THE HELLENISTIC - NABATAEAN CRYPT IN TOWER TOMB 303 AT ATH-THUGHRAH IN PETRA: RESULTS OF THE ARCHAEOLOGICAL AND MULTI-DISCIPLINARY STUDIES

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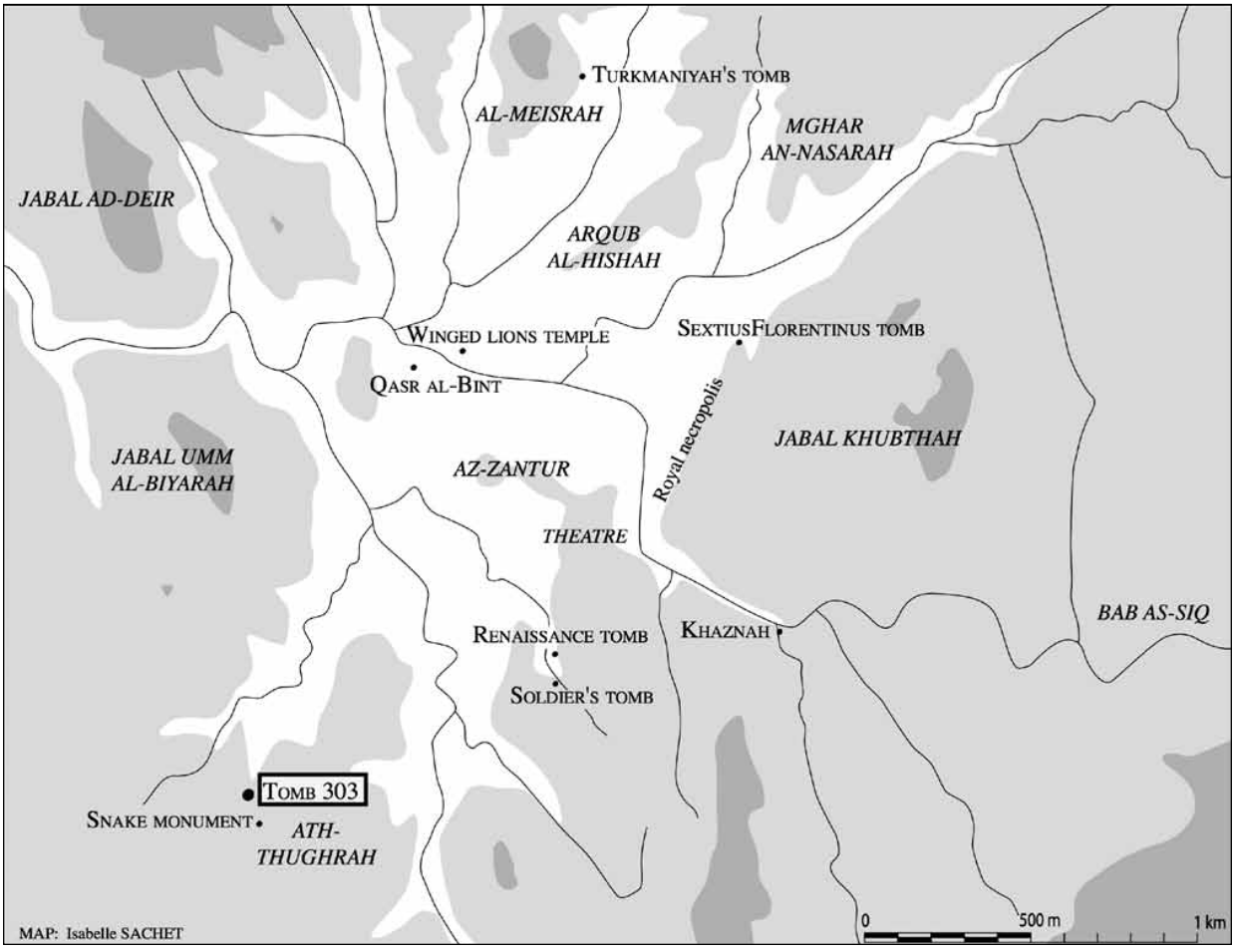
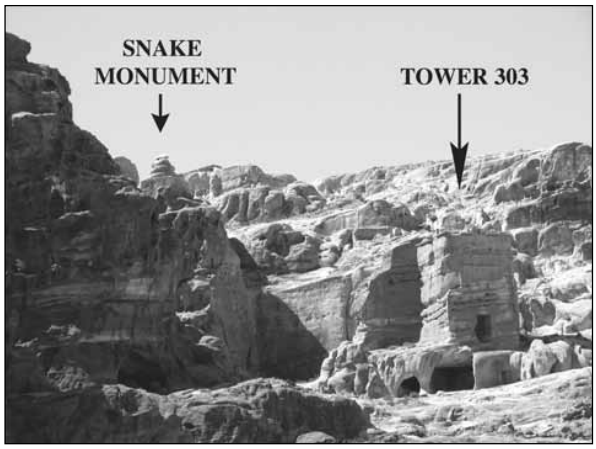
South of the town of Petra, in the ath-Thughrah area, lies tomb Th303 **(Fig. 1)**, numbered thus by R.E. Brünnow and A. von Domaszewski (1904: 289, figs 317-318). Just over 1 km away from the ancient city centre, it stands in a white sandstone massif that forms the southern entrance to the urban area of Petra. This doorway was guarded symbolically by a raised cobra (no. 302), its head turned away from the city **(Fig. 2)**.

In May 2006, as part of the French archaeological mission to Petra directed by C. Augé, a sounding was excavated at the foot of tower 303 to expose the access to the underground



1. Map of Petra, showing location of complex Th303 (I. Sachet).

1. Text translated by Isabelle Ruben.



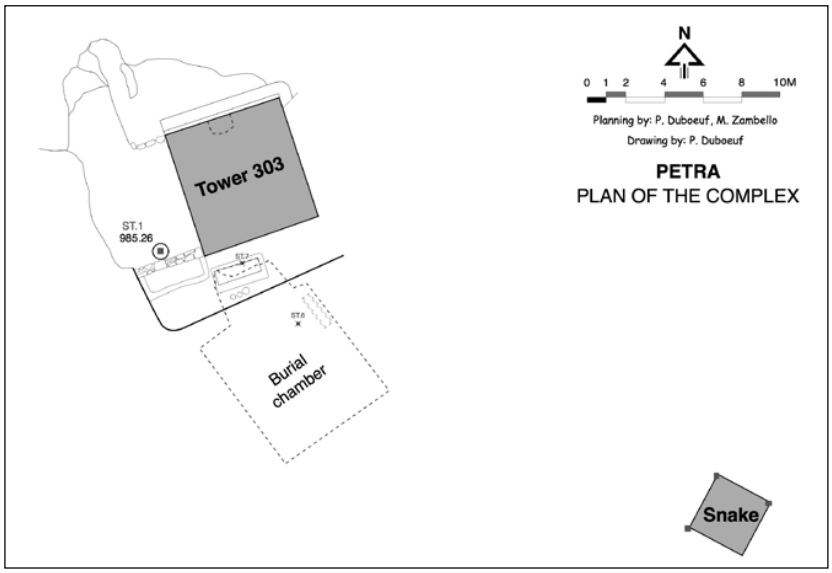
2. Photograph of the snake monument and tower 303 (I. Sachet).

chamber, which was partly visible at the time (Mouton 2010: 280-281). In December 2006, the underground burial chamber was completely excavated (Sachet 2009: 100-103). The field team consisted of I. Sachet (archaeologist) and N. Delhopital (physical anthropologist), assisted by ten workmen from the village of Umm Ṣayhun overseen by A. Abu Saksuka and M. Haoude. The architectural plans were drawn by P. Duboeuf (topographer). F. Bernel (conservator) took care of the conservation of metal objects and M. Zambello (draftsman) drew some of the pottery and objects. Our Department of Antiquities representative, A. al-Shami, was assigned to us by the late Dr F. al-Khraysheh. The faunal remains were studied by C. Tomé Carpentier (archaeozoologist); the plant, seed and charcoal remains were studied by C. Bouchaud (archaeobotanist), A. Gueli examined a series of pearls using Fluorescence X (Gueli *et al*. 2010) and N. Garnier undertook physio-chemical analyses on a libation cup (Garnier *et al*. 2009).

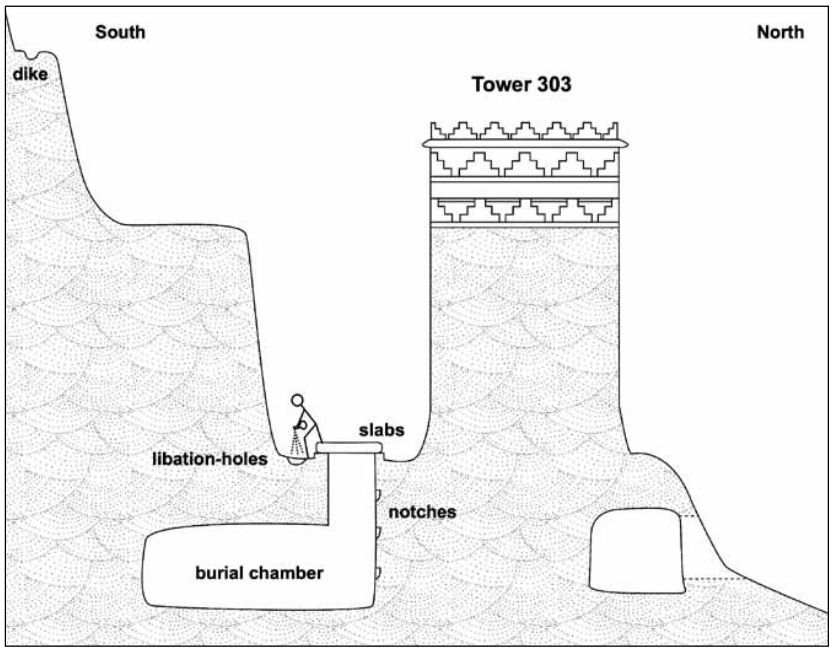
A. The Excavation (I. Sachet)

Funerary complex Th303 comprises a monolithic cenotaph tower carved out of the mountain and an underground burial chamber at the foot of the tower **(Fig. 3)**. Each side of the tower measures 6.5 m; it is a little less than 10 m high. It is crowned by an 'Egyptian' cavetto cornice and free-standing crowsteps, partially collapsed onto the top of the tower. Two further rows of crowsteps, carved in bas-relief, decorate the four sides of the tower. The underground vault is 6.5 m wide by 7 m long and a little less than 2 m high **(Fig. 4)**.

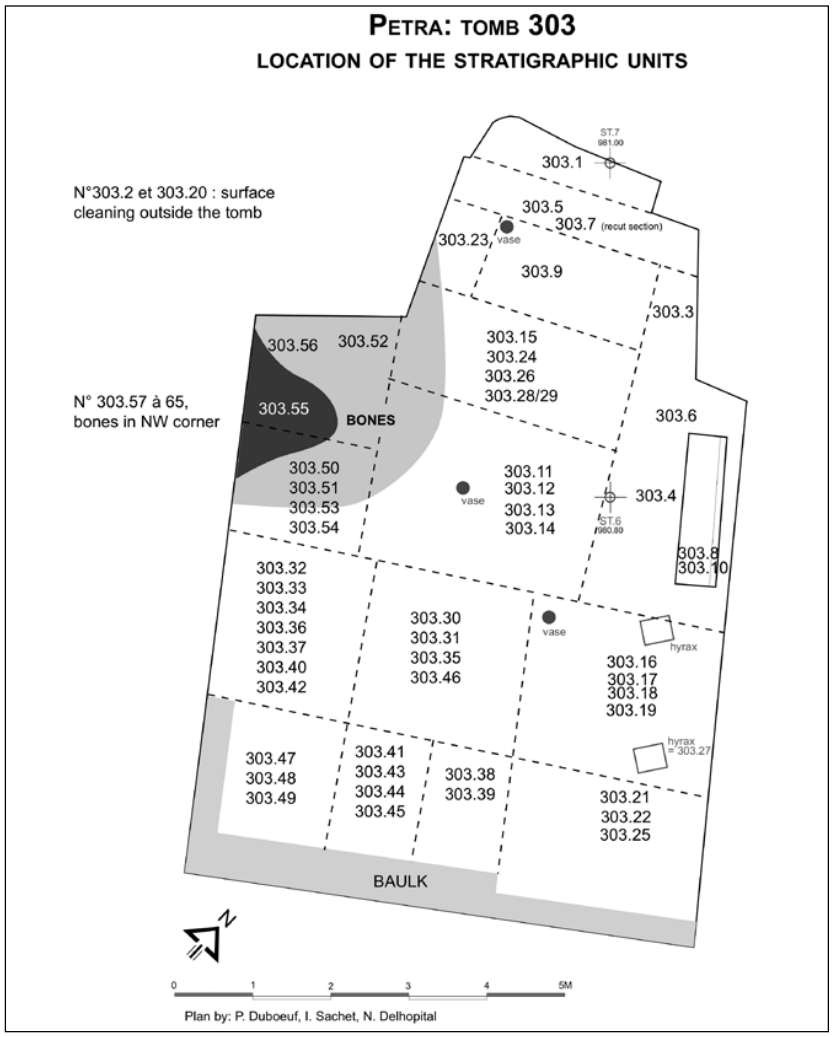
Prior to excavation, the vault was filled with sediment to within 50 cm of the ceiling, suggesting that it had remained undisturbed for a long time. The accumulation of sediment in the chamber consisted of fine alternating layers of sand and soil (**Fig. 7**), corresponding to the long-term deposition of silts by seasonal floods. During the excavation, the stratigraphic units (SU) were numbered sequentially from 1 to 65, (**Figs. 5 and 6**) the number being preceded by 'Th' to signify the ath-Thughrah massif and the figures '303' to indicate the tomb (Brünnow and von Domaszewski 1904: 289, figs. 317–318). Stratigraphic units Th303.2 and 20 were exca-



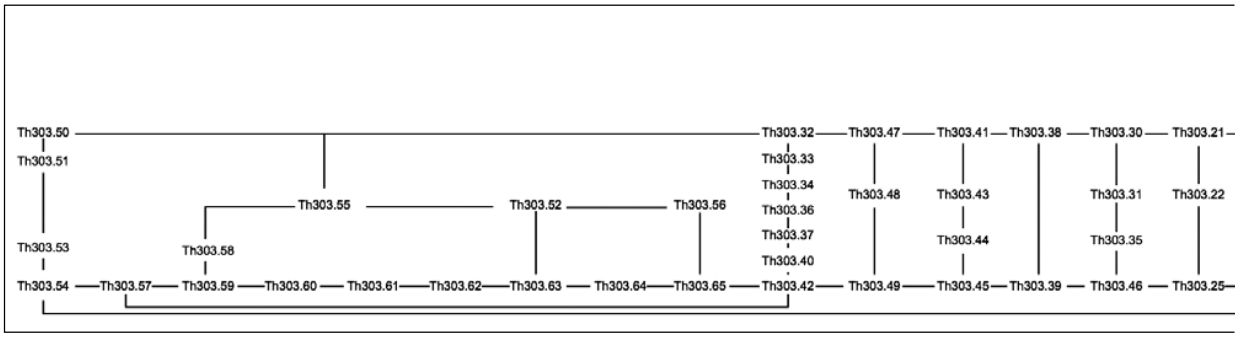
3. Plan of funerary complex 303: tower and underground chamber (French Archaeological Mission to Petra).



4. Sketch of the reconstructed complex in cross-section (I. Sachet).



5. Chamber 303: location of the stratigraphic units (SU) (I. Sachet).



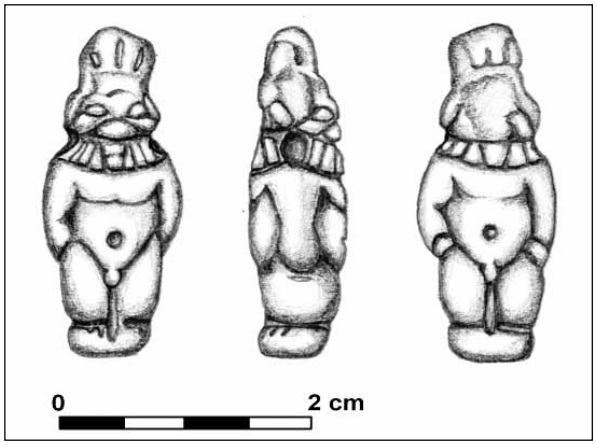
6. Excavation of chamber 303: Harris matrix (I. Sachet).

vated outside the vault, over the access shaft; all other units were inside the chamber.

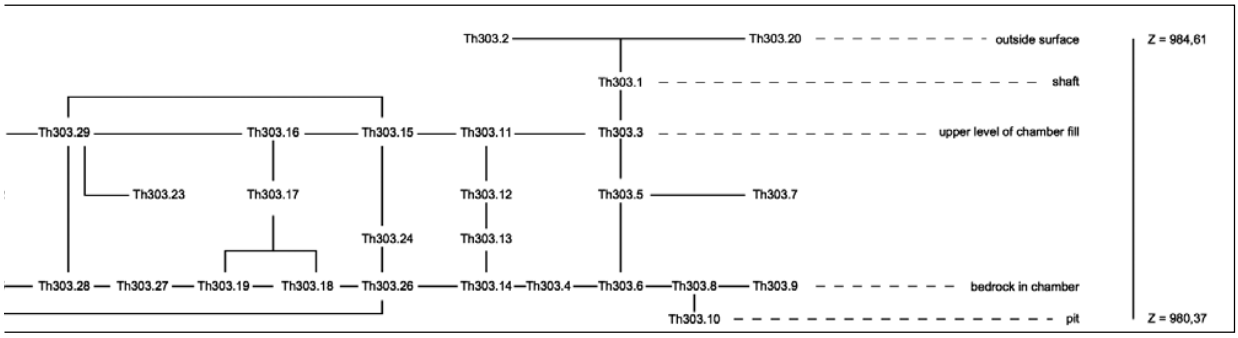
In the north-east corner, evidence of a recent robbery was visible but limited to about 10% of the total area of the chamber (US Th303.1 and 3-7). Clearing the disturbance from the robbery made it possible to excavate a pit (Th303.8 and 10), in which the only finds were a few teeth and a little figurine made of frit representing the Egyptian god Bes (**Fig. 8**). The bottom of the pit was filled with very black earth that probably resulted from the decomposition of a wooden coffin. Limited mediaeval occupation was then exposed in the upper layers in the northern part of the chamber (Th303.11-12, 14-16 and 51-53). Some pieces of mediaeval pottery, an early Islamic lamp and some charcoal were extracted from the sandy fill (**Fig. 9**). At the time of this occupation the chamber was already filled with sediments to within 1 m of the ceiling; it had not been cleaned out and the silts do not seem to have been dug into in this area. Presumably then, in mediaeval times this vault served as a temporary shelter or hiding place. Other than these two disturbances – the recent robbing and the temporary mediaeval occupation – the chamber had silted up progressively ever since its abandonment in antiquity.

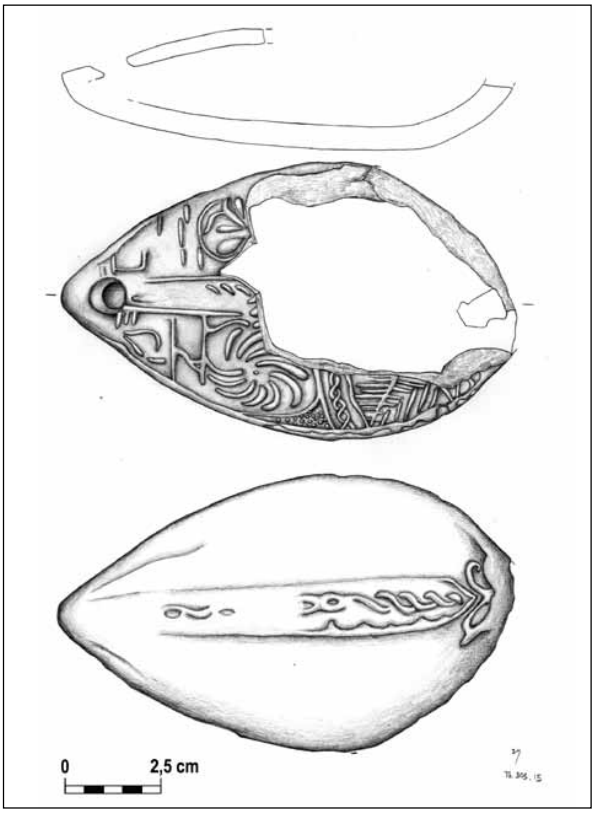
The funerary occupation, represented by a great many human bones on the floor of the chamber (Th303.18, 19, 25, 27, 28, 39, 42, 45, 46, 54, 57 and 59-65), had been severely disturbed in antiquity. Most of the bones were mixed up and piled together in the north-west corner of the chamber (**Fig. 5**: Th303.57-65; **Fig. 13**: area A). There may be several explanations for these disturbances: the need to clear some space on the floor of the chamber in which to lay a new corpse, clearing space in order to re-occupy the chamber, a robbery contemporary with use of the tomb or one that occurred soon after it was abandoned. According to the stratigraphy and pottery, the most recent funerary activities in the vault took place in the 2nd century AD and the most recent signs of disturbance appear to date from soon after. The bones from the burials on the floor of the chamber were piled up in no apparent order and any valuable ob-

7. Section showing accumulation of fine horizontal sedimentary layers resulting from alternating floods and dry periods (I. Sachet).

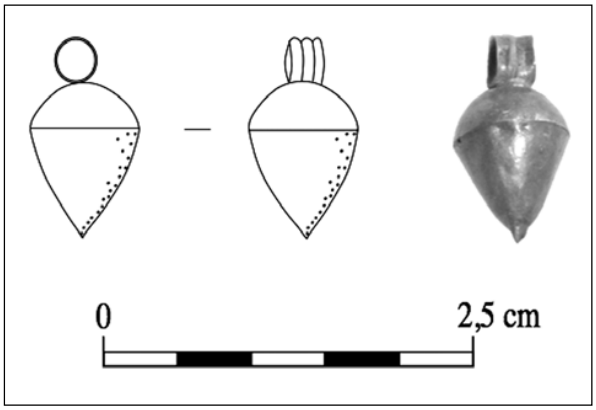


8. Figurine representing the god Bes (drawing M. Zambello).





9. Early Islamic lamp (drawing M. Zambello).

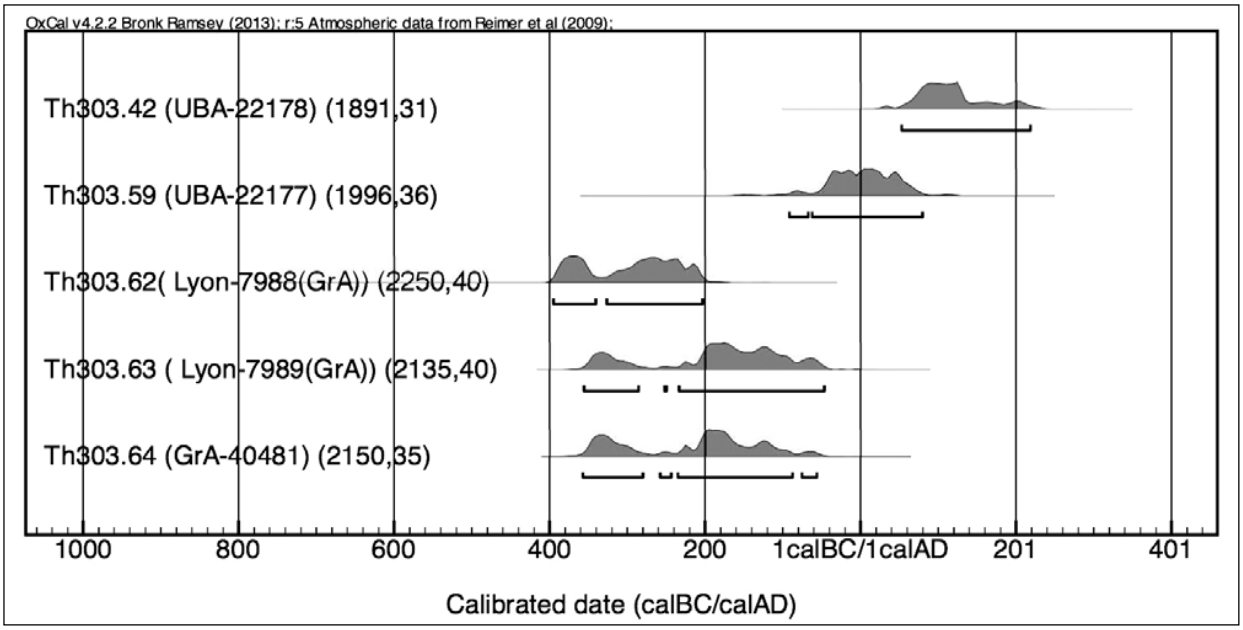


10. Gold pendant (I. Sachet).

jects had been taken. Nevertheless, a few small items escaped the attention of the robbers: a gold pendant (**Fig. 10**), some small bronze bells and some small emerald, amethyst and chalcedony beads (**Fig. 11**; Gueli *et al*. 2010). The extent of the fragmentation of sherds and bones would indicate that this was not the first time the inside of the tomb had been disturbed. The ceramic and archaeozoological studies reveal an initial clearing of the chamber floor during the Nabateaen period.

The dating of the archaeological material in tomb 303, confirmed by radiocarbon analyses, provides additional information relating to the chronology of the early periods in Petra. In Th303.62, 63 and 64, a human bone and two pieces of charcoal were dated to between 2,135 and 2,250 BP±40, while two seeds from Th303.42 and 59 were dated to around 1,900 BP±35 (**Fig. 12**). The calibrated dates allow a distinction to be made between two succeeding periods, the first in the 4th to 2nd centuries BC and the second in the 1st century BC to the 3rd century AD. The radiocarbon dates, therefore, confirm two main phases of occupation of the tomb, which might be one to three centuries apart. These two phases were already suspected when the finds were being studied but were not clearly identified because of the stratigraphic disturbances caused by the numerous disturbances of the tomb. Taken together, the finds and radiocarbon analyses slightly reduce the chronological gap obtained by C_{14} dating alone and thus establish a first phase of occupation of the tomb in the 3rd to 2nd centuries BC, known as the 'Hellenistic-Nabataean' phase, and a second phase from the 1st century BC to the 2nd century AD, known as the 'classic Nabataean' phase.

11. Group of small beads of precious and semi-precious stones (emerald; chalcedony; amethyst; glass).



12. Summary of radiometric dating (J.-Cl. Lefèvre, Centre de Datation par le Radiocarbone, UMR 5138).

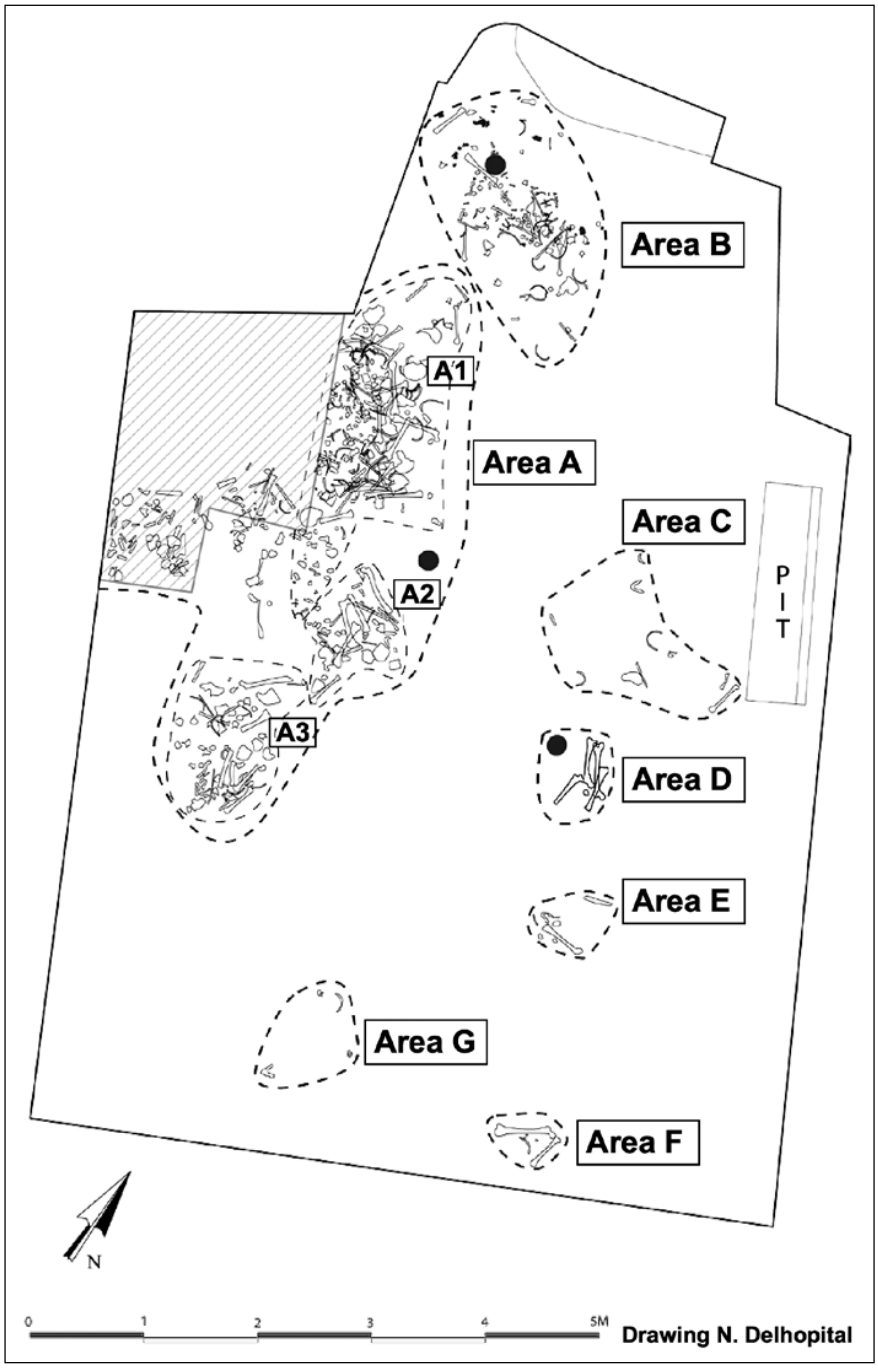
The construction of tower tomb 303 at ath-Thughrah is of necessity contemporary with or earlier than the oldest finds, and the carving of the complex therefore goes back at least to the 3rd century BC. Such an early date was indicated by the architectural studies, but previous dating of the tombs in Petra did not support it. Therefore, tomb Th303 is currently the earliest known tomb in Petra, built during the site's Hellenistic phase.

B. Archaeo-anthropology (N. Delhopital)

The funerary chamber Th303 was intended for the inhumation of multiple bodies; the bones of at least sixty individuals, both adult and immature, were found there. The disturbance and fragmentation of the bones has limited interpretation, but nevertheless the bones from ath-Thughrah constitute one of the largest collections from the Nabataean period.

Distribution of the bones **(Fig. 13)**

Most of the bones were piled up in the north-west corner of the tomb (area A), in the tomb entrance (area B) and scattered around the pit (area C); a small quantity were in the back of the tomb on the floor of the chamber (areas D, E, F and G). Virtually all the bones were disarticulated. Only two articulations were found: a skull with the first two cervical vertebrae, and three carpal

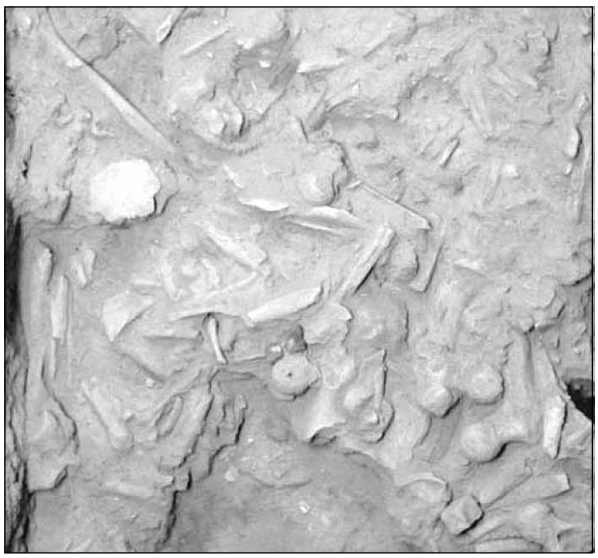


13. Plan of the tomb showing the different areas in which bones were found (area A: Th303.26, 42, 52, 54-55 and 57-65; area B: Th303.9; area C: Th303.14; area D: Th303.19; area E: Th303.28; area F: Th303.28; area G: Th303.45; la fosse: Th303.8) (N. Delhopital).

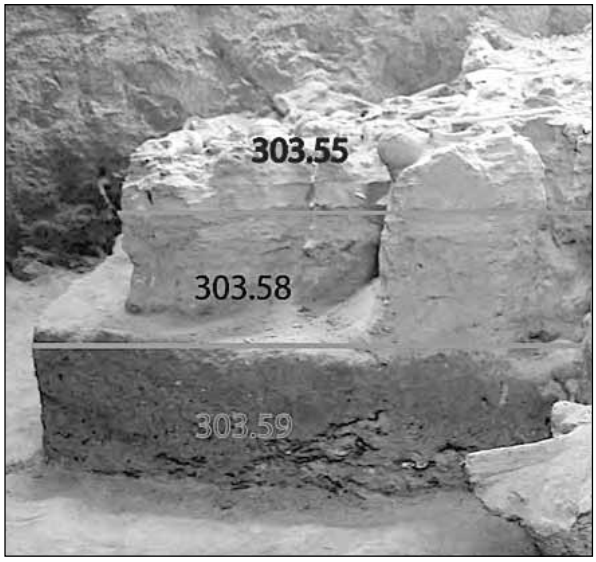
bones. The mixing of bones is no doubt due to the reuse of the tomb and its looting in antiquity.

The majority of human bones were found in area A. They represent the remains of fifty-five individuals, spread across a small area of about 2 □3 m. Three groups were distinguished: A1, A2 and A3; the bones lay on the floor of the chamber. The other bones in area A were piled up against the north-west corner of the tomb, up to a height of 40 to 50 cm (**Fig. 14**). At the bottom of the deposit of bones in area A (Th303.57 and 59), a distinct level was noted, consisting of brown sediment containing very fragile bones of the same colour (**Fig. 15**). This colouring might be explained, as at Khirbat adh-Dharih (Lenoble *et al*. 2001), by the decomposition of coffins or shrouds that would have changed the colour of the bones. Area A3 is particularly interesting. On the floor of the chamber, several bones of the same type, left and right, were quite close to each other. Several bones are pathological, suggesting that they might belong to a single individual whose burial was disturbed.

In area B (Th303.9), a total of 164 bones, mostly upper limbs, belonged to a minimum of four individuals, two adults and two children. The pit (Th303.8) had been emptied of its contents and only two teeth were found in it. Near the pit, in area C (Th303.14), there were about a dozen bones. It is possible that these bones came from the pit and belonged to a single individual, but this remains difficult to determine. In



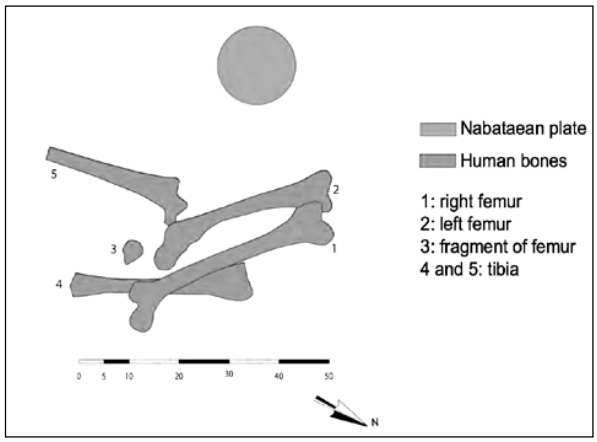
14. Detail of heavily fragmented bones from area A, Th303.55 (N. Delhopital).



15. Field photograph showing Th303.55 and 58-59 in section (N. Delhopital).

area D (Th303.19), five bones were found, a left and a right femur and two tibias; they perhaps represent the lower limbs of a single individual (**Fig. 16**). A complete Nabataean plate was laying next to these bones. Area D might thus be the burial of an individual with an associated funerary offering, the remains of which have been dispersed. In areas E, F and G, about twenty bones were found.

It is difficult to determine if the different areas A, B, C, D, E, F and G represent the same use of the chamber. Originally, the bones in area A could have come from burials placed on the floor of the chamber which might then have been pushed aside to the north-west corner for the reuse of the tomb. The use of area B is more



16. Human bones and a Nabataean plate found on the floor in area D, Th303.19 (N. Delhopital).

difficult to define: it might represent bones from the same origin as those in area A but which were not pushed aside as methodically into the north-west corner, or else it might represent a different use to that of area A, for example, a later burial phase.

Finally, the type of deposit, the presence of small anatomical elements such as carpal bones, and the two sets of articulated bones point to primary burials (Duday 2005). It is impossible to say whether there were any secondary burials. In any case, the chronological diversity of the archaeological material demonstrates that tomb 303 was used for multiple burials, with inhumations staggered over time.

Results of the physical anthropological studies

The estimated minimum number of individuals in tomb 303 is 60, with 51 adults including five males and six females, and nine immature individuals. Thus, the burials in the tomb do not seem to have been selected according to sex, though this interpretation is based on the sex determination of only 11 of the 51 adults.

All the bones from immature individuals come from area A, with the exception of at least two individuals found in area B. The lack of immature individuals, notably in the age range 0 to 1–4 years, probably indicates a certain selection of buried individuals. Indeed, it is common that young children are the object of different funerary practices and are buried in a different location. The lack of immature individuals noted in the age class 15–19 years could, in contrast, be explained by the poor preservation of bones in Th303, which makes the determination of bone maturity more difficult and leads to grouping together within the adult sample.

The size of the adults in Th303 varies from 1.49 m (±4.83 cm) to 1.80 m (±5 cm). This extensive variation in size of the individuals in the tomb is noteworthy. Such variation has already been noted in other Nabataean cemeteries, at Khirbat adh-Dharih and in other tombs in Petra (Perry 1998; Bikai and Perry 2001; Perry 2002). Nevertheless, the results from Th303 are limited by the poor preservation of the bones and disturbances in the tomb. Indeed, the sample used to estimate size consists of only 14 adults and it was not possible to relate the size of the individuals to their sex.

Palaeopathology

Caries amongst the individuals buried in the tomb are few, at 2.47% (13 teeth out of 527). Amongst the teeth examined, 16.3% present linear hypoplasias of the enamel, that is a stoppage in the growth of the enamel following an episode of non-specific stress. Their position on the dental crowns shows that the episode occurred between 2 and 6 years of age.

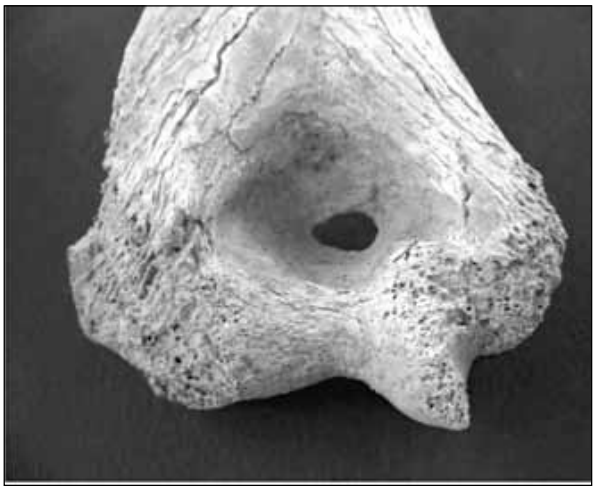
Concerning disease of the skeleton, the adult individuals in the tomb are mainly affected by pathologies of the articulations, perhaps linked to age or to particular repetitive and difficult activities. Four consolidated fractures and some periostitis were recorded. The etiology of these traumas is difficult to pin-point but they are not surprising in Petra, with its rocky environment where accidental falls can occur and result in various fractures.

At least two individuals in Th303 were handicapped: one had limited manual activity following the deformation of one or both arms (area A3) and the other had limited mobility (area D). In area A3, several bones that were close together, though not articulated, and presenting similar pathology suggest that the bones belonged to a single individual. In addition, these bones were not mixed with the other bones in area A. Was the individual, affected by a handicapping pathology, buried apart from the others, or alternatively is this burial later than the others in area A? It should be noted that the two individuals in area A and area B lived to become adults despite their handicaps and that they were buried in the same tomb as the other individuals. These two points thus bear witness to a certain solidarity amongst the group.

Discrete traits

Discrete traits allow family groups to be identified (Crubézy and Sellier 1990b) and are good population markers for relatedness (Ossenberg 1976). In Th303, two discrete traits were recurrent: a notch on the patella is present in at least 16 individuals (**Fig. 17**), while at least ten individuals have a perforation of the olecranon of the humerus (**Fig. 18**). These two traits would thus be good population markers for individuals found in tomb Th303, indicating that the deceased would have enjoyed the same environment during their lifetimes.

17. Notch in patella (N. Delhopital).

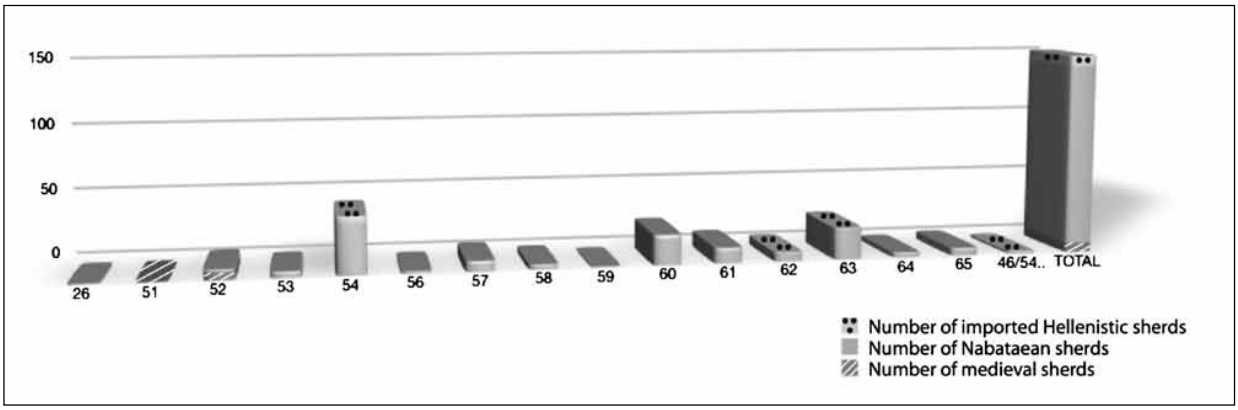


18. Perforation of the olecranon on a distal humerus epiphysis (Th303.42); posterior view (N. Delhopital).

C. The pottery (I. Sachet)

Several hundred sherds were recovered in the excavation of tomb Th303, the majority being found either outside the chamber (Th303.1-2 and 20; **Fig. 5**), or in the access shaft to the chamber (Th303.3, 5, 7 and 9) and in a corridor recently created by looters (Th303.4, 6, 8 and 10-11). Whether or not the sherds were linked to activities that occurred inside the burial chamber depends on their location when they were excavated. Pottery found at the entrance to the chamber could simply have fallen down the shaft when it was still open. In addition, near the pit and in the area close to the looting, there were a few mediaeval sherds (Th303.12, 14 and 16)[2]. Given the wide extent of the corpus, the pottery was divided into two groups: (1) sherds which may not originally have been present inside the chamber and (2) sherds that were closely linked to the burial levels in the tomb. Only the second group is described here. It comprises 151 sherds associated with stratigraphic units in which human bones were found (Th303.26 and 51-65), in other words, from the earliest archaeological levels in chamber Th303 **(Fig. 19**).

Within this corpus of pottery, which came mainly from the north-west corner of the chamber (area A; **Fig. 13**), seven mediaeval sherds were found in the upper layers (Th303.51-52), above the pile of bones representing ancient funerary activities. These bear witness to a superficial occupation in mediaeval times when the chamber may have been used as a hiding place or temporary shelter. The earlier levels were not disturbed and no mediaeval sherds were found in the deeper levels.



19. Number of sherds by category (imported Hellenistic, Nabataean, mediaeval) in the funerary stratigraphic units in chamber 303 (I. Sachet).

2. For the pottery of Islamic period see the article of M. Sinibaldi in this *ADAJ* volume (Sinibaldi 2013).

Chronological typology

In the earlier levels (Th303.62-64), dated radiometrically to the 4th - 1st centuries BC (**Fig. 12**), the pottery is very fragmented and difficult to recognise. Macroscopic study of the fabrics nevertheless enabled a few sherds of imported Hellenistic pottery to be identified. These characteristic sherds, notably the base of an *unguentarium* (**Fig. 20: 13**), were found only in the stratigraphic units lying on the bedrock floor of the chamber, at the bottom of the pile of bones (Th303.54 and 62-63). They were mixed with pottery from Petra from the 1st centuries BC / AD, which bear witness to some major disturbance of the tomb and its reuse at that time. Evidence from the first occupation of the tomb is extremely tenuous and seems to have been largely wiped out by the second funerary occupation in the 1st centuries BC / AD.

By the mid-1st century AD, workshops in Petra were producing large quantities of pottery and so there was no longer any need to import it. Therefore, apart from the earlier periods it is rare to find imported pottery at the site. The Petra workshops produced both fine and common wares. The fine painted wares, studied by Schmid (2000), provide a reliable dating tool, particularly for the 1st century AD. In tomb Th303, the painted pottery belongs only to Schmid phases 2a to 3a, that is between 50 BC and 70 / 80 AD. No painted sherds later than this have been found either inside or outside the tomb.

Unpainted pottery does not offer such precise dating as painted pottery. The Hellenistic-type bowls, some of which are probably imported, are dated to the 2nd - 1st centuries BC (**Fig. 20: 7-10**), perhaps even to the 3rd century BC. Otherwise, the corpus is essentially made up of Nabataean productions, dated mainly to the late 1st century BC and the 1st century AD. Three complete vessels were found set on the floor of the chamber: two plates and one cooking pot (**Fig. 20: 1-2**). The two plates are dated to between the mid-1st century BC and the late 1st century AD. The cooking pot, found near the entrance to the tomb is dated to the first half of the 2nd century AD[3]. Thus, according to the pottery analysis, the peak of activity in tomb Th303 was between the mid-1st century BC and the last quarter of the 1st century AD. It seems likely that the tomb was subsequently abandoned, then perhaps reused briefly or looted in the 2nd century AD or shortly thereafter.

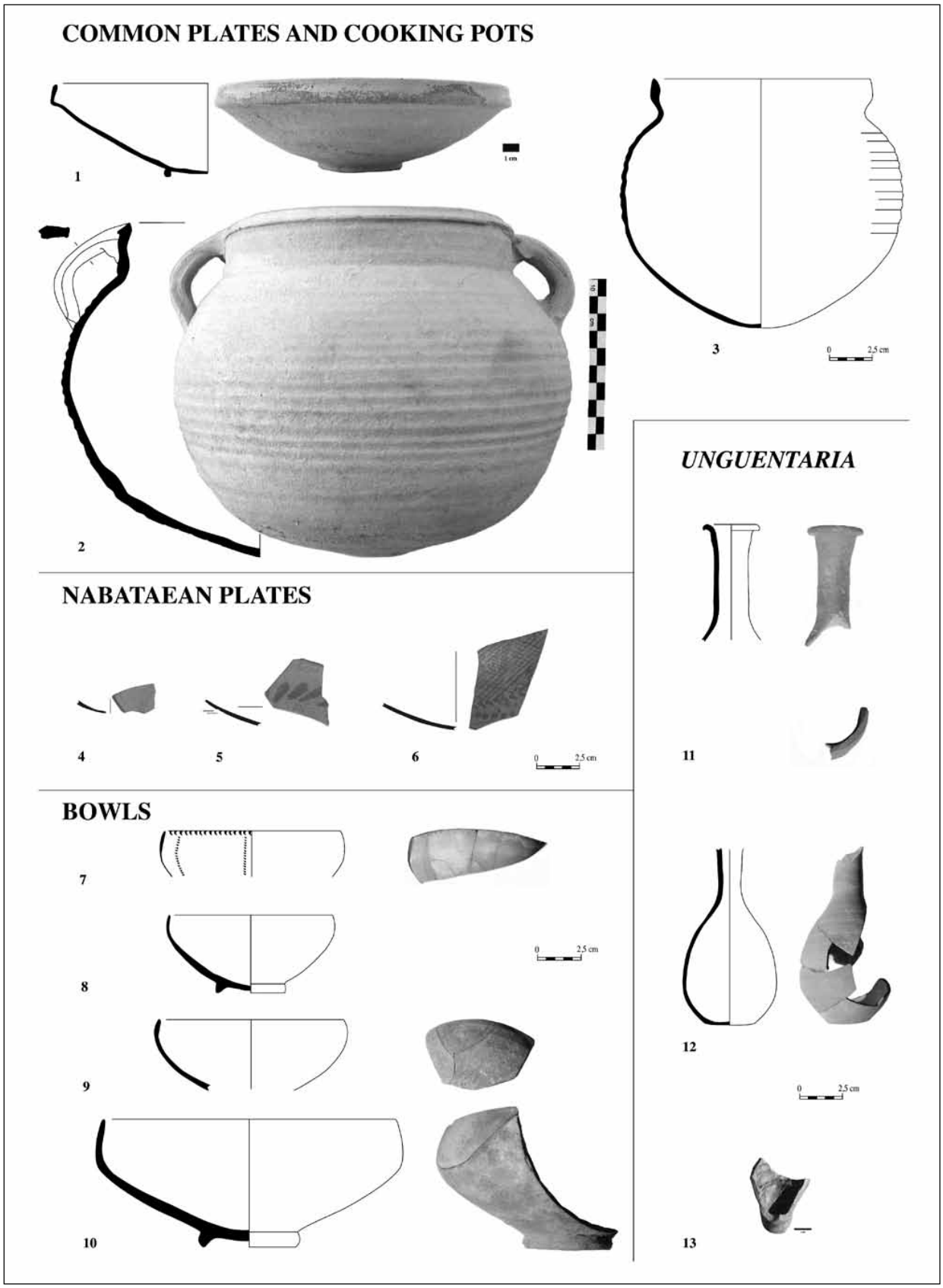
Discussion

Owing to the many disturbances in the tomb, the original location of the pottery vessels inside the chamber is difficult to determine. However, all the sherds are closely linked with the stratigraphic units which contained the remains of the burials: when the bones where pushed aside into the north-west corner of the chamber, the pieces of pottery were swept aside with the rest of the material. In area D, where the bones are best preserved, a Nabataean plate had been placed next to the legs of the deceased **(Fig. 16)**. These remains show that the vessels were most probably placed next to the burials, on the floor of the tomb. In ancient burials, one or several vases were often placed close to the legs or head of the body.

Tomb Th303 did not contain any new types: the funerary vessels are the same as the domestic ones. Thus, there appears to have been no pottery production that was, strictly speaking, dedicated to tombs or kept for funerary use. No analysis has been carried out to determine what the vessels found in the tomb might have contained, or even if they contained food. However, it seems likely that the pitchers contained liquids, while the plates were used for solid food and the *unguentaria* for perfumes or oils. If these vessels were deposited empty, at the very least they had symbolic value. The range of pottery forms found inside the tomb is interesting. Excluding the upper levels containing the mediaeval material (Th303.51-52), the closed pottery corpus came mainly from area A (**Fig. 19**) and produced a group of 94 sherds (after gluing), that fall into the following categories:

Cooking pot	Plate	Bowl	Pitcher	Goblet	*Unguentarium*	Indet.	TOTAL
12	14	17	7	1	23	20	**94**
12.8%	14.9%	18.1%	7.4%	1.1%	24.4%	21.3%	**100%**

3. Our thanks to yvonne gerber for her help in dating cooking pots 2 and 3 (fig. 20). Her interpretation contributed to establishing the chronology of the end of the funerary occupation in th303.


COMMON PLATES AND COOKING POTS
1
1 cm
2
3
0 2,5 cm
NABATAEAN PLATES
4
5
6
0 2,5 cm
BOWLS
7
8
9
10
0 2,5 cm
UNGUENTARIA
11
12
0 2,5 cm
13

20. Pottery from tomb Th303, ath-Thughrah, Petra (drawn by I. Sachet).
1. *Unpainted Nabataean plate. US 303.19. Pink fabric, quartz inclusions. Schmid group 6, phase 3b, 70-100 AD. (Schmid 2000, Abb. 49).*
2. *Nabataean cooking pot. US 303.9. Pink fabric, beige exterior surface. 2nd century AD. (Gerber 1997: fig. 7; Gerber 1994: fig. 16; Villeneuve 1990: pl. VI.1.2).*
3. *Nabataean cooking pot. US 303.54. Orange fabric, black inclusions, specks of lime. Second half of 1st century AD (Gerber 1997: 409, fig. 5, 6: F, G, I).*
4. *Painted Nabataean plate (or bowl). US 303.20. Decorated with rays of dotted lines. Perhaps a ring base. Schmid phase 2a-b, 50 BC-0. (Schmid 2000: Abb. 394–395).*
5. *Painted Nabataean plate. US 303.20. Vegetal decoration. Schmid phase 3a, 20-80 AD. (Schmid 2000, Abb. 199–200).*
6. *Painted Nabataean plate. US 303.20. Criss-cross and dot decoration. Base. Schmid phase 3a, 20-80 AD. (Schmid 2000, Taf. 2.4).*
7. *Painted Nabataean bowl, US 303.54. Decoration Schmid phase 2a-b, 50 BC–0. (Schmid 2000, Abb. 394–395).*
8. *Nabataean bowl. US 303.60. Schmid phase 1, 150–50 BC. (Schmid 2000, Abb. 41).*
9. *Hellenistic-type bowl. Imported? US 303.54. Fine orange fabric, red slip. Schmid unpainted forms, group 2, phase 1, 150-50 BC. (Schmid 2000, Abb. 19).*
10. *Hellenistic-type bowl. Imported. US 303.59. Pink fabric, voids, white specks. Traces of burning on the exterior and ash on the interior. Schmid, unpainted forms, related to group 5, phase 1, 150-50 BC. (Schmid 2000, Abb. 97).*
11. *Nabataean unguentarium. US 303.60. Pink fabric, a few inclusions. 1st century BC - early 1st century AD. (Johnson 1990, group I ; Schmid 2000, fig. 316).*
12. *Nabataean unguentarium. US 303.54. Pink fabric, fine. 1st century AD (Johnson 1990, group II).*
13. *Unguentarium. US 303.63. Imported. Base. Beige fabric, brown slip inside. Probably before the 1st century BC.*

The sherds from tomb 303 belong to three main families: vessels intended to hold perfume (*unguentaria*: 24.4%), those intended for liquids (pitchers, goblets and bowls: 26.6%) and those intended for solid foods (cooking pots and plates: 27.7%). Surprisingly, the main pottery categories are found in equal proportions in the tomb: about □ for drinking, □ for eating and □ for perfuming, the last quarter consisting of indeterminate forms. This range bears witness, firstly, to variety within the deposits but perhaps also to a particular intention for the types of offerings. The variety of the corpus and its composition suggest that very careful attention was paid to the dead. The pottery assemblage of tomb Th303 establishes the undertaking of specific rituals by the living, perhaps in order to feed, refresh and anoint the dead, or perhaps as ministrations intended to satisfy the gods. But the exact purpose of these funerary practices and how they functioned is difficult to determine. Outside Nabataea, food offerings are known from ancient texts and confirmed by archaeology, notably by the presence of vessels inside tombs (Toynbee 1971: 51 ss.; Cartron 2012: 178-186). However, it is not possible to transfer the eschatological thoughts from this or that population to that of Petra. Nevertheless, the study of the pottery from tomb Th303 attests to a community with rituals and practices that were current during the Hellenistic and Roman periods around the Mediterranean and to the care given the dead.

D. Archaeozoology (Carine Tomé Carpentier)

The faunal material from tomb Th303 was studied after the excavation, during a study season in Petra in May 2007. A more detailed analysis based on the inventory and preliminary field plans was then carried out at CEPAM the following September. In spite of the reasonable condition of the remains, several factors often made identification difficult: long bones of large mammals were heavily fragmented, bones were often vermiculated, the presence of very young individuals (foetuses) and reference material for the wild species was not available.

Taxonomic analysis

From a total of 8,526 specimens, only 22.1% could be identified to species level (**Fig. 21**). Nevertheless, it was possible to determine most of the remaining fragments to genus, family, order or class, thus providing important information.

The ovicaprids are the best represented species, with a total of 42% of the NR and 27.7% of the MNI, the majority being goats. Dogs and rock hyrax are also well-represented. Larger mammals, such as camels, are clearly underrepresented because of the heavy fragmentation of their bones. Systematic sieving allowed the collection of many fragments of small animals (toads; jirds; snails; snakes; lizards; birds), as well as some foetal bones.

Analysis of the stratigraphic and spatial distribution of the taxa (**Fig. 22**) shows that the

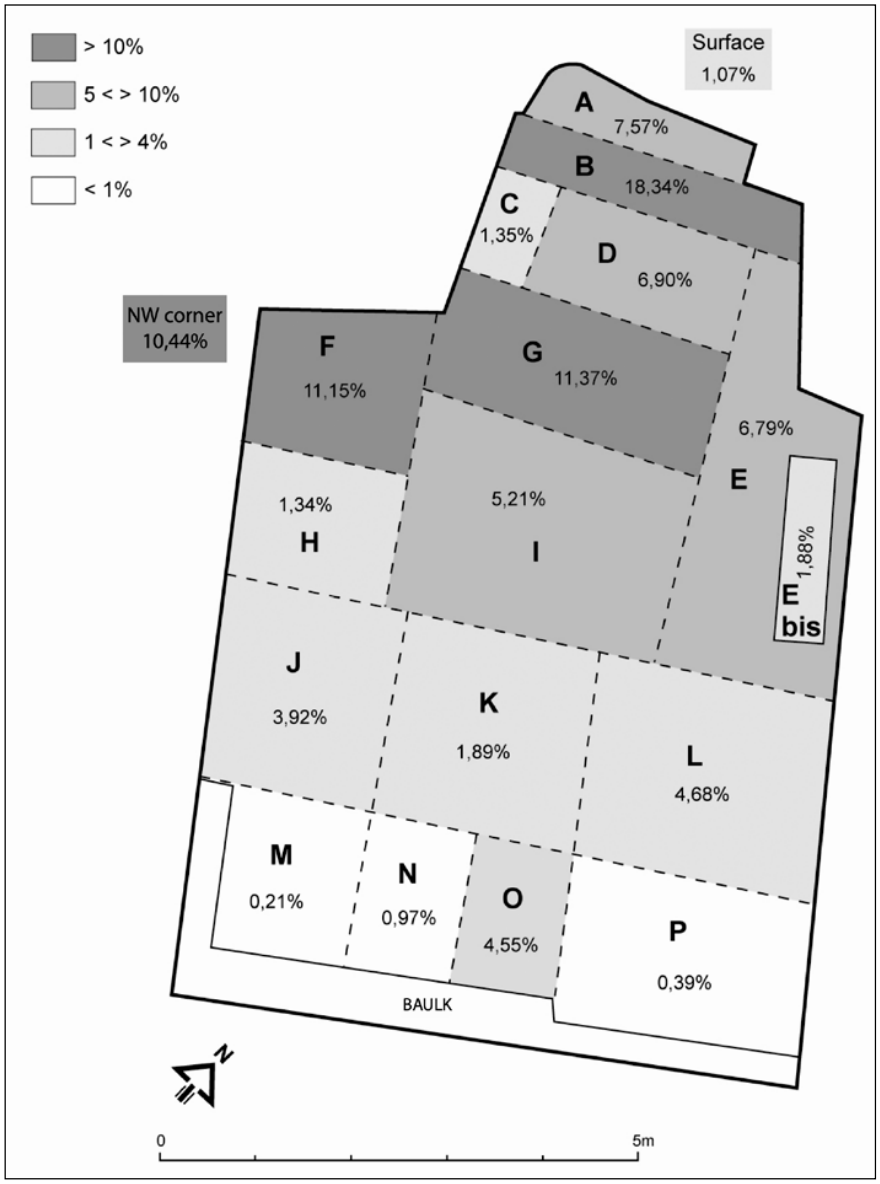
Taxons (common names)	Taxa (scientific names)	NR	% NR	MNI	% MNI
Dromadary	*Camelus dromedarius*	98	1,1	2	0,9
Equid	*Equus* sp.	3	0,03	1	0,5
Large mammals	*Camelus / Equus*	287	3,4		
Sheep/Goat	*Caprinae*	3324	38,9	36	17,1
Goat	*Capra hircus*	258	3	14	6,7
Sheep	*Ovis aries*	6	0,07	4	1,9
Dog	*Canis familiaris*	91	1,1	11	5,2
Medium mammals	*Capra / Ovis / Canis*	1349	15,8		
Rock hyrax	*Procavia capensis*	394	4,6	4	1,9
Hare	*Lepus* sp.	2	0,02	1	0,5
Jird	*Meriones* sp.	70	0,8	22	10,5
Mouse	*Eliomys* sp.	1	0,01	1	0,5
Rodents	*Rodentia*	698	8,2		
Small Carnivore	*Carnivora*	4	0,05	1	0,5
Indeterminate mammals	*Mammalia*	58	0,7		
Chicken	*Gallus gallus*	2	0,02	1	0,5
Rails	*Rallidae*	47	0,5	1	0,5
Indeterminate birds	*Aves*	28	0,3	4	1,9
Green toad	*Bufo viridis*	978	11,5	61	29
Snakes	*Serpentes*	537	6,3	4	1,9
Lizards (Agamids)	*Agamidae*	29	0,3	2	0,9
Lizards (Lacertids)	*Lacertidae*	79	0,9	8	3,8
Indeterminate lizards	*Sauria*	5	0,05		
Marine bivalve	*Bivalvia*	1	0,01	1	0,5
Land snail (Helicids)	*Levantina spiriplana hierosolyma* (Mousson, 1854)	44	0,5	12	5,7
Land snail (Buliminids)	*Buliminus labrosus labrosus* (Olivier, 1804)	17	0,2	13	6,2
Land snail	*Gastropoda*	6	0,07	4	1,9
Milkweed bug	*Lygaeus pandurus*	1	0,01	1	0,5
Insects	*Insecta*	2	0,02	1	0,5
Indeterminate		107	1,2		
Total number of remains		***8526***		***210***	

21. Faunal remains from tomb Th303: Number of Remains (NR) and Minimum Number of Individuals (MNI) (C. Tomé Carpentier).

tomb was used as a dump on two occasions. The first - located between the two burial spots - is represented by the remains of goats and dogs 'swept aside' with the microfauna and human bones into the north-west corner of the chamber. The second - after the tomb was abandoned - is represented by the dumping of camel and ovicaprid bones. It also shows that the intrusion of small wild animals occurred preferentially between the two phases of funerary activity (the tomb was not sealed) and that rock hyrax fell into the chamber after it was abandoned.

Domesticated animals

The surfaces of the large mammal bones are badly damaged and display traces of vermiculation. The position of the remains at and near the entrance to the chamber might explain this poor state of preservation through exposure to the elements, unless they were thrown into the tomb after having been outside on the ground surface for some time. A large part of the remains can be attributed to the dromedary and consist of isolated teeth, caudal vertebrae, parts of the feet (carpal and tarsal bones; phalanges) and long bones that are too fractured to be identified. There is a minimum of two individuals, an adult and a younger animal. Three fragments can be attributed to an indeterminate equid: the proximal half of a second metacarpal, a large sesa-



22. General distribution of faunal remains by area (% NR) (C. Tomé Carpentier, after site plan by P. Duboeuf, I. Sachet and N. Delhopital).

moid and a talus. Two pathologies were noted: (1) poor resorbtion of a fracture on a rib and (2) a morphological anomaly on the distal epiphysis of a metapodial.

The 287 remains attributable to the genus *Capra* belong to a minimum of 14 individuals of various ages (from 3 months to 4 or more years), of which four are female. Calculation of the withers height of the goats (after von den Driesch and Boessneck 1974) on the basis of a humerus (9 months old), a metacarpal and a metatarsal (>18 months) gives us 52, 62 and 69 cm. Only six fragments display sheep-like characteristics, representing at least four individuals aged between one and 20 months; this taxon is quite likely to have been present in the rocky environment of Petra. To the four sheep and 14 goats can be added a further 36 indeterminate ovicaprids, of which 30 are foetuses. All anatomical parts are well-represented, suggesting that the individuals were probably complete at the time of their deposition. One fragment of a medial phalanx is burned and eight bones show cut marks typical of disarticulation. Only eight pathologies were noted, *viz.* periodontal disease, consolidation of fractures and (?) arthiritis.

The spectrum of domestic species is completed by 91 fragments of dog, belonging to a minimum of 11 individuals (one of which is male): three individuals of <6 months, one individual of

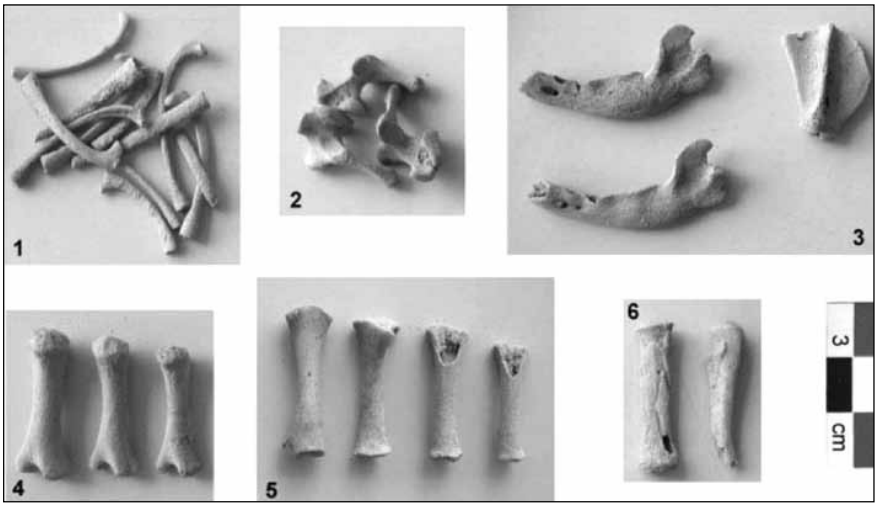
>6 months and 7 foetuses. The best represented anatomical parts are the skull, anterior limb and foot. The presence of these dog remains scattered all over the chamber is difficult to explain.

A minimum number of 30 ovicaprid and seven dog foetuses does not simply suggest the presence of pregnant females at the site, but rather the premeditated placing of the foetuses in the chamber (**Fig. 23**). The length of the long bone diaphyses allowed us to demonstrate the presence of ovicaprid foetuses from 80 - 90 days of gestation up to birth. Thus, the atypical number of foetuses in this context could perhaps be explained by the spread, in one or several herds, of an infection such as abortive chalmydophilosis, a disease common amongst small ruminants and which can also affect dogs living in close contact with infected herds. This disease colonises in the placenta from the 60th day, but the pathological consequences of this colonisation only become visible after around 90 days.

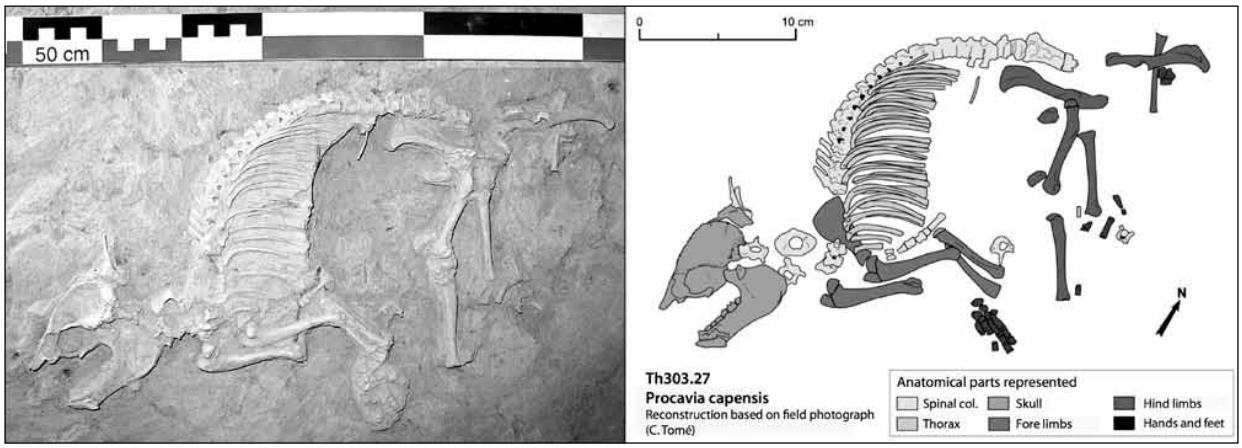
Finally, it should be noted that one fragment each of a sternum and right femur of domestic fowl (*Gallus gallus*) were found.

Wild animals

The rock hyrax (*Procavia capensis*), a species which is today on the road to extinction in the Petra region, must have been widespread in the Nabataean and Roman periods. The 394 remains come mainly from two well-preserved skeletons found *in situ* (**Fig. 24**) in Th303.18 and 27. The other remains come from two incomplete individuals scattered at the back of the chamber. Though their presence seems natural, these two articulated skeletons nonetheless show some striking similarities: they are fairly close to one another spatially (area L), they are



23. Remains of ovicaprid and dog foetuses (C. Tomé Carpentier): (1) Caprinae ribs, Th303.39; (2) Caprinae vertebra fragments, Th303.39; (3) two left Canis mandibles and one right Canis scapula, Th303.39; (4) three left Caprinae humeri, Th303.39; (5) one left Caprinae femur and three left Caprinae tibias, Th303.37; (6) one left Canis radius and one left Canis ulna, Th303.39.



24. Incomplete skeleton of rock hyrax (Procavia capensis) from Th303.27 (modified field photo by I. Sachet and drawing by C. Tomé Carpentier).

both lying on their right side and in an almost identical posture (anterior and posterior limbs touching), their skulls are fractured and they are young individuals. They were positioned with their heads to the west, with a gap in the orientation of the two individuals of about 80°. The perfect preservation of their skeletons and absence of any man-made marks nevertheless suggest a natural death.

Hare is represented by only two lumbar vertebrae belonging to an adult individual.

Small rodent remains are numerous (NR = 769) and were mainly found in area F, the 'north-west corner', and in area D. All anatomical elements are present but species determination was carried out only on the teeth. Thus a mouse was identified (mandible with the natural perforation in the inferior process characteristic of the genus *Eliomys*) and a minimum of 22 jirds, based on left mandibles. Alhough it was not possible identify the remaining 698 rodent fragments owing to the absence of a comparative collection, one can nonetheless suggest that they belong mainly to jird, an animal that lives in a dry environment and which is still present in Petra, represented by the species *Meriones crassus* (Ruben 2006: 162).

In the absence of reference material, the identification of the bird bones was similarly difficult. Of the 28 indeterminate fragments, there is a minimum of two immature and two adult individuals. An almost complete skeleton allowed the identification of a rail (family Rallidae), the presence of which suggests that there was probably some standing water near the site since this taxon usually frequents ponds, lakes and shallow bays with dense vegetation, as well as open water.

The second most represented animal on the site, with 978 remains, is another species typical of humid environments, the green toad (*Bufo viridis*). A minimum of 61 individuals were identified as follows (Bailon 1999): 34 adults (25 females; 14 males) and 27 immature (ten females; one male). This toad, the most common in Jordan, is the only one found today at Petra (Ruben 2006: 100). All its anatomical parts are represented.

The 537 snake remains could not be identified to species in the absence of reference material for the numerous species present in Petra. The number of remains is large, but is overrepresented because of the many ribs and vertebrae present in any one individual. A few cranial fragments (teeth) confirms the presence of a minimum of four snakes.

Remains of lizards are less frequent (NR = 113) and clearly belong to two families with several species found in Petra today, *viz*. Agamidae and Lacertidae.

Sixty-eight snail remains were recorded. The two main species noted are terrestrial gastropods: *Levantina spiriplana hierosolyma* (Helicidae) and *Buliminus labrosus labrosus* (Buliminidae). The presence of snails in the chamber once again confirms the existence of a humid environment. A single indeterminate marine bivalve was noted on the surface.

Of the remains of three insects, only one was in perfect condition and could be identified to species level: milkweed bug, *Lygaeus pandurus*, which is common in Petra and easily recognised by its black and red colouring.

Interpretation of results

The spectrum of wild species, consisting of animals that are basically the same as those that still inhabit the Petra area, sheds light on the immediate environment of the tomb.

Based on observations made during the course of the excavation, it would seem that the faunal remains are not contemporary with the funerary activities (they do not lie directly on the floor of the chamber) and that some animals found themselves trapped in the chamber after it was abandoned. The archaeozoological analyses partly corroborate this observation, but also introduce new considerations on which to reflect, e.g. the possible intrusion of some animals during the use of the tomb and more certainly between the two phases of funerary activity, the likely reuse of the chamber as a dump, the visible disturbance of material by burrowing animals, and a humid environment in at least at some periods.

The overlap of toads and jirds, animals with very different environmental preferences, is striking. It could suggest the alternation of at least one very humid phase with one very dry phase, which would also explain the neat fractures on several of the disturbed human bones. The presence of water in the sediments as well

as the scats of these small animals might also explain the modifications to the structure of several human remains (mineralisation).

It was equally possible to demonstrate ovicaprid herding near the tomb. The herd was probably affected by an infectious disease that caused premature abortion. The presence of several females shows that the herd was used for reproduction and perhaps also for milk production. An ability of herders to manage infections is also hinted at with the dumping of foetuses and stillborns in the chamber to avoid contagion.

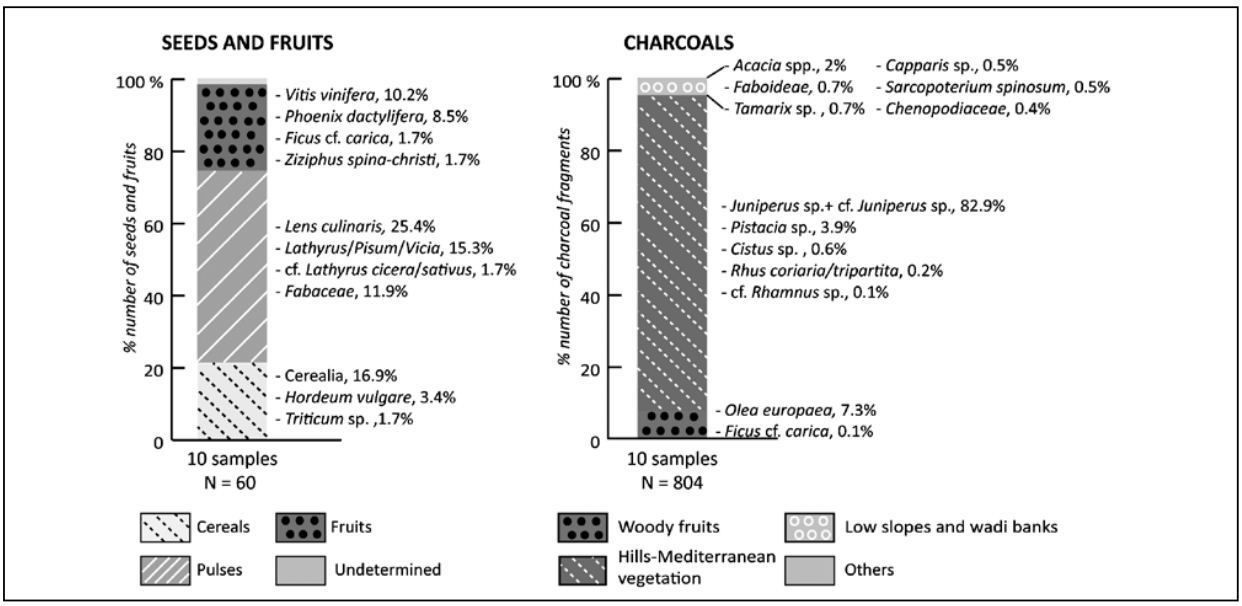
E. Archaeobotany (C. Bouchaud)

Twelve stratigraphic units were partially sampled during the excavation carried out by I. Sachet and N. Delhopital in November 2006. All were in area A (**Fig. 13**), in the north-west corner of the chamber, which contained most of the bones. These sediment samples, totalling a volume of 42.5 litres, were sieved and processed by flotation (mesh size 0.375 and 0.5 mm) in Petra in July 2008. The heavy fraction was then sorted in the archaeobotanical laboratory of the MAE (Nanterre, France) to extract plant, seed, fruit and charcoal remains, which were then identified by their morphological or anatomical characteristics using comparative atlases (Fahn *et al*. 1986; Schweingruber 1990) and reference collections of seeds and wood. The presence of burned plant matter in the deepest stratigraphic units, below the layers of fill, suggests that it was contemporary with the ancient occupation of the burial chamber. Radiometric dating of the charcoal and seeds (juniper charcoal from Th303.62 and 63; cereal grains from Th303.42; legumes and fruits from Th303.59) confirms their antiquity, giving a date between the 4th century BC and 3rd century AD (**Fig. 12**). These results also show that the plant material was deposited over time and does not constitute a homogenous group. Though the chronology is well established, the functional link remains in question. These plants could have been brought in by people in connection with funerary activities but, as with the faunal remains, the notion of non-deliberate deposition (notably aeolian) must also be entertained.

Analysis of fruit and seed remains

Ten samples yielded a total of 60 specimens (**Fig. 25**), with a density of between 0.2 (Th303.58 and 62) and 13.1 (Th303.54) specimens per litre of sediment. Eleven taxa were identified in the form of seeds or fruits derived from the three main food groups of cereal, pulses and fruits.

Thirteen cereal caryopses were identified, that is 22% of the minimum number of individuals (**Fig. 26**), including two barley grains (*Hordeum vulgare* L.; **Fig. 27**) and a partial wheat grain (*Triticum* sp.). Their poor state of preser-



25. Results of analysis of fruits, seeds and charcoal: NR per sample by taxon (C. Bouchaud).

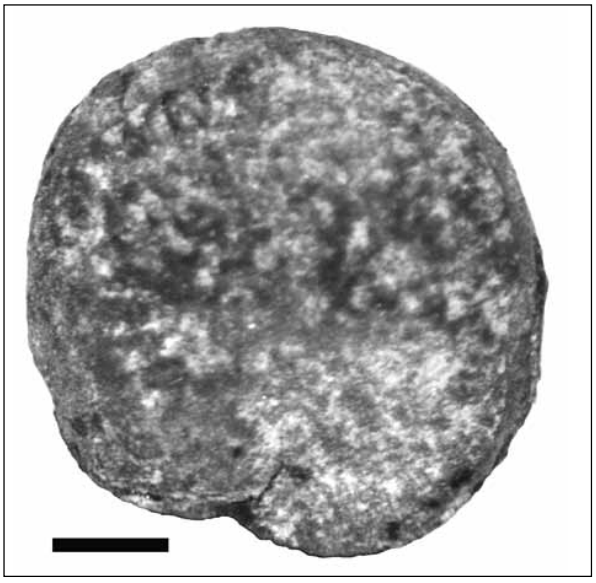
Zone	Ath 303											
Us	26	42	54	56	57	58	59	61	62	63	64	65
Volume	0,1l	4,7l	2,9l	0,7l	0,1l	4,5l	5,5l	8,5l	5,5l	2l	4l	4l
Fruits and Seeds analysis												
Cereals												
Hordeum vulgare, caryopsis			1			1						
Triticum sp., caryopsis fragment		1										
Cerealia, caryopsis		1	8	1								
Pulses												
Lens culinaris, seed		6	9									
cf. *Latyrus cicera/sativus*, seed			1									
Lathyrus/Pisum /Vicia, seed			9									
Fabaceae undetermined, seed			3				4					
Fruits												
Ficus cf. *carica*, agglomerate achenes												x
Phoenix dactylifera, seed		1										1
Phoenix dactylifera, seed fragment	1		3						1			
Vitis vinifera, seed			2									1
Vitis vinifera, berry			1		1						1	
Ziziphus spina-christi, endocarp			1									
Other												
Undetermined pericarp												1
Total	**1**	**9**	**38**	**1**	**1**	**1**	**4**	**0**	**1**	**0**	**1**	**3**
Seeds and fruits remains density	10,0	1,9	13,1	1,4	10,0	0,2	0,7	0,0	0,2	0,0	0,3	0,8
Charcoal analysis												
Woody fruits												
Ficus cf. *carica*								1				
Olea europaea		11	14	1		6	9	15	2	1		
Hills - Mediterranean forest												
Cistus sp.									1	1	3	
Pistacia sp.			3	1			1	3	1	6	4	12
Rhus coriaria/tripartita								1			1	
Juniperus sp.		85	135	95		75	116	26	34	31	14	30
cf. *Juniperus* sp.		4	19									
cf. *Rhamnus* sp.			1									
Low slopes and wadis banks												
Acacia spp.		3	5			6	2					
Capparis sp.							3				1	
Chenopodiaceae			1				2					
Faboideae			2	1		3						
Sarcopoterium spinosum			3						1			
Tamarix sp.		1				2	2				1	
Others												
Monocotyledon										1		1
Bark							2					
Indeterminable		1	15	2		8	18	5	2	4	6	9
Total	**0**	**105**	**198**	**100**	**0**	**100**	**155**	**51**	**41**	**44**	**30**	**52**

26. Fruit, seed and charcoal analysis as a percentage MNI relative to the total number of identified remains; indeterminate charcoal and bark fragments not counted (C. Bouchaud).

vation prevents a more accurate identification. In antiquity, the Near East produced mainly six-row barley (*Hordeum vulgare* spp. *vulgare* L.) and naked wheats (bread wheat [*T. aestivum* L.] and hard wheat [*T. turgidum* spp. *durum* L.]) (Crawford 2006; Willcox 2003), which could correspond with the cereals from the tomb.

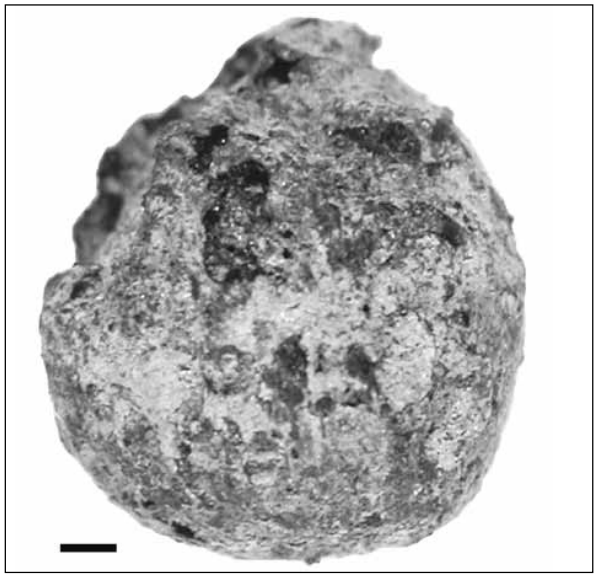
Pulses are the largest group of remains amongst the seeds and fruits (54.2% of the minimum number of individuals). They consist mainly of lentils (*Lens culinaris* L.; 25.4%; **Fig. 28**), a common food from the Neolithic onwards that has already been identified in Late Roman levels at the residential area of ez-Zantur in Petra (Karg 1996). As with the cereals, carbonisation has limited identification of the other pulse remains. A vetch (cf. *Lathyrus cicero* / *sativus*) has been tentatively identified; this plant is known for its use as fodder and is eaten nowadays in India and Ethiopia (Nesbitt 2005: 143).

27. Grain of barley (Hordeum vulgare), ventral face. Th303.54. Scale: 1 mm (C. Bouchaud).

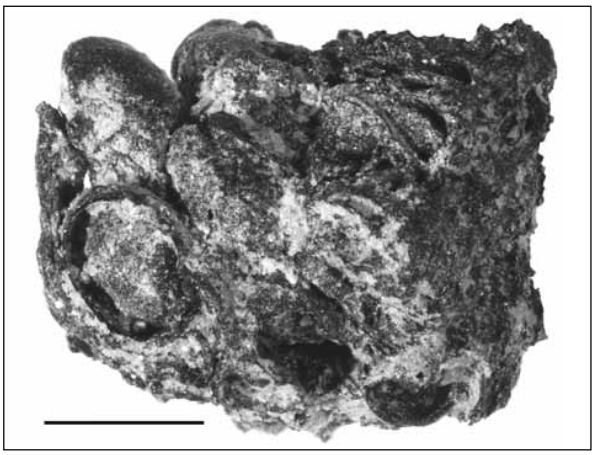


28. Lentil (Lens culinaris). Th303.54. Scale: 1 mm (C. Bouchaud).

Fruits represent the last quarter (22%) of plants found in the tomb. Dates (*Phoenix dactylifera* L.), figs (*Ficus* cf. *carica* L.) and grapes (*Vitis vinifera* L.) are frequently found in Bronze Age archaeobotanical assemblages from the Middle East (Tengberg 2012). These plants have already been identified in Late Roman levels at ez-Zantur (Karg 1996; Jacquat and Martinoli 1999) and in Nabataean levels at the chapel of Obodas (Tholbecq *et al*. 2008). The fig achenes are clumped together and form an amorphous mass that could be part of the fruit, even though no trace of the outside skin has been observed, or some foodstuff based on figs (**Fig. 29**). Individual grapes (**Fig. 30**) have part of their pericarp preserved, recognisable in the form of a black amorphous mass surrounding the pips, and could represent the remains of the fresh fruits (Margaritis and Jones 2006). These grapes may thus have been placed in the tomb shortly after the grape harvest, during the autumn, or later in the year. Indeed, Pliny the Elder states that grapes can be preserved over the winter if suspended from the ceiling or conserved in their own juice in sealed jars (*Natural History* XIV.3.16). The endocarp of Christ's thorn (*Ziziphus spina-christi* [L.] Desf.) probably indicates the presence of this plant in the natural environment of Petra, since it could, for example, have grown on the sandy plains in association with acacias (Ruben 2006: 92). This



29. Lump of fig achenes (Ficus carica). Th303.65. Scale: 1 mm (C. Bouchaud).



30. Grape (Vitis vinifera). Th303.57. Scale: 1 mm (C. Bouchaud).

tree, from the jujube family, produces small edible fruits, fleshy and yellow when ripe, which taste a bit like apples.

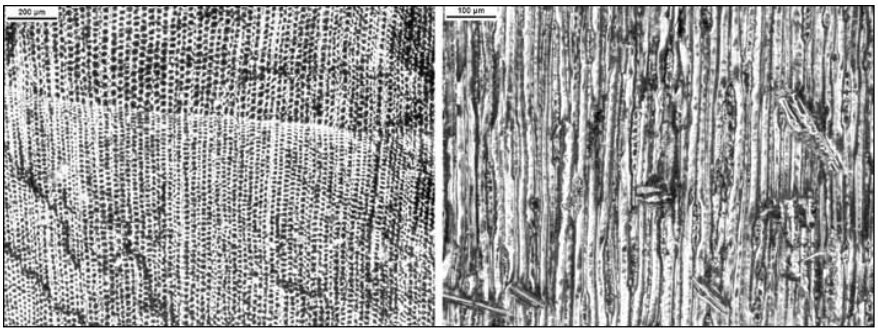
Charcoal analysis

The charcoal analysis looked at 876 fragments from ten samples (**Figs. 26 and 27**). Fourteen taxa were identified and grouped according to their present-day habitats. They comprise fruit trees, woods characteristic of high elevation Mediterranean formations, and vegetation typical of rocky slopes and sandy plains.

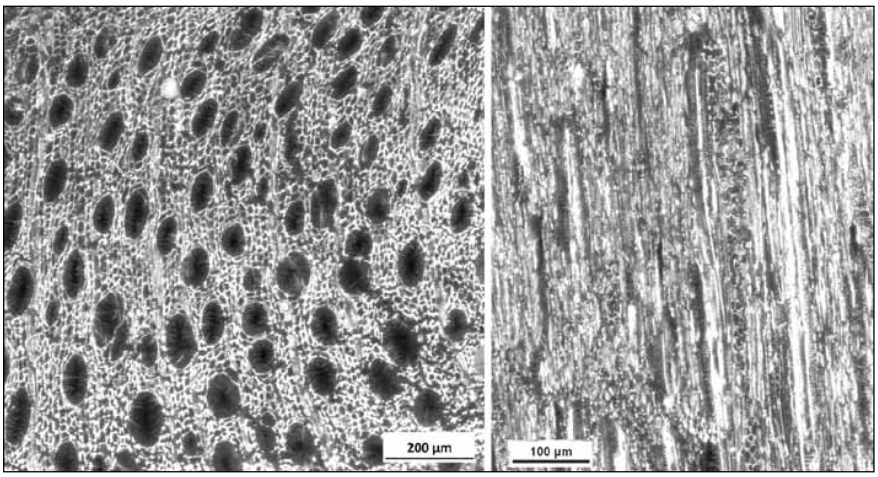
The carbonised olive and fig wood (*Ficus* cf. *carica* L.) probably comes from cultivated plants. Their cultivation in Petra has already been noted in palynological (Fall 1990) and charcoal studies (Karg 1996). It is possible that these fragments were the burned remains of pruned branches - either to dispose of them, or used as fuel - following the maintenance of the trees. In addition, a number of wild taxa were recorded that reflect the different plant formations that might have evolved on the site of Petra. The presence of wooded vegetation of a Mediterranean type typical of semi-mountainous landscapes is suggested by the shrub and tree species (cistus, *Cistus* sp.; pistachio, *Pistacia* sp.; sumac, *Rhus coriaria* / *tripartita*; juniper, *Juniperus* sp.; buckthorn, cf. *Rhmanus* sp.; **Figs. 31 and 32**). The acacias belong to desert flora typically associated with sandy plains. Prickly burnet (*Sarcopoterium spinosum*), brooms (such as *Retama raetam* [Forssk.] Webb., which is very common today) and chenopods grow particularly on degraded soils and are generally considered to be markers of human activities, notably grazing and firewood collecting (Zohary 1973). These species can also develop on the plains and in *wadis*, alongside tamarisk (al-Eisawi 1996: 78).

Discussion

The taxonomic identification of the carbonised plant remains allows several levels of interpretation. From an agricultural point of view, these new results complement previously published archaeobotanical data (Fall 1990; Karg 1996; Tholbecq *et al*. 2008) by indicating the presence of cultivated species within the Petra basin or in places nearby where cereals (barley; wheat), pulses (lentil; vetch) and Mediterranean fruit trees (fig; olive; grape) could be grown. The climate and topography of Petra are not suitable for the cultivation of date palms and it is possible that the stones found in the tomb came from areas with more favourable conditions, such as the shores of the Dead Sea. If the olive-wood charcoal from Th303.62 really is contemporary with the juniper charcoal from the same unit, dated by radiocarbon to the 4th or 3rd century BC, then it is the earliest indication of olive cultivation in Petra, the agricultural exploitation of the site in this period being still little known, even ignored (Tholbecq 2001 and. 2013; Kouki 2009). However, the complex stratigraphy of



31. Transverse (left) and longitudinal tangential (right) cuts of cistus (Cistus sp.). Th303.62 (C. Bouchaud).



32. Transverse (left) and longitudinal tangential (right) cuts of juniper (Juniperus sp.). Th303.54 (C. Bouchaud).

the tomb and the many disturbances that it has suffered spell the need for caution, since the two pieces of olive-wood charcoal found could be contamination from adjacent, more recent, but nevertheless ancient, stratigraphic units.

From an ecological point of view, the diversity of the assemblage of wild plants is a complete reflection of the formations of the Petra landscape. There are the cultivated orchards, the semi-mountainous wooded slopes, more steppic soils and desert plains where the vegetation is concentrated along the *wadis*. Semi-mountainous vegetation is best-represented, particularly by juniper. This can logically be explained by the location of the ath-Thughrah tomb within the altitudinal zone in which the juniper thrives. Today, the vegetation around the tomb is much reduced, but the presence of more significant wooded formations in the Nabataean period is quite conceivable. The sandy plains and Wadi ath-Thughrah below the study area are also potential sources for some of the species identified.

Finally, there is the question of the origin of these deposits. Aeolian deposition of waste from domestic hearths or fires certainly explains the presence of inflammable parts of these plants, which could have been mixed in with the sediment in the tomb. However, there is one indication in favour of a link with funerary activities: the assemblage of seeds and fruits contains only food plants which were - by default - not eaten. Several of them display evidence for carbonisation of the entire fruit, e.g. grapes and fig[4]. These two observations are not often made in archaoebotanical assemblages from the Middle East; for example, neither is attested amongst the thousands of plant remains studied from the az-Zantur area (Bouchaud 2011: 162–187; Jacquat and Martinoli 1999; Karg 1996). Th303.54 produced the largest number of food remains and corresponds to a layer of sediment resting on the bedrock, which also contained a large amount of Hellenistic and Nabataean pottery. This concentration of material might represent the 'swept' remains of food offerings made during the first occupation of the tomb. Part of the charcoal could, in this case, represent the fuel that was used to burn the offerings. Like the pottery that was deposited, which comes from common production and is also found in domestic contexts, the cereals, pulses and burned fruits are in no way exotic, being routinely consumed in daily life. If this hypothesis is confirmed, it would demonstrate the existence of a practice so far unknown in the Nabataean world, for which the closest known parallel is that of the necropolis of the Greek colony of Apollonia at Pontus on the shores of the Black Sea. There, several hearths containing animal and plant (hazelnut and almond shells) remains have been found close to burials. These remains have been interpreted as possible uneaten sacrifices, a hypothesis based on the writings of the Greek philosopher Lucian of Samosata (*Charon sive contemplantes*, 22), who explains that the burning of food is intended to feed the souls (Hermary 2010: 161-165).

4. It could also be a fig-based food preparation.

Conclusion

Owing to the many disturbances inside tomb Th303, the chronology of the events that took place there is difficult to establish. Nevertheless, the phasing observed in the archaeological material indicates that there were at least two phases of funerary occupation in the chamber. The first occupation is ancient, belonging to the Hellenistic period, between the 4th and 2nd centuries BC. Though the evidence for this is tenuous, it is attested to by the pottery and confirmed by the radiocarbon dates. This is the first evidence for the construction of tombs and, thus, of funerary activity in Petra in the Hellenistic period. However, the details of this first funerary occupation, as well as the exact dates of its beginning and end, are uncertain. Following this, an initial clearance of the chamber occurred and the burial remains were pushed into the north-west corner of the tomb, along with the bones of small rodents, sheep, goats and toads. The presence of toads indicates that the tomb was open and unoccupied for an indeterminate length of time before being re-occupied. The discontinuity of occupation in a monumental tomb and its eventual abandonment is noteworthy. It might be indicative of a slowing-down of occupation across the entire site. The progression of urbanisation might not, therefore, have been continuous from the 3rd to 1st centuries BC and the construction of the town of Petra may have gone through phases of growth and slump during the Hellenistic period.

The second phase of occupation of tomb Th303 occurred during the so-called 'classical' Nabataean period, that is between the mid-1st century BC and the 2nd century AD. Based on the large amount of pottery and associated human bones found in the chamber, this second phase was the main period of funerary use. Such a dense occupation accords with the known peak in activity in the town at the end of the 1st century BC and in the 1st century AD. An urban boom during the reign of Aretas IV (9 BC - 40 AD) was associated with strong demographic growth and, therefore, with a greater number of dead to accommodate. Ancient burial spaces were reused, as was the case at tomb Th303, and new tombs were built. Subsequently, the burials were again disturbed and the bones pushed into the north-west corner of the chamber. The most recent pottery found in the tomb is a complete cooking pot dated to the 2nd century AD, placed at the chamber entrance. It gives an approximate date for the abandonment of the tomb since nothing later was found on the floor of the chamber. The tomb seems not to have been reoccupied in the Late Roman or Byzantine periods. A localised and non-funerary use was recorded for the mediaeval period, during which the tomb might have been used as a temporary overnight shelter or hiding place.

Study of the material found in tomb Th303 shows that the chamber was used for successive burials of at least 60 individuals, including men, women and children. The population markers indicate that they were related or had at least lived in the same environment. The physical anthropological study cannot establish their kinship links, but the presence of recurrent discrete traits, along with epigraphic evidence known from Nabataean tombs in Hegra (Healey 1993), tends to suggest family use of tomb Th303. The presence in the tomb of two adult individuals with handicapping pathologies bears witness to solidarity at the heart of the group since they lived to be adults and were buried in the collective tomb. Bodies were placed on the floor of the chamber, perhaps in shrouds or in coffins, with vessels at their sides. The pottery represents the traditional vessel forms known from domestic contexts and the chamber was thus supplied, at least symbolically, with the vital necessities for eating and drinking. The vessels were empty but numerous animal and vegetal remains were identified, mixed in with the human bones. The archaeozoological study did not find evidence for meat offerings in the funerary levels. However, it informs us about the ancient environment of Petra, particularly with regard to ovicaprid herding and the management of infections such as abortive chalmydophilosis in the herd. Finally, the seed assemblage consists solely of uneaten edible plants and some whole carbonised fruits found in association with inhumations of the Hellenistic and classical Nabataean periods. These vegetal remains are perhaps vestiges of sacrificial offerings intended for the pleasure of the deceased or the appeasement of the gods. The use of cereals in expiatory rites is known from Lycian inscription of the Hellenistic period (Schweyer 2002), notably in the case of the violation of a tomb.

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