Excavations at Utica by the Tunisian-British Utica Project 2014

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Introduction

The fourth season of the Tunisian-British excavation project at Utica took place in 2014, with excavation and between 23rd August and 5th October 2014, and geophysical survey from 5 to 17 Novemer 2014. A season of conservation and mosaic restoration under the direction of Cecilia Bernardini was carried out between 28 September and 10 October 2014; further study on the pottery and the animal bones took place in March 2015. The project was generously funded by Baron Lorne Thyssen, and benefited from the support of the Institut National du Patrimoine of Tunisia, under whose aegis the work was conducted.

The project began in 2010, with excavation seasons also in 2012 and 2013.[1] The aims are to investigate the development, layout and economy of the ancient city, with a particular emphasis on the Roman and late Roman periods. Work in 2014 included continued excavation in Areas II (the forum and basilica), III (the House of the Large Oecus), and IV (pottery kilns and a lime kiln by the western limits of the city area), contour survey to complete the digital elevation model of the site begun in 2010, and magnetometer survey in the fields to the south-east of the modern road (the C69) from Zana to Utique Nouvelle that bisects the ancient site.

[1] For preliminary accounts of these seasons, see Kallala *et al.* 2011; Fentress *et al.* 2013; Fentress *et al.* 2014. For associated coring work aimed at locating the ancient harbour, see Delile *et al.* 2015.

I. Survey of the Site

The Digital Elevation Model

Emanuele Mariotti

The area covered by the contour survey in 2010 was extended by 25 ha, using a Trimble DGPS and reaching all of the peripheral areas of the ancient city. Significant features examined include an ellipsoid depression to the southwest, interpreted in the past as a second, massive, theatre, but which is more probably a quarry.[2] Clear terraces show the amount of manipulation that the natural surface underwent in the various phases of its use. The maximum extension of the city was also delimited more precisely, and amounts to alost 80 ha.

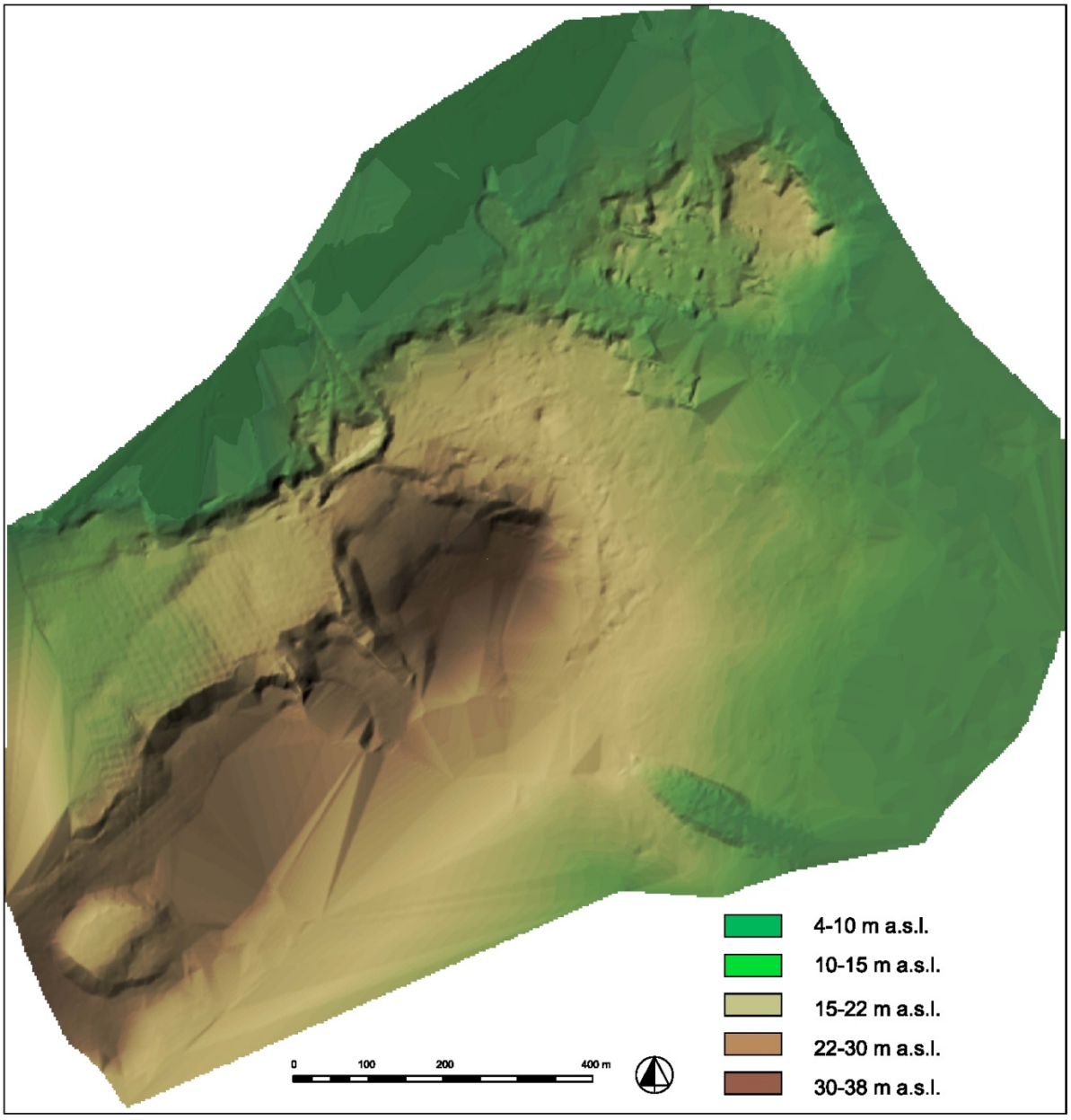


Fig. 1. Digital Elevation Model of Utica. (EM)

[2] Kallala *et al.* 2011, 13.

Geophysical Survey

Sophie Hay



Fig. 2. Magnetometer Survey, superimposed on Lézine's plan of the city and the 2010 contour survey by Emanuele Mariotti (Sophie Hay and J. Andrew Dufton)

The geophysics campaign, carried out by the British School at Rome in collaboration with The University of Southampton's 'Roman Mediterranean Ports' project, extended the 2013 coverage, particularly to the southeast, where the limits of the city could be shown to be at least one insula larger than those proposed by Lézine: beyond this limit the city might have extended even further, but the colluvial deposits that cover the remains become too deep for it to be visible using this technique. Notable in the southern edge of the coverage is a feature that appears to represent an earthwork or wall which appears to have been related to the defense of the city at some point in its history. North of this the survey clearly shows the orthogonal layout of the Roman *insulae* measuring 80m x 40m. In some cases, colannades and rows of small rooms that may represent shops running along the street frontage are visible, particularly in the area of the circus. What is notable are the large open spaces contained within the insulae suggesting large urban gardens for entertainment or food production.

In Area IV the orthogonal street grid continues although they appear to correspond less well to Lézine's schema. This may have been due to an ancient surveying error, as they lie beyond the high relief in the centre of the site, or to the fact that they represent an extension of the town in a period subsequent to the initial layout of the plan. To the north, coverage around the excavated *insula* proved disappointing, due to the very high level of disturbance, probably from modern metal refuse although traces of walls and roads on the same grid alignment are visible.

Coverage around Areas II and VI was necessarily fragmented, due to the large amount of previous excavation and dense vegetation but despite this, walls and structures can be traced

II. Area II: the monumental centre

Excavation north of the road

Gabriella Carpentiero with Ben Russell[3]



Fig. 3. The foundation of the southern stylobate of the basilica. 2 m scale (GC)

The area north of the wide decumanus saw three investigations: one of the northern robber trench, aimed at revealing the pre-Roman stratigraphy; one aimed at the western limits of the basilica; and the third, to the east, aimed at clarifying the eastern limits and the nature of the small building constructed over the robber trenches.

The northern Robber Trench

The last remains of the fill, already excavated in 2012–2013, was removed, revealing the foundations under the stylobate inside the Basilica (Fig. 3). The foundation was created cutting the clay bedrock and the stratigraphy on top of it, which relate to the Punic and subsequent Early Roman occupation of the site. The date of these phases is not yet clear, as they have so far only been revealed in section. However, the main outlines of the sequence are now clear. These are illustrated on Fig. 4:

Phase 1

On the eastern end of the north wall of the trench is visible part of a wall **[2665]**, 1.15 m high, built in relatively large stones, apparently reused. This seems to have been a foundation.

Phase 2

After the abandonment of this structure, a more complex phase saw the construction of three principal structures (from east to west): a cistern, preserved for 50 cm and lined with hydraulic plaster **[2297]**, a kiln **[2658]** – **[2659]**, and a structure with vats **[2598]** and **[2597]**. The kiln is built of mud bricks, of which we can see an initial construction phase **[2658]** and a rebuild **[2659]**; after its abandonment it was filled with a dense layer of clay, **(2657)**.

The westernmost structure, whose vats may have served for levigation of the clay, was created using a levelling course **(2676)** covered by a second preparation **(2677)** supported by a small wall in mud brick **[2678]** over which was built the grey masonry structure of the vat **2599.** Subsequently, a layer of mud bricks **(2598)** obliterated the first phase and served as the base for a reconstruction, **2597**. On the south side of the trench is visible the collapse of a wall in mud brick **[2607]** and three different levels of pavement **2687**, **2685**, and **2683**.

[3] In the text that follows all of the people who worked on a site are found after the title: the author's name is the first. Throughout this report context numbers are in **bold**, with the following symbolism: **(deposits)**, **[structures]**, **floors**, and (no symbolism) **cuts**.

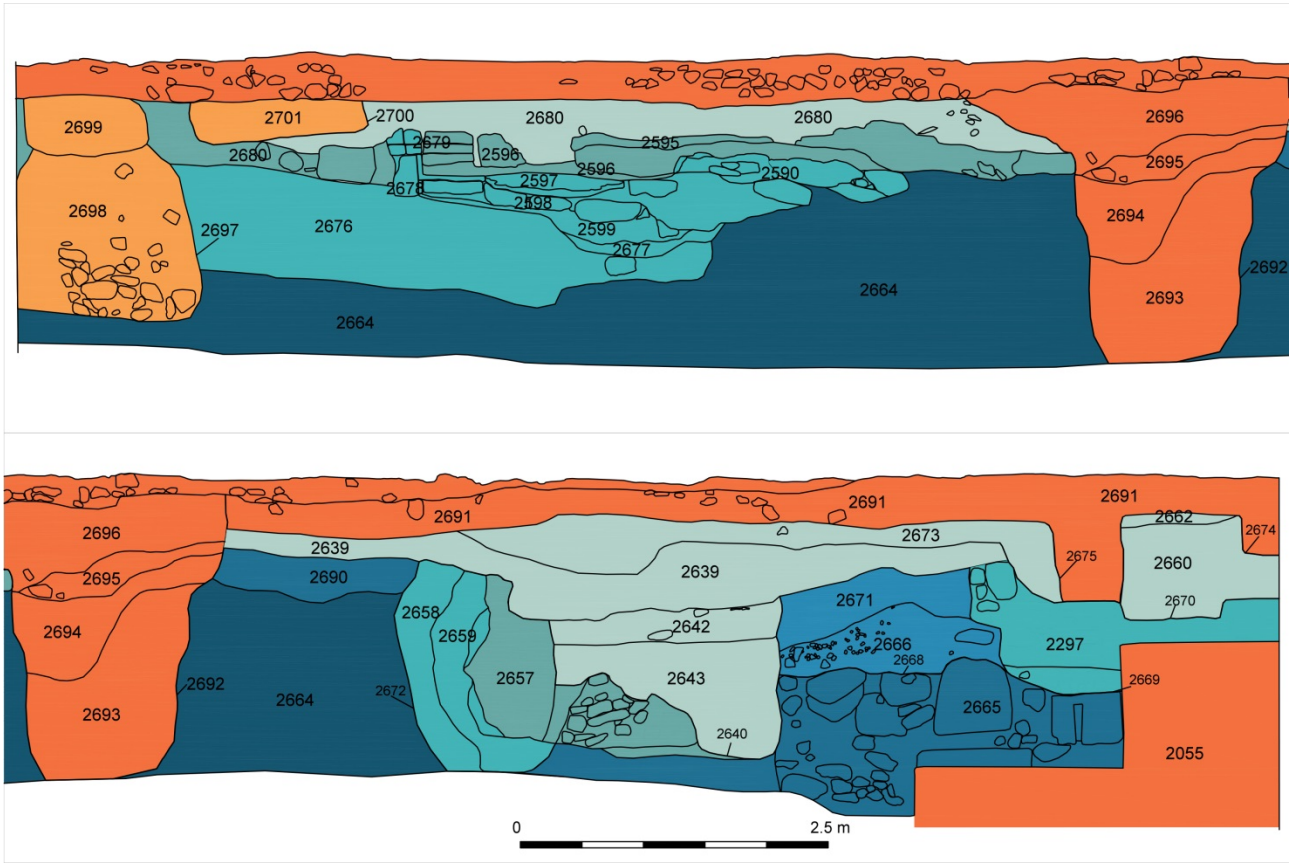


Fig. 4. The north section, west (top) and east sides (GC)

Phase 3

A cut, **2640**, 1.75 m deep, removed part of the kiln and its fill, and was then filled by various levels of abandonment. The cistern, too, was robbed, and then levelled. On the south side in this phase we see the removal of a north-south wall (cut **2609**). Over the fill of this is found a pavement with traces of burning, **2604**, covered by various layers of fill.

Phase 4

In the southern section is visible part of another north-south wall, whose foundation trench, **2705**, foundation, **[2706]** and some of its structure **[2707]** are preserved. This structure was subsequently obliterated and covered with a levelling layer, **(2602)**.

Phase 5

The final pre-basilica occupation visible in the section shows evidence for three structures: a north-south wall visible along the western edge of the trench, (cut **2697**, foundation **[2698]**, structure **[2699]**), part of a smaller structure **(2701)**, and two north-south walls whose existence is shown by robber trenches of the next phase, the very deep **2692** and two smaller trenches, **2675** and **2674**, visible at the eastern end of the section.

Phase 6

Around the beginning of the second century AD the previous structures were razed or robbed, and the whole area was levelled with make-up deposits. Construction trenches for the foundations were dug, in which remnants of the basilica foundations are visible in section for just over 15 m (Fig. 2), and then a mortar make-up for the basilica pavement was created.

Excavation in the western part of the basilica



Fig.5. Building V, from the north (GC).

Just north of the road, the western limits of the basilica were defined by the discovery of three robber trenches, respectively of the western stylobate, the western wall and the external portico, which can thus be shown to have existed on the western side of the building. None of these robber trenches was bottomed.

Above the robber trench of the portico was excavated a small building, V, already identified in previous campaigns and probably contemporary with the other early Medieval buildings found on the structure (Fig. 5). This building probably used the west and south walls of the basilica, which must still have been standing at the time, as well as simply levelling over the robbed pavement of the Roman building. Into this were cut two little pits around 10 cm in diameter, probably for jars, and a more substantial hearth. There was very little occupation debris, and we imagine that the structure was only occupied for a very short time.

Excavation in the eastern part of the basilica

Elizabeth Fentress with Soukaïna Bessouda and Hugh Jeffrey

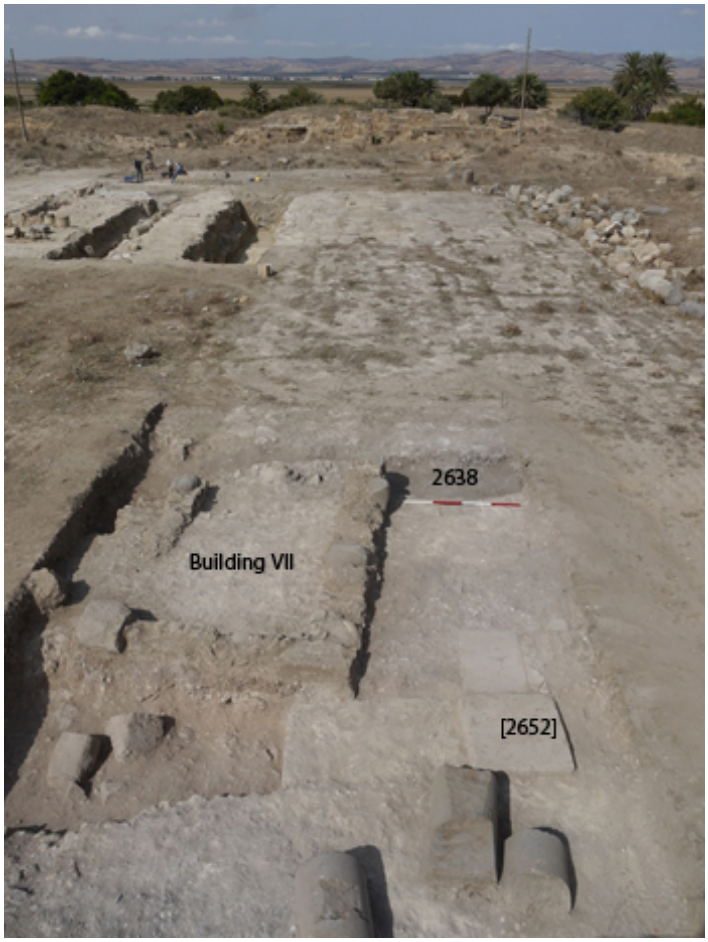


Fig. 6. The eastern robber trenches, with building VII (HJ)

The area was opened in order to understand the eastern end of the basilica. We chose a position where mechanical removal of the topsoil had revealed another of the little houses on the model of Building II, in order to increase our knowledge of these structures. The area excavated measured 10 x 10 m, and lay 22.7 m east of the eastern limit of Area II.

The earliest structures excavated were the walls of the basilica, of which one, the east wall still had two large ashlar limestone blocks *in situ*, **[2652]** (Fig. 6). Further south the wall was robbed, although the robber trench was not bottomed. To the south, along the south section of the trench, it makes an angle with the robber trench of the southern stylobate of the basilica.

A second robber trench, **2638**, this time of the eastern stylobate, lay 5.05 m to the west of it. The robbing of this feature appears to have taken place before the

construction of building VII, which covers it. Not fully excavated in 2014, its excavation should be finished in 2015 in order to date the construction of Building VII with more certainty. Pavement preparation was reached on all sides. Outside the building, the surface **2648** showed clear traces of paving blocks very similar to those along the main east-west road to the south of the basilica, while a similar block was found on the preparation of the floor between the east wall and the stylobate.

The date of the construction of Building VII is entirely unclear from the pottery. There were no glazed forms present, and nothing easily identifiable in the stratigraphy. Its four walls are built of rubble packed casually into mud with, at intervals and at the corners, fragments of columns. The structure, which measures 5.87 x 3.47 m, seems to have been built against the inside of the east wall of the basilica, at a moment when the stylobate had already been robbed. This parallels the situation of Building II, which was built over the robbing of the portico south of the basilica, and of Building V, which is built into the southwest corner of the structure. This procedure will have given some support to what were clearly fairly fragile structures.

The little house was paved with beaten earth, mixed with a substantial amount of fallen mortar. In the southwest corner was a shallow oval depression, filled with ash and rubble which may be interpreted as a hearth. To the rear of the room was a raised area, consisting of a preparation of rubble, earth, and Roman roof tiles, covered with a smoother layer of earth with a little plaster. This probably constituted a *banquette* structure, for sitting or sleeping. A destruction layer covered the house with a fairly uniform deposit 30–40 cm deep, comprising much rubble, probably deriving from the destruction of the walls, mixed with roof tiles. The walls of the little house were robbed from above the destruction layer, in a rather haphazard fashion, possibly aiming at any substantial blocks. We have no indication when this robbing took place, nor for the date of the destruction of the building. However, the lack of any substantial occupation deposit, or succession of floors, suggests that it, like Building V, was not occupied for long. Unlike the area south of the road, there were no silos, at least in its immediate vicinity.

Excavation south of the Road
Elizabeth Fentress with Faouzi Ghozzi, Rojdi Saīdi, Andrea Zocchi



Fig. 7. The channel running along the southern side of the north wall of the Forum. (EF)

This campaign reached the earliest layers relating to the abandonment of the forum. The western half of the robber trench of the north wall was bottomed, showing that its foundations were at least 2.40 m deep, but probably very much more. Along it ran a channel with mortared walls lined with hydraulic plaster (Fig. 7): as it would have been covered by the forum portico, it seems likely that it was designed to bring water to an exedral structure to the west which is probably nymphaeum, rather than acting as a drain. It was filled with a fine, dense silt, containing numerous gaming pieces and coins. 8.09 m to the south of it was the robber trench of the stylobate of the forum portico, which made a right angle in the southern extension: this has not yet been fully excavated. It also continued westward in a shallower trench, presumably intended as a foundation to support the corner of the portico. A construction trench for the stylobate was defined, but has not yet been excavated.

Between the two robber trenches were found part of the original pavement of the portico (figs. 7 and 8) composed of large and rather thin paving stones without any visible mortared makeup. The abandonment and destruction of the forum was signalled by a very clean layer of earth, some of which sloped up towards the north, as if composed of wind-blown dust blowing against the north wall. In this layer there was very little material, but what there was seems to date to the fifth century AD. One notable fragment of an historiated frieze was found, which may belong to the portico itself.



Fig. 8. The forum paving, from the north. To the south, the robber trench of the stylobate of the forum portico. (EF)



Fig. 9. Building VIII, from the south. (EF)

The whole of the area, including the robber trench of the forum portico, was then covered by a layer of trample of the Islamic period, associated with a construction, Building VIII, partially visible along the western section (Fig. 9). This structure measured 9.06 m long and at least 3.6 m wide. It was floored with a very hard, compacted white plaster, renewed at intervals over intervening layers of ash. There were no traces of interior walls, while the exterior walls were clearly made of thick, slightly stoney earth with no stone socle: they are barely distinguishable from the external surface. No obvious door was found. The interpretation of this building is very difficult: much bigger than the other houses, its lack of internal structures suggests that it was very spacious. Although the photograph (Fig. 9) seems to show denser areas of burning at intervals, perhaps suggesting wooden supports, these were not evident on excavation, and there was no trace of postholes or pads. There seem to have been successive thin plaster floors, or intervals of blown sand, while the whole was covered with a burned layer that probably represents the burning of roof timbers and straw. Without further excavation the building must remain a mystery: its

orientation seems to preclude an interpretation as a mosque, as the only plausible place for a *qibla*, the southeast side, is the only one exposed, and there is no trace of anything of the sort. Within the destruction layers were found a coin and a glass weight of the eleventh century.

To the east of the building were found a number of silos whose materials seem to place them in the tenth century AD.[4] These were bell-shaped pits, around 1 m deep. The materials in them include numerous Islamic amphorae and some glazed pottery, of manganese on a mustard-coloured glaze.

The building and its courtyard were both then covered with a second courtyard surface, which may represent the collapse of the *pisé* walls of the building. Over this was built Building IV, oriented roughly along the lines of Building VIII, with stone socles and at least three rooms in a row. This does seem to have been domestic, and the fact that it covers rather precisely Buildng VIII suggests that it was a successor to it. Around this building were found further silos, including the massive structures excavated last year, which seem to date to the later eleventh century. The robbing of the forum wall, which would have provided a convenient boundary for this area in the Islamic period, is certainly the last action to take place on the site, and probably dates in the twelfth century AD.

Analysis of the faunal remains from Area II

Tarek Oueslati

In Area II, bones from 52 contexts were studied. The total number of finds is 1,516 with an average of 28 remains per context. The largest sample comes from context **2329**, the fill of a silo probably of the late 11th or early 12th century AD, with 269 bones. Contexts **2309** and **2220**, also silo fills, also have large samples. Although pig remains are scarce, four of the contexts in which they are found — two silos and two occupation layers related to medieval buildings (**2206**, **2325**, **2329**, **2332**) can plausibly be interpreted as medieval occupation debris.

The global composition of the sample (Figure 1) is dominated by ovicaprids if counting is expressed in NISP (60%), and by cattle if we use the weight of the bones (71%). By using weight, we have the closest approximation of the relative proportions of consumed bovine and ovicaprid meat in the diet. Chicken bones represent 6.2% of the total NISP of chicken, cattle, sheep and goat bones. In addition to the 69 chicken remains, 22 wild bird bones, comprising partridge, pigeon and a variety of ducks, indicate the importance of birds as a means of diversifying the diet. Fish are mainly coastal with grey mullet, grouper, and gilthead seabream: this may opposed to larger fish requiring more elaborate fishing techniques, such as the large red tuna present in Area IV (**4128**).

[4] Information from Paul Reynolds.

	NISP	Weight (g)
Mammals		
Cattle	441	9479
Ovicaprids	667	3894
among which:		
sheep	54	
Goat	17	
Pig	7	
Horse	1	
Donkey	4	
Mule	4	
Equids	17	
Dromedary	1	
Dog	2	
Carnivore	1	
Hare	2	
Hedgehog	6	
Human	1	
Micromammals	3	
small mammal	66	
large mammal	95	
unidentified mammals	55	
Aves		
Hicken	69	
Partridge	1	
duck family	4	
Pigeon	1	
bird unidentified	16	
Fish		
Gilthead sea bream	2	
Sparid	1	
Grouper	4	
grey mullet	8	
unidentified fish	20	
Testudines		
Turtle	1	
Amphibians		
Toad	1	
tree frog (*H. meridionalis*)	1	
Molluscs		
European thorny oyster	1	
Bittersweet clam	1	
Purple dye murex	1	
Banded murex	2	
Coral	2	
blacksmith bone tool	5	
bone pin	1	
game piece (leaded astragalus)	1	

Table 3. Animal remains studied from Area II 2013 and 2014 excavations.

If we focus on the main species (Fig. 10) we can deduce that the bulk of the provisioning of the site relied on the breeding of cattle and ovicaprids with some hunted mammals, including hedgehog, which is consumed, hare, and a diversity of birds and fish.

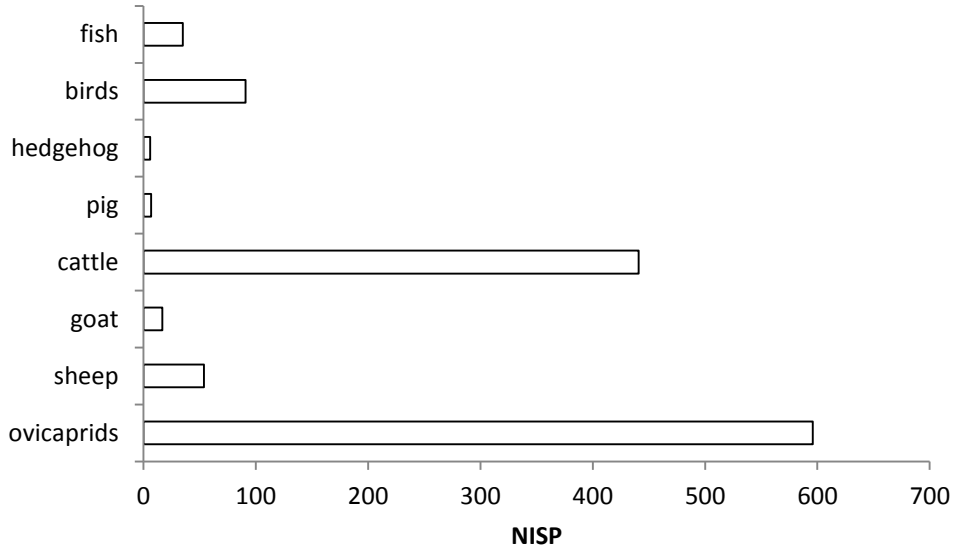


Fig. 10. Number of identified specimens (NISP) for the main taxa.

Bone Anvils from Area II

Area II provides proof of the introduction of Islamic techniques used by blacksmiths to incise metal blades, especially sickle blades. Cattle bones were in fact used as anvils. For this the surface of the bone is ground down, usually resulting in the creation of three perpendicular flat facets: the working surfaces. The metal blade, previously sharpened, rests across the bone transversally, and then a chisel is hammered onto it to cut through the thinned and hardened edge of the blade. Only part of the chisel pierces the metal and the corner of the tool that cuts the metal continues its trajectory into the bone, which retains the mark of the cut. After many misinterpretations,[5] Esteban-Nadal managed to interpret this sort of find through ethnographic work that revealed that blacksmiths still used bone as anvils in Catalonia for the manufacture of serrated sickles.[6] Other authors indicate that archaeological bone anvils appear in Visigothic period (5th-8th centuries AD) and that they are mainly discovered in Islamic contexts.[7] In Tunisia, contemporary blacksmiths still make serrated sickles, such as one in Nabeul from whom we obtained the used anvil illustrated in Fig. 11.Five samples have been identified in Area II among which two are well preserved (Figure 3). The first one is made of a cattle metapodial (UT13/2232) and the second one from a tibia of cattle (UT13/2223).

In Morocco, 9th-/10th-century contexts from a metal production area of Al-Basra pieces of bone anvils associated with metal tools and large quantities of iron and copper slag.[8] For the same period the Rirha site has provided similar supports for blacksmiths. The diffusion of this technique

[5] See Moreno-Garcia *et al*. 2007
[6] Esteban-Nadal,2003.
[7] Moreno-Garcia *et al. op.cit.* 2005.
[8] Benco *et al.* 2002; Anderson, *et al.* 2014.

all the way to Spain, Portugal and France indicates a progression following the path of the southern shore of the Mediterranean, and originating in the Balkans and, hypothetically the Middle East. Two early Roman examples were found in the *macellum* of Thasos with a difference consisting in the fact that the surfaces of bone were not flattened by sanding and instead flat bones such as mandibles and cattle tibia were specifically selected, so these may constitute examples of primitive bone anvils. From an economic point of view, these finds indicate the presence of a blacksmith near Area II, thus suggesting the existence of consumer demand for serrated sickles. This in turn suggests at least a moderate population at Utica at the medieval period. The need for sickles seems to indicate that at least part of the community was engaged in agriculture.



Fig. 11. The anvils from Utica and the contemporary sample from a blacksmith in Nabeul

III. Area III: The House of the Large Oecus

The Roman House
Nichole Sheldrick and Geoff Morley

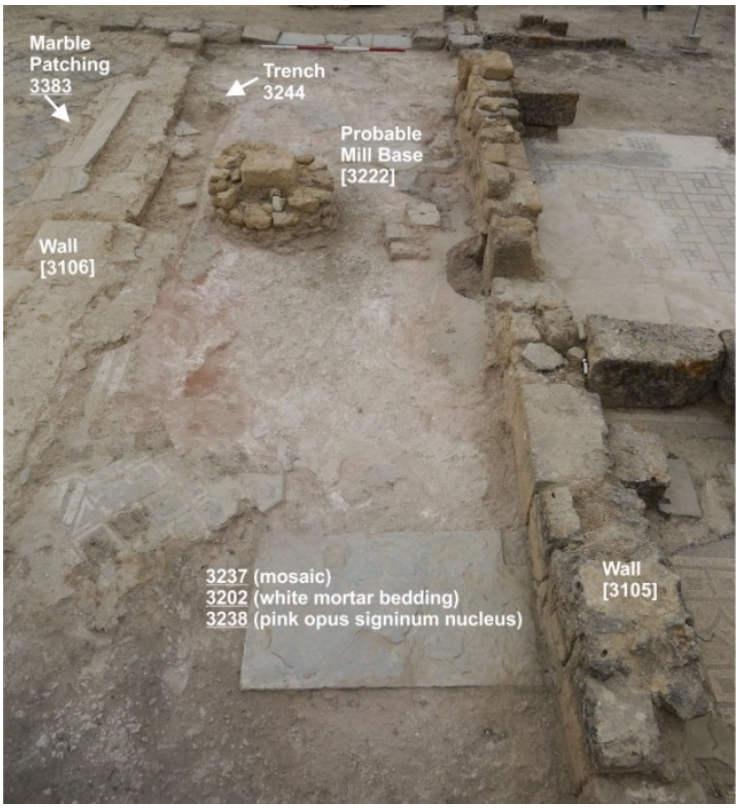


Figure 9. Room XIX from the south, 2 m scale (NS)

There were two main areas of focus in the 2014 excavations in the House of the Large Oecus. The first was the continuation of the work begun in 2012 and 2013 in Rooms XIX, XX, XXI, XXII, XXIII-S and XXIII-N (originally thought to be a single room), and XXIX. The second was new excavations in Rooms X and XII, and a brief investigation in Room XIII.

Room XIX

This season we excavated to pavement levels in Room XIX, revealing the meagre remains of the mosaic pavement. Compared to the other excavated rooms this pavement is extremely poorly preserved, and over a large part of the room its mortar bedding and *opus signinum* nucleus, are exposed, suggesting heavy use following a change in function of this room, almost certainly related to the probable mill base discovered last year (Fig. 9). Sitting over the remains of the pavement was a grey, silty layer, **(3369)**, containing a great deal of charcoal and ash, *c.* 0.05–0.10 m thick and covered with small concentrations of fire-reddened soil, ash and charcoal. Most of these features are interpreted as small fires or ash dumps which attest to the continued use of the room following the primary abandonment of this part of the house. In one case four stones seem to determine a hearth. Finally, a long trench of unknown purpose runs along the south half of the east edge of the room, cutting through the mosaic and all of its associated beddings. At its north end, it is capped with roughly mortared pieces of broken tile; this remains *in situ*. The fill along the rest of the trench was excavated to a depth of c. 0.25 m, and contained two large fragments of roof tiles, along with bone and pottery. It may be paralleled by a similar feature on the other side of the wall, in Room XXI (discussed below).

Room XX

A layer of clayey-silt trample, 0.05–0.15 m thick, covered not only the mosaic pavement, **3246**, of Room XX, as expected, but also a narrow strip of the slate tile pavement of Room XXI and a mosaic threshold connecting the two rooms, flanked by two T-shaped trenches, **3344** and **3345**, representing the original, but now robbed-out, dividing wall (Fig. 10).



Fig. 10. Room XX, facing south; 0.50 m scale. (NS).

Immediately flanking the doorway, the trenches reached a depth of *c.* 0.40–0.50 m below the pavement, before stepping up to foundations *c.* 0.20–0.30 m below the pavement, suggesting that the doorway was flanked with ashlar piers, while the remainder of the wall was infilled with smaller stones and rubble, *i.e. opus africanum* construction, as in the rest of the house. The date of the robbing is currently unknown, although there was no sign of any attempt to pave over the robber trenches, which might suggest that both walls remained standing for some period (though to what height is unclear), and that the stone wall was robbed out (and the trenches filled in) only after a period of abandonment.

Room XXI

To the south of Room XX Room XXI revealed a well-preserved slate-tiled floor, **3233**. The slate tiles ran on a diagonal: a single strip of white tesserae was occasionally preserved between them. (Fig. 11). Along the west side of the room, a number of large, but irregular slabs of marble were incorporated into the paving, which can almost certainly be interpreted as a later patching episode. Worth noting is the fact that this area of patching is approximately symmetrical to the location and size of the trench excavated on the other side of the wall in Room XIX discussed above. This could be a coincidence, but it could also suggest that the patching in Room XXI was to repair the pavement after a similar trench had been dug and that both were related to some kind of repair work to the wall. While Room XIX may already have been converted into a working space or had been abandoned, and therefore the floor was not repaired, Room XXI was perhaps still in regular domestic use which necessitated its repair.

On the north side of the room, 70 cm from the north wall, a thin earth wall, **[3179]**, was placed directly on top of the slate floor, slightly diminishing the size of Room XXI, and blocking its access



Fig. 11. Room XXI, facing south; 0.50 m scale. (NS)

to Room XX. The wall is very thin, and vertical slots on its north side might suggest it was built inside a framework. It was covered with scored plaster with on both sides suggesting the application of a layer of fresco or a veneer. It is unclear what its function was: perhaps it was not much higher than the 50 cm to which it survives, and served to support a dais, bench or shelf.

Room XXII

The pavement in Room XXII was revealed as a geometric 'checker-board' pattern in *opus sectile* composed of a dark grey/black marble with white veins and the distinctive yellow Numidian marble (*giallo antico*) (Fig. 12). As in Room XXI, this pavement seems to have undergone repairs at some point, with marble patching evident in the northwest corner of the room. The repairers were apparently able to obtain the same type of black marble with white streaks which is used in the original pavement, but not the *giallo antico*, thus we also see two spots in other parts of the room where the yellow has been replaced with black.

There were two doorways through the west wall of Room XXII, one on the north side, with a mosaic threshold leading into Room XX, and one at the south, paved with slate tile leading into Room XXI. Between these two thresholds, the entire length of the wall has been robbed out to below the level of the pavements on either side.

Above the pavement was a clayey-silty layer, which is interpreted as a post-abandonment trample layer, *c.* 0.05–0.15 m thick, and was the context at which excavations were halted last year. On the east side of the room this was distinctly ashy, and was interpreted as a primary post-occupation deposit which accumulated after regular cleaning of the house had ceased. The only feature of note in this area was a mound or shallow pit filled with ash located in the southwest quadrant of the room, against the west wall.



Fig. 12. Room XXII from the north (EF).



Figure 13. Room XXII (east half), facing south, showing tumbled ashlar blocks in relation to *opus africanum* wall [3279]; 0.5 m scale. (NS).

On top of this layer were a row of three large ashlar blocks, *c.* 0.50 x 0.50 x 0.75 m in size (Fig. 13). These blocks are thought to have tumbled from the eastern wall of Room XXII, constructed in *opus africanum*, and still standing to a maximum height of *c.* 1.25 m, with three piers still remaining within the wall. Each ashlar block had a right-angled slot cut out of one corner, probably intended for a wooden beam supporting the ceiling or an upper storey in the room next door.

Room XXIII-N

During the removal of the upper deposits in this area it became apparent that the room labelled XXIII in the *Corpus des Mosaïques* publication was, in fact, two rooms: a small corridor room to the north and a larger room to the south. These were named XXIII-N (north) and XXIII-S (south) according to their position; the two were divided by a plastered *pisé* wall, c. 0.40 m wide.



Fig. 14. Room XXIII-N, from the south, showing fallen *pisé* wall (NS).

The floor of Room XXIII-N was paved with a fine black and white geometric mosaic, composed of triangles running east–west (Fig. 14). There were doorways into this room on both the east and west sides, suggesting that it was more of a corridor than a proper room. The western threshold was paved in the same marble as Room XXII. The east doorway was subsequently blocked with ashlars; from what is visible, its threshold appears paved with a black and white geometric mosaic.

Lying on the mosaic floor and built into the north-western corner of the room was a plaster 'plinth', 0.47 x 0.33 x 0.10 m thick. This had an indentation on the top which had a small concentration of ash within and around it and discolouration indicative of a fire. This hollow may have been part of the construction and may have been designed to hold a pot, or contain a small fire. Lying on and around this plinth was a large assemblage of pot sherds, all seemingly from the same pot. It is possible that this pot was on the hearth at the time that a collapse event occurred in the room, burying and breaking the pot almost *in situ*. This plaster setting seems an unusually formal version of a late fire, as most of these appear to have been placed immediately on a mosaic floor or on the thin trample layer which overlay this. The plaster base was constructed directly on the mosaic floor, so is presumably early. The floor may have been cleaned before construction of this feature but a broken patch underneath it shows that it had deteriorated by the time of the hearth's construction. Around this plaster feature, but not covering it, was a relatively thin layer of yellow/brown–grey silt, corresponding to the trample layers elsewhere. Over it was found a large spread of fragments of *lapis specularis*, or sheets of thinly-cut translucent stone which were used as windows in place of glass. It is not known for certain if this was the result of an *in situ* collapse of a window at this point or a dump of many panes during early robbing of the house, but the large quantity of the material present, and the fact that there appeared to be several layers of it, point towards the latter.

Above this lay the common primary collapse layer of reddish silts possibly composed of degraded *pisé*. At this point the plaster face and part of the core of the wall separating Rooms XXIII-N and XXIII-S slumped down into the room, coming to rest at an angle of approximately 70–80°. After this slumping sequence, what appears to have been the final collapse occurred, composed of *pisé* from the walls and, possibly, a first floor. Within this matrix there were very frequent inclusions of mosaic fragments were recovered, as well as fragments of painted plaster in a variety of colours and patterns.

Room XXIII-S

The earliest deposit found in this room was the *rudus* of an early mosaic floor. Not enough was seen of this floor to establish any kind of decoration as it was obscured by the basal substrate of alternate black and white geometric mosaic. However, in the small area visible it was seen that the individual tesserae were not aligned in columns or rows. The pattern of the later mosaic takes the

form of overlapping hexagonal wheels with rectangular ‘spokes’ around a smaller hexagon, in the centre of which was a six-petalled flower (Fig. 15); the mosaic was surrounded by a black slate tile border. At a slightly higher level than mosaic, in the northern part of the room was a slightly raised dais paved with were a number of marble slabs, and framed by piers of plastered *pisé.* Entrance to the room was via a doorway with a marble threshold leading from Room XXII, at the south end of the west wall, and probably a larger doorway through the east wall of the room which has not yet been investigated thoroughly.



Fig. 15. Room XXIII-S, facing north; 0.50 m scale. (NS).

Above the floor the normal sequence of abandonment and degradation was observed and excavated. The lowest layer was interpreted as the primary abandonment/trample layer. This is a good example of a basal layer possibly being an actively trampled layer as the deposit was much more solid to the south than it was to the north, which supports the idea that the southern part of this room was deliberately kept clear of fallen debris. In the south-eastern corner of the room was a small irregular pit, hard up against the two walls. It appears to have been cut through some of the post-abandonment layers, and was full of mosaic tesserae ‘sticks’, *i.e.* thin strips of marble of different colours, square or rectangular in section, which could be cut into tesserae for new mosaics. It suggests that the house had gone out of use and was effectively being used as a quarry for raw materials, derived especially from the o*pus sectile* floors and the marble veneers of the walls. Immediately above this primary deposit lay the final collapse of this room and the room above it. This is largely made up of very large fragments of mosaic of a pattern very different from that found paving Room XXIII-S itself. The deposition pattern shows that this mosaic fell into this

room when the upper floor of this area collapsed. Enough of this fallen mosaic was recovered that it has been possible to reconstruct its design, which consisted of a black, white, and red geometric 'flower' design, ornamented with red, heart-shaped ivy leaves and surrounded by a black and white guilloche border (Figs 16 and 17).

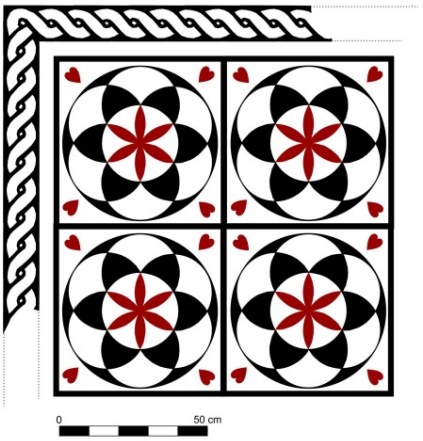


Fig. 16. Room XXIII-S, digital schematic reconstruction of upper storey mosaic pattern. (NS).



Fig. 17. Room XXIII-S, facing east, detail of fallen upper storey mosaic; 0.50 m scale. (NS).

Much later a silo was cut through the collapse deposits near the centre of the room. Although there is no direct dating evidence, this silo was filled with intricately carved marble which can be linked to the spoliation of the grand structures in the probable forum located to the west of the house, and it may be compared with that recovered in 2013, which contained elements certainly deriving from the robbing of the basilica.

Room XXIX

This 'room' is actually the north side of the *quadriporticus* which surrounds the central garden space of the house. Approximately 10 m of this room along the south edge of Rooms XXIII-S and XXII remained unexcavated until our work began this season.

The lowest deposit uncovered in this room, as expected, were the remains of the floor. Unlike most of the other rooms in this house, the pavement itself has not survived, leaving only the *rudus* with no further indication of the original surface treatment. If we assume, however, that the entire *quadriporticus* was paved in the same way, it was probably a mosaic similar to that observed in Room XXVIII (Pavement 169) by the *Corpus des Mosaïques* team, which was a mainly black and white geometric mosaic with a polychrome guilloche border.

Above the remains of the pavement was an ash layer from which a possible 4th-century AD coin was recovered, dating the late occupation of this part of the house. Similar coins were also found in the first post-abandonment layers in Rooms XXII (east half) and XXIII-N. A similar date can be suggested for the pottery from the same layers, indicating that the last occupation of the house is no later than the fourth century.

The sondages in Rooms X and XII

Chahla Dhibi



Fig. 18. Room X: the earliest beaten earth floor, with the wall in the west section of the trench. The construction trench for the houses seen on the right, filled with pink earth. (EF)

In order to understand the stratigraphy of the site prior to the construction of the Roman house two small trenches were excavated in Rooms X and XII. This was possible because the spaces concerned had housed a staircase, now disappeared, that led to a door in the north wall of the building. Because the stair was foreseen from the beginning of the construction, the underlying layers were much less cut away than they were in the rest of the site, and we found archaic stratigraphy at a layer higher than that of the Roman pavements elsewhere.



Fig. 19. The mosaic of the vestibule, room X. (NS)



Fig. 20. Room XII, from the east, showing the mosaic and the foundation for the stair, subsequently excavated. (EF)

The lowest level reached was a beaten earth floor (Fig. 18), from which was excavated a certain quantity of red-slipped pottery, associated with a small fragment of Greek pottery, dating perhaps to the seventh century BC. It was related to a north-south wall in mud-brick and stone, on the east side of the sondage. To the east of it a white layer, with much plaster, probably represents an internal floor surface. A new wall on a stone socle replaced the earlier one, abutted by a thick make-up of clay, perhaps deriving from the earlier mud-brick wall, and again containing a large quantity of red-slipped pottery, along with a lamp and amphora sherds. This was cut for another north-south wall, this time in the west section of the sondage. A further earthen floor was laid against this, containing pottery, bones, and some shells. The entire sequence was then cut away by the terracing for the Roman house, and by the construction trench for the north wall of the house. This was over 1.5 m deep, and 50 cm wide at the top. It was filled with a pinky earth with numerous small stones and very little pottery. The same layer covered the earlier walls, and made up the pavement of the room at a higher level, which was composed of a

rather coarse mosaic, paving the vestibule in front of the door which gave access to the house from the street in back of it (Fig. 19).

An even smaller sondage was carried out in room XII, to the east of room X (Fig. 20). Here the foundation of the early stair left just a metre between the wall and the mosaic, whose make-up was rather substantial. The lowest level reached was a large hearth with a raised rim, and much blackened or reddened clay (Fig. 21). It is not impossible that this represents a forge rather than a hearth, as some traces of rust were visible. Over it a layer of pale green clay was probably a floor, as were two successive floors of whitish clay, one of which may correspond to that seen on the other side of the wall. We do not as yet have any dating for this sequence, whose examination will continue next year.



Fig. 21. The hearth or forge (EF).

IV. Area IV: an Industrial quarter on the edge of town

Andrew Wilson with Cesare Felici, Roberta Ferrito, Mike Johnson, Taylor Lauritsen, Ines Noussa, Skander Souissi



Fig. 22. The site at the end of the season, facing south. 2 m scales (AW)

Located on the margins of the Roman city, to the south of the large 2nd-century seaward baths, and by the edge of a steep slope to the west of which lies a Roman cemetery, the site was chosen for excavation in order to test Lézine's identification of the steep slope as a defensive rampart, and because geophysical survey in 2010 located a strong circular magnetic anomaly suggestive of a kiln. Excavation from 2012 to 2014 has revealed a sequence of occupation which includes domestic housing, pottery kilns, and a lime kiln. The phases alternate between residential and industrial usage, but rather than see this as pulses of expansion and retraction of the city, with residential areas shrinking to be replaced by industrial suburbs, and vice versa, it is probably better to imagine the continued imbrication of living and production space, with individual properties being converted now to one purpose and now to another.

Phase 1



Fig. 23. The cistern from the north. 50 cm scale (AW)

The first phase on the site was a large structure principally defined by a pair of parallel walls running NW-SE (Fig. 22), with cross-walls dividing the space between them into a series of at least 5 rooms, although the building clearly extended beyond the E and W limits of the trench. The walls (with the exception of the westernmost visible wall, only a small portion of which was revealed in the NW corner of the trench, and which was in rubble masonry), were built with a basal course in large ashlar blocks surmounting an offset foundation course. Above the basal course the walls had been in *pisé*, remnants of which, together with traces of white wall plaster, survived *in situ* in places. The fact that the white wall plaster was preserved in places extending down the faces of the basal ashlars almost to the level of the offset foundation indicates that the associated floor levels, which had been destroyed by later activity, had been at the level of the offset foundation. Preserved wall plaster on the SW face of the southern wall indicates that there was at least one further room to the south of the range of rooms 1–5.

After the initial construction of the building, a cistern was either inserted into the second room from the east, or a cistern below the floor of this room was heightened (Fig. 23); the cistern presently visible extends to above the presumed floor level of the room, and its walls abut and partially cover an original plaster face on one of the framing walls. The cistern measures 3.55 m long x 1.05 m wide x at least *c.* 3.5 m deep (the upper parts of its walls are not preserved). It contained a sequence of fills: a silty deposit at the base overlain by collapse containing rubble and squared blocks. The pottery within this suggested that the cistern had remained in use until the late second or early third century AD, i.e. well into the life of subsequent phases (2 and 3). Over this had accumulated soil that had washed into the cistern: a sticky silty clay deposit, and sandy silt.

Phase 2

The demolition of the Phase 1 building is represented by fallen white wall plaster and *pisé* collapse in Room 1, and remnants of pisé demolition in Rooms 3 and 4. Subsequently, pottery kilns were inserted into the shell of this building, whose walls must still have been standing up to about a metre high above the original floors (fig. 24). In total, 8 kilns have been excavated belonging to this phase, although no more than four were ever active at the same time.



Fig. 24. The kilns in Rooms 3 and 4, looking south (AW)

In Room 3 the floor was dug away to insert a kiln **[4022]** in mud brick in the SW half of the room and its firing pit in the NE half; similarly in Room 4 (near the corner of the trench) a kiln, [**4193** was dug through the *pisé* demolition and the floor. This was subsequently truncated and replaced by another kiln, better preserved **[4071]**. To the south, a set of three successive kilns was identified: a large kiln **4160** (of which little now survives), replaced by a much smaller kiln **[4050]**, whose fill was found to contain coarseware unguentaria. Later still, this small kiln was replaced by a larger one **[4159]**, largely replicating the size and outline of the first of this sequence of three kilns.

Between these kilns and the much later lime kiln of a subsequent phase lay a very ashy area of dumps, whose excavation is not yet complete, but where parts of two kilns, one apparently replacing the other, were exposed in the closing days of the 2014 season.

The kilns were on the whole small, and indeed kiln **4050** was tiny; to judge by the common forms found in their fills and associated waste dumps, and indeed from wasters and green-throughs, they were producing a variety of coarsewares, including jugs of Fulford form 3.9, perfume or oil bottles, and chamberpots. Abundant carbonised olive stones show the use of olive pressings as fuel for the kilns. ITS and Campanian Black Slip sherds were found in this phase, but the latest datable fine wares are fragments belong to ARS A Hayes 8 forms dating to between the late 1st and the second half of the 2nd century AD.

Phase 3

Most of the kilns in the northern part of the trench lay directly below topsoil and overlying phases had been truncated. However, in the centre of the trench two of the kilns were covered by an extensive spread of ashy dumps that accumulated after their disuse.

Phase 4



Fig. 25. The second house, from the east, showing its mosaic and the line of the *pisé* walls (AW).

Subsequently, a house with mosaic floor and *pisé* walls, was constructed; although here too the layers of this phase had been truncated in the lower (western) parts of the trench, stone pier foundations that must belong to this phase cut the ashy Phase 3 dumps over the Phase 2 kilns, confirming that this house post-dates the dumps. Little can be said about this house, other than that it had at least one room with a white mosaic floor with a geometric blue pattern, and *pisé* walls on stone foundations (Fig. 25); it was aligned similarly to the building of Phase 1. Where overlying levels survived, toward the east, this phase was covered by a thick (0.5 m) layer of *pisé* collapse, much eroded and truncated in the lower-lying part of the trench. Given the late 1st-/early 2nd-century AD pottery found in Phase 2, this phase may belong to the 2nd century AD.

Phase 5



Fig. 26. The tank, cutting the *pisé* collapse of the second house (AW)

Cutting this *pisé* collapse of Phase 4 were walls related to a plaster-lined rectangular tank **[4070]** and related surfaces (Fig. 26). The tank, excavated in 2013, measures 3.15 x 2.70 m, with the floor in *opus figlinum* and the walls built in mortared rubble concrete, and lined with *opus signinum* covered in white plaster. A lead pipe leaves the tank through the west wall near the southwest corner, a few centimetres above the floor; there is a ceramic drain pipe at floor level in the north wall at the northwest corner. Both pipes are associated with external surfaces, to north and west; into the north surface a ceramic pot had been set, filled with stones. To the south, the tank abuts a wall which may have formed a property boundary, and certainly serves to terrace the site as the ground rises steeply to the south above it. This terrace wall cuts pottery dumps on the uphill side of the trench, probably from further kilns lying beyond the unexcavated area. Material from the construction fill of walls associated with the tank suggests an early Roman date

—fragments of ITS and Dressel 2–4 amphorae—but given the dating of Phase 2 below it these may be residual and provide only a *terminus post quem*. The purpose of the tank is unclear; it is possible that it served for the preparation and puddling of clay, but if our reading of the fragile and poorly preserved stratigraphy (which, truncated by erosion, is not always continuous between the different parts of the trench) is correct, this tank should belong to a later phase than the pottery kilns actually excavated within the trench.

The tank was filled with predominantly sandy deposits, the lowest also containing two limestone column drums.

Phase 6

The terrace wall and external surfaces associated with the tank were in turn cut by a large lime kiln, excavated in 2010 and 2012. Study of material from its construction trench is not yet complete, though there is a *terminus post quem* of at least the late 1st century AD, and in fact the stratigraphic sequence ought to push its date well into the 2nd or even the third century.

The lime kiln itself underwent at least two phases of repair, attested by repairs to and relinings of the walls, before its domed roof eventually collapsed – large sections of the collapsed bricks of the upper walls and dome were found in the sequence of fills. The floor appeared to have been cut into the local subsoil, and was blackened and covered with the remains of lime from firings. The total height of the kiln originally exceeded 4.5 m.

Summary

Area IV overall shows the complexity and activity of a zone right on the edge of the city, next to the cemetery now in the olive groves to the south-west of the site. A probably domestic building of the late Punic or Roman Republican period was reused as a pottery production complex, and this in turn gave way to another house with a mosaic floor, possibly some time in the 2nd century AD. This was later demolished and succeeded by a tank probably for some kind of industrial use, and this in turn was cut by a lime kiln, apparently one of several installed along the steep slope that would catch the prevailing wind to create good updraught conditions for firing. While the usage of space within the trench therefore alternates between residential and industrial, we would hesitate to extrapolate the character of the entire quarter at any one time from this sample, and it may be that what we are seeing is the periodic fluctuation of usage of particular property lots in a zone that had a mixed industrial and residential character throughout.

Area VI: The Porticoed Street

Imed Ben Jerbania and Kaouther Jendoubi with Nourhène Bilel

A new area opened in 2014, this trench was located to the south of the Forum (Fig. 1, above). It corresponds to an area already excavated by Pierre Cintas during the 1940s.[9] He brought to light a paving delimited to the south by a stone-cut channel. Onto this pavement opened two rooms identified as boutiques. He then continued the trench with a long slot to the north, in order to find the earliest tombs in Utica. Without ever publishing his results, the author decided that the pavement was built into a natural depression, once a channel separating the mainland from a small island, on which the original city was built. This hypothesis was proved false by André Lézine, who cleaned and measured Cintas' finds, and proposed that the pavement constituted the northern portico of a wide avenue occupying the depression, which would have been cut by the Romans as a part of the design for the monumental centre.[10]

The 2014 campaign followed a cleaning of this area in 2013: it had become entirely obscured by modern dumping and the growth of bushes. The paving was revealed, and the importance of the area for the understanding both of the Punic city and of the monumental center led us to investigate it further, with the aims of:

- Bringing to light the Roman street, and dating its creation and abandonment.

- Defining the function of the shops, and dating their creation and abandonment.

- Defining the relationship between this area and the forum to the north and at an elevation over 4 metres higher. The trench excavated by Cintas appeared to cut both the south wall of the forum and the Punic rampart.

The construction of the portico

The earliest structures found in the depression are the paving of the portico with, on the south side, the channel that borders it, and, on the north, the wall of the shops, interrupted by their doors (Fig. 27). All the walls of the structure are in careful *opus africanum*, with orthostats at the corners. They were covered on the street side with a white marble veneer. Just north of the drain, a wall underneath the paving forms the stylobate for the portico, no columns of which were preserved.

Beneath the paving of the portico was a series of fairly clean clay layers, the last of which was full of stone chips which probably represent the last preparation of the portico. No paving has yet been found for the street: its last phase was probably a layer of stone chips visible to the south of the channel. The material from underneath the pavement has been dated to the end of the first century AD.

[9] Cintas 1951, 76, Fig. 34.
[10] Lézine 1968, esp. 83–86.



Fig. 27. The portico from the west, showing the deep colluvium that covers it. (EF)

The shops (Figs 28 and 29)

The width of the shops are repspectively 3.47 (east) and 3.70 (west), although we are not yet sure of the position of their back walls. In the western shop a partition wall, subsequently robbed, was built at a certain point, dividing the space into a front and a back room. Although the lowest floors of the two shops have not yet been reached, they were apparently substantially lower than the paving of the portico, and were probably originally floored in beaten earth, which characterizes subsequent floors. The lowest floor reached in the western shop seems to present a large circular cut filled with ashy material, perhaps representing some artisanal activity. This floor was cut by the dividing wall. Above it, a paler yellow floor was characterized by a large amount of bronze hammerscale, which suggests that bronze working was one of the uses it was put to. The final floor was fairly regular, with several cuts, particularly in the southeast corner. The wall was robbed out from this level. The latest floors contain material of the early fifth century AD.

The paving of the portico and the drain were robbed out at the same period, and replaced with stoney patches, with some traces of burning: again, these appear to date from the early fifth century. Over them accumulated a series of layers containing a certain amount of building rubble from the structures above (above Fig. 27). Over these accumulated a fairly clean colluvial deposit, presumably deriving from the area of the forum. No material was found dating to a period later than the fifth century: apparently, medieval occupation did not extend this far.



Fig. 28. The eastern shop, from the east. (EF)



Fig. 29. The western shop, from the north. The highest floor has been sectioned, revealing a circular cut filled with ashy soil. (EF)

The northern extension : Punic rampart and Forum wall



Fig. 30. The Punic rampart, north face. Behind it can be seen the *emplecton* under excavation (KJ).

The trench extends between the large excavation to the north, where Cintas exposed the earliest cemetery, and the shops. On the northern edge is a stretch of wall built with an ashlar facing, with two courses of blocks preserved (Fig. 30). Against these are piled layers of stones and earth, that appear to constitute the *emplecton* of the rampart. A posthole cut into it may represent some timber internal structure. The *emplecton* was particularly clean, containing only a single sherd of a Punic amphora which dates to the end of the fifth or the beginning of the fourth century BC.

The position of the southern face of the wall is uncertain: there is an alignment of limestone blocks of dimensions similar to those of the rampart (1.37 m x 0.83 m), although it is relatively far (8 m) from the north face. This may also mark the northern edge of a substantial defensive ditch of the same period, whose existence we hypothesize on the basis of the position of the defensive rampart and the deep cut in which sits the Roman porticoed street. A further element in support of this hypothesis comes from the dark clayey soil **(6041)** (Fig. 31) which appears to fill the southern half of the *emplecton*, which gives the impression of being cut from a peaty subsoil like that that characterizes the marsh around the island.



Fig. 31. The east section of Cintas' trench, showing the redeposited subsoil (6041) cut by the robber trench of the Forum wall. To the north of this are visible the foundation of the water channel that ran along it (KJ).

Roman Constructions



Fig. 32. The southern end of the Cintas trench, from the west: A possible block from the south face is visible to the north. (KJ)

At the southern end of the Cintas trench a small robber trench, **6060**, cutting a construction trench cut into the dark redeposited subsoil seems to represent a preliminary attempt to shore up the earth slipping into the ditch from the north, using a terrace wall built beyond the end of the Punic rampart (Fig. 32). The rich material in the construction trench contains many Dressel 1 amphorae, and dates between the middle of the second and the middle of the first centuries BC. It is clearly only a little earlier than that filling the robber trench. What replaced it during the period between the middle of the first century BC and the end of the first century AD is not yet clear.

Another series of structures lying 4 m to the north marks the construction of the forum, dating perhaps just after the construction of the porticoed street, and possibly part of the same programme. A robber trench filled with orange earth, two metres wide, cuts through the middle of the sondage (Fig. 31). The masonry of the wall, measuring 1.85 m wide, was found at the bottom of the trench. Abutting it is an east-west channel which apparently brought water to a nymphaeum lying some 50 m to the east. This is, of course, identical to the situation in Area II, where we have seen a channel running under the portico along the line of the robbed-out north wall. It allows us to identify the robber trench with the south wall of the forum.

Conclusions

Elizabeth Fentress and Andrew Wilson

The 2014 season has clarified some of the topography and extent of the ancient city, in particular emphasising the extensive area of gridded streets and presumably residential areas in the south-eastern part of the town, and showing that the urban area extended further to the east than Lézine was able to detect from the aerial photographs from which he mapped the site. This appears to be because the ancient ground surface dipped away towards the east, to the point where the streets and buildings were covered by sufficient alluvium that they did not show up as cropmarks; it is for this reason that our geophysics results become progressively fainter towards the eastern limits of the city, which evidently extended further than we can detect.

A deep sequence of stratified deposits and structures was documented below the Roman basilica, showing Punic ceramic production in this area, and cisterns belonging to Punic and early Roman houses; evidently the creation of the monumental centre in the Roman imperial period involved the demolition and clearance of a formerly residential area.

We can now identify with greater confidence the location of the forum of the Roman city, and to begin to delineate its limits. As suspected by Lézine[11], it is bounded to the north by a wall and portico, separated from the basilica by a wide, paved street. Its southern limit was a similar wall some 4 m to the north of the terrace wall separating it from the colonnaded street. The total width of the forum is 59.5 m, or 200 Roman Feet. Inside the northern and southern edges run two channels. As these were most likely covered by porticoes, they seem to have carried water to nymphaea visible to the west of the forum on the north side, and to the east on the south side. The portico facing the forum on the north side is 8.26 m wide, while that facing the colonnaded street are 5.90, m. wide, or roughly 20 RF. This latter colonnade must have been on two storeys, given the difference in height between the level of the colonnaded street and that of the forum, which is over 4 m: such a double portico would have created an impressive façade for the monumental centre when viewed from the town.

The full abandonment sequence in the north wing of the House of the Large Oecus (Area III) has now been exposed, and particularly significant discoveries were the uncovering of the opus sectile floor of what must be a reception room of the north wing, and the discovery of a collapsed mosaic floor that had fallen from an upper storey. The house was apparently built in the Julio-Claudian period and abandoned around the middle of the fourth century AD.

In addition to the lime kiln discovered in 2010, a total of 8 pottery kilns has now been revealed in Area IV, of which it seems that four were active at any one time, making a variety of coarsewares including jugs, unguentaria and chamberpots. This area lay on the very western edge of the city and was a mixed industrial and residential area.

[11] Lézine 1968, 162.

The medieval occupation in the area of the abandoned Roman forum appears to date from the ninth to the twelfth centuries AD, and is represented by the footings of pisé-walled houses, and by bell-shaped and cylindrical silos for grain storage. Particularly noteworthy are the finds of bone anvils for making sickles, indicating the presence of a blacksmith, and probably the involvement of the inhabitants in agricultural activities.

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