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A PUBLIC BATH-HOUSE, A CARAVANSERAI AND A LUXURIOUS VILLA IN KHIRBAT ADH-DHARĪḤ (ṬAFĪLAH, JORDAN): REPORT ON THE 2013 EXCAVATION SEASON

Caroline Durand, Zeidoun al-Muheisen, Pauline Piraud-Fournet, Laurent Tholbecq

Introduction

A new excavation campaign was carried out in DharīḤ between the 18th and the 30th of May 2013, on behalf of the French-Jordanian Archaeological Mission of Khirbat adh-DharīḤ (dir. Profs. Zeidoun al-Muheisen - Yarmouk University, and François Villeneuve - University Paris Panthéon Sorbonne)¹. Three operations were undertaken on different buildings, in order to complement the previous excavations (**Fig. 1**). Soundings and cleaning were undertaken by P. Piraud-Fournet in the northern house of village V1, which is the largest domestic building of the site, in order to determine its phasing and chronology. At the same time, work was carried out in Area A, about 150 m south of the sanctuary's southern entrance (second court), on both a Nabataean/Roman *mansio* (L. Tholbecq) and the associated public baths (C. Durand).

House V1. New Discoveries: a Stable, a Bathtub and some Elements of Dating (P. Piraud-Fournet)

Around twenty domestic buildings were found in DharīḤ, on the hill overlooking the Nabataean-Roman sanctuary. House V1, excavated between 1984 and 1996² is the largest, and has the most interesting features (**Fig. 2**; al-Muheisen and Villeneuve 2000; Villeneuve

and al-Muheisen 2008). In 2007, the plan of the house was updated and, together with a review of its architecture, new clues came to light (al-Muheisen and Piraud-Fournet 2013). The finds from the excavations, which are currently being studied, suggest that the house was founded between the 1st and 2nd centuries AD, while the material from the destruction/abandonment layers is no later than the 4th century (al-Muheisen and Villeneuve 2000). The 2013 season was short, with specific goals. First, it was necessary to highlight the troughs between rooms D and E, by cleaning and replacing several fallen blocks to their original position. We needed to understand the original layout in room L, which may be a bathtub, better. Finally, soundings were conducted in the northern and southern parts of the house, in order to date their construction precisely.

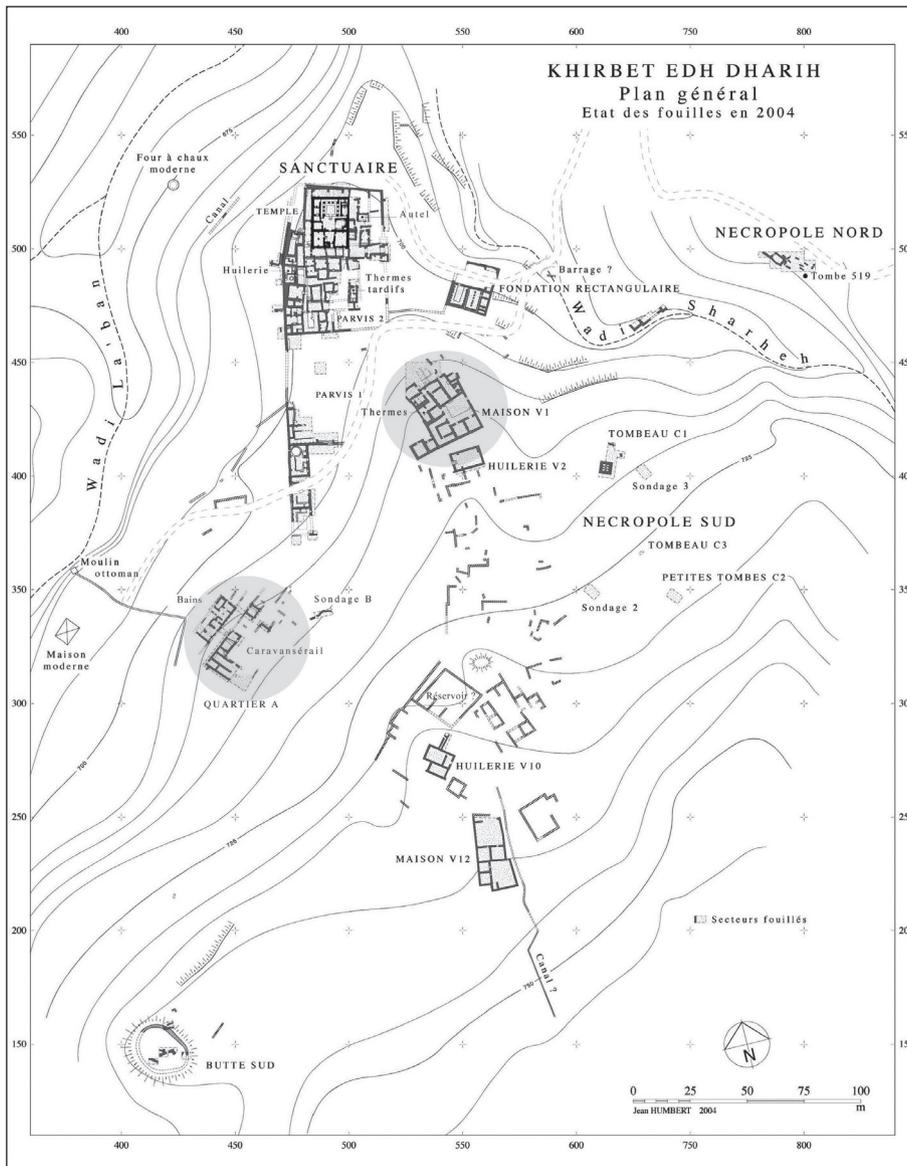
Description of House V1

House V1, on the northern slope of the hill, is a compact block covering a surface of at least 900 m², and is comprised of three adjoining sections with two courtyards. The southern part of the house is organised around a trapezoidal courtyard (A, 118 m²). The only known entrance is located on the east side of this courtyard. To the south, the platform provides access to two paved rooms, (B and C). To the west, it provides

1. We would like to warmly thank François Villeneuve and Zeidoun al-Muheisen, who allowed us to undertake this mission, for their help and support. The team consisted of six people: Pauline Piraud-Fournet (IFPO), architect and archaeologist, Laurent Tholbecq (ULB), archaeologist, Caroline Durand (IFPO), archaeologist and ceramicist, Moussa Ali Moussa Serbel, technician and restorer (Yarmouk University) and Gabriel Humbert, logistics. The Department of Antiquities was represented by Aimad al-Drou (DoA, Tafila). This campaign

was funded by the University Paris Sorbonne and the CNRS, with logistical support from IFPO Amman. Many thanks are also due to Thibaud Fournet (CNRS-IFPO), for his help and suggestions about the private and public bath installations of DharīḤ.

2. In 1984, François Villeneuve excavated Room G; the rest of the structure was excavated by Zeidoun al-Muheisen and his team between 1992 and 1996.

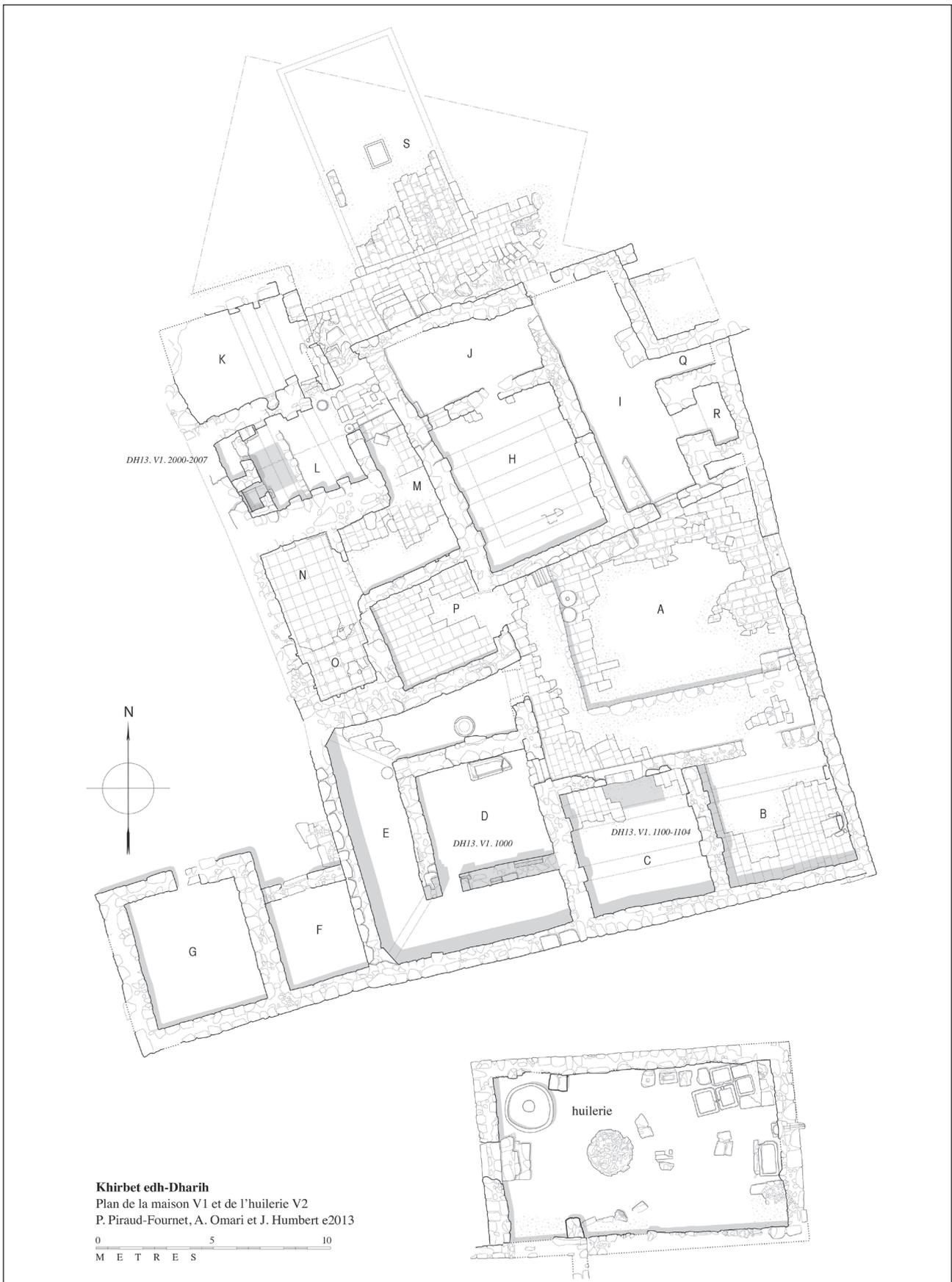


1. General map of Khirbat ad-Dharīh, illustrating areas investigated during the 2013 season (© J. Humbert 2004).

access, via two doors, to a central room (D), which is surrounded on three sides by a wide U-shaped corridor €. The northern section is different in its orientation and its installations. It is aligned 13.5° further to the west, and one of the most interesting installations in this part is a large paved courtyard, or esplanade (S) in front of the northern face of the vestibule (J). This esplanade has a dominant position and a panoramic view over Wādī al-La‘bān and the hills of Wādī al-Ḥasā, as well as over the sanctuary, about a hundred metres lower down.

The western part of the house complex consists of six rooms. Two adjoining rooms to the north (K and L); one long, paved, L-shaped corridor (M) and two other, contiguous rooms (N and O); and a small, square, paved room

(P). Rooms (N and O) form one room, with the imprint of a robbed clay tile floor still visible. This room has a kind of alcove, which becomes wider in its façade, with a T-shaped plan. The interior faces of the western and southern walls are cut by five vertical channels, characteristic of rooms heated by hypocausts. The underground part was well preserved until 2012, with the low surrounding walls of brick and the remains of twenty *pilae* stacks of fired clay, which carried the *suspensura* of fired clay slabs, still *in situ*. However, it has recently been completely destroyed. Several more or less contemporary houses, such as a beautiful villa at Wadi Musa and the az-Zantur houses in Petra (EZ III and EZ IV), also have heated rooms of this type, some of which have been interpreted



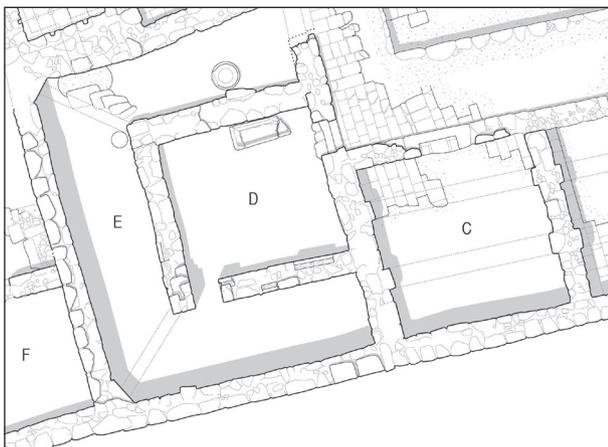
2. Plan of House V1. Grey sections indicate areas investigated during the 2013 season (© P. P.-F. 2013).

as private baths (Nehmé and Villeneuve 1999: 62-71; Kolb 2000; Kolb and Keller 2001: 319).

Field Operations in 2013

Cleaning and Restoration in Rooms (D) and (E) – A Room with Troughs

Rooms (D) and (E) present an unusual organization; a central room surrounded on three sides by narrow corridors, with the walls separating the central room and the corridor pierced by troughs (**Fig. 3**). This configuration is usually found in southern Syrian houses of the Roman and Byzantine eras (Clauss-Balty 2008: 62-70; Bodo and Clauss-Balty 2009). In the late 19th-early 20th centuries, Melchior de Vogüé (Vogüé 1865) and Howard Butler (Butler 1914) interpreted these facilities as mangers for animals (horses or cows), with the feed stored in the central room while the animals were kept in the corridors. Since then, many such stables have been identified in domestic contexts in Syria (for example Clauss-Balty 2010); in the Negev, in Mampsis, Oboda and Sobata (Negev 1988 and 1981); in the Jowlan (or Golan; Al-Halabi 2012), etc³. The cleaning of the best-preserved wall in House V1, between (D) and (E), supports this hypothesis. One bevelled block (D1), inward sloping, was still in place 1.10 m above the ground-level (the correct height for animals). Three other stones with a similar shape had fallen to the floor, two on the northern side (D2 and D3) and one on the southern (E4). The wall has been consolidated with cement mortar, and many blocks have been reconstructed in their original placement



3. Rooms (C) and (D-E) (© P. P.-F. 2013).

3. An international conference, held in Paris in May 2015, presented studies and hypotheses regarding ancient buildings or

(**Figs. 4 - 5**).

The first interpretation is that these were feeding troughs for domestic animals. Nevertheless, access to rooms (D) and (E) may have been difficult for animals, due to their position in the house, relatively far from the main entrance. Another, less convincing, hypothesis is that these troughs were storage vats for crops or for the precious commodities of the house. In a second construction phase, the troughs were blocked with small stones in mortar and earth, and a plain wall was built to separate the room from the corridors; a door was also built into this wall. The blocks of this door, found on the floor, have also been reconstructed. As a large monolithic trough is still standing in room (D), we suppose that, during this second phase, animals (probably smaller, goats or sheep?) were kept in this room. This type of installation



4. Left, on the wall, the trough blocks (D1), (D2) and (D3). On the right, the trough block (E4) (© P. P.-F. 2013).

rooms with troughs found in North Africa and the Middle East. Concerning Dharrah: see Piraud-Fournet, forthcoming.



5. Overview of the restored southern wall separating rooms (D) and (E) (© P. P.-F. 2013).

has rarely been identified in Jordan. However, other troughs are attested at Dharīḥ, in the *mansio* or caravanserai built along the access way to the sanctuary (see *infra*).

Excavations in Room (C)– Foundation Trench of a Main Wall in the Southern Section

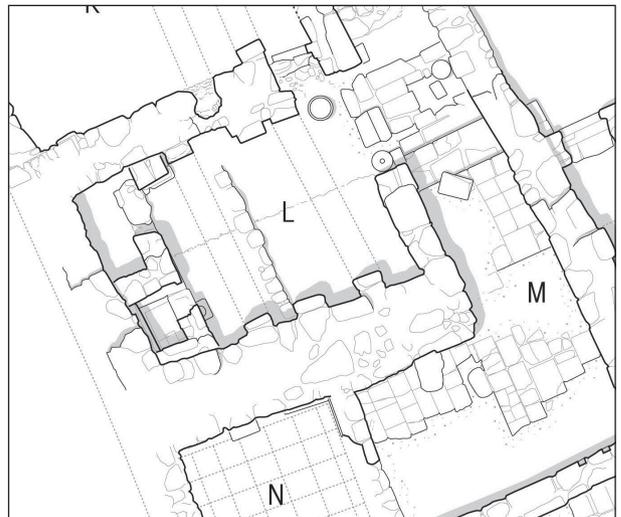
During the 2013 season, a 1 m by 2 m square was opened inside room (C), along the threshold of the door. The aim was to determine the date of construction of this room and the southern part of the house. The paved floor in this area lies directly on the bedrock, or sometimes on a slab formed by small stones (**Fig. 6**). A trench was cut into the bedrock and the foundation of the wall with the threshold was built into it. This foundation is made of rows of stones and stone shards bound by a strong lime mortar. The earth inside the trench did not reveal any pottery, but three small sherds of Nabataean pottery were discovered in the wall foundation, dated from the end of 1st c. to the beginning of the 2nd c. A.D.



6. Excavation of the foundation trench of the front wall of room (C). Discovery of the soleplate (Locus 1101) supporting the pavement (© P. P.-F. 2013).

Excavation in Room (L)– a Possible Bathtub

Room (L) is a small rectangular room, mainly accessible from hallway (M) through a door with a broken threshold (**Fig. 7**). Cleaning of this room has allowed us to complete its description. An interesting installation is located



7. Plan of room (L) (© P. P.-F. 2013).

on the western side of the room. A large stone-niche seems to have been added to an existing room, or was built independently at the same time. A sunken monolithic basin was found in this niche in 1993, accessible by some sort of door in the front wall. Embedded in this wall was a square stone which formed a receptacle with a spout, allowing liquid to flow into the basin. This basin, of slightly trapezoidal shape, measures 0.80 m in length, 0.63 m to 0.56 m in width, and 0.40 m in depth for the most part. Above the monolithic basin, the inner walls of the structure are constructed of thin, horizontally placed sandstone slabs, embedded in a layer of mortar. None of the previous assumptions regarding this niche appear to be convincing; fortunately, the 2013 season provided new information. The southern part of the basin is cut so as to form a seat flanked by two small inclined ramps (Fig. 8). An outflow hole was found in the bottom of the basin. In order to understand the direction of the outflow, we opened a sounding of 1.50 m by 3 m in front of the stone niche.

The floor of the room no longer survives. We found only the thick layer of whitewash (thickness: 0.15 m) which supported it, which was based on another layer of earth and small stones. Both covered a layer of compact earth containing a lot of charcoal, animal bones and



8. Sunken monolithic basin inside the niche (© P. P.-F. 2013).

some pottery (all from the end of the 1st to the beginning of 2nd c. A.D.). Under these layers, as we expected, a large channel made of stone-blocks was discovered (Fig. 9). All the *loci* we dug inside this channel yielded, *prima facie*, Nabataean pottery (end of the 1st to the beginning of 2nd c. A.D.). We also sampled the ashy layer for future archaeobotanical studies. Since the liquid from the basin was removed by means of a wide channel, it is tempting to describe it as a bathtub. The bather entered the niche at the front, settled on the small seat and washed. It is possible that the drain was clogged and his body was partially submerged in the basin, or that the user washed himself with water flowing from the spout, which then flowed out through the drain. The two small inclined ramps beside the seat may have been designed to facilitate the water drainage. The channel is surprisingly large considering the small evacuation-hole of the basin (diameter 0.04-0.05 m). It was probably part of the main common sewer under the house, possibly coming from heated rooms



9. The bathtub in the niche and the channel during excavations (© P. P.-F. 2013).

(N) and (O), or from the west, running under the basin of the room (L). Unfortunately, the material under the basin has collapsed, and it is not possible at this time to determine the source of this sewer.

In the Hellenistic world, small individual tubs, most usually “hip-baths”, are well documented in private homes and in public baths, in Egypt (Fournet and Redon 2013) and Palestine (Hoss 2005). It seems that from the end of the 1st c. A.D., hip-baths from the Greek tradition tend to disappear in favor of immersion baths from the Roman tradition. In Jordan, recent works undertaken in Petra, on the top of Umm al-Biyara, uncovered a thermal building with small individual tubs (Schmid and Bienkowski 2011)⁴. These are not equipped with seats, but their walls are made of long slabs, set on their edges and joined with mortar. This building, dated by the excavators to the 1st c. A.D., may be a good parallel for the House V1 bathtub. Another interesting parallel comes from southern Syria, where many dwellings have been explored. Ancient houses from the villages of Amra and Hit (Bodo and Clauss-Balty 2009: 241-242), dated by architectural studies to around the 3rd c. A.D., have a niche in some rooms (approximately 1 m² and 1.80 m height). Some have a small basin inside the niche, while on the door jamb, outside the niche, is a protruding stone with a receptacle and a small conduit passing through the wall. Thanks to this installation, interpreted as a small sink, one can supply water from outside to the small basin inside the niche. This discovery allows us to imagine that, in House V1, a servant discreetly provided water to a person sitting in the bathhouse. If it is indeed a bath, Room (L) could be a bathroom, but we need to confirm this through further exploration.

Conclusion

Elucidating the trough system and discovering a probable small, sophisticated bathtub contribute to our knowledge of ancient

habitation in Jordan. The southern side of this house seems to be a domestic area, with three residential rooms with paved floors and plastered walls, a stable and a large service courtyard with elements specific to domestic activities (kitchen items). On the northern side, we can perhaps recognize a luxurious area with a heated chamber, a possible bathroom, a room which may have stored betyls, a terrace overlooking the main sanctuary and a hypothetical large reception room. These two parts have undergone a transformation, and the first is probably older than the second, although the material collected during excavation does not yield conclusive evidence. The organization of the house and the findings of this season further support the suggestion that it could have belonged to a wealthy owner, perhaps the family who built the sanctuary, administered its possessions or took care of the religious services.

Area A

In 2001 and 2004, soundings were opened in a relatively flat area (alt. *ca.* 710 m) situated between the wadi (alt. 685 m) and the village (735 m), at about 150 meters south-west of the sanctuary (Villeneuve and al-Muheisen 2008, 1504-1506). They revealed the presence of an ancient caravanserai and its associated bath-complex on both sides of a *c.* 4 m wide unpaved way (**Fig. 10**).

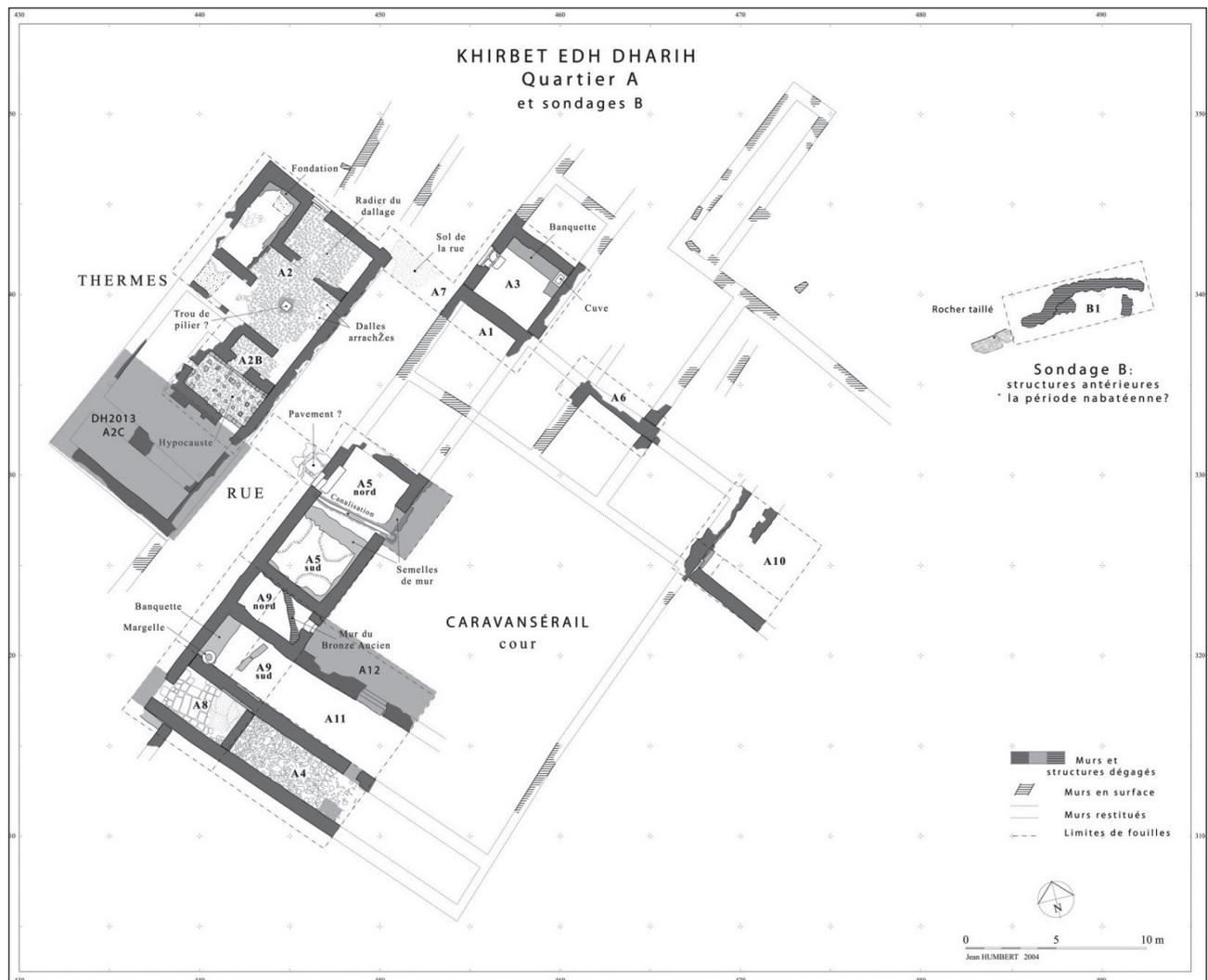
A Roman Mansio (L. Tholbecq)

A *c.* 30 m by 20 m building, organized around a courtyard (*c.* 19 m by 12 m) and surrounded by independent rooms was discovered at Khirbat ad-Dharīḥ during the 2001 season, on the southern access-way to the temple area. It was partly excavated in 2001, 2004 and 2013. The general layout of the building has been defined through several probes, the main work focusing on the south-western rooms of the building (Villeneuve and al-Muheisen 2008: 1504-1506)⁵. The maximum preserved

4. The discoveries of the “International Umm al-Biyara Project” were presented by Piotr Bienkowski at the ICHAJ conference in Berlin in May 2013. See also online reports 2010 (http://www.auac.ch/iubp/season2010/iubp_2010_text03c.html) and 2012 (http://www.auac.ch/iubp/season2012/iubp_2012_text03b.html), Figs. 9 and 11.

5. The excavations were directed jointly by François Villeneuve

and Zeidoun al-Muheisen. Square supervisors were Laurent Tholbecq (Squares DH01-A1, DH01-A3, DH01-A4, DH01-A5North, DH01-A6; DH04-A5South, DH04-A10; DH13-A12); Béatrice and François Villeneuve (DH04-A7), Nural-Dîn al-Saad and Mohammad al-Mearaj (DH04-A4, DH04-A8, DH04-A9, DH04-A11).



10. Plan of Area A. The mansio and the bath-complex. Grey sections indicate areas investigated during the 2013 season (© J. Humbert 2004).

elevation of the rather poorly built walls reaches *c.* 1.50 m. Due to the position of the excavation squares, and despite the opening of a probe on the supposed north-eastern angle of the building (A10), the plan of the complex and the limits of the inner open-air court remain hypothetical. The complex is interpreted as a *mansio*, which housed visitors to the sanctuary, as nothing in its construction method or the finds seem to point towards a military function or occupation of the building.

The building opens on its western side through a *c.* 1.90 m wide gate. So far, this seems to be its only existing access, as no other opening has been identified in the northern (probe A6) and southern walls (probe A4) of the complex (although its eastern limit remains unexplored). This gate connected the path from the neighboring bath-complex (see *infra*) to

a 3.80 m by 8.2 m porch (room A5), which opened on its eastern side by a second gate, accessing an open-air inner court. This western porch was originally divided into two square rooms of equal size by a very poorly built E-W wall, which supported two N-S arches on both sides of the wall. Surprisingly, this internal dividing wall and the eastern wall of the porch sit directly on Iron Age and/or Bronze Age structures (Fig. 11). The floor of the porch is crossed by a roughly built water channel, running from the east (inner court) to the street; its function (sewer?) remains unclear. The connection between this water channel and the baths is not established. On the west, in front of the main gate, the surface of the road has been paved with heavy flagstones (a *c.* 2 m by 1.5 m paved surface). The porch is apparently flanked on the north by two unexcavated rooms. The



11. Iron Age and/or Bronze Age structures located under the *mansio* (© L. T. 2013).

northwestern exterior corner of the caravanserai has been unearthed (probe A1). South of the entrance porch is a 3.7 m by 2 m room open to the inner court (room A9 north).

South of the central inner court, two large parallel rooms were partly excavated in 2004 (rooms A8+A4 on the south, of at least 12 m by 2.5 m; rooms A9 South+A11 on the north, of at least 12 m by *c.* 3 m). This last room, accessed by the northern room through a 2.05 m wide gate with a grooved threshold stone *in situ*, was originally closed by a double door. Due to the existence of V-shaped feeders in the parting wall *c.* 1 m from the floor, they are interpreted as stables, probably used to shelter animals (horses, mules or donkeys; **Fig. 12**). If one considers that this door is centered on the inner court, one can possibly imagine a *c.* 19 m wide room.

This feature is not unparalleled in Jordan. For instance, an early Roman *mansio* excavated in Khirbat as-Samra and connected to the *Via Nova Traiana* exhibits similar patterns, with long rooms reaching *c.* 17.5 m and almost 22 m (Humbert 1993: 92-93, Fig. 40-41). The presence of feeders, together with the absence of exterior buttresses, platforms, ventilation systems or specific storage vessels, exclude here an interpretation of these rooms as granaries or *horrea* (see *e.g.* at Lejjûn, Crawford 2006: 235-240, Fig. 9.; Fig. 3.3).

The possible existence of an eastern row of rooms is suggested by symmetry with the western row (*c.* 5 m wide). In this case, the main entrance gate to the stables would have been centered on the main N-S axis of the building. A 2 m by 2 m probe in the eastern



12. View of the beveled feeders in the “stables?” (© L. T. 2013).

sector of the southern room (A4), opened in 2004, proved that the rough pavement made of boulders was built on a 2/3 cm thick yellowish mortar connected to the foundation of the southern wall. It appears to demonstrate that this pavement was built together with the southern wall of the caravanserai. Due to its mediocre quality, and unlike the other pavements of the complex from both the rooms and the inner court, this rough pavement was not repaired during the Byzantine period.

During the 2013 season, a 7.5 m by 2 m square was opened north of room A11 (open space A12). The aim was to have a better understanding of the inner court partly identified by the probe opened in 2004 east of the main porch. Surprisingly enough, no tumble or destruction of the upper elevation of the walls was discovered in the eastern half of the probe. This leads us to the conclusion that some of the building material was looted in this area, unlike the western side of the court, where the tumble of building material was found. The excavation

uncovered the base of a pavement, which was probably looted during the Byzantine period. We reached a similar conclusion in 2004 from the opening of the probe east of A5, where dumped ceramic material from the late 1st c. A.D. was found to be connected to this base (see *infra*). There is so far no evidence of any inner portico. The excavation of the building is indeed rather frustrating, as part of the construction material was looted both after, and seemingly before, the destruction of the building. In the exposed rooms, the destruction debris/tumble covered what is interpreted as the base elevation of the pavements, of which no single element has so far been found *in situ*. The date of the building can be established from several converging chronological clues delivered by independent *loci*. The earliest data connected to the building's use dates from the end of the 1st or the beginning of the 2nd century AD (Fig. 13). When identified, occupation levels can be dated to the 2nd and 3rd centuries. Ceramic finds associated with the destruction levels are dated to the late 3rd or early 4th c. AD.

Several shops were built along the road. Room A3 (3.70 m by 3.70 m) abuts the northwestern angle from the caravanserai, and Room A8 was opened during a secondary stage in the south-western angle of the building, reducing the original length of Room 11.

Looking for general comparisons, in addition to the *mansio* of Kh. as-Samra, one could point to several settlements identified through surveys and excavations as Nabataeo-Roman caravanserais built along the Petra-Gaza road; e.g. in Mo'a, Sha'ar Ramon/Qaṣr al Mahale and Oboda (Cohen 1992: 1135-1145; Erickson-Gini 2010: 17-24). As far as one can tell, Qaṣr at-Tayyiba, in the Wādī Arabah, seems typologically and chronologically close to our building (Smith *et al.* 1997: 62-63; Smith 2010: 36-37).

A Public Bath-Complex (C. Durand)

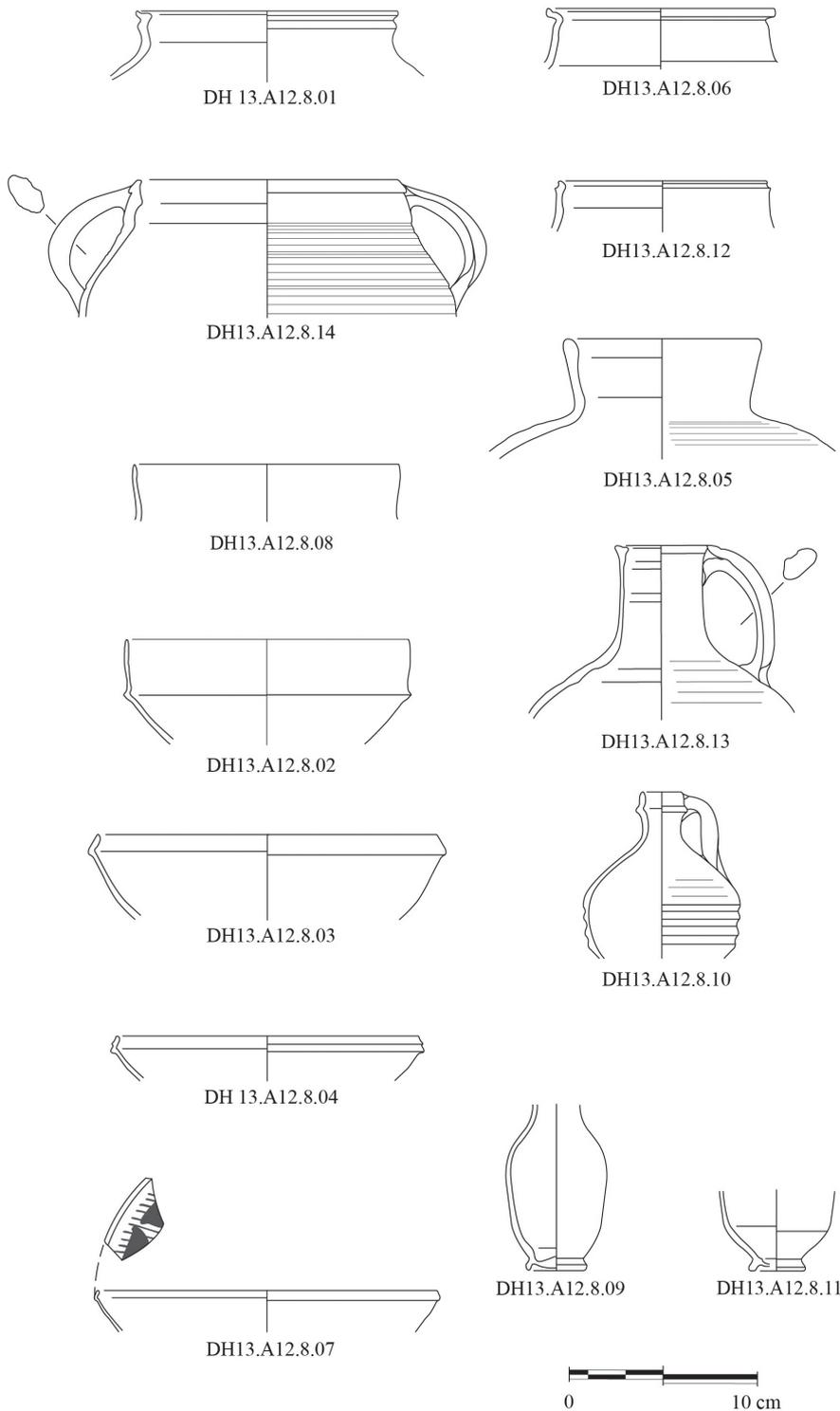
As well as the caravanserai/*mansio*, the public bath-complex was discovered in 2001, and excavation continued in 2004 and 2013. A first restoration, with identification of the rooms and bathing circuit, was proposed in 2008 (Durand 2015). However, the southern part of the building was not completely excavated,

and restoration was still hypothetical. The main objective of the 2013 campaign was to complement this excavation in order to obtain the general plan of the bath complex (Fig. 14). Our goal was also to better understand its organization, particularly the water and heating systems.

The 2001 and 2004 campaigns have established that this building belongs to the axial row type (Krencker 1929: Abb. 234-240 (Type 1); Nielsen 1990 (vol. II): 51, Fig. 1; see also Rebuffat 1991). The rooms adjoined each other, and the bather had to come back the same way in order to leave the building. The entrance of the building (Room A, *apodyterium*) is located in the north. It is a small rectangular room (4 m by 3 m), with a paved floor. Only two rows of rectangular slabs against the eastern wall were found *in situ*. The rest of the pavement has been removed, probably during the Byzantine period, when a small Christian community settled in Dharīh and built a village in the first court of the ancient Nabataean temple. This entrance leads to a second, larger and square room (Room B, 5 m by 5 m). Its pavement has been removed, together with that of Room A. It was the cold room of the bath complex (*frigidarium*). In the center of this room, we found a square cavity, formed by four large blocks embedded in the ground under the paving. Its function is still undetermined; it could correspond to the location of a central supporting pillar, possibly of wood. The western part of the building is extremely damaged and leveled, due to the slope of the hill. Therefore, the rooms located in this part could not be formally identified. The small room located in the north-west corner of the building (room C) was interpreted as a latrine, because of its situation close to the entrance and to the cold room. A deep sounding in the northeastern corner of this room demonstrated that the walls, as in the caravanserai, were partially founded on former rectangular structures, probably dating from the Bronze Age.

Room B opened to the south, leading to a small room (1 m by 3 m) which was interpreted as the *tepidarium* (warm room, Room D). This room was a connecting zone between the cold part of the building, and the heated rooms. The following room (Room E, 2 m by 4 m) was heated with a hypocaust system, fueled via a

Dharīh 2013, Area A (*mansio/caravanserai*)
Locus A12.8



Drawing: C. Durand
French-Jordanian Mission of Khirbat adh-Dharīh

13. Pottery assemblage from Locus A12.8 (© C. D. 2013).

DH13.A12.8.01 Cook-pot, light red to orange fabric, reddish-brown slip (ext.), small white inclusions. Diam. rim 14 cm.

DH13.A12.8.02 Carinated bowl, fine ware, light red to orange fabric, white slip on the exterior of the rim. Diam. rim 15 cm. (close Schmid 2000: Fig. 100, 117)

DH13.A12.8.03 Carinated bowl, light red fabric, traces of white slip on the exterior of the rim, small black and white inclusions. Diam. rim 18 cm. (Schmid 2000: Figs. 49-51, Group 6)

DH13.A12.8.04 Carinated bowl, fine ware, light red to orange fabric, white slip on the exterior of the rim, red slip on the interior. Diam. rim 16 cm. (Schmid 2000: Figs. 54-56, Group 7)

DH13.A12.8.05 Jug with everted neck and rounded rim, greyish-brown fabric, traces of greyish-white slip, white inclusions. Diam. rim 10 cm.

DH13.A12.8.06 Jar/cook-pot with inverted neck and everted rim, pinkish fabric, white slip, small white inclusions. Diam. rim 12 cm.

DH13.A12.8.07 Painted Nabataean bowl, fine ware, light red to orange fabric. Diam. rim 18 cm. (Schmid 1996: 206-207, Figs. 700-701, Phase 3b)

DH13.A12.8.08 Carinated bowl (?), fine ware, light red to orange fabric, small white inclusions. Diam. rim 14 cm.

DH13.A12.8.09 Small bottle/juglet, fine ware, light red to orange fabric, red slip outside. Diam. base 3 cm.

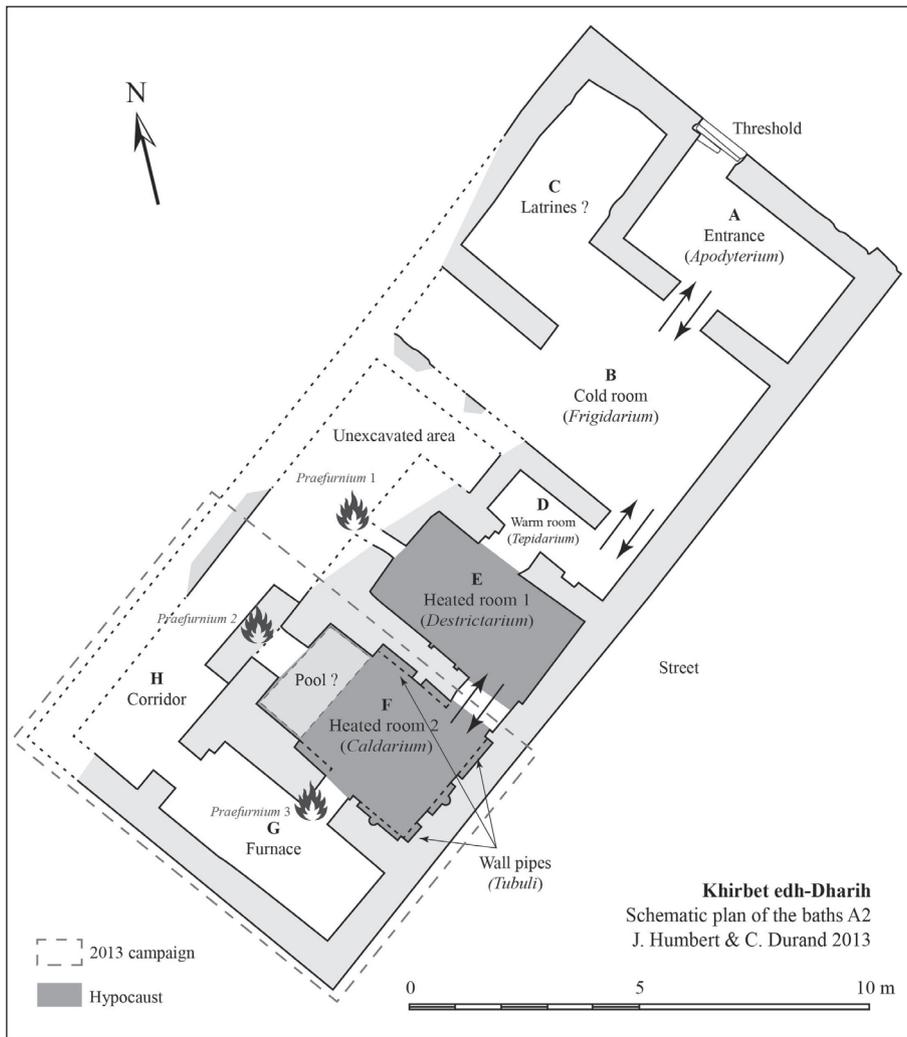
DH13.A12.8.10 Globular juglet with ribbed body, light red to orange fabric, grey core, red slip outside, small white inclusions. Diam. rim 2 cm. (Schmid 2000: Figs. 324-325)

DH13.A12.8.11 Small bottle/juglet, fine ware, light brownish fabric, grey core, white slip outside. Diam. base 3 cm.

DH13.A12.8.12 Cook-pot, light red to orange fabric, traces of white slip outside, white inclusions. Diam. rim 12 cm.

DH13.A12.8.13 Jug, light red to pinkish fabric, white slip outside, white inclusions. Diam. rim 5 cm.

DH13.A12.8.14 Cook-pot with beveled rim, two ridges on the interior; ribbed body, light red to orange fabric, grey core, reddish slip outside, small grey and white inclusions. Diam. rim 14 cm.



14. Plan and restoration of the Nabataean-Roman baths of Dharieh (© C. D. 2013).

heating channel in rectangular bricks located in the western wall of the room (*praefurnium* 1). Warm air was diffused vertically and horizontally through the rows of *tubuli* placed against the walls of the room. It was evacuated from the roof by several embedded chimneys, as evidenced by the vertical grooves regularly placed in the walls. This kind of device is known in Syria between the 2nd and the 4th c. AD, for example in the Roman baths of Bosra (Fournet 2007: 253). According to the traditional plan of Roman baths, this room must have been a cleaning/sweating room (*districtarium-laconicum*). Although the rest of the building remained unexcavated at the end of the 2004 season, the presence of a second heated room to the south was already suspected, as there were four channels running under the southern wall of Room E.

During the 2013 season, this room (F) was partially excavated. According to the plan of the

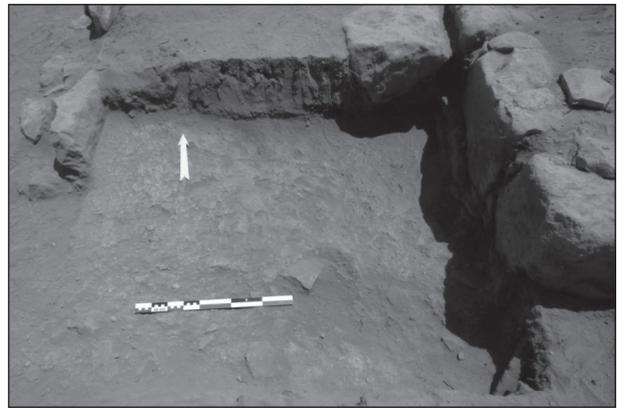
building, it was interpreted as the *caldarium*, which is usually characterized by the presence of a hot pool. The room is slightly larger than Room E (c. 3 m by 4 m), becoming narrower in its western part (ca. 2 m wide). A thick destruction layer was excavated, containing numerous fragments of ceramic pipes (*tubuli*), together with different sized bricks and mortar pieces, which have confirmed the hypothesis of a second heated room. Due to the short duration of the campaign, the hypocaust was not excavated this year. On the northern, southern and eastern walls of the room, one can notice several rectangular projections, regularly disposed. These are characteristic of the heated rooms in Roman baths, which flanked the “*tubuli* panels” placed against the walls. In addition, at least two semi-circular grooves (chimneys) have been uncovered in the south-eastern corner of the room. In the western part of the room, the thickening of the

northern and southern walls probably indicates the limits of a large pool (ca. 2 m by 1 m) built against the western wall. A heating channel is visible in the center of this wall (*praefurnium* 2; Fig. 15), although it has not been excavated yet; two stacks of bricks appear on each side of the opening. This *praefurnium* appears to be embedded in a rectangular structure (c. 2 m by 0.7 m), built against the western wall in Room H. It could be the supporting base of a heated cistern, directly linked to the pool, just on the other side of the wall.

Room H was excavated in its southern part. It is a long, rectangular corridor type, located to the west of rooms F, G and probably E. This corridor facilitated entry of the fuel for the furnaces which heated rooms E and F (*praefurnia* 1 and 2), as evidenced by the thick layer of ashes (c. 30 cm) located just under its surface. This ashy layer was partly removed in front of the rectangular structure, by means of a sounding c. 1.50 m wide. This revealed a floor level which can probably be interpreted as the circulation floor (Fig. 16)⁶. Due to the slope of the hill, the north-south wall closing Room H to the west has almost totally disappeared. Consequently, the location of the access door to the corridor from outside the building cannot be determined. However, a door which opened to Room G, located to the south of Room F, and which was partly excavated on its eastern side in 2004, was discovered (Fig. 17). Unlike rooms E and F, it is a simple room without a heating system. A stack of rectangular bricks in the middle of its northern wall suggested the



15. View of *praefurnium* 2 (© C. D. 2013).



16. View of the floor level under the ashy layer, Room H (© C. D. 2013).



17. The door between rooms H and G (© C. D. 2013).

presence of another heating channel opening to Room F (*praefurnium* 3). This *praefurnium* was partly excavated in 2013, after removal of the deep destruction layer (Fig. 18).

The water system for this bath-complex is still poorly understood; further investigation in the western part of the building, under the foundation level, would probably provide more information. Similarly, other than construction material (*tubuli* and bricks), the pottery found in the bath is very scarce and does not establish a definite date. Nevertheless, it does suggest a utilization period between the 2nd and the 4th c. AD. A complete Roman lamp, found near the *praefurnium* 2, is dated to the 2nd to 3rd c. AD (Fig. 19; same type: Durand 2011: 72, n. 32-37; ‘Amr 2004: 242, Fig. 5).

Based on its organization, this bath-complex seems to be inspired by the Campanian architectural model, which was diffused throughout the whole Roman Empire during

6. Some ash samples were collected in order to analyze the botanical remains. The study will be conducted by Charlène

Bouchaud (Muséum d’Histoire Naturelle, Paris).



18. View of praefurnium 3 (© C. D. 2013).



19. Roman lamp from bath A2 (© P. P.-F. 2013).

the 1st c. AD. The closest parallel in the Near East can be found at Sleim (Southern Syria), where the baths are dated to the 1st c. AD or the beginning of the 2nd c. AD (Fournet 2010). Another close example, both in its plan and its date, is the Roman bath recently excavated in Xèron Pelagos, in the Egyptian Eastern Desert (Redon 2011).

Conclusions for Area A

The discovery of a *mansio* and its associated bath-complex in Dharīḥ is of special interest. The identical phasing of these buildings suggests

they both belong to a single phase which was initiated at the turn of the 2nd century AD. Their construction seems therefore contemporary to the rebuilding of the main sanctuary. The association between a caravan-station and a bath is common in the Roman world. Examples in the Nabataean area include Sha‘ar Ramon (Erickson-Gini 2010: 22), En Hatzeva (Cohen 1994: 205) and Mamspis (Negev 1988) in the Negev; Humeima (Oleson 1993; Reeves 1997), Bir Madhkur (Smith 2010: 39) and Gharandal (Darby and Darby 2012; Keller *et al.* 2012) in Jordan. Nevertheless, as far as we know, similar accommodation infrastructures have never been found in the Roman Near East within a religious complex; we can therefore assume that this complex was eventually used by pilgrims who frequented the regional sanctuary of Dharīḥ. Moreover, an eventual link between the construction of this complex and the Roman military presence in the region after the annexation of the Nabataean kingdom is not confirmed, since the caravanserai does not seem fortified (for the link between the bath and the army in Roman Egypt, see Redon 2010).

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Bibliography

- ‘Amr, K.
2004 Beyond the Roman Annexation: The Continuity of the Nabataean Pottery Tradition. *SHAJ* 8: 237-246.
- Bodo, P. and Clauss-Balty, P.
2009 Une Maison Antique à ‘Amrah (Syrie du Sud): de Melchior de Vogüé à nos Jours. *Syria* 86: 233-279.

- Butler, H. C.
1914 *Archaeological Expedition to Syria, II A: Southern Syria, 1907*. Leyden: Publications of the Princeton University.
- Clauss-Balty, P.
2008 Maisons Romano-Byzantines Dans Les Villages De Batanée: Mission 2002-2004. Pp. 41-79 in P. Clauss-Balty (ed.), *Hauran III. L'habitat dans les campagnes de Syrie du Sud aux époques classique et médiévale*. Beyrouth: IFPO (BAH 181).
- 2010 Les Villages Et L'habitat Rural À L'époque Romano-Byzantine: Le Cas De Sharah, Sur Le Rebord Nord-Ouest Du Leja. Pp. 199-214 in M. al-Maqdissi, F. Braemer and J.-M. Dentzer (eds.), *Hauran V. La Syrie du Sud, du Néolithique à l'Antiquité tardive*, Vol. 1. Beyrouth: IFPO (BAH 191).
- Cohen, R.
1992 Hellenistic, Roman and Byzantine Sites in the Negev Hills. Pp. 1135-1145 in E. Stern (ed.), *The New Encyclopedia of Archaeological Excavations in the Holy Land*. Vol. 3. Jerusalem: Israel Exploration Society.
- 1994 The Fortresses at 'En Haseva. *BA* 57-4: 203-214. Crawford, P.
- 2006 The Horreum at el-Lejjûn (Area M). Pp. 235-240 in S. Th. Parker (ed.), *The Roman Frontier in Central Jordan, Final Report on the Limes Arabicus Project, 1980-1989* (2 vol.). Washington: Dumbarton Oaks Studies 40.
- Darby, R. and Darby, E.
2010 A Newly Identified Roman Military Bath at 'Ayn Gharandal (Jordan). *Carnet de recherches Balnéorient*: <http://balneorient.hypotheses.org/1983>.
- 2012 A Roman Fort Amidst the Dunes: The 'Ayn Gharandal Archaeological Project. <http://asorblog.org/?p=2992>.
- Durand, C.
2011 Les Lampes Nabatéennes et Romaines de Khirbat Adh-Dharīḥ (Jordanie). I^{er}-IV^{ème} siècles ap. J.-C. Pp. 43-73 in D. Frangié and J.-F. Salles (eds.), *Lampes antiques du Bilad Es-Sham, Jordanie, Syrie, Liban, Palestine*. Actes du colloque international, Pétra-Amman, 6-13 novembre 2005, Paris: De Boccard.
- 2015 Les Bains Nabatéo-Romains de Dharīḥ (Jordanie). *Syria* 92: 13-21.
- Erickson-Gini, T.
2010 *Nabataean Settlement and Self-Organized Economy in the Central Negev, Crisis and renewal*. Oxford: Archaeopress (BAR International Series 2054).
- Fournet, Th.
2007 Les Thermes du Centre («*Khân ed-Dibs*»). Pp. 243-253 in J. Dentzer-Feydy, M. Vallerin, Th. Fournet, R and A. Mukdad (eds.), *Bosra, aux portes de l'Arabie*. Beyrouth: Guides archéologiques de l'IFPO n. 5.
- 2010 Les Bains Romains de Sleim (*Seloema*), Analyse architecturale et proposition de Chronologie. Pp. 315-333 in M. al-Maqdissi, F. Braemer and J.-M. Dentzer (eds.), *Hauran V. La Syrie du Sud, du Néolithique à l'Antiquité tardive*, Vol. 1. Beyrouth: IFPO (BAH 191)
- Fournet, Th. and Redon, B.
2013 Heating Systems of Greek Baths. New evidence from Egypt. Pp. 239-265 in S. K. Lucore and M. Trümper (eds.), *Greek Baths and Bathing Culture. New discoveries and Approaches*. Louvain: Peeters (Babesch Supplements 23).
- Al-Halabi, T.
2012 L'architecture Domestique Rurale Sur le Plateau du Jawlân (sud de la Syrie), à l'époque romaine. Sites de Gamla, d'el-Farj, de Na'rân, de 'Uyoun Mkhaldi, de Khirbet Za'arta et de Khirbet Nâmra. in A. Le Bihan, P.-M. Blanc, F. Braemer, J. Dentzer-Feydy and F. Villeneuve (eds.), *Territoires, architecture et matériel au Levant*, Beyrouth: IFPO (<http://ifpo.revues.org/2999>).
- Hoss, S.
2005 *Baths and Bathing. The Culture of Bathing and the Baths and Thermae in Palestine from the Hasmoneans to the Moslem Conquest*. Oxford: Archaeopress (BAR Int. Ser. 1346).
- Humbert, J.-B. and Desreumaux, A.
1998 *Fouilles de Khirbat es-Samra en Jordanie. La Voie Romaine. Le cimetière. Les documents épigraphiques*. Turnhout: Brepols (Bibliothèque de l'Antiquité Tardive 1).
- Keller, D. R., Porter, B. A. and Tuttle, C. A.
2012 Archaeology in Jordan, 2010 and 2011 Seasons. *AJA* 116-4: 693-750.
- Kolb, B.
2000 Les Maisons Patriciennes d'az-Zantûr. *Le monde de la Bible* 127: 42-43.
- Kolb, B. and Keller, D.
2001 Swiss-Liechtenstein Excavation at az-Zantur/Petra: The eleventh season. *ADAJ* 45: 311-324.
- 2002 Swiss-Liechtenstein excavation at az-Zantur/Petra: The twelfth season. *ADAJ* 46: 279-293.
- Krencker, D. and Krüger, E.
1929 *Die Trierer Kaiserthermen. Abteilung I: Ausgrabungsbericht und Grundsätzliche Untersuchungen Römischer Thermen*. Augsburg: Dr. Benno Filser Verlag.
- McKenzie, J., Gibson, S. and Reyes, T.
2002 Reconstruction of the Nabataean Temple Complex at Khirbet et-Tannur. *PEQ* 134: 44-83.
- Al-Muheisen, Z. and Piraud-Fournet, P.
2013 A large Nabataean-Roman period house at adh-Dharīḥ. *SHAJ* XI: 833-846.
- Al-Muheisen, Z. and Villeneuve, F.
2000 Nouvelles Recherches à Khirbat ad-Dharīḥ (Jordanie du Sud), 1996-1999. *CRAI*: 1525-1563.
- Negev, A.
1981 Les Nabatéens au Negev. *Le monde de la bible* 19: 14.
- 1988 *The Architecture of Mampsis: Final Report. Vol. 2: The Late Roman and Byzantine Periods*.

- Jerusalem: The Hebrew University of Jerusalem (Qedem 26).
- Nehmé, L. and Villeneuve, F.
1999 *Pétra. Métropole de l'Arabie antique*. Paris: Seuil.
- Nielsen, I.
1990 *Thermae et Balnea: the Architecture and Cultural History of Roman Public Baths*. Aarhus: Aarhus university press.
- Netzer, E. and Weiss, Z.
1994 *Zippori*. Jerusalem.
- Oleson, J. P.
1993 Humeima Hydraulic Survey, 1989. *Syria* 70: 248-254.
- Piraud-Fournet, P.
Forthc. Salles à auges antiques de Syrie du Sud et de Jordanie. in F. Baratte, E. Rocca and P. Piraud-Fournet (eds.), *Les «bâtiments à auges» antiques d'Afrique et du Moyen-Orient*. Proceedings of the international conference, Paris, 29-30 May 2015.
- Rebuffat, R.
1991 Vocabulaire Thermal. Documents Sur le Bain Romain. Pp. 1-34 in *Les thermes romains : actes de la table ronde (Rome, 11-12 novembre 1988)*. Rome: Collection de l'École Française de Rome 142.
- Redon, B.
2010 L'armée et Les Bains en Egypte Hellénistique et Romaine. *BIFAO* 109: 407-443.
2011 Archéologie – Découverte de Thermes Romains à Xéron (désert Oriental, Égypte). *Carnet de recherches Balnéorient*: <http://balneorient.hypotheses.org/2186>.
- Reeves, B.
1997 Baths of the Hisma Desert. *Balnearia* 5: 2-4.
- Schmid, S. G.
1996 Die Feinkeramik. Pp. 151-218 in A. Bignasca et al. (eds.), *Petra. Ez-Zantur I. Ergebnisse der Schweizerisch - Liechtensteinischen Ausgrabungen 1988-1992*. Mainz am Rhein: Philipp Von Zabern.
2000 Die Feinkeramik der Nabatäer. Typologie, Chronologie und kulturhistorische Hintergründe. Pp. 1-199 in S. G. Schmid and B. Kolb (eds.), *Petra. Ez Zantur II. Ergebnisse der Schweizerisch - Liechtensteinischen Ausgrabungen*. Mainz am Rhein: Philipp Von Zabern.
- Schmid, S. G. and Bienkowski, P.
2011 The International Umm al-Biyara Project (IUBP). Preliminary Report on the 2010 Season. *ADAJ* 55: 101-119
- Smith, A. M.
2010 *Wadi Araba in Classical and Late Antiquity: An Historical Geography*. Oxford: Archaeopress (BAR Int. Ser. 2173).
- Smith, A. M., Stevens, M. and Niemi, T.
1997 The Southeast Araba Archaeological Survey: A Preliminary Report on the 1994 Season. *BASOR* 305: 45-71.
- Villeneuve, F. and al-Muheisen, Z.
2008 Le Sanctuaire Nabatéen et Romain de Dharih (Jordanie): Nouvelles Découvertes, 2001-2008. *CRAI*: 1495-1520.
- de Vogüé, M.
1865 *Syrie Centrale: Architecture Civile et Religieuse du I^{er} au VII^e Siècle*. Paris: J. Baudry.