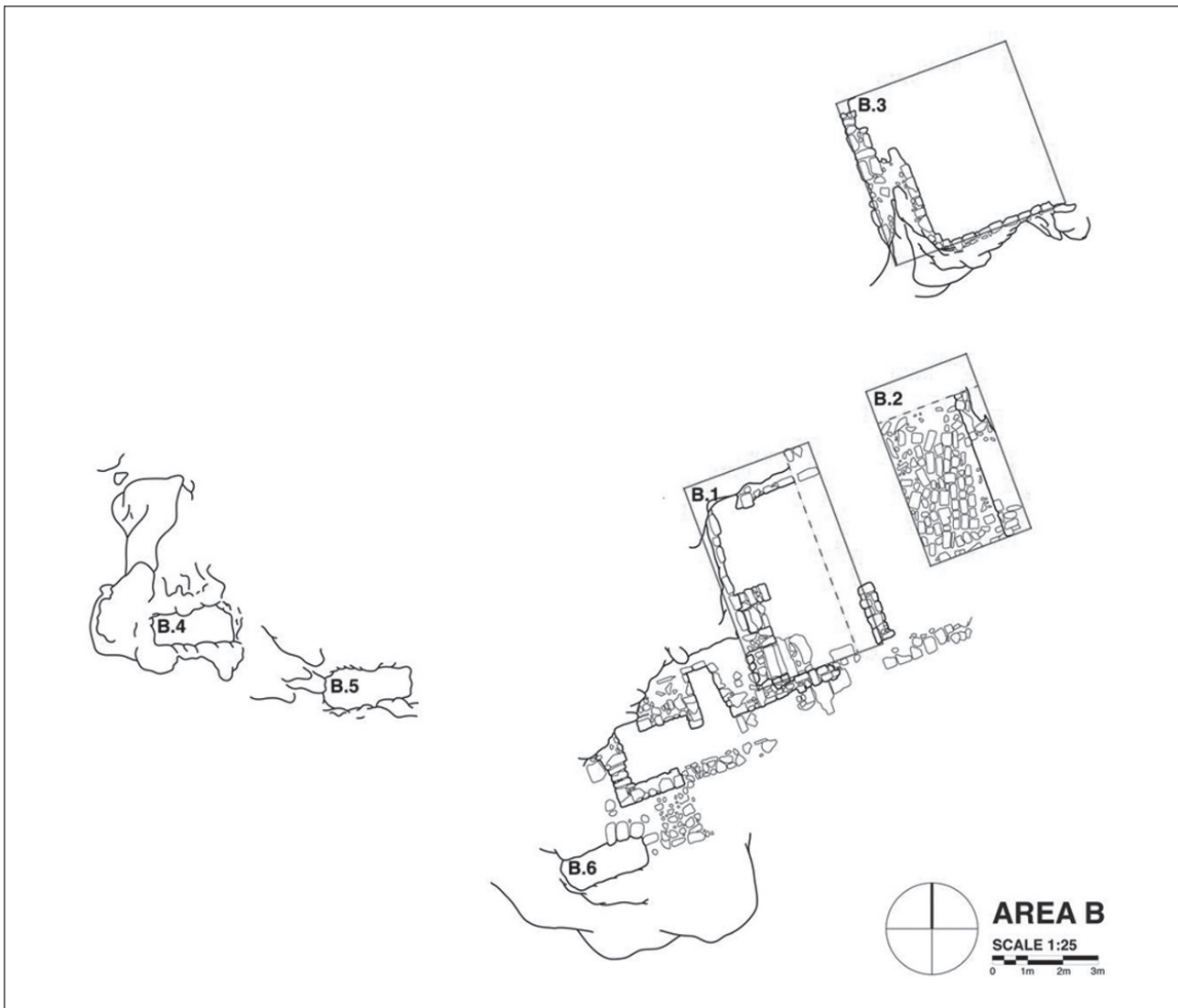
One additional project goal is study of Petra's city wall, which has appeared on site plans since the beginning of the 20th century. It seemed incredible that even after nearly a century of excavation at Petra, the city's fortification wall, which has been variously dated from the Nabataean to Byzantine periods, remained essentially undated. Given its obvious significance in understanding the history and organic growth of Petra, the project is conducting soundings along segments of the city wall on the North Ridge to understand its construction and chronology.

The evidence will be interpreted in light of the Petra papyri, offering a rare opportunity to correlate material cultural evidence with contemporary documentary evidence from the same sector of the same site. Therefore, this project will combine disparate kinds of evidence (ancient texts; material culture; skeletal evidence) to allow insight into the economic, cultural and social life of Petra's people, as well as their connections with other populations. Results from excavation of three shaft tombs excavated in 2012 are summarized elsewhere (Parker and Perry forthcoming).

The 2012 season also focused on two architectural complexes east of the Ridge Church, excavated as Areas A and B. The more westerly of the two architectural complexes and the city wall were excavated as Area A. Four trenches (A.1-A.4) were opened in an east - west line just east of the Ridge Church and just south of the city wall. Given the fact that the complex excavated as Area A was cut through and partially built over by a segment of the later city wall, this seemed like an ideal opportunity to examine more closely and hopefully date this latter structure. The second architectural complex, Area B, lies east of Area A and also includes several shaft tombs excavated in 2012. We will first examine the domestic structures in Area B, then review the evidence from the other domestic complex in Area A as well as results from the soundings of the city wall.

In Area B, three trenches (B.1-B.3) examined portions of structures already partially visible on the surface of the ridge (FIG. 2). Trenches B.1 (4 × 6 m) and B.2 (4 × 5.5 m) were laid out directly adjacent to one another on a terrace just below and a little south-west of B.3. Standing masonry walls farther south-west of B.1-2, apparently exposed by erosion of the southern slope, suggested the presence of well-preserved structures in this area. These exposed structures, although situated outside the excavated area, were also documented by the project. Trench B.3 (5 × 5 m) was laid out just to the north of B.1 and B.2 on a small plateau amidst several wall lines visible on the surface. Excavation of B.3 revealed a large rectangular enclosure, open to the north. It seems too large to have been roofed and thus was probably an open-air courtyard. The masonry walls were partially laid against cut bedrock, which formed the south-west corner of the enclosure. The recovery of numerous storage jar fragments within parts of the enclosure suggested that the courtyard probably served at least in part as a storage area. Occupation ended with the westward collapse of the entire eastern wall, with its stone coursing still closely aligned, into the courtyard (FIG. 3). Diagnostic pottery from this context suggested that the wall collapsed in the mid-fourth century, perhaps in the well-attested 363 earthquake.

Trenches B.2-3 exposed two rooms of the complex on the south-facing terrace. The room walls were founded on bedrock and may have extended into caves to the north. The combination of masonry structures fronting caves is a typical type of domestic architecture at Petra, but unfortunately the danger of collapse prohibited excavation of the caves themselves. Excavation began with the removal of massive layers of tumbled masonry. The collapsed masonry in B.2 was particularly closely aligned, suggesting it fell as a single unit from the west, most likely being the common north - south wall separating the two rooms (FIG.



2. Plan of Area B showing layout of trenches.

4). Under the tumble in B.2 was a beaten earth floor, but little other evidence of occupation. In fact, it appeared that the room had been cleaned out shortly before the collapse of its walls. In B.3, occupation began with the construction of a plaster floor directly over bedrock. Against the northern wall of the room was a cooking installation comprised of two large ceramic jars, the smaller placed within the larger and the former filled with ash (FIG. 5). Excavation also yielded many fragments of red-painted plaster that once decorated the walls and/or ceiling of either this room or perhaps an upper storey. The possibility of the latter was suggested by an L-shaped stone staircase built into the southwest corner of this room (FIG. 6). Three steps

of the staircase were preserved. Adjacent to the staircase to the north was a small plastered cubicle, perhaps a storage area. Occupation of this room also ended catastrophically with massive deposits of stone tumble, including a number of architectural fragments, apparently re-used in the walls of the structure. The latest pottery was again mid-fourth century, likewise suggesting that the tumble may date to the 363 earthquake.

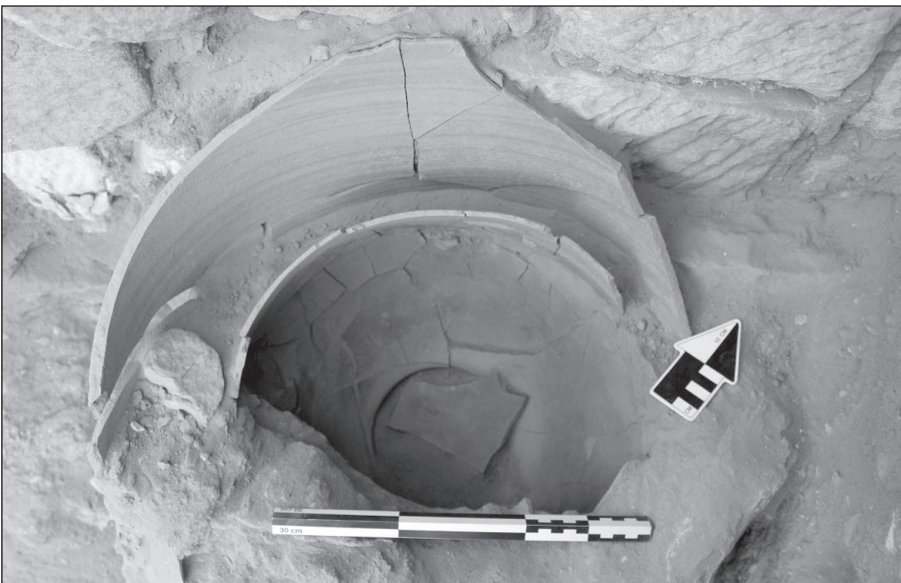
In short, it appears that the B.1-3 structures represent portions of a domestic complex dating from the Late Roman period (second/third centuries) that was destroyed in the earthquake of 363. There appears to be no later occupation in this area. Given that the numerous shaft



3. Trench B.3: Wall collapse, probably from the earthquake of 363, encountered on the surface.



4. Trench B.2: Closely aligned tumble reflecting the catastrophic collapse of a wall within this room, probably in the earthquake of 363.



5. Trench B.1: The cooking installation composed of two ceramic jars, one set inside the other, built against the north wall of this room.



6. Trench B.1: L-shaped stone staircase is on the left. In the center above the metre stick is a plastered cubicle, perhaps for storage.

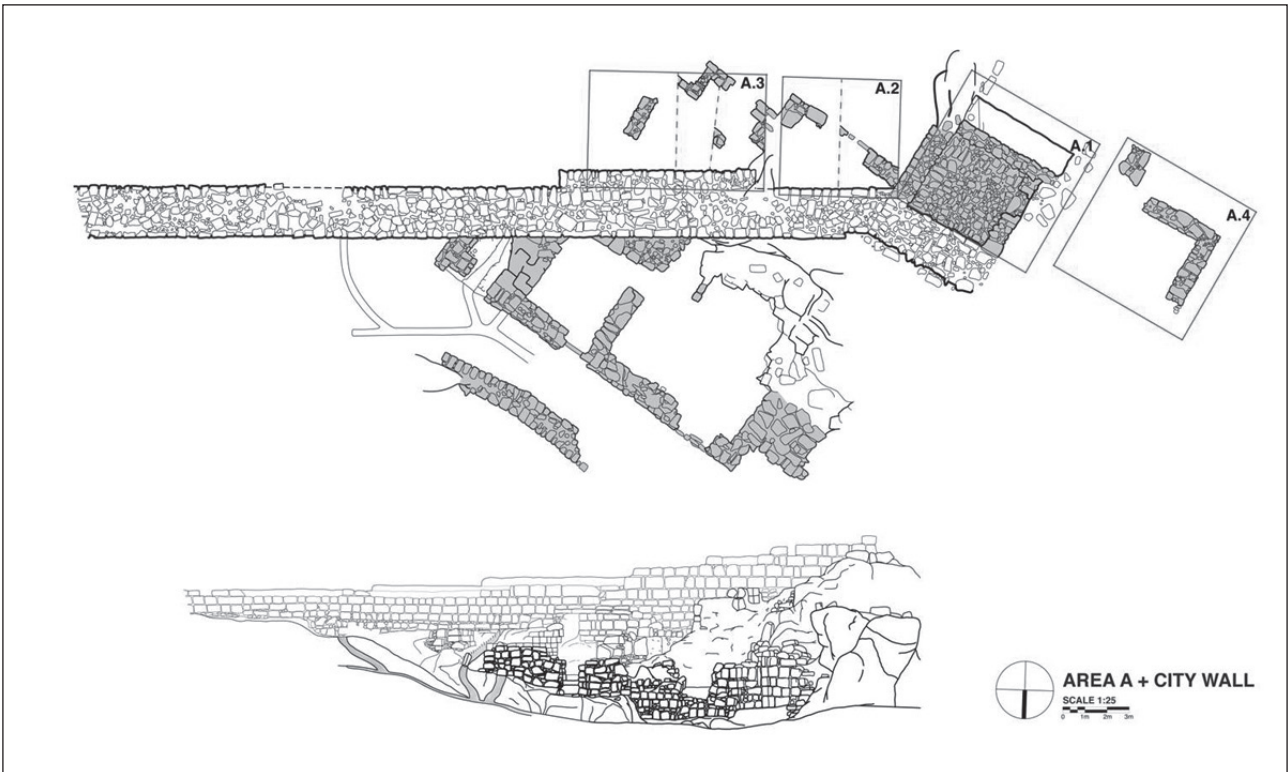
tombs that pockmark the ridge date to the first centuries BC and AD, one may suggest a change in function of this portion of the ridge from funerary to domestic use, likely following the Roman annexation of AD 106. There are obvious similarities in the plan, construction and furnishing of the Area B complex with the domestic complex at az-Zanṭūr across the valley, which was apparently destroyed at about the time of the Roman annexation, was severely damaged in 363, but was then reoccupied well into the Byzantine period, perhaps until an earthquake in 419 (Bignasca *et al.* 1996; Kolb 2000). Preliminary comparative analysis suggests that the Area B complex represents a less affluent population than at az-Zanṭūr, although this requires more study.

Further west along the ridge, excavation produced a complete stratigraphic profile from topsoil to bedrock in three trenches, A.1-3 (FIG. 7). Excavation in Trench A.4, just west of A.1, was confined to articulating the tops of wall lines that extended from Trench A.1 and were visible on the surface of A.4.

A complex of stone masonry structures, apparently domestic in nature, was erected directly atop bedrock in the first century AD. The orientation and alignment of these structures suggested that they once continued downslope

to the north of the later city wall, where similar structures were uncovered by Peter Parr in the late 1950s (Parr 1986). Unfortunately this excavation remains largely unpublished, so Parr's structures were documented by drawings and photographs by the current project. The structures included a well-preserved doorway, with its door jamb and threshold still *in situ*, to access the complex from the south.

These structures were subsequently cut by and/or built over by the erection of the city wall. The city wall builders used different techniques for different segments of the wall. In some cases (*e.g.* A.1) they simply incorporated existing Nabataean walls into the city wall itself. In other cases (A.2; A.3) the city wall builders cut a trench through the earlier structures down to bedrock, then laid a thin layer soil to create a level surface on which to construct the city wall itself. The city wall averages *ca.* 1.50 m in width and consists of two faces of dressed masonry surrounding a core of more roughly coursed masonry and rubble. It still stands in places up to 3 m in height. Attached to the south (inner) face of the city wall in A.3 was a stone structure interpreted as a buttress that abutted the face of the city wall, but which shared a common stone foundation that extended under both the city wall and the buttress (FIG. 8). The latest



7. Plan of Area A showing segment of the city wall and earlier Nabataean domestic structures.



8. Trench A.3 showing the stone buttress foundation (under the metre sticks) extending under both the city wall (upper left) and buttress itself (upper right in shadow).

pottery associated with the wall foundations dated to the early second century, providing a *terminus post quem* for its construction.

Later in the second century massive dumps accumulated against the south face of the city wall in A.2-3. These shaly dumps proved rich in terms of artifacts, with thousands of pot sherds, animal bones, metal slag and other finds. In

contrast, occupation in A.1 continued after construction of the city wall immediately to the north, by laying a new stone floor over a similar earlier floor. Occupation in A.1 continued into the fourth century, possibly being terminated by the 363 earthquake, when the structure apparently collapsed and was henceforth abandoned.

## Conclusions

Obviously much work remains to be done. Nevertheless, some preliminary conclusions may be offered at this stage.

First, although the North Ridge was clearly in use as a cemetery by the first century AD, the evidence from Area A suggests that there were apparent domestic structures in close proximity to these tombs during the same period. In short, the Nabataean domestic occupation was contemporary with the funerary function of the North Ridge at this time.

Second, although at least this segment of the city wall appears to have been erected around the turn of the second century AD, it is unclear whether it was built just before or soon after the Roman annexation of Nabataea in 106. Although it has long been argued that the Roman annexation was a relatively peaceful affair marked by little violence, there is now increasing evidence from several parts of the Nabataean kingdom for serious resistance to the imposition of Roman rule, possibly even centered at Petra itself (for a convenient summary, see Parker 2009). Thus, the erection of the city wall could be interpreted in at least two dramatically different ways. If built just before 106 it could represent a last-ditch and ultimately futile attempt to fortify the city in advance of the approaching Roman forces. On the other hand, if erected shortly after the annexation it could reflect an attempt by the newly installed Roman garrison to create a secure base within the city to protect itself from what was now an occupied and a quite possibly hostile urban population. The present evidence, essentially ceramic, simply does not yet permit us to choose between these two possibilities.

Third, it seems clear that the cemetery on the North Ridge went out of use after the early second century in favor of continued domestic occupation, reflected in the reoccupation of a portion of the Area A complex (in trench A.3) and the construction of a new complex in Area B. The abandonment of the cemetery might be

explained by the imposition of Roman law by the new rulers, which normally forbade burial of the dead within the formal sacred boundaries (*pomerium*) of a city. The abandonment of the ridge for funerary purposes thus opened up prime real estate in downtown Petra which offered superb views of the city center. It does seem clear that, whatever the damage caused by the Roman invasion of 106, the city of Petra quickly recovered economically in the second century as it witnessed extensive public building in the city center and, as seen in Area B on the North Ridge, some private domestic construction as well.

Fourth and finally, it is notable that neither domestic complex on the North Ridge was rebuilt after the catastrophic earthquake of 363. This is particularly surprising given the proximity of these structures (especially Area A) to the Byzantine churches, all of which appear to have been erected after 363 and continued in use until at least the end of the sixth century. Most of the city situated south of the main street appears to lie in ruins after this date and the focus of occupation clearly centered to the North Ridge and its churches. Thus it is somewhat surprising that the sector atop the ridge just east of the churches was apparently also abandoned. Further excavation planned by the present project will likely clarify this picture.

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