NABATAEAN *BASILEIA* AND THE EARTHQUAKE OF A.D. 363 AT PETRA: SOME CONSIDERATIONS

Zbigniew T. Fiema - Stephan G. Schmid

Introduction

The history of Petra, the capital of the Nabataean kingdom and subsequently, of the Roman province of Arabia in southern Jordan, is marked by the occurrence of several major seismic destructions. On May 19, 363, Petra was affected by an earthquake in which, according to ancient sources, «a third part of the city was destroyed».[1] Archaeological data indicate that the earthquake indeed caused substantial destruction of the public buildings in the city centre.[2] Some of these, such as the Temple of the Winged Lions, the so-called "Great Temple", and the Theater, were never restored. The domestic structures on ez-Zantur ridge were rebuilt after this destruction, but they fell victim to an earthquake in the early 5th century, and were finally abandoned.[3] The Colonnaded Street was only partially cleared of the 363 earthquake debris. Afterwards, there was an encroachment of private structures into the public space of the street. Simple shops, made of reused elements, were erected along the street and upon the sidewalk.[4] The inadequate restoration of the anti-flash flood installations, following their damage in 363, caused growing deposition of alluvial material in the city centre, evidenced inside shops which faced the street.[5] Although the impact of the 363 earthquake should not be overestimated, its outcome was particularly harmful for the city whose political significance was already limited and whose economic viability was stagnant.

This paper presents evidence which may shed more light on the impact of that earthquake on Petra. This evidence is provided by the new archaeological project in Petra – the Northeastern Petra Project (NEPP) – organized by Humboldt Uni-

[1] S. Brock, *A Letter Attributed to Cyril of Jerusalem on the Rebuilding of the Temple*, «Bulletin of the School of Oriental and African Studies» 40, 2, 1977, 266-286.

[2] See Ph. C. Hammond, *New Evidence for the 4th-Century A.D. Destruction of Petra*, BASO 238, 1980, 65-67, and K.W. Russell, *The Earthquake of May 19, A.D. 363*, BASO 238, 1980, 47-64.

[3] B. Kolb, *Die spätrömische Bauten*, in A.N. Bignasca *et al.*, *Petra. Ez Zantur I*, Mainz 1996, 51, 89.

[4] For these, Z.T. Fiema, *Remarks on the Development and Significance of the Colonnaded Street in Petra, Jordan*, in P. Ballet - N. Dieudonné-Glad - C. Saliou (éd.), *La rue dans l'antiquité. Définition, Aménagement, Devenir*, Actes du colloque de Poitiers, 7-9 Septembre 2006, Rennes 2008, 165-167.

[5] Z.T. Fiema, *The Roman Street of the Petra Project, 1997. A Preliminary Report*, «Annual of the Department of Antiquities of Jordan» 42, 1998, 395-424.

FIG. 1. The centre of Petra. The "Great Temple" is in the centre left, the Temple of the Winged Lions is opposite the temple, across the Colonnaded Street. Photo by D. Kennedy

versität zu Berlin and co-directed by the authors and Bernhard Kolb. The project is concerned with the documentation of the northeastern part of the Petra Valley, i.e., the high ground, which is limited by the Wadi Musa depression (south), al-Khubthah massif (east) and the Wadi Matahah (west-northwest), but also with the issue of the location of the Nabataean royal residence.

Two passages in Flavius Josephus (*AI* XIV, 4 [16] and *BI* I, 2 [125]) clearly imply that by the mid-1st century B.C., Petra was considered a royal city and, therefore, the capital of the Nabataeans, where their kings resided. In fact, the Greek word τὰ βασίλεια, used in the first passage, does not only designate a "palace" as the building where king resided but rather implies the existence of entire areas of a city where the royal quarters, administration, cultic installations etc. were concentrated. This is especially, although not exclusively, true when late Hellenistic rulers from the eastern Mediterranean and the Near East were concerned.[6] Such main royal residences seem to follow certain rules. It was recently demonstrated[7] that, for example, within the vast territories of the Seleucid kingdom, *basileia* tends always to include the same features, namely, it occupies roughly a quarter of the space of the city, it is built in a location peripheral to the city centre and it is surrounded by water (sea, rivers, artificial channels) at least on two sides. Finally, in addition to the residential and representative quarters of the royal family, *basileia* contains administrative and infrastructural installations, sanctuaries, gardens and parks as well as tombs or *heroa* of the worshipped founders of the dynasty and/or the city. These criteria fit not only *basileia* of the Seleucid kings, such as in Antioch, Seleucia, Babylon or Aï Khanoum, but also the most famous royal city of the Hellenistic period, Alxeandria in Egypt, founded by Alexander the Great and greatly expanded by the Ptolemaic dynasty.[8]

Site Location and Characteristics

Despite the existence of imposing and extensive ruined structures at the NEPP site, neither an exhaustive description nor proper mapping were ever conducted there, besides short notes by Brünnow and von Domaszewski,[9] Alois Musil[10] and

[6] As was convincingly shown by B. Funck, *Beobachtungen zum Begriff des Herrscherpalastes und seiner machtpolitischen Funktion im hellenistischen Raum. Prolegomena zur Typologie der hellenistischen Herrschaftssprache*, in W. Hoepfner - G. Brands (Hrsg.), *Basileia. Die Paläste der hellenistischen Könige*, Mayence 1966, 44-55.

[7] W. Held, *Die Residenzstädte der Seleukiden. Babylon, Seleukeia am Tigris, Ai Khanum, Seleukeia in Pieria, Antiocheia am Orontes*, JDAI 117, 2002, 217-249.

[8] J. McKenzie, *The Architecture of Alexandria and Egypt. 300 BC – AD 700*, New Haven-London 2007, 32-146, especially 66-71.

[9] R.E. Brünnow - A. von Domaszewski, *Die Provincia Arabia,* Strassburg 1904, 318-319 nos. 412-415.

[10] A. Musil, *Arabia Petraea, II. Edom. Topographischer Reisebericht, 1. Teil*, Wien 1907, map following p. 343.

Fig 2. The NEPP area located between the Wadi Matahah (left), the Wadi Musa (right) and the face of the al-Khubthah massif. View from the West. Photo by S.G. Schmid

Gustaf Dalman.[11] The most useful information comes from the explorers of "Deutsch-Türkische Denkmalschutzkommando", who noted the existence of several buildings above a structure they interpreted to be a small theatre, as well as recorded a large, monumental "room" and a lengthy corridor with columns.[12]

The high ground measures c. 250 m (east-west) x 150 m (north-south). Its northern extremity is occupied by Umm al-Harjal and the eastern one by Rujm Umm al- unaydiq, the latter seemingly being the name of the entire area. Even with the limited amount of information obtained only through the surface prospection by the NEPP, it appears that most of the criteria recognized as significant in defining a *basileia,* as discussed above, will be fulfilled. A number of large, often monumental structures once existed on different terraces of this area that offers a dominant view over the entire city and which was clearly visible from almost every place in the Petra Valley. To note, the Nabataean adaptation of the Wadi Musa depression between al-Khubthah and Umm al-Biyarah for a permanent settlement, required the construction of a dam and the tunnel diverting the Musa stream from the entrance to the Siq into a side valley (the Wadi Mudhlim) that crosses the Khubthah massif.[13] From there, towards the city centre, the water flows through the Wadi Matahah before returning to its original bed in the middle of the city centre. As a second result of the diversion project, a separate quarter (in the true sense of the word) of the city emerges at the foot of al-Khubthah, being defined by the Wadi Matahah, the Wadi Musa and the face of al-Khubthah. This arrangement closely resembles that described for the *basileia* of the Seleucids and the Ptolemies.

Secondly, the presence of the monumental steps to the top of al-Khubthah, that begin in the northeastern corner of the site, directly north of the Palace Tomb is significant. The steps provided access to the cultic installations on top of Jabal al-Khubthah[14] but could also have served as an emergency exit from the city. To access the steps, one had to pass through the area that was topographically and architecturally clearly separated from the rest of the city.

Thirdly, the area is directly connected to one of the six fresh water aqueducts of Petra, namely the al-Khubthah conduit, which starts in modern Wadi Musa. This aqueduct enters the city at the point of the presumed *basileia* and there meets a huge cistern collecting the water from a highly sophisticated water catchment sys-

[11] G. Dalman, *Petra und seine Felsheiligtümer*, Leipzig 1908, 314-329.

[12] W. Bachmann - C. Watzinger - Th. Wiegand, *Petra* (Wissenschaftliche Veröffentlichungen des Deutsch-Türkischen Denkmalschutz-Kommandos, Heft 3), Berlin-Leipzig 1921, 32-33.

[13] U. Bellwald, *The Hydraulic Infrastructure of Petra – A Model for Water Strategies in Arid Lands*, in Ch. Ohlig (Ed.), *Cura Aquarum in Jordanien*, Proceedings of the 13th International Conference on the History of Water Management and Hydraulic Engineering in the Mediterranean Region, Petra-Amman 31 March - 09 April 2007, Siegburg 2008, 67-73.

[14] On these see L. Nehmé, *L'espace cultuel de Pétra à l'époque nabatéenne*, «Topoi» 7, 1997, 1035-1036; Dalman, *Petra und seine Felsheiligtümer*, cit., 332-336.

Fig. 3. The plan of the NEPP area featuring Structures 1, 2, and 3. Plan by Jana Falkenberg and Maija Holappa

tem that covers most of the Khubthah massif.[15] These two systems (fresh water aqueduct and runoff water collection) could be used both separately and together. This direct and exclusive access to one of the city's aqueducts, is notable and it distinguishes the area of the presumed *basileia* from any other place in the city, including the area of the "Great Temple", that has also been suggested as being part of the royal palace. While that area was provided with water by the Aïn Braq aqueduct,[16] it is neither the first nor exclusive user of this supply, the ez Zantur area being the first. It would seem inconceivable that the royal infrastructure would be a secondary or even tertiary water receiver. Finally, at the spot where the Khubthah massif meets the area of the presumed *basileia*, there is the so-called Palace Tomb – the largest and most decorated façade of Petra. Ideally, this could be the tomb and/or *heroön* of the kings of Petra within the *basileia*, exactly as in other Hellenistic royal quarters.

Site Description

The dimensions and the architectural decoration of the various buildings underline the working hypothesis of a royal residence in the area. Typically, there seems to be no common orientation of the buildings themselves as they follow the topography of the site. In addition to the densely occupied spots, there are other sectors within the NEPP area that are seemingly deprived of any significant structures visible on the surface. There, one could expect the gardens and water basins as they are known from other palaces, especially from the royal residences of Herod the Great, such as Jericho and Herodion. All this easily conforms with the various functions, which the structures and installations within the *basileia* had to fulfil. Three most impressive, monumental structures have been documented so far:

Structure 1, ca. 30x20 m, located at the western tip of the area, consists of two major rooms in alignment and abutted on the north by two smaller rooms. Inside one larger room, one column still is standing *in situ*, implying that this was a courtyard. In both main rooms, architectural members of different sizes were found, indicating an upper storey in both, a fact supported by stone tumbles of substantial height. It is also clear that some major decorative elements have been reused in a secondary function and location. Directly outside the southern wall of the building, there are several monumental door-jambs with pilasters, decorated with the vine scrolls motif. Yet, currently, there is no indication of any door in this wall. So these

[15] Bellwald, *The Hydraulic Infrastructure of Petra*, cit., 49-53 (al-Khubthah conduct), 87-90 (generally on runoff water collection).

[16] Bellwald, *The Hydraulic Infrastructure of Petra*, cit., 56-58; S.G. Schmid, *Die Wasserversorgung des Wadi Farasa Ost in Petra*, in Ohlig (Ed.), *Cura Aquarum in Jordanien*, cit., 110-113.

Fig. 4. The façade of Structure 2. View from the North. Photo by Z.T. Fiema

blocks were either reused or the door was blocked. Also, considering the size of some elements inside or directly outside the building, it seems uncertain how these could have been accommodated in the structure in its *extant* appearance. Probably, Structure 1 features at least two major occupational phases and the earlier one could have been ended by a significant disaster. In Phase 1, it was probably a rectangular building consisting of one large hall (currently, the two major rooms). One entrance was presumably in the eastern wall, flanked by two smaller, tower-like rooms. The external corners were decorated with quarter columns and shallow pilasters. Another door might have been in the southern wall, flanked by the large floral-decorated door-jambs. Surface ceramics and the stylistic dating of architectural elements indicate a date in the 1st century A.D. To elements, which seemingly originated from the upper storey, belong fragments of small round capitals and pilaster capitals with floral decoration and acanthus leaves. These closely resemble similar (in style and size) capitals from the "Palazzo delle Colonne" in Ptolemaïs, where they were used for an *aedicula* façade in the upper storey of the palace.[17] The size, organization and architectural features of Structure 1 clearly indicate an outstand-

[17] On the typology of similar capitals from Petra and the comparative examples from Alexandria and Ptolemaïs, see McKenzie, *The Architecture of Alexandria and Egypt*, cit., 80-118; most recently on the "Palazzo delle colonne", see N. Bonacasa, *Ancora su Tolemaide e Alessandria. Riflessioni sul "Palazzo delle colonne"*, in E. Jastrzębowska - M. Niewójt (eds), *Archeologia a Tolemaide. Giornate di studio in occasione del primo anniversario della morte di Tomasz Mikocki, 27-28 maggio 2008*, Roma 2009, 85-109.

ing design of the early Structure 1. Whatever disaster affected the early building, the ground plan and the decorative design were evidently changed later. The southern entrance, if it was ever there, was abandoned and the building was divided into two main, extant rooms.

Structure 2, ca 40x30 m, is located in the northern part of the NEPP area, roughly parallel to the course of the Wadi Matahah. Altogether 214 architectural blocks have been found inside or directly outside the building, including the multitude of column drums and door jambs, and impressive array of decorative elements (e.g., triglyph and metope blocks and other decorative elements of entablature). Characteristic for Structure 2 is the consistent and unmixed use of architectural decoration here. Decorative elements seem to follow the same homogeneous concept of architectural decoration, datable to the 1st century A.D., and with the parallels easily found in the Qasr el-Bint temple and the villa at ez-Zantur IV. To occupy the prominent spot overlooking the Wadi Mataha, the building was constructed on a massive substructure. The main façade is located on the northern, where two entrances were also located, including one monumental.

The main, central component of the structure is a large, asymmetrical rectangle featuring a colonnade running N-S, which possibly turned eastward, having an L-shaped plan. The colonnade features uniform columns crowned by Nabataean capitals. That room was flanked by two large rooms or spaces. The western room was accessible through a passage in the colonnade. The eastern room, possibly a *triclinium* or courtyard, had a black-and-white mosaic floor. This combination of rooms resembles the luxurious Nabataean mansion on ez-Zantur IV[18] – the representational banqueting halls of the villa, modelled on the prototypes provided by Hellenistic palaces, i.e., the so-called "Flügeldreiraumgruppen".[19] The existence of a second storey is exemplified by the different sizes of columns as well as the fragments of architectural decoration of highest quality. A room south of the monumental staircase contains a staircase arranged around the central core, a type popular in the region. The staircase probably provided access to the different levels of the structure. A large room, which stretches along the entire western width of Structure 2 appears to be an open courtyard, seemingly without a colonnade. Several blocks decorated with triglyph and metope indicate that the western wall of that room was a richly decorated façade. That room also yielded a large number of door-jambs, probably from doors located on both sides of the stairway, giving access to lateral rooms on different levels. As opposed to Structure 1, there is much less evidence for substantial changes, restorations or redefinition of space in Structure 2. If the same disaster as that postulated for Structure 1 also affected Structure 2, either the impact was cata-

[18] B. Kolb, *Nabataean Private Architecture*, in K.D. Politis (ed.), *The World of the Nabataeans*, International Conference "The World of the Herods and the Nabataeans" held at the British Museum, 17-19 April 2001, Stuttgart 2007, 167-168.

[19] See K. Vössing, *Mensa regia. Das Bankett beim hellenistischen König und beim römischen Kaiser*, München-Leipzig 2004, 101-102.

FIG. 5. The Blue Chapel featuring granite columns. The NEPP site is located in the background, in the straight line from the two right-hand columns. Photo by Z.T. Fiema

strophic and the building was never restored, or, less likely, the building was restored with a minimum of structural and decorative changes.

Structure 3 – a narrow very long, two-level building, situated along the Wadi Musa in the south part of the NEPP area, and constructed on massive substructures. A long gangway is located on the higher, backside, part of the structure, and a colonnaded hall opening towards the Wadi Musa, on the lower foreground. Evidently, Structure 3 was a monumental façade for the east part of the NEPP area, facing the Wadi Musa depression, where the main communication axis of the ancient city was located. This again confirms the interpretation of the NEPP area as being the site of a large complex of interrelated buildings and installations, which displays a strong monumental and representative character.

The Post-Annexation Period

If the area under discussion was indeed *basileia* of the Nabataean kings, this proposition carries some interesting considerations. One would expect that the area retained its official function and might have been occupied as a temporary residence by the Roman governor in the post-annexation period.[20] Secondly, there are also some indications as for the end of occupation in the area and the reasons behind it. Such hypothesis, however, is highly speculative because based only on the surface finds and as such will have to be confirmed or disproved by the forthcoming excavations. It is rather symptomatic that the surface sherding yielded ceramics overwhelmingly dated to the 1st through the 3rd century A.D. with only occasional 4th century material. Structure 1 also provided the latest datable material, perhaps dated slightly later than the 4th century. Thus generally, the site did not provide Byzantine material, in contrast with other areas in Petra where Byzantine surface ceramics are usually well-attested. It might, therefore, be suggested that the entire area suffered a massive destruction sometime in the 4th century and the 363 earthquake would be the best candidate considering the wholesale destruction of monumental buildings all around the city, as associated with that disaster.

Structure 2 does not show any substantial evidence of rebuilding or remodelling. The collapsed architectural elements are consistently located in areas where they should be expected considering their probable original position. This is definitely not the case of Structure 1 where many elements are found in areas not compatible with the extant plan of the building, indicating their reuse. It is thus probable that the building was also destroyed by the 363 earthquake, but later restored although in much altered form and appearance, as postulated above. The final destruction and abandonment of Structure 1 would presumably have happened soon

[20] For discussion, see Z.T. Fiema, *Roman Petra (A.D. 106–363). A Neglected Subject,* ZDPV 119, 1, 2003, 39-43. Also, T. Gagos, *New Inscriptional Evidence and Petra's Role in the Province of Arabia*, JRA 22, 2009, 389.

Fig. 6. Structure 1. The interior featuring a collapsed granite column. In the background: the Petra Church (left) and the Blue Chapel (centre). Photo by Z.T. Fiema

afterwards, perhaps sometime in the early 5th century. The earthquake of 419 was postulated to ruin ez Zantur I and effectively end the ancient occupation on that southern hill of the Petra Valley.[21] Perhaps that otherwise poorly attested earthquake was also responsible for the final destruction of Structure 1.

Therefore, Structure 1 appears no longer occupied by the end of the 5th century or even earlier. On the nearby hill, across Wadi Matahah, an elegant ecclesiastical edifice, so-called Blue Chapel, was built between the Petra Church and the Ridge Church. The chapel, roughly dated to the 5th-6th century, features monolithic columns made of bluish Egyptian granite.[22] The only other place in Petra where one of such granite column is still visible, is the eastern of the two main rooms in Structure 1. Presumably, that structure in its early phase featured such supports which were at least partially retained in the post-363 reconstruction of the building. However, once the structure was again destroyed and abandoned, its ruins conveniently provided quantities of good quality construction and decoration material. In fact, the excavations of the Blue Chapel have yielded numerous decorative blocks (cornices, architraves, pilasters etc.), which were reused there most often as simple stone blocks. Some of these were measured and stylistically compared with elements from Structure 1 and were found to be identical.

The existence of a family of prosperous landowners with wide economic contacts and possessions, was documented in Petra Papyri discovered in 1993. The papyri confirm the continuity of urban life and the existence of local government officials, at least up to the end of the 6th century. But this image is highly selective. In fact, the well-being of some of Petra's citizens does not necessarily imply the prosperity of the city. By the end of the 5th century, some of the main public buildings lay in ruins and large areas of the city, especially in the southern part, were already abandoned.[23] If the hypothesis presented above can at least temporarily be accepted, this image of abandonment, decay and deterioration in urban standards can now be supplemented by the evidence from the northeastern part of the city. Undoubtedly the earthquake of 363 was instrumental, yet rather than being the cause, it was probably a catalyst for local socio-economic trends and constraints, which must have preceded the Byzantine period in Petra.

University of Helsinki
zbigniew.fiema@helsinki.fi

Humboldt Universität zu Berlin
stephan.g.schmid@culture.hu-berlin.de

[21] See Note 3. Also B. Kolb - R.A. Stucky, *Preliminary Report of the Swiss-Liechtenstein Excavations at ez-Zantur in Petra 1992. The Fourth Campaign*, «Annual of the Department of Antiquities of Jordan» 37, 1993, 422.

[22] P.M. Bikai - M. Perry, *Petra: Blue Chapel complex*, ACOR Newsletter, 12, 1, 2000, 1-2.

[23] For Petra in the 6th century and the Petra Papyri, see Z.T. Fiema, *Late-antique Petra and its Hinterland: Recent Research and New Interpretations*, in J. Humphrey (Ed.), *The Roman and Byzantine Near East*, III (Journal of Roman Archaeology Suppl. Series, 49), Portsmouth 2002, 191-252.

Abstract

The article reviews the results of the Northeastern Petra Survey Project (NEPP) which, since 2011, investigates the large, palatial complex located on the hill overlooking the ancient city of Petra in southern Jordan. The isolated, strategic, location, the monumentalism of architecture, and the wealth of architectural decoration elements at the site indicate that the complex, dated to the 1st century A.D., might have been the *basileia* of the Nabataean kings. Furthermore, it is probable that the archaeological investigations at the site may also shed more light on the post-annexation history of Petra. In particular, the article presents a hypothesis concerning the impact of the earthquake of May 19, 363 on the history of the architectural complex and the city of Petra in late antiquity.

Key-words: Petra, Nabataean, *basileia*, A.D. 363 earthquake, palace