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MONKS ACROSS THE DESERT. HERMITIC LIFE IN CHRISTIAN PETRA

Abstract: A new interpretation of the pre-Crusader phase of the site follows from the identification of a pre-Crusader rock-cut chapel. In particular, in early mediaeval time, a monastic community at al-Wu'ayra and a number of hermitic cells surrounding a central fortified coenobium preceded the later military castle keep.

The Crusaders profited by the presence of a Christian fortified settlement, easy to transform into a military installation by a simple addition of a number of buildings, which are identifiable by a chrono-typology of building techniques.

The new program of research which started in 2017 aims at registering, surveying, and studying various hermitic installations around the perimeter of the town in order to contextualize this early medieval phase of al-Wu'ayra in the topography of Petra and contribute to the knowledge of a 'minor' and underestimated aspect of the town in early Christian time. In fact, these monastic-hermitic settlements located in segregated spots of the peri-urban area, surviving the abandonment of the major churches of the town, can help to understand in a more realistic way the articulated forms of Christian presence and its duration until the late 19th century.

Keywords: Petra; Christian period; hermitages; survey

In 2011, the archaeological research at the site of al-Wu'ayra was extended to the area surrounding the Crusader castle keep in order to gain a more comprehensive knowledge of the site. The analysis started with

a non-destructive archaeological reading program as the most appropriate methodology due to the remarkably abundant archaeological data consisting in a variety of rock-cut structures (stairways, platforms, cavities and chambers, benches, niches, and series of postholes).¹ Among the hundreds of Topographic Units mapped, surveyed, and registered so far,² Topographic Unit 126 appeared as crucial for a new interpretation of early medieval al-Wu'ayra. Furthermore, it also helps to explain what the Crusaders actually found at the site and probably the reason why they installed there.

Written sources apart, the knowledge of the topography of Christian Petra mainly relies on data coming from specific archaeological projects on monumental churches—for instance the one dedicated to the Virgin Mary (or Petra church), the Blue Chapel, the Ridge church and the Saint Aaron monastery—which rapidly and widely enhanced our knowledge on the subject (Pl. 1: 1). On the other hand, less or no attention has been paid to ‘minor’ elements, which nonetheless may contribute to the knowledge of Christian Petra. In fact, being closer to local village communities, these components actually played a very significant role in the continuity of Christianity. In a wider chronological perspective, they survived the abandonment of the main churches, extending the presence of Christianity in the area through late Medieval time until the late 19th century. Moreover, this presence probably helps to explain the settling strategies of the Crusaders in the early 12th century.

The ongoing research intends to study this subject profiting by Light Archaeology, a methodology which turns to be particularly suitable to this specific task.

The rock-cut chapel of al-Wu'ayra

As already noted, the starting point of the research was provided by a new archaeological analysis of the so called “Nabataean rock-cut chamber,” as TU 126 was conventionally called. It is an important point in the history of the archaeological study of the site, being one of the first areas to be investigated, just some months before the Medieval Petra Mission of

¹ On the application of Light Archaeology at al-Wu'ayra, see Vanni Desideri, Vannini 20116.

² The field research at al-Wu'ayra and the thematic survey on hermitic settlements in area of Petra is conducted by the authors within the program of the Medieval Petra Archaeological Mission by the University of Florence (SAGAS Department). In particular, the research at the Hermitage profits from the collaboration of Arabic epigraphist Julia Maczuga (University of Bonn).

the University of Florence started their work. The aim of stratigraphic sondages performed by R. Brown in 1987 (277-278, fig. 7) was to collect more precise data on the Crusader-Ayyubid phase of al-Wu'ayra and the corresponding material culture, never investigated by archaeologists before.

The man-made cavity is located in a marginal position at the very end of a sandstone ridge, around 25m beyond the southern ditch of the castle keep, and it is naturally isolated by steep slopes on every side except to the north. The analysis started from surveying the structure by photogrammetry and laser scanning³ followed by mapping of plaster fragments still preserved *in situ*. These new data, together with those already gathered by Brown, allow a new interpretation of the artificial cavity as a rock-cut chapel, even if its origin from an earlier structure could not be excluded.

The cavity has an approximately square plan (the aisle is about 7,50m large and the reconstructed longitudinal W-E axis is around 8,50m) with the entrance located on the north side. Although only the northern portion of the presbytery survives with a rectangular niche, due to an old rock collapse, we can propose a reconstruction of its setting on the basis of the survey of traces and fragments of the hard and thick plaster, which used to cover the walls completely (Pl. 1: 2). The presbytery, canonically oriented towards the east, is composed of a shallow apse flanked by two rectangular niches included under an arch whose springers are still preserved in the north and south corners (Pl. 2: 1). According to this interpretation, the square hollow filled with plaster (mortar?) that was found in 1987 (Brown 1987) could be seen as a slot for an architectural element of the presbytery, for instance a pillar of a chancel screen. On the southern wall, just outside the presbytery to the right hand, one oval niche about 30x100x170cm, once covered by the same kind of plaster, is still visible, and a poorly preserved second one was probably located in front of it on the north wall. The entrance to the chapel was originally from the only possible way to the north, while the secondary opening on the west wall is an accommodation in order to link the nearby dry-stone dwelling TU 146 to TU 126 within the context of a wider Late Islamic village.⁴

During the research, a particular sandstone element was recovered among a heap of stones collapsed from a house of this village (TU 150),

³ The laser scanning was performed by R. Gabrielli (CNR-ITABC, Rome).

⁴ The Late Islamic chronology of the latest phase of this village has been ascertained during the excavation in TU 115, thanks to a small pottery assemblage including a fragment of an Ottoman tobacco pipe (Vanni Desideri, Sassu 2014, 99, fig. 5).

around 10m to the west of the rupestrian chapel. It consists of the leg of a seat, sculptured in the shape of two ram or sheep paws, evidently belonging to the furniture of the chapel (Pl. 2: 2). The dating of this *unicum* is very difficult at the moment because no comparison has been found in Transjordan among the extremely rare pieces of church furniture. A possible way for the study to progress is to compare the leg with objects illustrated in mosaic floors, at least in order to find potential similarities of representation in search for a possible chronological and cultural milieu. As to the purpose of this piece, it is only possible to suggest that the sculptured seat could have been located in the southern niche to the right of the chancel, meant for hosting the officiant. The symbolic meaning of the goat/sheep paws must obviously be rooted in biblical episodes where these animals appear as sacrificial offerings or even in a direct reference to Jesus Christ as the Lamb of God.

The chronology of the chapel is still to be ascertained by stratigraphic sondages, but the insignificant archaeological deposit (noted as early as Brown 1987) makes this perspective unrealistic. Anyway, the flattening of the top of the surviving portion of the presbytery arch reveals it underwent some modifications during the 12th century, an inference supported by further observations. Arch elements found in the chapel show a stone dressing technique and tool marks characteristic of Crusaders' architectural decoration, as in the mouldings of the apse of the upper church and in the angular capitals of the west tower. In addition, among these architectural pieces recovered in TU 126, Brown identified an unfortunately lost, but significant keystone of the same material and processing technique on which a cross over a double spiral was engraved (Brown 1988, 42). All these clues point towards a modification of the chapel during the Crusader time, most probably intended for supporting a new upper floor for defensive purposes.

The topography of Early Medieval al-Wu'ayra

The identification of the chapel at al-Wu'ayra leads to a new interpretation of the topography of the site and to a revision of its chronological phases. From this latter point of view, the location of the chapel beyond the southern ditch is incongruous with the Crusader castle as it is the case of a possible hermitic cell (TU85) dug into the counterscarp of the same ditch. Therefore, we can infer that the chapel, the cell, and the ditch are pre-Crusader.

The topography of the site included two main elements: a central settlement to be interpreted as a *coenobium* provided with defensive structures (ditches, curtain walls, and a fortified gate) surrounded by

an area of scattered hermitic cells and a chapel, as a liturgical reference point (Pl. 3). At the moment, the inner organization of the *coenobium* is very difficult to read because of the modifications introduced by Crusaders and later dwellers in the Late Islamic time, however, some structures can be indicated. The lower part of the curtain wall flanking the gate is certainly pre-Crusader as is the southern cistern, too, whose plaster technique with pottery sherds inset is common in Byzantine Jordan (Bianchi, forthcoming). The main unsolved problem is the presence of the church which can possibly be located close to or underneath the later Crusader church, which obviously caused major modifications.

Moreover, the pathways net, leading independently to two different parts of the monastery, seems to be planned according to such a topography. From the common entrance gate, a pathway to the right (north) enters the central *coenobium* and another one to the left (south-west) leads to the rupestrian chapel and dispersed cells. While such a topographic conformation shows analogies mostly with monasteries of Palestine and in particular with those of the Judean Desert, we have few parallels in Transjordan at the moment. Hermitic cells are dispersed around the monastery of Lot (Politis 2012) and scattered in the landscape surrounding the memorial of Moses on Mount Nebo (Bianchi, forthcoming), but the case of al-Wu'ayra seems to be closer to Palestinian examples mainly because the cells are included in and protected by a defensive structure with only one gate (Hirschfeld 1990). The particular significance of the chapel seems to be highlighted by the rock-cut pathway leading to it but also by the fact that at least five small artificial cavities, most probably hermit dwelling units, have been purposely carved into the rock as close as possible to the small church.

In addition, further five cells, mostly accommodating earlier structures (Vanni Desideri, forthcoming), are located at the west and north limits of the site composing a kind of *laura*.

The topography of the monastic settlement is completed by a singular hydraulic mechanism, identified during the 2016 campaign and located between the entrance gate and the Beidha-Wadi Musa road. Basically, it consists of two basins, obtained by blocking natural depressions and meant at collecting water through a net of rock-cut channels from a torrent flowing from the east. Abduction channels run from these cisterns in two different directions: one to another cistern located in front of the gate and the other to a kind of square pit, about 10m high, excavated into the rocky edge of Wadi al-Wu'ayra with a vertical opening running from top to bottom. The only plausible hypothetical interpretation of this hydraulic

mechanism suggests a cableway meant at transporting items into the settlement across the deep wadi al-Wu'ayra circumventing the access gate. No archaeological comparison is available for this kind of device, but water counterweight mechanisms are known in antiquity (for instance, Heron) and the Renaissance. The hypothetic operating sequence has been partially reconstructed on the basis of the accurate survey of the remains (Pl. 4). Power was supplied by water stored in the double reservoir (Vanni Desideri, Vannini, Leporatti and Rose, forthcoming), flowing through a channel to the rock-cut pit uploading a counterweight made of soft material (leather?). The counterweight started then to slide down inside the pit and, thanks to cables and pulleys, transported heavy/voluminous materials across the wadi and into the monastic settlement. At the end of the operation, when the counterweight reached the bottom of the pit, a cam caused an automatic downloading of the water; the empty counterweight would then return to the starting position and the mechanism was ready to operate again. The mechanism should have been very precisely planned and built in order to fulfil its purpose: in particular, the stroke of the counterweight being *c.* 10m and the distance to be covered by the cableway *c.* 50m, a differential was needed. The simplest solution of the problem would have been a winch with two different diameters with a 1:5 ratio. Due to its external position, the mechanism should have been operated only from outside the settlement.

Concerning the dating of this phase, although we lack direct archaeological information, a late antique/early medieval horizon can be suggested, mainly on the basis of residual Byzantine pottery sherds recovered in Middle and Late Islamic layers at the site (Tonghini, Vanni Desideri 1998). The location of the monastic settlement along the road linking Beidha and Wadi Musa is not surprising due to necessary relations with the latter village and likewise because churches and monasteries also played the role of hospitals for the local sick as well as travelers or pilgrims, as indicated in papyrus 6a (column VI, line 94) from the church of the Virgin Mary (Petra church), which mentions a hospital of Saint Cyricus in Petra in 573 AD (Frosen 2018).

As a direct consequence of this interpretation, together with the distribution of masonry types characteristic of the Crusader phase, 12th-century additions to extant buildings can be recognized more precisely. In particular, the defensive apparatus was strengthened by adding two towers to the west and the north-east limit of the castle. They were built up taking advantage of previous building material, as is demonstrated by the keystone with a Greek cross incongruently placed in the left jamb of the arrow slit in north-east tower (Vanni Desideri, Sassu 2014, 101; Leporatti, Vanni

Desideri 2020, 60). To the north, a curtain wall provided with a double row of arrow slits faced the road from Beidha to Wadi Musa. The church was also built up at that time, most probably replacing an earlier one, unidentified as yet.

Survey of hermitic settlements of Petra

The identification of a monastic settlement at al-Wu'ayra subsequently pointed out the need for a better contextualization into the hermitic landscape of Christian Petra within the wider panorama already traced for Transjordan (Politis 2001; Hamarneh 2012; Hamarneh 2014). A new research started in 2017 in order to survey and document different hermitic installations around the town (Pl. 1: 1). The following are some examples of the results achieved since then.

To the north of al-Wu'ayra on top of Jebel Urf ad-Dik, a single hermitic complex has been individuated. It consists of a cell dug into a sandstone outcrop, deliberately located near two ancient rock-cut cisterns collecting water from a net of channels (Pl. 5: 1). The cell has an irregular plan with two benches and nowadays is reused by local shepherds to shelter their flocks. On the back wall in front of the entrance, a barely readable cross appears among some badly preserved graffiti. The cell is also provided with a grave dug into the sandstone bedrock nearly in front of the entrance.

A particular concentration of hermitic installations surrounds ed-Deir, whose name directly comes from the presence of a community of monks, testified to also by an epigraph noticed by Johann Ludwig Burckhardt on the entablature of the monumental tomb, which however disappeared as early as 1865 when Giammartino Arconati Visconti visited the monument (Arconati Visconti 1865, 383). Here, the activity of a special research group is mostly focused in prospecting and surveying numerous monumental traces of the presence of monks. It is also the site where their presence lasted longer than elsewhere around Petra. In fact, Albert of Aachen and Foucher de Chartres report the presence of Greek monks around ed-Deir (Runciman 1993, 343, no. 1, 364-365, no. 1), whose epigones were still living there until 1884 (Canova 1954; Piccirillo 1992 quoted by Politis 2001, 589).

The Hermitage is certainly the most interesting complex in this area (Pl. 5: 2). The site was first visited by Lagrange on October 28, 1893 (Lagrange 1897, 228-229) and later on by Brünnow and von Domaszewski (Brünnow and von Domaszewski 1904, 329-330) but the first systematic survey of the epigraphs was only accomplished by Sartre in his corpus

of epigraphic sources of southern Jordan (Sartre 1993, 109-111).

The central part of the scattered hermitic settlement seems to be the one taking advantage of a Nabataean quarry where three artificial cavities, partially integrated by masonry, are the only remains of a more articulated complex (Pl. 6). In fact, in front of these rooms, a series of buildings, probably located around a central courtyard, crowned the artificial terrace formed by the interrupted excavation of the quarry. On the vertical surface of the quarry, in a central position between the three cavities, an arcosolium privileged tomb is carved into the sandstone surrounded by a number of Arabic Christian and Muslim epigraphs (Pl. 7). Topographic Unit H1, the westernmost of the three, is a square room provided with benches along the south, east, and north walls, probably demonstrating its function as a congregation or prayer room. A short tunnel gives access to the central cavity (TU H2), most probably the chapel of the complex, provided with a seat, an altar niche decorated with red crosses and Christological monograms in Greek, already noticed by Lindner (1989, 104, abb. 58). The easternmost structure (TUH3) is arranged in a partially modified natural rock shelter and shows clear characteristics of a dwelling unit, possibly one of the last to have been inhabited. The survey and the study of the whole complex is still in progress together with the tracing and study of the epigraphic context.

Apart from the first observations by Burckhardt and Arconati Visconti on the Deir and those by Lagrange on the Hermitage, the more systematic surveys by Dalman refer to a “Klausenschlucht” on the way up to the Deir (Dalman 1908, 259-262, abb. 196, nos. 441, 442). It consists of a segregated valley on the south side of the pathway climbing the mountain where a series of Nabataean funerary structures were turned into hermitic cells. A lot of red painted crosses mark the entrance of these recesses and a large panel was engraved with crosses suggesting the presence of a monastery in the type of *laura*.

During the research, there also started a survey of two utilitarian structures certainly connected to the hermitages, in particular those providing water. The lower Qattar ed-Deir is a narrow gorge where rainwater or moisture percolating from the top of the mountain drips from a particular rock interface (Pl. 8: 1). The site was arranged in Nabataean time, provided with idol niches and a triclinium and scattered with epigraphs above a series of rock-cut basins meant at collecting and settling water (Dalman 1908, 252, abb. 192, nos. 430-440). The Christian reutilization of the complex is indicated by some modifications of the water catching system as well as by destruction of some idols and superimposition of crosses. The Christian

phase of the Qattar is more clearly documented by the transformation of a nearby small Nabataean tomb into a hermitic cell, located in a parallel narrower gorge to the north. Several crosses are engraved on the lintel while the back wall and the ceiling show several yellow painted crosses and four slots, probably meant at supporting a wooden cross (Pl. 8: 2).

A smaller Qattar of the same function is located further up the mountain (Pl. 9). As archaeological evidences demonstrate, it was arranged in early Christian time. A large cross is engraved above the system of water collecting basins, which also shows at least two phases of modification. The relations between the two Qattars during Christian time are difficult to determine. It is possible that they were intended as water supplies for two different hermitic installations, but a possible connection with two different climatic phases affecting the availability of water cannot be excluded. In this case, the later upper Qattar could have been an attempt at solving a potential water shortage in the lower Qattar, trying to intercept the nappe at a higher level.

The ongoing research is intended to throw light on a particular aspect of Christian Petra, often poorly examined by archaeologists. In spite of the poor solidity of the remains, it has been the longest-lasting Christian presence, which survived the abandonment of the main churches of the town. The last hermits are documented there at the end of the 19th century, hence the popular toponym of Qubūr al-Mugāta' given to their burial place. Possibly, it was because of this residual presence of Christianity that a tribe came to settle nearby, thus originating the toponym of Qnub an-Nazar (Dalman 1908, 300) or Moghar an-Nazara⁵ to their living place.

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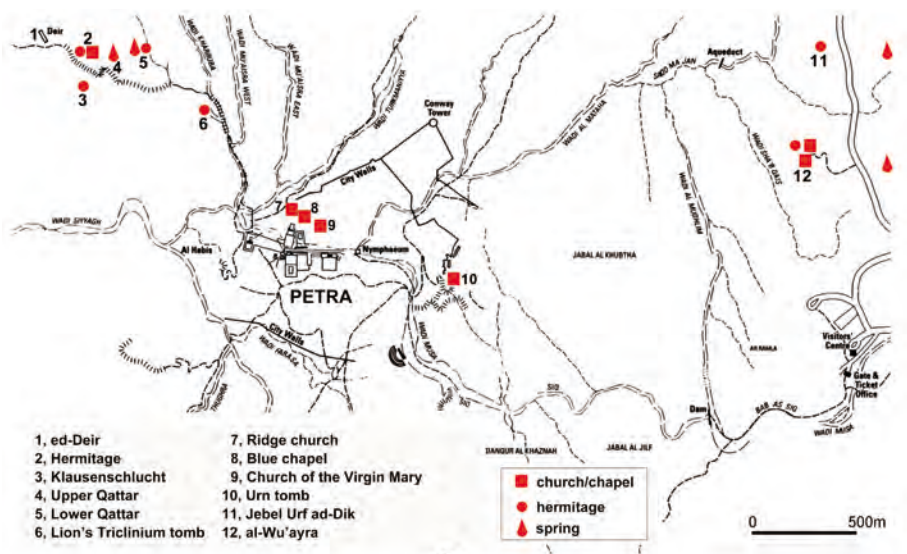
⁵ See Rudolf-Ernst Brünnow and Alfred von Domaszewski Archive 1897-1898 at the Princeton University, retrieved from <https://researchphotographs.princeton.edu/brunnnow-and-domaszewski/>.

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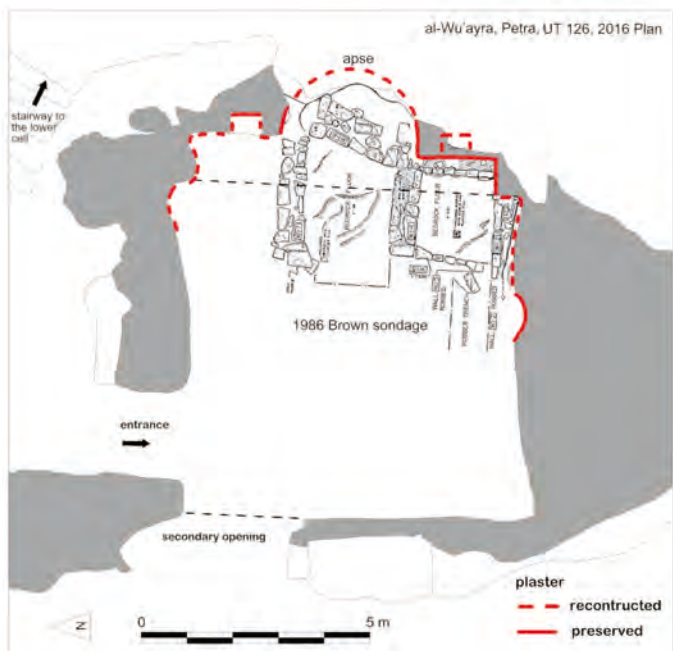
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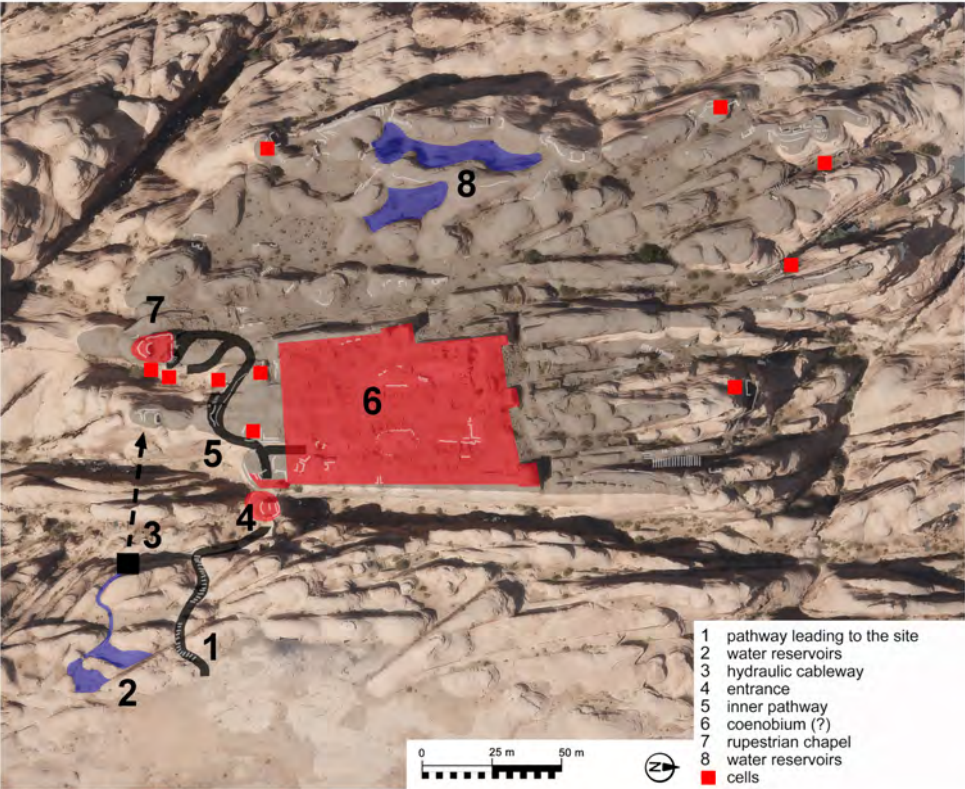
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Pl. 1: 1. Main Christian monuments of Petra and sites quoted in the text. After Schmidt, modified by the authors

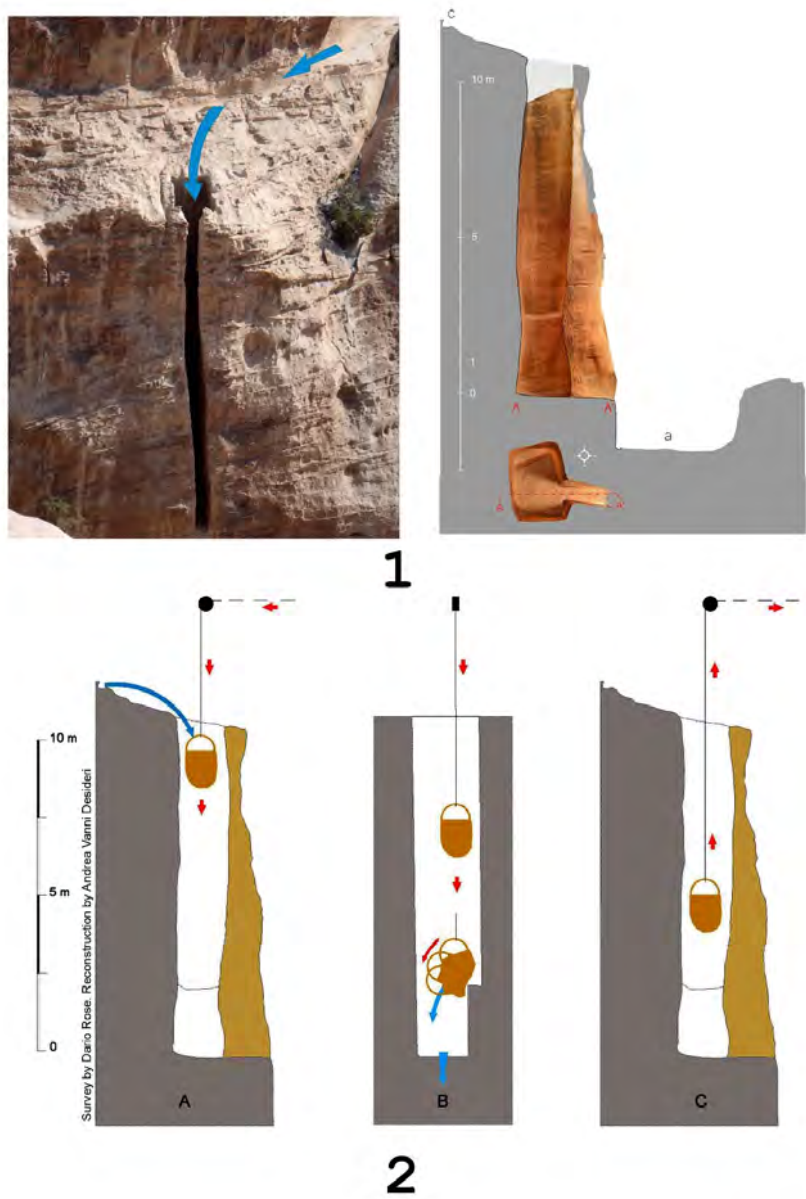
Pl. 1: 2. Plan of the rupestrian church (TU126) with the final plan of Brown’s 1986 sondage and the reconstruction of the apse by the authors



Pl. 2: 1. Reconstruction of the apse setting in TU126. Photo and processing by the authors
Pl. 2: 2. Front and lateral view of the sculptured leg of the seat. 3D model by the authors

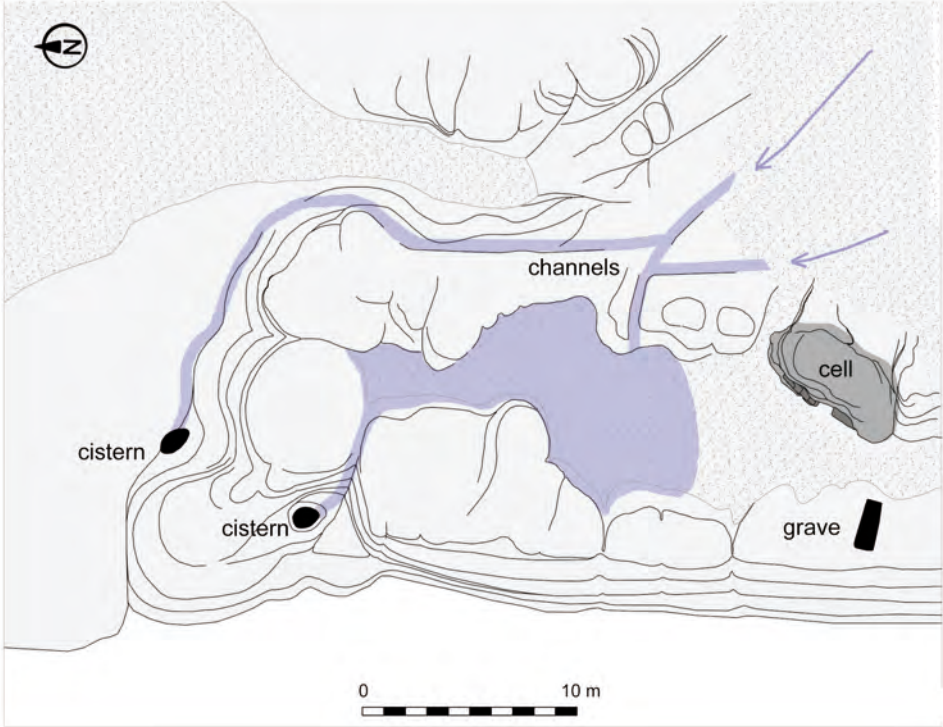


Pl. 3. Updated topographic setting of al-Wu'ayra in early medieval time. 3D model based on photos kindly provided by APAAME (APAAME_20171001_REB-0599-0613, APAAME_20171001_RHB-0334-0344)



Pl. 4: 1. The rock cut pit. Survey by D. Rose

Pl. 4: 2. Reconstruction of the operating sequence of the hydraulic device by A. Vanni Desideri

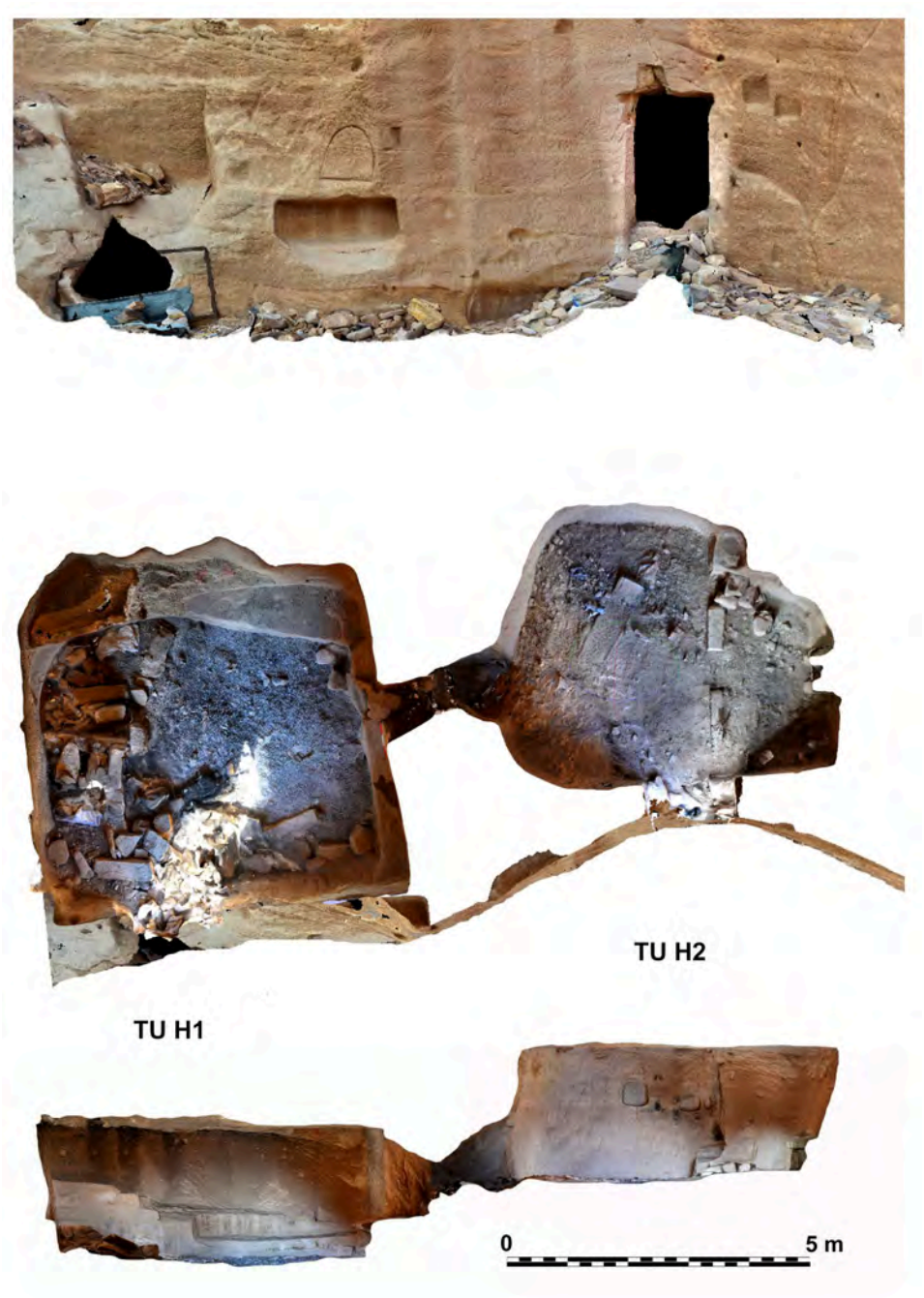


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Pl. 5: 1. Top view of the complex of Jebel Urf ad-Dik. Survey by S. Leporatti
Pl. 5: 2. The Hermitage. photo by A. Vanni Desideri



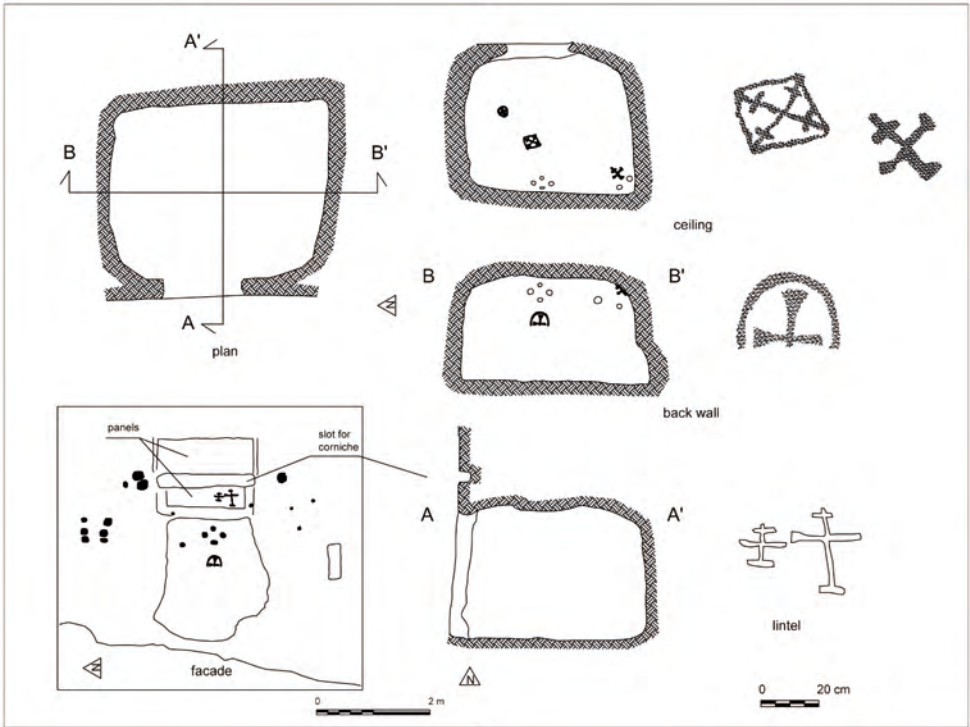
Pl. 6. The Hermitage. Photogrammetric survey of complex TU H1-H2 by the authors



Pl. 7. The Hermitage. Cluster of Arabic Christian and Muslim epigraphs

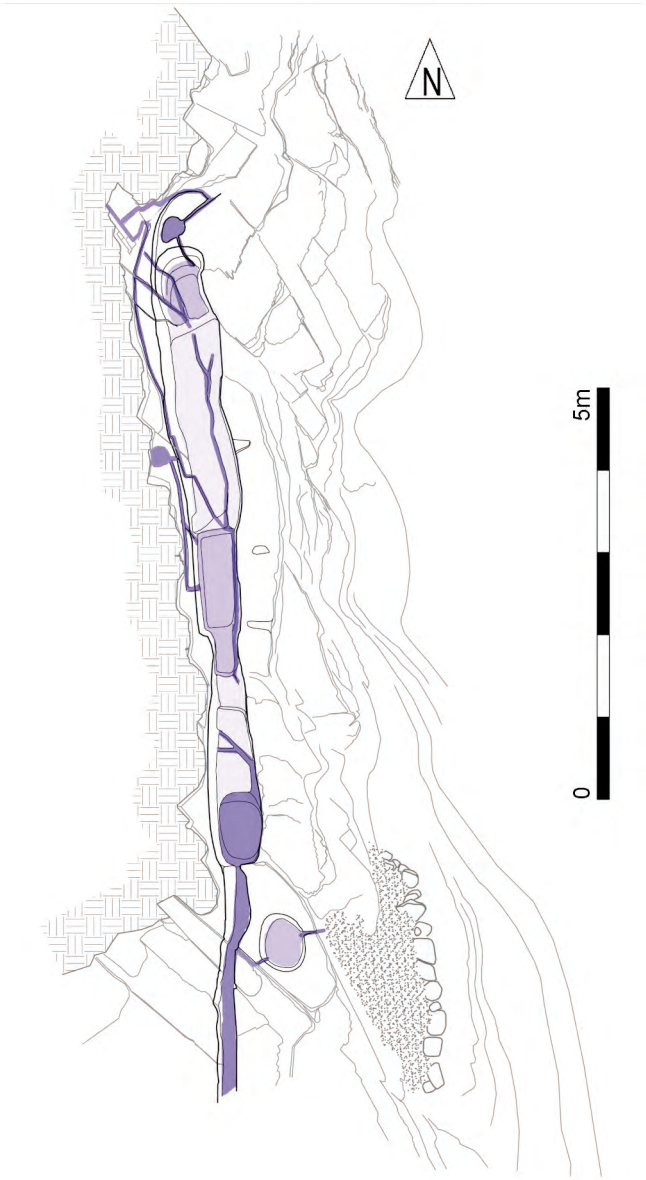


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Pl. 8: 1. Lower Qattar
Pl. 8: 2. Lower Qattar, hermitic cell. Survey by A. Vanni Desideri



Pl. 9. Upper Qattar. Survey by S. Leporatti