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The Capitals of the Capital - New Insights into Freestanding Nabataean Architecture in Petra

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Abstract

Since Judith McKenzie's work on the architecture of Petra, which is largely based on the research of the famous rock-cut architecture, numerous archaeological projects in Petra and other Nabataean sites have provided an immense amount of new information about the way the Nabataeans built. In course of the North-Eastern Petra Project several hundred architectural elements have been documented and studied. The main purpose of this study is to present a detailed analysis of a specific architectural element: the blocked-out Nabataean capital and, in particular, its use in free-standing architecture. So far, this type of capital seems to be underrepresented in free-standing buildings in Petra. Therefore, this study will provide new insights into the use of the capital in the buildings of Petra's city center.

Keywords: Nabataeans, Architecture, free-standing architecture, Architectural decoration, Nabataean capital.

Introduction

This paper will present new insights into the architectural decoration of free-standing buildings in Petra and will focus on a group of decorative features of one prominent building in the northeast of the city center. This building is situated on top of the plateau between the Wadi Mataha, Wadi Musa and Jabal al-Khubtah triangle and is being studied in the course of the North-Eastern Petra Project, conducted by the Humboldt-University of Berlin.² Furthermore, this short study aims show that it is necessary to provide a comprehensive study on single architectural elements in order to get a better understanding of the character of architectural decoration featured on free-standing buildings in Petra.³

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² In the following, the North-Eastern-Petra-Project will be referred to as NEPP. The surveys were conducted between 2011 and 2015 under the directors Stephan G. Schmid (Berlin), Zbigniew Fiema (Helsinki/Berlin) and Bernhard Kolb (Basel). A first excavation season was undertaken in autumn of 2016.

³ A study on the Nabataean architectural decoration of free-standing buildings will be conducted as part of the author's PhD.

Architectural decorative elements – The status quo

Since the important work of J. McKenzie 30 years ago, no further comprehensive study on Nabataean architectural decoration has been carried out that would have considered new findings of recent years. Since then several buildings and areas were studied, such as the so-called Great Temple (Joukowsky 1998, 2007, 2017a), the Small Temple (Reid 2002, 2004), the Paradeisos (Bedal 1999, 2000), the monumental staircase to the Upper Market (Fiema 1998; Kanellopoulos 2002), and several structures in the area of the Qasr al-Bint (Tholbecq 2013, 2014, 2015, 2017). Also, archaeological research has been focused on the byzantine churches on the northern side of the Wadi Musa (Bikai 1996, 2002; Fiema et al. 2001; Perry and Bikai 2007) as well as the Nabataean/Roman residences on ez-Zantur (Kolb 2001, 2007, 2012) south of the city center, and the Soldier Tomb Complex in the Wadi Farasa (Schmid 2009, 2010).⁴ Those projects have contributed a great deal of knowledge regarding the layouts and construction of these buildings as well as their dating. Even though a vast number of architectural elements has been documented in the course of those archaeological field projects, the resulting reports, articles and publications often lack a holistic overview of the complete material, like it was provided for the finds of the Qasr al-Bint (Zayadine, Larché, and Dentzer-Feydy 2003), or in part for finds in the Dionysian Hall in Beidha (Bikai, Kanellopoulos, and Saunders 2008) as well as for the architecture of the Bâtiment B in recent years (Fournet 2017). On the other hand, however, a significant number of detailed studies on specific decorative elements do provide an insight into the architectural design of individual buildings. Those were often limited to the most decorative architectural elements like the floral Nabataean capitals (Schluntz 1998; Dimitrov 2013; Hussein 2017) and special forms like the elephant-headed capitals (Dimitrov 2013; Joukowsky 2017b) or the architectural sculpture (Keller, C. 2009; Basile 2017). Therefore, it is not always possible to identify specific characteristics of the overall decorative programme of an individual building, which makes it more difficult to compare the decorative features of different buildings.

One example for this is the case of the Temple of the Winged Lions. More than 500 architectural blocks with distinct decorative features were unearthed in nearly 30 years of excavations and are now gathered in several lapidaria around the building. So far, only the capitals of the temple, especially those with Winged Lions have been discussed in a short article (Hammond 1977) as well as very briefly by McKenzie (McKenzie 1990: 40, 51 and 139) and Freyberger (Freyberger and Joukowsky 1997: 80; Freyberger 1998: 9 and 18). Although Hammond provided some information about further architectural elements (Hammond 1996), no comprehensive overview about the architectural blocks is given. There are several other lapidaria in Petra in which a variety of architectural elements are preserved. Their evaluation would allow a more detailed discussion regarding the appearance of Nabataean buildings and the role of local architectural

⁴ All those projects are also well documented through preliminary reports in the *Annual of Department of Antiquities*, available also online: <http://publication.doa.gov.jo/Browse/1> (seen 18.06.2019).

decoration. Since there is no comprehensive study or review of these elements for the whole Petra area, consequentially there is an intrinsic lack of understanding of the architectural decoration of its free-standing buildings.

As discovered through recent investigations, there are two forms of architectural decoration in Petra. On the one hand, there is a decorative system consisting of elements that show simplified moldings with plain surfaces, such as the blocked-out Nabataean capital, the Doric frieze with plain discs in its metopes or even undecorated friezes and architraves as well as plain-faced pilasters like those that can be seen on most of the tomb façades. On the other hand, the same architectural elements can occur in a more richly decorated, 'baroque'ish way (Dentzer-Feydy 2012: 212), which seems to be strongly inspired by Greek and Roman architectural decoration with a tendency towards figurative and ornamental motives. Examples of this can be seen on nearly every building in the city center, like the Qasr al-Bint, the so-called Great Temple and, almost uniquely, also on the most famous rock-cut façade in Petra, the Khazneh al-Firaun.

In the light of previous research in the city center, there seems to be a certain contrast between the decorative system that was used on the rock façades and the one used in free-standing architecture. Ornamented and sculpted decorative features dominate on the free-standing buildings, while the simplified decoration with plain surfaces is particularly present on the façades (Netzer 2003: 162) with only few exceptions such as the aforementioned Khazneh. But is it too easy to simply divide the use of different decoration systems between rock-cut architecture and freestanding architecture? This assumption does not take into account a large number of findings which clearly show that building elements with plain surfaces were also used in free-standing architecture. For instances, there are numerous findings which prove that the blocked-out Nabataean capital was also an important decorative element in the buildings of the city center (Parr 1957: 10, Pl. IX A; Hammond 1965: 45, Pl. 34.4; Hammond 1996: Pl. 23.3.; Kolb and Keller, D. 2000: 358-359, Fig. 4; Kolb and Keller, D. 2001: 314, Fig. 4; Kanellopoulos 2002: 301; Schmid and Bienkowski 2011: 114 Fig. 18; Fournet 2017: 48, Fig. 4. B.01-B.03). Mostly, those findings were only discussed very briefly in publications. The finds in the Bâtiment B (Fournet 2017: 46-49, Fig. 3 and 5) and in the Nabataean/Roman Villa ez-Zantur IV (Kolb and Keller, D. 2000: 358) prove the use of the blocked-out capital in the same building that also features floral Nabataean capitals.

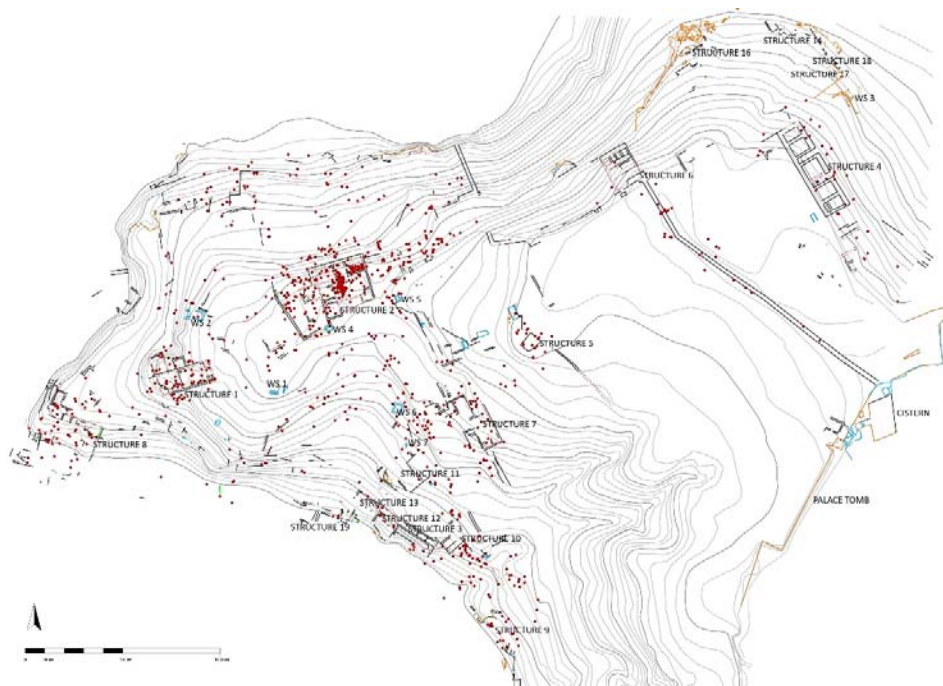
In order to gain more insight into the use of the blocked-out capital in free-standing buildings, a few preliminary results on architectural findings of the NEPP shall be discussed herein below.

Architectural features of the NEPP

The research area of the NEPP occupies roughly a quarter of the city center. Within the scope of the survey project, not only a large number of buildings was documented, but also individual decorative architectural elements were recorded. Distribution maps (Fig. 1) help to locate the so far documented architectural

elements including bases, capitals, column drums, cornices, pilasters, door jambs, pediments, and many more. So far, these elements provide only a preliminary insight into the decoration of the different buildings in this area, since no extensive excavation activities have yet been undertaken. Out of the 19 documented structures, one building, Structure 2,⁵ sticks out due to its location, size, and the large number of architectural elements found on the surface (Schmid et al. 2012: 91-93; Fiema, Schmid, and Kolb 2016: 750-752).

ST 2 is situated on a plateau in the northern part of the NEPP area and overlooks the Wadi Matahah. It is the largest and probably most elaborated building in this area. The entire structure (Fig. 2) measures roughly 50 x 35m and is divided into two main parts: a rectangular one to the east and an irregularly shaped part to the west. The southern half of ST 2 lies on a relatively flat, high ground while the northern part was built on highstanding foundations built directly into the steep slope overlooking the Wadi Matahah. Comparing the size of ST 2 with other buildings and complexes in Petra, it becomes clear that it is one of the larger buildings in terms of overall dimensions. It is only surpassed by a few complexes such as the Soldier Tomb Complex, the so-called Great Temple with its two terraces, and the Qasr al-Bint with the enclosed altar area in front of it. Compared to the houses and residences on the hill of ez-Zantur it is superior in size, even larger than the Nabataean/Roman villa ez-Zantur IV. Also, in terms of the architectural decoration ST 2 shows very interesting details.



**Figure 1: Distribution map Architectural Elements
(M. Holappa/J. Falkenberg/M. Dehner 2019)**

⁵ In the following, the Structure 2 will be referred to as ST 2.

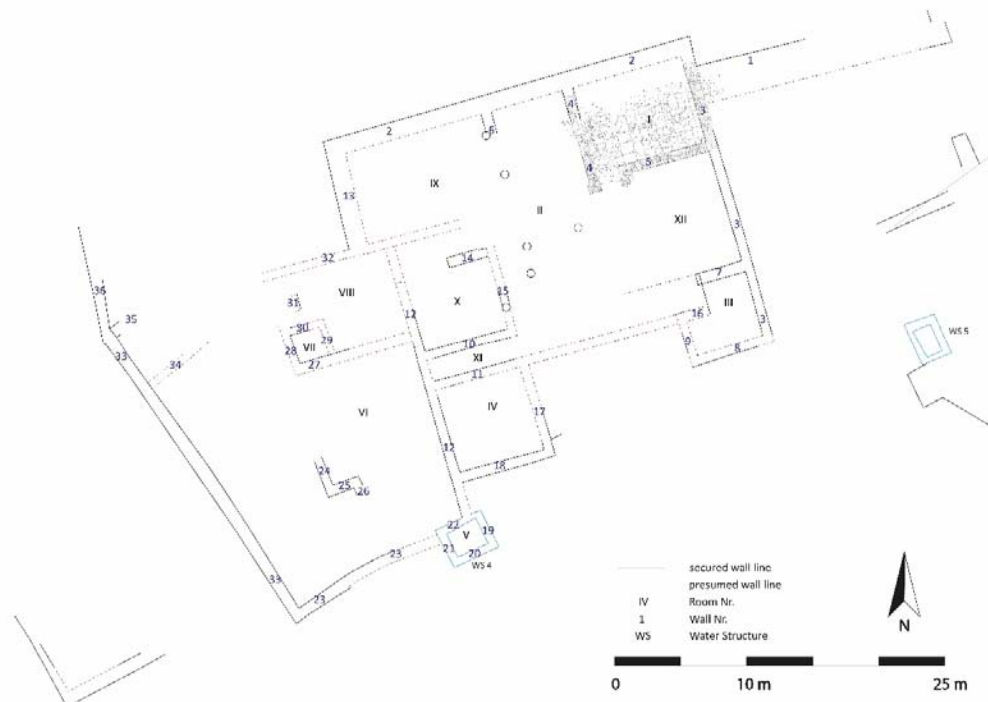


Figure 2: Plan ST 2 (M. Holappa/J. Falkenberg/M. Dehner 2019)

During surveys of the area, a total of 279 architectural blocks were documented directly inside the building and in the immediate vicinity of the outer walls. This number also includes the finds that were made during the excavation of Room I in 2016.⁶ The different elements present an impressive array of decorative elements, e.g. triglyph and metope blocks, cornices, fragments of architraves, column drums, bases, capitals, and door jambs. A characteristic feature of the blocks documented so far is the consistent use of architectural decoration which is often referred to as "Nabataean". Decorative elements seem to follow the same homogeneous concept datable to the 1st century A.D., like the one known from the rock-cut façades, with plain-faced Nabataean capitals and flat discs in the friezes' metopes rather than ornate decoration.

Of the 279 documented blocks of the NEPP area, 44 are finds of capitals or fragments of such varying in size and type.⁷ This number includes pilaster capitals, half-capitals and a double quarter capital. The largest number of capitals was found in Room II and includes both upper and lower segments of blocked-out Nabataean capitals of Type 1. In Room II, a total of 27 capital parts were documented on the surface in the collapse. They can all be assigned to Type 1. Out

⁶ An overview of the excavation results will be presented in the upcoming survey publication.

⁷ For further information regarding the development of the Nabataean capital and the different types see Patrich, 1996. See McKenzie 1990 concerning the appearance of Nabataean Type 1 and Type 2 capitals at the tomb façades in Petra and Hegra.

of those 27 examples, two finds belong to a pilaster capital while all others belong to the principal column order that can be assumed for Room II. In addition to the capital finds, there is a large number of column drums also to be found in this room.

A unique feature of the buildings in the NEPP area are the frieze blocks, of which a total of eight examples has been documented in ST 2. The elements show parts of a Doric frieze consisting of metopes with plain discs and triglyphs. Six of them were found in the western part of Room VI with no clear indication of whether they were originally placed there as part of an entrance or integrated into the wall. Additionally, 26 cornice blocks and fragments of such, showing diverse profiles, give an impression of the horizontal division of the building. These blocks are distributed across the entire building, yet with a clear concentration on the western and northern sides. So far, there is no evidence for architectural elements decorated with floral ornamentation.

The Nabataean capital in the NEPP

One of the most characteristic architectural features in Nabataean architecture is the so-called blocked-out Nabataean capital with a plain surface. In general, the blocked-out capital of Nabataean Type 1 (Fig. 3) is composed of two members that are almost identical in height. The upper part has a plain concave surface terminating in horns at the corners instead of volutes, while the lower part shows a sequence of moldings from bottom to top, starting with a slim astragal and followed by a cyma recta as well as two diagonal fillets with a slight groove between them (Patrich 1996: 194). In the center of the upper part sits a blocked-out abacus flower. Nabataean block-out capitals of Type 2 consist of only one part which resembles the upper segment of the Type 1 capital with small supports under the blocked-out volutes (Patrich 1996: 195-196).⁸ These are most commonly known from the rock-cut façades in Petra and Hegra, but also from some free-standing buildings elsewhere in the Nabataean kingdom, like the Temple in Khirbet et-Tannur (McKenzie 2012: 106-109, Fig. 169-171), the Temple in the Wadi Ramm (Tholbecq 1998: 243, Fig. 3-4), the Nabataean gate in Bosra (Kader 1996: 193) as well as in Oboda (Negev 1997: 36-37 Photo 42, 59 Photo 71, 185 Fig 27 V). However, evidence of an extensive use in the free-standing architecture of Petra is sparse. So far, there are only a few examples of blocked-out Nabataean capitals used in freestanding architecture in Petra as was shown before. Those buildings usually feature pilaster capitals or half-column capitals of the blocked-out Type 1. As M. Grawehr emphasized, the blocked-out capital was often used on the façade architecture of a building, as it was more resistant to weathering than the florally sculpted capitals, which in turn was a result of the quality of the building material (Grawehr 2017: 107, 110-111). In Petra this is best seen at the

⁸ In addition to Type 1 and 2 capitals there are further types of blocked-out capitals in Petra, which shall not be discussed here. Type 3 is a variation of Type 2 capitals and capitals of Type 4, also called pseudo-ionic, differ greatly different from the others and seem to follow a basic ionic form, with an echinus and strongly protruding diagonal horns.

entrance of the Bâtiment B east of the Qasr al-Bint (Fournet 2017: 46-49, Fig. 3). With this observation in mind, the findings in ST 2 will add a new aspect to the understanding of the use of blocked-out Nabataean capitals in free-standing architecture.

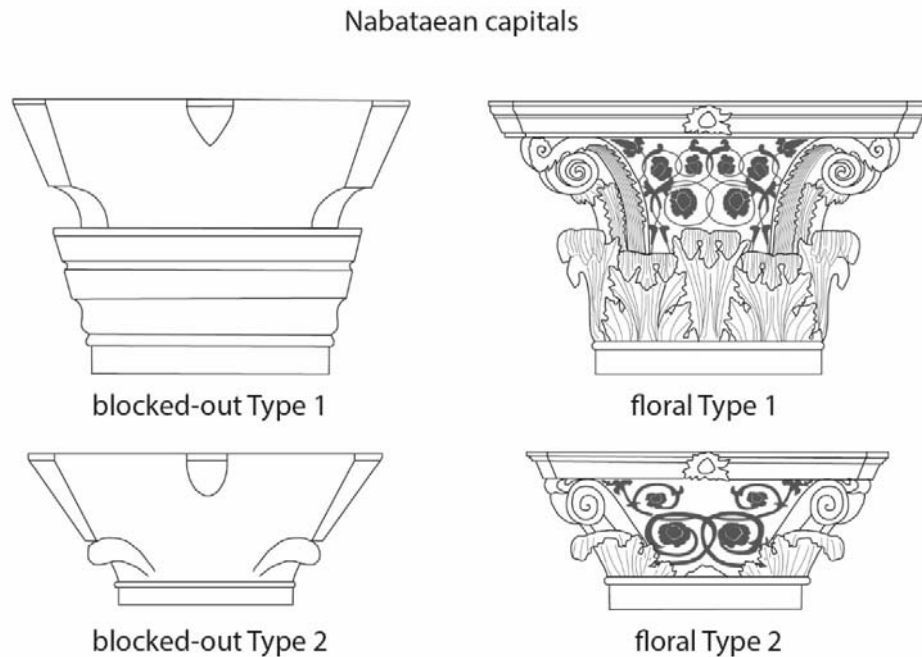


Figure 3: Nabataean blocked-out and floral capitals (Drawings: M. Dehner)

Depending on size and composition, at least three different orders of supports crowned by Nabataean capitals can be distinguished in ST 2. Two of those were topped by Nabataean capitals of Type 1 and one by capitals of Type 2. All capitals were made out of a reddish-yellow, locally available sandstone. While it is not possible to determine the exact position of the three support orders inside the structure due to the finds' distribution, the location of the main column order appears to be quite evident, even if the arrangement in the room is not clear.

Capitals and Columns of Room II

In the center of the rectangular part of the building, which can be described as the core part of ST 2, the collapse indicates several columns, which led to its attribution as a courtyard.⁹ The northern limit is formed by Wall 2. The southern one cannot be determined due to the high debris. Therefore, the room could have a length of more than 15 m. The width of the room can be determined by Wall 4 in the north-east and Wall 17 in the south-western part of Room II and measures almost 8 m. A large number of column drums with a diameter of 0.62 m or fragments of such was documented there. Additionally, 28 complete blocks or

⁹ Room II in Figure. 2.

fragments of Nabataean Type 1 Capitals were recorded in this room as well. The upper and lower parts of these capitals were found apart from each other, suggesting that they were also produced separately and assembled on-site. While the collapse is still standing 1.50 to 2 m above the floor level, it can be assumed that those numbers are not final and even more capital fragments as well as column drums will appear once this area is examined more carefully. The floor level is known through the recent excavation of Room I in 2016 (Fig. 4).



Figure 4: ST 2 from North (Photo: M. Dehner)

As these finds indicate, the lower capital parts were generally cut out of one block. They show the typical sequence of moldings of Type 1 capitals. Such a sequence is only preserved in its entirety in one example, which has a total height of 0.28 m (Fig. 5). The height of the complete block is 0.33 m including the neck of the column shaft attached to it. Its lower diameter corresponds with the diameter of the column drums while the upper diameter is 0.86 to 0.90 m. The upper diameter is preserved on four examples, while the lower one can be found on three other blocks.

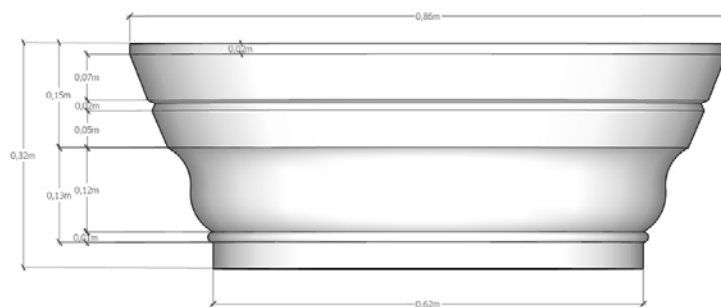
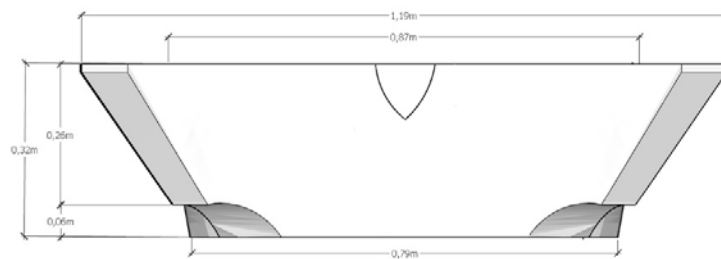


Figure 5: Nabataean blocked-out capital Type 1 - Molding of the lower segment (Model: M. Dehner)

Next to the lower parts several blocks of the upper part of blocked-out Type 1 capitals were found. Six of them are nearly complete half-capitals with a height of 0.30 to 0.32 m and a lower diameter of 0.79 m (Fig. 6). Another six capital fragments are parts of half-capitals broken in two with the same height. The blocks were found in various states of deterioration. The horns of the capitals are mostly broken off and the surfaces are heavily weathered. Therefore, it is difficult to determine the exact dimensions of a half-capital with certainty. All blocks have plain surfaces with a slightly concave curvature which turns into a convex one in the lower end, taking on the shape of the column. At the top of the straight-worked back side the blocks have two incisions towards the outside, each with a length of 0.15 m and a width of 0.05 m. The incisions are about 0.12 m deep.



**Figure 6: Nabataean blocked-out Capital Type 1 – Upper segment
(Model: M. Dehner)**

In Room II no complete upper parts with all four faces could be found in the debris. Also, the straight backs of the half-capitals indicate that they were intentionally produced as half-capitals and full ones may not have existed. Likewise, no pilasters or half-columns were discovered in ST 2 that could have carried half a capital of such monumental size. For this reason and while taking into account the lower segments of capitals found, which are exclusively worked in the round out of one block, it must be assumed that two half-capitals were placed back to back on top of the full lower part to fit onto a full column (Fig. 7). Such a construction has already been identified several times before, e.g. by P. C. Hammond on the capitals of the Temple of the Winged Lions (Hammond 1977: 47) and by C. Kanellopoulos on the capitals at the Dionysian Hall in Beidha (Bikai, Kanellopoulos, and Saunders 2008: 496) as well as on the reused capitals in the Petra Church (Kanellopoulos 2001a: 171). There, the upper parts of floral Nabataean capitals were also produced as half-capitals and were placed back to back on a full lower segment. Corresponding tool marks on the half-capitals of both floral and blocked-out ones, as well as the large number of examples in Petra, makes it seem obvious, that the majority of column capitals were produced in this manner and not split after completion or at a later time.



Figure 7: Construction of a Nabataean Type 1 capital in ST 2 (Model: M. Dehner)

If two half-capitals are placed back to back, the aforementioned incisions are directly opposite each other. As these are concave on the outside, they offer space for the insertion of an abacus flower or a blocked-out form of such. One blocked-out abacus flower was found in Room II as well (Fig. 8). This one is comparable with a similar fragment in the villa ez-Zantur IV (Kolb and Keller, D. 2000: 359, Fig. 4). This construction can also be observed on the reconstructed columns in the Blue Chapel (Bikai 2002: 275). The insertion of separately carved abacus flowers also can be found on floral Nabataean capitals, as findings from the so-called Great Temple show (Schluntz 1998: 228, Fig. 5.49). It becomes apparent that the same construction technique was applied to both floral and blocked-out Nabataean capitals. However, even though the incisions were meant to incorporate another component of the capital, they had no structural purpose in the sense that they contained a linking component that provided additional statical stability. The design of the incisions, which are wider at the top and narrower at the bottom, was not appropriate for this purpose. The stability of the composed capital would rather have been achieved by an applied architrave or the base of a voussoir on the capital.



Figure 8: Blocked-out abacus flower (Photo: M. Dehner)

In addition to the column capitals, a fragment of a lower part and one of an upper segment, belonging to a blocked-out pilaster capital of Type 1 were identified in Room II as well. The position of the pilaster in the building is not clear yet. It can be assumed that this was connected to one of the walls that enclose Room II. The size of this capital corresponds to the dimensions of the column capitals. Therefore, the pilaster capital must have been directly linked to the column order.

Considering the number of capital fragments, at least five column capitals and one pilaster capital can be considered as secured for Room II, corresponding therefore with at least five columns and a pilaster. The height of the columns, including base and capital, can be assumed to be 5 m to 5.60 m, with an estimated ratio of 1:8 to 1:9 from column diameter to height as determined by Kanellopoulos for the columns at Petra in general (Kanellopoulos 2004: 228; Fournet 2017: 46). Since the composition of Room II as well as the appearance of the surrounding rooms is as of now mostly unclear, the positioning of the columns must remain speculative. So far, Room II seems to appear as a long room, reaching from north to south. It is flanked by Room I, XII and III to the east as well as Room IV to the southwest. The composition of the rooms north of Room IV cannot be determined at the moment.

At this point, some brief considerations on the appearance of Room II shall be introduced based on the two most likely possibilities (Fig. 9).¹⁰ The first one is that of a long corridor with a portico on the western side, which continues in a right angle to the east on to the southern end (Schmid, Fiema, and Kolb 2011: 3c). This is suggested by several column drums, which are assumed to be in situ. Considering this proposition, it would lead to an elongated, very narrow courtyard, even though no corresponding portico is evident on the opposite side of the room. Assuming an opposite portico, however, both column rows would form a narrow corridor only about 4 m wide. The porticos would have been about 2 m deep. If the length of the room is estimated to be 15 m, from Wall 2 in the north to the visible alignment of Walls 7 and 19 in the south, at least four columns could fit between two corresponding pilasters on one or both sides of the elongated room. With this consideration, the interaxial column spacing would measure 3 m with an intercolumnium of just under 2.40 m. The same calculation with five columns in between corresponding pilasters would lead to an interaxial column spacing of 2.50 m and an intercolumnium of around 1.90 m. Comparable interaxial column spacings of porticoes with columns of roughly the same dimensions are between 2.20 in the Dionysian Hall (Bikai, Kanellopoulos, and Saunders 2008: 471) and 2.60 m in the portico of the Colonnaded Street (Kanellopoulos 2001b: 17). Thus an assumed axial distance of almost 3 m must be considered too wide compared to the dimensions of the column, since such a distance is more likely to be found in

¹⁰ The different possibilities of the arrangements of the columns as well as the appearance of Room II will be discussed in more details in the upcoming survey publication.

porticoes with column diameters of more than 0.80 m in Petra, for example on the lower terrace of the so-called Great Temple (Joukowsky 1998: 201). It can thus be concluded that if Room II had the shape of an oblong corridor at least five columns must have fit in it, ten if there were two porticoes. However, this suggested reconstruction must remain purely hypothetical, since the supporting evidence is very sparse and no other example of such a narrow courtyard with two porticoes has been attested for Petra so far.

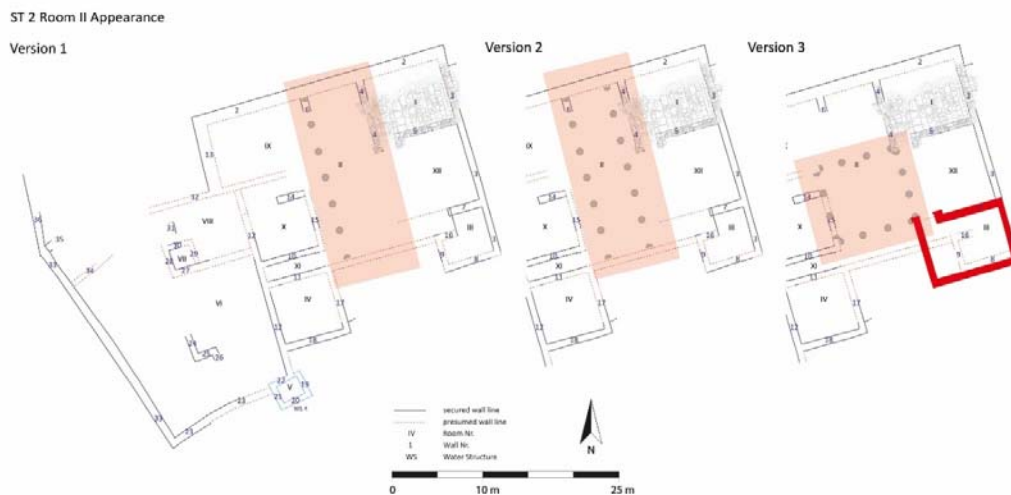


Figure 9: Possible layouts of Room 2 – ST 2 (Drawing: M. Dehner)

Another possibility is to imagine of a smaller peristyle-type courtyard in the center of the building, as Z. T. Fiema already suggested very briefly (Schmid et al. 2012: 91). This proposal is supported by the distribution of the column drums and capitals in the debris which are mainly found in the central area of ST 2. This may suggest that Room II was not a long, corridor-like courtyard, but rather divided into two smaller rooms. In this case one could assume its northern limit in alignment with Wall 5, which is the southern limit of Room I to the east. A comparable example of a similar arrangement can be seen in ez-Zantur IV with a small courtyard, Room 19, limited to the north and south by columns between pilasters (Kolb and Keller, D. 2000: 358-359). If one considers a similar layout for Room II in ST 2 with columns in between the passageways from a central courtyard to the adjacent rooms, a total of four, six or eight columns can be estimated. These, in turn might have been related to corresponding pilasters or antae, which again on their part were crowned by blocked-out Nabataean capitals. A peristyle courtyard seems very unlikely, though, since no heart-shaped columns or capitals necessary for corners were documented in Room II so far. The fact that such combined columns and capitals were regularly used in peristyle-like courtyards in Petra has been documented several times, e.g. in the cella of the Temple of the Winged Lions (Hammond 1996: 39), the so-called Great Temple (Hussein 2017: 124-125, Fig. 7.4), or in the northern portico of the Soldier Tomb Complex (Schmid 2010: 224, Fig. 4) as well as in the peristyle courtyard in Bâtiment B (Fournet 2017: 54-55, Fig. 8).

The layout of Room II can only be finally determined through more extensive excavations in ST 2. The noteworthy finding in this structure so far is the here presented evidence of the first column order in free-standing buildings proven to have been crowned by blocked-out Nabataean capitals and thus contrasts the numerous other column orders with floral Nabataean capitals. With regard to the dimensions of the Room II columns, the closest comparisons are to be found in the Temple of the Winged Lions, whose cella columns have a similar diameter. In addition, blocked-out capitals of the same size as in ST 2 were also found in the vicinity of the temple, yet the placement of those capitals has not yet been clarified. In this case the finds in the Temple of the Winged Lions offer the best comparison among the architectural features so far documented in Petra.

More blocked-out Nabataean capitals in ST 2

As mentioned before, further findings suggest at least two additional types of support elements in ST 2, which were crowned by blocked-out capitals. The first one is represented by three Nabataean blocked-out pilaster capitals, most probably of Type 2. Since the projecting bosses are broken off, it is very difficult to judge if there was a small supporting tongue under the horns, an indication of Type 2, though, small traces of such an element can be seen in one example. All three capital fragments were found in front of the northern Wall 2 on the plateau below the building, suggesting that the capitals were placed on the northern façade of ST 2. The size of the pilaster capitals, with a width of 0.62 to 0.64 m and a height of 0.30 m roughly matches the size of the capitals of Room II. It can be assumed that they crowned a projecting pilaster to the north. The precise location of the components cannot be determined by only looking at the circumstances in which they were found.

Capitals of a smaller half-column order are preserved in four cases. Two additional architectural blocks of this type were found further to the north of ST 2. The half-capitals once again belong to the Nabataean capitals of Type 1. The diameter of the half-columns varies between 0.24 and 0.27 m. The height of the capitals is 0.24 to 0.25 m. The lower and the upper capital parts are hewn out of one block (Fig. 10). Both parts have similar heights, with the upper part slightly higher than the lower one, and thus show the same proportion as the larger capitals. They feature the typical molding of Type 1 capitals. Three fragments of architectural blocks with a projecting half-column with diameters of 0.22 to 0.24 m were documented in the vicinity of those capitals. All of these elements were found in the debris close to Wall 2 in the northern area of the building, west of Room II but still in the rectangular part of ST 2. So far, no corresponding bases have been documented. Judging by the diameter of the half-columns and the size of the capitals, this order most likely belongs to an interior half-column wall decoration. Whether this was part of the architectural decoration of the ground floor or an assumed upper floor must remain open. The height of the half-columns including capitals and bases can be reconstructed to around 1.90 m to 2.00 m, using the same

ratio of diameter to height as before for the portico columns. Such a smaller column would have been too low to serve as the only wall decoration of a room if it is directly placed on the ground. Instead, such an installation needs to be elevated through a pedestal. The use of pedestals in combination with columns or semi-columns is a common feature in Nabataean architecture, as it is seen on the western façade of the Temenos Gate in Petra (Kader 1996: 122-124, Fig. 57, 59) or on the platform in the Temple of Khirbet edh-Dharih (Villeneuve and Al-Muheisen 1988: 473-476, Fig. 10-11). A similar decoration can even be seen in the adyton of the Qasr al-Bint, where the aedicula was decorated with a pedestal followed by pilasters and a pediment (Zayadine, Larché, and Dentzer-Feydy 2003: 28-30, 149 Fig. 15, 188 Fig. 54). It is also possible that those small columns were part of a niche, similar to the one that was found reused in the Petra Church (Kanellopoulos 2001a: 187). The capitals in ST 2 even closely resemble those from the Petra Church in size and style. A final possibility for the use of such a small column order, if it was combined with a pedestal, is as decoration of a doorframe crowned by frieze and pediment, as it is presented by the entrances of some tomb façades.

Finally, a last capital, similar in size to the aforementioned small ones, was found south of the building. This one consists of two joint quarter capitals of Nabataean Type 1 and is worked as a coupled quarter capital (Fig. 10) made of very hard shell-limestone. The height of 0.21 m is a bit lower than that of the other small capitals. The heart-shaped form as well as the appearance of the back side of the capital seem to indicate a use as part of an interior wall decoration. Interestingly, a coupled quarter base was found just a few meters to the south, seemingly belonging to the same architectural element. It is also made of shell limestone and 0.23 m high. The base is an attic type, with a lower torus that is mostly broken, followed by a trochilus, another torus, a small fillet, a groove, and finally by another fillet. In addition to the capital and base coupled quarter-columns of the same size, but made from sandstone, were found inside ST 2, also confirming the use of these architectural elements for interior decoration.



Figure 10: 3D-models of blocked-out Nabataean half-capital and coupled quarter-capital of Type 1 (M. Dehner)

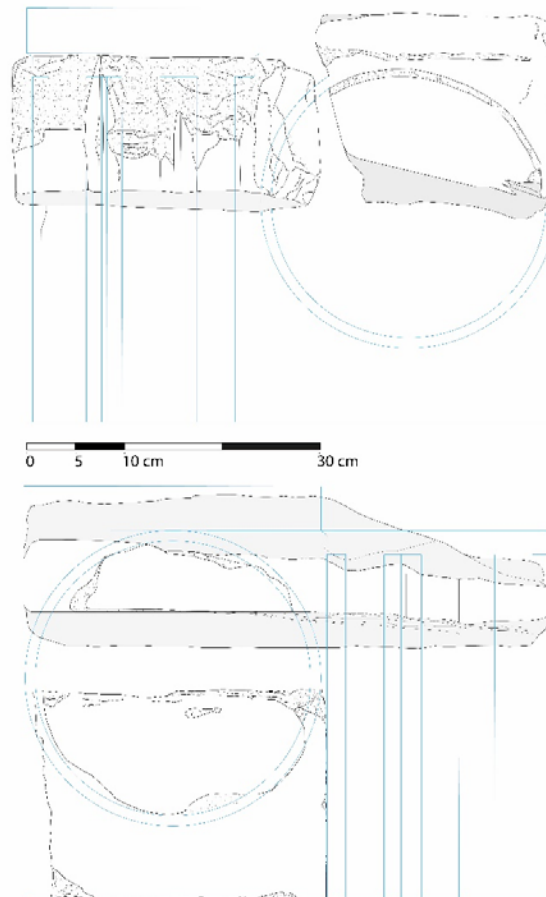


Figure 11: Doric frieze in ST 2 (Photo: M. Dehner)

Conclusion

After this short examination, consequently, three different kinds of supports crowned by blocked-out Nabataean capitals of Type 1 and Type 2 can be distinguished in ST 2. The presented capitals all resemble examples from capitals of the 1st centuries BC and AD, as known from the rock-cut façades in Petra and Hegra and underline the highly representative character of the building. Dating the capitals to the 1st century AD seems to be confirmed by pottery samples from the foundation of Room I, which were collected during the first season of excavation in 2016. The samples date to the first quarter of the 1st century AD and confirm an initial building phase in this period.¹¹ The capitals presented here, even though they are made of sandstone, are all of an extraordinary quality and produced with a great precision in proportions as well as their polished surfaces. It seems very likely that those capitals belong to the initial decoration of the building, which resembles the plain-faced architectural decoration of the tomb façades.

Not only the capitals, also further architectural features follow the same

¹¹ The pottery analysis is not published yet and will be presented in the upcoming survey publication.

homogenous concept of the plain-faced decoration, which is often referred to as "simplified". Several fragments of a Doric frieze with triglyphs and metopes with flat discs (Fig. 11) in the northwestern part of ST 2 follow this decorative design. As examples also of rock-cut architecture show, a small fillet runs along the top of the triglyphs and metopes. Whether the Doric frieze once crowned a possible entrance area of ST 2, or was part of the wall decoration, is debatable. Additionally, several fragments of cornices, architrave and entablature or pediments as well as various attic bases underline the remarkable character of this prominent building. All those elements are closely comparable to the rock-cut architecture as it was analyzed by J. McKenzie. This brings up the question of what can be considered the original, the blueprint of this decoration. Was it the rock-cut architecture that influenced the free-standing architecture or the other way around? This question is very difficult to answer. The only thing that can be said with certainty is that ST 2 in the NEPP area is the first building that was documented reflecting very homogeneously the "simpler" decoration system and existing simultaneously to buildings with a more elaborated ornamental decoration. In addition, the evidence from ST 2 points to a much more prominent use of the plain-faced Nabataean capital in free-standing architecture than it was assumed until now. Also, this building was a very prominent and highly representative one regarding size and its consistent, so far unique decoration programme in free-standing architecture, which follows the homogenous concept of plain-faced decoration known best from the tomb façades. It resembles the pure, simplified forms of Nabataean architecture with no figurative or ornamental additions. There are furthermore no other examples so far, which raises the question of whether there were more free-standing buildings following this decorative programme. If so, it appears that the decoration of the tomb façades indeed resembles built architecture or that there was a much bigger connection between built architecture and rock-cut architecture. Finally, the question arises when and where did the Nabataeans use the more elaborated ornamental decoration instead of the plain-faced one?

A more detailed study of the architectural elements, for example of the Temple of the Winged Lions, may provide more insights and helps answer these questions. Even though some of the decoration features, like the floral Nabataean capitals, are more elaborated, several elements such as the Doric frieze and a number of blocked-out capitals found in the area of the Temple are the closest parallels to the decoration of ST 2. The columns, capitals, bases and other interior decoration are of the same dimensions. Additionally, the Nabataean mansion ez-Zantur IV needs to be reviewed, showing plain-faced decorating elements, like Nabataean capitals, as well as ornamented and figurative decoration.

In any case, this short study shows, that there are a lot of unanswered questions regarding the architectural decoration of free-standing buildings and that this investigation is just a starting point for a necessary comprehensive study of different aspects of free-standing architecture and the use of specific decorative elements.

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تاجية العاصمة - رؤى جديدة في العمارة النبطية القائمة بذاتها في البترا

ماركو دهنر

ملخص

بعد ظهور دراسة جوديث مكنزي حول عمارة البترا، المبنية بشكل كبير على دراسة العمارة الأكثر شهرة والمقطوعة في الصخر، وفرت العديد من المشاريع الأثرية في البترا كما هائلاً من المعلومات الجديدة حول العمارة النبطية. وعليه، فقد وثق مشروع "شمال - شرقي البترا" مئات العناصر المعمارية وأجرى عليها دراسات. إن هدف هذه الورقة الأساسي تقديم تحليل مفصل لعنصر معماري محدد هو التاجية النبطية المقلدة، خصوصاً استخدامها في المباني القائمة بشكل حر في البترا؛ وبذا ستقدم هذه الدراسة أفكاراً جديدة حول استخدام هذه التاجية في مباني وسط مدينة البترا.

الكلمات الدالة: الأنباط، العمارة، العمارة الحرّة، الزخرفة المعمارية، التاجية النبطية.

جامعة براندنبورغ التقنية في كوتبوس-سينفنتبرغ: كوتبوس ، براندنبورغ ، ألمانيا، و حالياً باحث ما بعد الدكتوراه في المركز الأمريكي للبحاث الشرقية، الاردن.

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