

Spolverino (Alberese – GR). The 4th Archaeological Season at the Manufacturing District and revision of the previous archaeological data¹

Alessandro Sebastiani

The aim of this paper is to present the preliminary results of the fourth archaeological season (August and September 2013) at the river port of Rusellae (Spolverino, Alberese – GR). Our research focused on some previously discovered rooms of the manufacturing complex, as well as some new spaces, and revealed the existence of storage facilities in Room II and VIII and a series of new workshops dedicated to the production of iron and lead ingots. More generally, the excavations illuminate a shift in the economic axis in Central Italy during the second half of the 2nd century AD, when agriculture was progressively replaced by artisanal productions – through until the late 5th century, when the complex was abandoned.

Introduction

During the months of August and September 2013, the 4th archaeological season at Spolverino took place. The site has been investigated since 2010 when the Soprintendenza per i Beni Archeologici della Toscana started the excavations with professional archaeologists². Since 2013 the Department of Archaeology of the University of Sheffield, via a European funded project under the Marie Curie Intra-European Fellowship programme, has led the archaeological research in the Alberese area.

The site of Spolverino is located on the last bend of the river Ombrone (figs. 1-2), in the territory of the Regional Park of Maremma (Grosseto, South Tuscany – Italy). Previous investigations brought to light the existence of a multiphase manufacturing complex built during the 1st century AD. It remained in use until the late 5th c. AD when the area was converted into a small necropolis.

The 2013 excavations focused on 5 different rooms in the complex (fig. 3), and the established strategy was to reach the foundation levels in at least 2 rooms. We were hoping to confirm the initial chronology of the site as revealed in Room I by revealing new materials from the foundations. Room II was fully excavated, discovering the earliest phases of occupation, as was Room III. Room V was partially investigated by removing the collapse layers to show the perimeter walls. Room VI excavated to the late 3rd/4th c. AD contexts. Finally we opened up a new area, Room VIII, but due to the difficulty of defining its full extent we decided to stop the excavations after the removal of the rubble layers.

In order to facilitate the reading of the sequence, the table below offers a summary of the periods and phases of the site at Spolverino, with the relevant archaeological evidence and structures discovered so far.

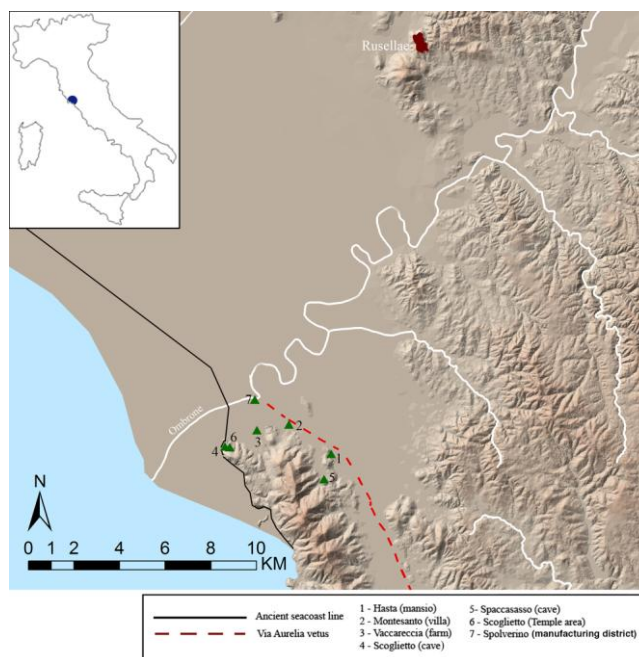


Fig. 1. Map of the area of Alberese with the main Roman sites.

¹ This article is part of the ALBTUSMEDII European Project, carried out at the University of Sheffield. The project is funded under the 7th Framework Programme with a Marie Curie Intra-European Fellowship.

² For previous results see SEBASTIANI 2013 and SEBASTIANI 2014.



Fig. 2. Aerial picture of the excavation (courtesy Paolo Nannini, SBAT).

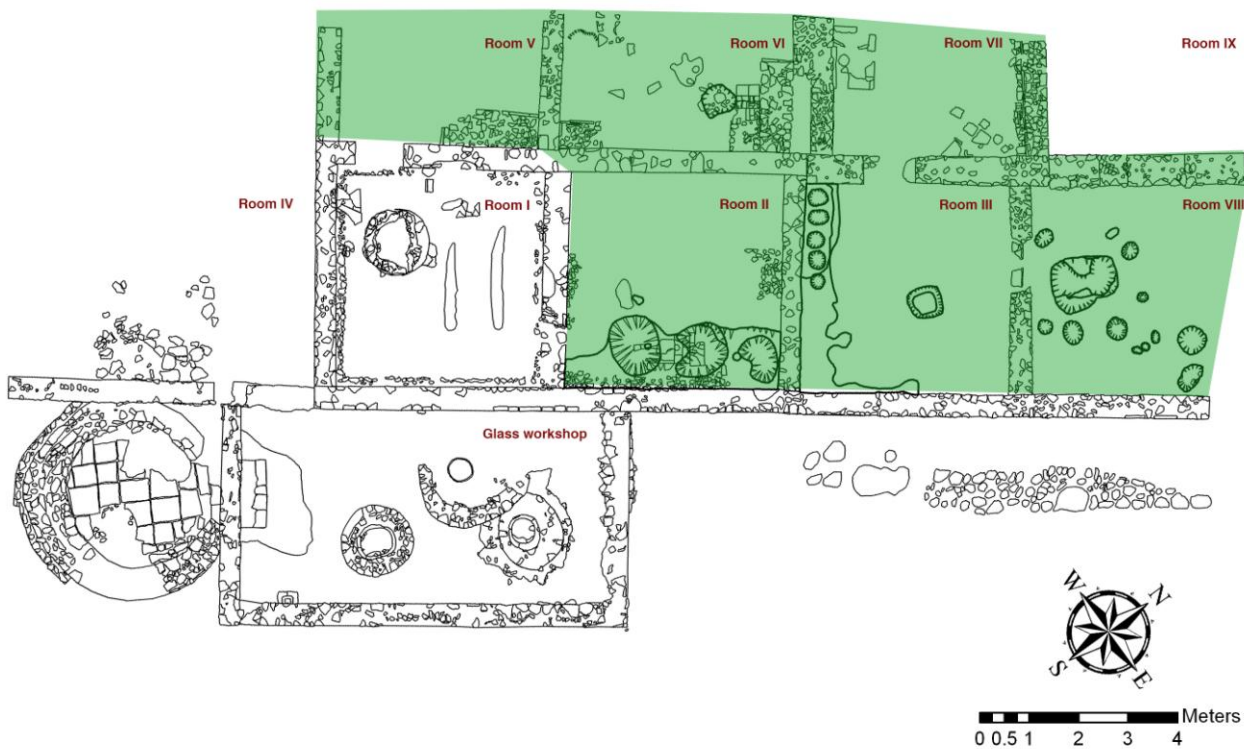


Fig. 3. Plan of the site of Spolverino. Highlighted the areas of excavations in 2013.

	Chronology	Archaeological evidence
Period 1	Domitian Era – second half of the 2 nd c. AD	Construction of the complex Glass workshop in Room I Storage facilities in Room II Dumping levels in Room VII
Period 2	End of the 2 nd c. AD – 3 rd c. AD	Glass workshop built outside the complex Bone workshop in Room I Iron and lead Workshop in Room II Communal kitchen in Room III Lead workshop in Room VII
Period 3, Phase A	End of the 3 rd c. AD – first half of the 4 th c. AD	Roasting channels in Room I Metal workshop in Room II Communal kitchen in Room III Lead workshop in Room VII Glass workshop outside the complex
Period 3, Phase B	Second half of the 4 th c. AD – mid 5 th c. AD	Metal workshop in Rooms I and II Communal kitchen in Room III Lead workshop in Room VII Storage facilities in Room VIII Glass workshop outside the complex
Period 4, Phase A	Second half to the end of the 5 th c. AD	'Humble' tile floors in Rooms III, VII and VIII Limestone kiln in Room VI
Period 4, Phase B	Beginning of the 6 th c. AD	Necropolis
Period 5	6 th c. AD – Modern times	Agricultural fields and flood deposits from the river Ombrone

Period 1: Domitian Era to the second half of the 2nd century AD

While sondages across the foundation levels of Room I in 2012 allowed us to situate the foundation of the complex in the second half of the 1st c. AD, the 2013 season helped us to better define the construction phase and the first use of the complex.

Excavations in Room II and III confirmed and restricted the chronology to the Domitian Era. A series of artefacts recovered on the first contexts of the sequence clearly shows that the construction phase occurred around the 80's of the 1st c. AD, while subsequent materials belonging to the first phase extend the period up to the second half of the 2nd c. AD.

In this phase, Room I hosted a first glass workshop. It was made up of a glass blowing kiln, a *dolium* to store fresh water and a possible counter (fig. 4). The glass kiln measures 1.45m in diameter, being exactly the same size as the later ones found in the Period 2 external glass workshop. It survives only at a foundation level, showing nonetheless the central hole that possibly hosted an upside down *dolium* rim, as in the later examples of Period 2. The *dolium* used to store fresh water was found smashed on top of the earth-beaten floor of the room, while its hole in the ground survives as a negative trace. Across the SE corner of the room, a collection of glass fragments (both vessels and window panes) was recorded: suggesting that even the first glass workshop was recycling scraps and old materials in order to produce new objects.



Fig. 4. Late 1st c. AD glass workshop.



Fig. 5. The storage facilities in Room II.



Fig. 7. The thick mortar layer found in Room III, abutting the tile pillar and continuing into Room VII.

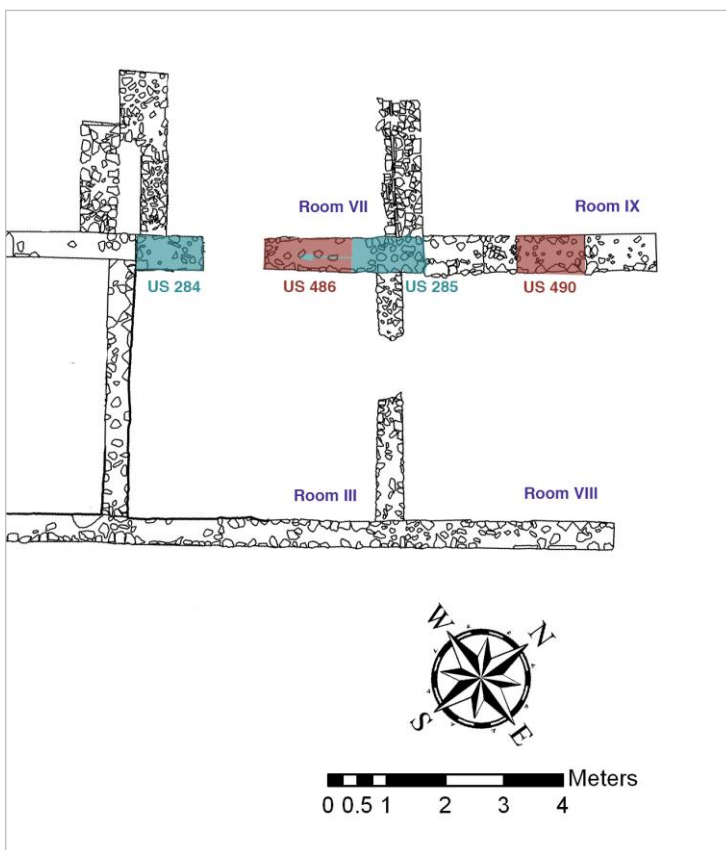


Fig. 6. Sequence of the wall construction between Room III and VII.

other side of the wall in Room VII. As shown in fig. 6, the two rooms appear to be divided by different portions of walls, i.e. US 284, 285, and 486 (this latter being a tile pillar covered by 285). As stated earlier, the trench in Room III revealed a thick mortar floor abutting the pillar and continuing over the two rooms (fig. 7). Walls 284 and 285 were then built on top of a greenish clay context. It is thus possible to argue that in Period I Rooms III and VII were two different spaces divided by arcades. This is confirmed by the fact that the greenish clay context continues below wall 350 and its foundation 535, i.e. the wall dividing Room VII from Room IX (fig. 8). The presence of a tile pillar, aligned with 486, in Room VIII, as well as other two pillars in Room I and II, confirms the original plan of the

The continuation of the research in Room II, interrupted in 2011, brought to light the existence of storage facilities. Along the southern wall of the room, in fact, a series of 3 pits holes were found (fig. 5). Given the size of the max diameter, c. 1.2mx1m, the oval shape in profile and the depth of the cut (c. 0.60m), it is possible that these hosted at least 3 *dolia* to store agricultural surplus. The holes were themselves contained in a wider cut (4.5m long, 1.25m wide and 0.40m deep) occupying c. 1/3 of the room. The rest of the space was covered with a reddish *cocciopesto* floor while the walls were plastered with a thick layer of mortar providing the room better insulation from the humidity caused by the proximity of the river. Unfortunately, the last third of the room was not investigated due to the presence of a large *cocciopesto* basin belonging to the metal workshop of Period 3 (Phase B) that was removed.

We also decided to finish the excavations in Room III. This space was used as a communal kitchen for the complex from at least Period 2. A trench was cut covering c. 1/3 of the northern portion of the room, in front of the dividing wall with Room VII. After the removal of the mortar floor found in 2012, a greenish clay deposit was revealed and subsequently removed. Soon after, an earlier floor appeared, abutting a tile pillar and dipping underneath the other portions of the northern dividing wall. This helped us to reconstruct, even if partially, the earlier plan of the site of Spolverino.

Another trial trench was excavated on the

complex with arcades and bigger spaces available in the second row of rooms (fig. 9). However, the original function of these spaces is at the moment unknown.

Period 2: End of the 2nd century AD – 3rd century AD

The complex of Spolverino was completely refurbished during this phase. The first transformation involved Room I. With the construction of the external, larger glass workshop, the functions of Room I were redefined. The Period 1 glass kiln was destroyed and a silty context was laid out on top of the ruins. This served also as the earth-beaten floor of a bone workshop (fig. 10). Archaeology has shown the presence of a good quantity of bone artefacts, such as hairpins, hinges, game pieces, spoons, dice, and pendants. Some of the objects are fully finished,



Fig. 8. Wall 350 and its foundation 535 (on the left) with the greenish clay context continuing below it.

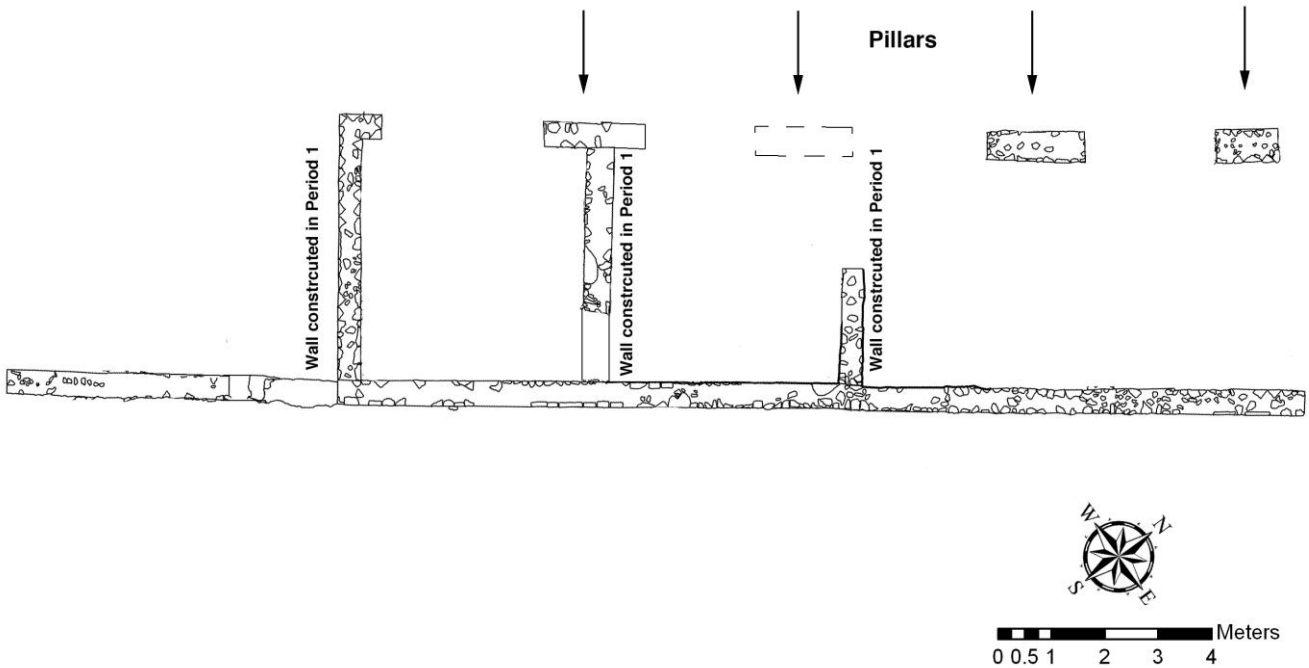


Fig. 9. Possible reconstruction plan of Period I.

while others are at a semi-worked state. In addition a quantity of animal bones was recovered from on the top of the working surface³.

The storage facilities in Room II were also dismantled and the deep cuts backfilled. Yet again, a new earth-beaten floor was laid down and a kiln was built. This was made up of reused tiles, one of them bearing a stamp (fig. 11). Exposure to fire has destroyed the letters of the stamps, but the mooned shape suggests it may have belonged to one of the *Domitii Ahenobarbi's figlinae* as many other tiles of these workshops have been recovered in the excavations. The kiln was surrounded by a series of ashy and burnt contexts, as well as a few, tiny, narrow and deep postholes. The large amount of iron and lead objects, as well as ingots, suggest that the kiln was a small

³ The faunal remains are actually under investigation with a Master Dissertation at the University of Sheffield (UK) by Veronica Aniceti (advisors Dr Umberto Albarella, Dr Alessandro Sebastiani).



Fig. 10. The bone workshop in Room I.



Fig. 11. The forge discovered in Room II.



Fig. 12. One of the lead ingots found within Room II.



Fig. 14. General view of Room VII.



Fig. 13. Bronze pan recovered in Room III.

forge used to reduce old items and create ingots (fig. 12). These latter do not have any stamps, reducing the possibility that they were imported from state mines spread across the Mediterranean.

If the original function of Room III is unknown, in this period the space was used as a communal kitchen. After the deposition of a green, silty context a new mortar floor was built and a new organization of the space was designed. As said before, a series of walls was built in order to create Rooms III, VII, VIII and IX. The walls in Room III were then plastered and a wide hearth was set up in the middle of the room. A *sacra privata* was found in

wall 285, a plastered niche with a votive deposit for the domestic cult⁴. A series of vessels attest to the main function of the room as a kitchen: African clay mortaria, ARS C plates, African cooking ware as well as jars and amphorae (most of them of African production) were the common objects in Room III, together with a bronze pan found close to a secondary hearth placed in the SE corner (fig. 13).

Excavations carried out in Room VII in 2013 have shown the existence of an extensive and long-used lead workshop (fig. 14). The various phases of use of the workshops have prevented a proper phase-to-phase reading of the structures, but several traces of simple ground level kilns have been recorded. In addition, a stone and mortar-based working counter was still visible in the SE corner, surviving as a foundation. In addition, in the NW corner the foundation of a *cocciopesto* basin, providing the necessary fresh water, was recorded. Due to the proximity of

⁴ A description of the *sacra privata* and its related votive deposit can be found in SEBASTIANI 2013: 6.



Fig. 15. General view of the external glass workshop.

the river and the (safety) requirement for required an extensive baulk, only the southern half of the room has been investigated. It is possible that other, better surviving structures are hidden under the section, as a series of burnt clay contexts were continued underneath. The interpretation of the room as a lead workshop is made due to the discovery of some lead ingots, as well as lead cuts and scraps found spread all over the remains of the kilns.

The research carried out in Room VI was unfortunately incomplete and during the 2013 season only a small amount of data was recovered related to this period. It seems from the presence of a substantial furnace that continues under the northern section as if the room housed some sort of industrial activities. The structure appears rectangular in shape, built with stones bonded with mortar and there was a core context

of burnt clay, possibly the product of some firing. Remains of a mortar floor can be detected in some parts of the room but no primary function of the productive structure can be argued.

The most extensive intervention in this period was the construction of the external glass workshop (fig. 15). This replaced the smaller one found in Room I in the previous period. It consists of an 18 m² rectangular room with an annealing kiln set just outside the western side. The internal space is occupied by two circular glass kilns of the same size as that belonging to the earlier phase (1.40m in diameter). The furnaces are built with tiles bonded with abundant mortar, and had a circular hole in the middle. This was filled by a large upper portion of a *dolium* rim, set upside-down, in order to line and protect the fire chamber. In between the kilns, a working counter was discovered with a *dolium* at its feet to store fresh water. On the western side, an annealing kiln, 4m in diameter, was then constructed. The walls are built with small sized stones and reused tiles (one of them bearing a brick stamp of one of the *Domitii's figlinae*), and the context covering the foundations produced pottery of the late 2nd c. AD. The floor of the kiln was constructed of entire *sesquipedales* while the vault was made from clay. A destruction *stratum* of the latter was found on top of the floor of the kiln. The glass workshop, according to the finds recovered during the excavations, lasted until late in the second half of the 5th c. AD (although a detailed analysis of the material culture has still to be completed)⁵.

Period 3, Phase A: End of the 3rd century AD – First half of the 4th century AD

This phase is characterized by continued use of Rooms II and VII as metal workshops, Room III as a communal kitchen, and by the external glass workshop.

Room I, on the other hand, saw the decline of the bone workshop, with a new beaten-earth floor laid on top of the one described above. 3 roasting channels were cut into this new surface (fig. 16). It seems that the economic trend shifted towards the production of metal ingots – not only from recycling, but also on the basis of primary materials⁶.



Fig. 16. Roasting channels found in Room I.

⁵ The glass workshop and its finds are under investigation thanks to the award of the prestigious Rakow Grant of the Corning Museum of Glass (New York – USA).

⁶ SEBASTIANI 2013: 7.

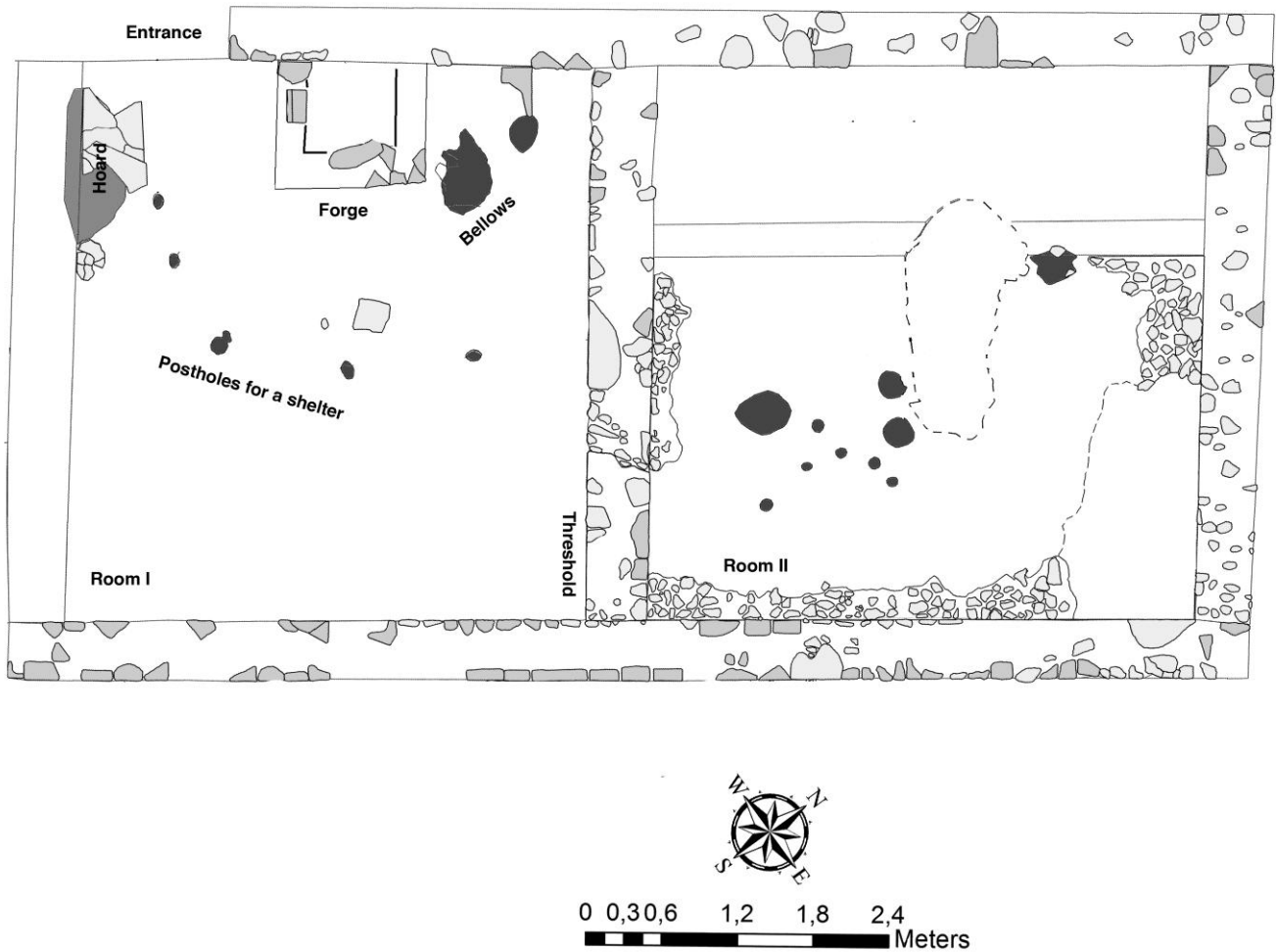


Fig. 17. The mid 4th c. AD metal workshop in Room I and II.



Fig. 18. Cocciopesto basin in Room II.

Period 3, Phase B: Second half of the 4th century AD – Mid 5th century AD

The main changes recorded in this phase involve Rooms I, II and VIII.

With the destruction of a portion of the dividing wall, and the creation of a simple threshold, rooms I and II appear now to be connected (fig. 17). In Room I a new floor, mainly of mortar, mixed with earth, was laid and sealed the previous structures. Abutting the northern wall, a rectangular forge was built, with a (reused) tile base and a possible clay vault. In order to house the vault, a portion of the wall was removed. On the right side, an irregular cut (c.0.40x0.20m) was recorded, and may be the remains of the bellows or the anvil. All around the metallurgic structure, a semi circular alignment of postholes was found, possibly the remains of a shelter to protect the forge. To the

left of the forge a reused marble slab covered a hollow that contained a hoard of metal objects. Most likely, these items were meant to be melted in the forge in the recycling process.

Room II contained a well-designed and substantial mortar floor. This was created by backfilling the structures of the previous workshop and by laying down a make up layer made of small stones. In the northern part of the room, a cocciopesto basin was constructed occupying c. a third of the available space (fig. 18). The basin was



Fig. 19. General view of Room VIII.

well made with substantial supporting wall on the southern edge and solid *cocciopesto* plaster and floor, and probably served to store fresh water. Unfortunately, a later burial cut through a portion of the basin and the supportive infrastructures around it. In addition, a series of postholes was found close to this facility but the lack of obvious alignment makes interpretation for these features difficult. Rooms I and II formed a larger metal workshop than those we have encountered during the excavations, with a clear separation of functions and activities in the two spaces.

In 2013, we were also able to recover data from a completely new room (VIII). Situated on the eastern side of Room III, it was covered by a dark earth *stratum* and a collapse layer. Once the collapse was removed, a dark red beaten-earth layer (similar to a context found in Room III in 2012) was found to cover the exposed area of the Room (it also continued under the section). The two rooms were linked by a simple threshold made of two roof tiles set upside down, with the embrix preserving the step. A context of burnt charcoal was recorded as a series of lumps across the whole of Room VIII, allowing us to suggest that it might represent the presence of a wooden floor. A series of circular holes were found within the beaten earth context (fig. 19). The biggest one, some 1.40x0.90m in extent, was filled with a clayish soil containing fragments of *dolia* and African Red Slip Ware shards. All the other holes were arranged around this one and appear to have hosted jars or small pots. They were all cut to a depth c. 0.30m, where they met an underlying mortar floor. The big hole was deeper and cut through the floor, so that was possible to measure its thickness (c. 0.10m). The excavation in this Room was then concluded for this season, as we preferred to expose the entire space in the future, and to excavate it in open area. Nonetheless, it seems clear that the main function of this Room was to act as a storeroom serving the communal kitchen in Room III.

Period 4, Phase A: Second half to the end of the 5th century AD

In this period, the site of Spolverino started to decline. Rooms I and II, i.e. the large metal workshop, seem to be still in use, at least until the end of the 5th c. AD. At this stage, the workshop is collapsing and a thick context of rubble and smashed amphorae was recorded. All the other Rooms of the complex seem to have been in ruins. The communal kitchen was abandoned as well as Room VIII and Room VII. On top of this collapse, humble floors were laid reusing roof tiles and bricks of the walls. The only activity is found in Room VI (fig. 20). It comprised a circular cut, some 45cm in diameter and c. 50cm deep, and filled with ashes and charcoal, together with several fragments of marble objects (and an almost complete *mortarium*) (fig. 21). The pit was sealed by a large lump of (almost circular) mortar (fig. 22). To the east of this feature, and built against the dividing wall with Room VII, we



Fig. 20. The furnace discovered in Room VI at the end of the excavation.



Fig. 21. Marble mortar found close to the furnace.



Fig. 22. Lump of mortar on top of the furnace.

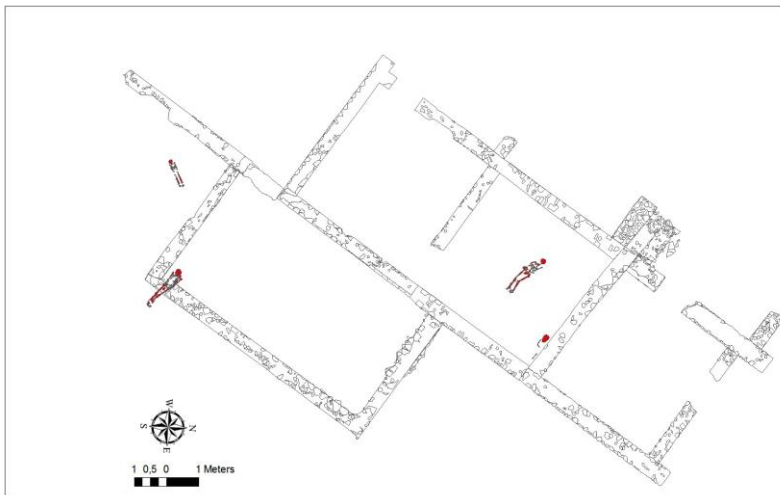


Fig. 23. Plan of the early 6th c. AD necropolis.



Fig. 24. The late 6th c. AD agricultural field.

found a platform made up of 8 squared tiles. The function of this infrastructure seems difficult to define. Some elements, like the presence of marble fragments (as well as the lump of mortar sealing it on top) in its fill could suggest it was used as a limekiln, but no exact parallels were found⁷. Moreover, the tile platform results in an unexpected item in this type of furnaces, leaving the final use of the structure still unknown.

Period 4, Phase B: Beginning of the 6th century AD

Excavations in 2011 showed how the settlement was transformed into a small necropolis. After the abandonment and full collapse of the manufacturing complex, four burials were interred (fig. 23). All of the graves had a stone lining delimitating the cut, three had stone caps, while the orientation is NW-SE for three and E-W for one.

There were two graves in Room II. The first one, containing the remains of an adult individual, was located in the centre of the room, cutting and partially destroying the southern wall of the *cocciopesto* basin. An infant burial was also located in the SE corner.

Another adult was buried at the SW corner of the glass workshop, destroying a portion of the southern enclosing wall. The final tomb was located within the annealing kiln, cut through the *sesquipedales* floor. None of the burials contained grave goods.

Their chronology is based upon their stratigraphical position, been sandwiched between the later contexts (first half of the 6th c. AD) and the collapse strata (end of the 5th c. AD).

Period 5: 6th century AD to Modern times

The final occupation of the site is evidenced by 12 furrows found on top of a “dark earth” context, distributed all over the excavation areas. They point to a change of function for this portion of territory and the conversion into an agriculture field (fig. 24). Their chronology is extremely broad as they are cut through a context dated to the first half of the 6th c. AD and covered by the massive alluvial deposits that form the modern plain.

⁷ For an updated and detailed examination of this kind of infrastructures see SAVI SCARPONI 2013. See also TRAINI 2013.

No other signs of human activities have been recorded, so we can assume that the area retained agricultural function from the Late Antiquity up to modern times.

Conclusions

Four years of excavations at Spolverino have succeeded in uncovering a substantial manufacturing district, which existed from the Domitian age to the late 5th c. AD, before being converted into a necropolis. I would like to conclude with a few thoughts on how this adds to the discussion on economic and settlement trends in the Roman period in this part of territory.

The construction of the *via Aurelia vetus* during the 3rd century BC was the primary engine for a substantial organization of the landscape. After a few decades the sanctuary and temple of *Diana Umbronensis* at the promontory of Scoglietto was built⁸. It owed its origin to several factors. Firstly, it was designed as a rural sanctuary and religious place whose dedication to the hunter goddess can be easily explained by the natural environment of an area surrounded by woods and wild animals⁹. Secondly, it marked the administrative border with the *ager Cosanus*, immediately to the south. Thirdly, it served as a territorial marker for the visual (and commercial) connectivity between the sea and the mainland, especially when, during the Domitian Age, we witness its expansion and the contemporary construction of the manufacturing district at Spolverino.

The settlement network was then enriched with the construction of at least two villas and the *mansio* of *Hasta*. The first residential building was erected on top of a small relief (Montesanto) and its chronology spanned from the 2nd c. BC up to, at least, the 3rd c. AD. A few pottery shards might push the chronology to Late Antiquity but say nothing about the survival of the site as a villa or as a different kind of settlement¹⁰. A second, possible, villa is located between Scoglietto and Spolverino. Trial trenches opened in 2013 have shown the existence of a square-plan building, with two open spaces on the main front. The pottery recovered during the excavation seems to fix the abandonment of at least one room during the first half of the 3rd c. AD, while decontextualized black gloss ware found in later contexts witnesses an earlier phase in the 2nd c. BC; finally, the *mansio* of *Hasta*, recognized through a terrific aerial picture¹¹, was built on a secondary road linked to the *via Aurelia vetus*, and its chronology spans from the 2nd c. BC up to the 6th c. AD.

It is worth noting that two natural caves were also used during the mid Imperial period. The cave of Scoglietto had been abandoned in the late Bronze Age, and was re-occupied in the 3rd c. AD. The recovery of mid 6th c. AD ARS fixes the final moment of use of this site¹². It is possible to date the occupation of the cave of Spaccasasso¹³, situated near the modern village of Alberese, to the same period. Finally, a possible farm is known, sharing the same chronology of the caves, and located some 500m east of Scoglietto¹⁴.

It is in this context that the manufacturing district of Spolverino was designed and built during the reign of Domitian. Its construction was part of a wider infrastructural project that has been investigated in the southern *ager Cosanus* and in the main islands of the Tuscan archipelago¹⁵. The site at Spolverino could reflect the same project, carried out by the Emperor in order to reinforce the infrastructural network along the coastline and to facilitate trades and communications.

A crucial turning point can be detected from the second half of the 2nd c. AD onwards. The area of Alberese is affected by at least three different events. On the one hand, some sites were abandoned (Montesanto and the newly-discovered maritime villa); other sites were newly built (e.g. the farm in Vacchereccia) or re-occupied (as the caves of Scoglietto and Spaccasasso); and the sanctuary of Scoglietto seems to have been in ruins, while the main temple was refurbished and continued to be used until the mid 4th c. AD.

In this scenario, Spolverino seems to be the only settlement that expanded with the construction of the external glass workshop. At the same time, the manufacturing activities are now focused only on the recycling of metals and glass while agricultural activities (witnessed in Spolverino by the storing facilities of Period 1) disappeared. It is possible to argue that the collapse of the villa system and the economic growth of the African and Spanish Provinces brought about a new economy for this region. Who is in charge of these activities remains unknown but, one can suggest, with some degree of certainty, that the emerging local aristocracy could have been involved in the reorganization of the economic system and, at the same time, the rural infrastructure. This hypothesis is supported by evidence for the refurbishment of the temple area at Scoglietto. Once the sanctuary was aban-

⁸ SEBASTIANI, CHIRICO, COLOMBINI 2013.

⁹ The zoo-archaeological study is showing a variety of species and breeds with a concentration of wild boars and deer, which are the privileged animals of Diana (personal note by Veronica Aniceti).

¹⁰ POGGESI 2004; VACCARO 2008.

¹¹ POGGESI 2004.

¹² DE BENETTI 2007a; VACCARO 2007.

¹³ DE BENETTI 2007b; VACCARO 2007.

¹⁴ VACCARO 2008.

¹⁵ CIAMPOLTRINI, RENDINI 2005.

done, its rubble were reused to rebuild (or restore) the main temple located in the southern part of the settlement. Marble veneers were recycled and used to cover and embellish the façade, the perimeter of the structure, its internal walls and floors. Geological analyses carried out on the marble decorations of the 3rd c. AD temple have shown that local stone was used in some of the main mouldings of the external decoration. This might suggest a lack of funds in supplying (and working) new marble veneers from an external market. This evidence suggest the possibility that behind the refurbishment of the temple one should see local private agents, rather than a much more official figure (as it should be for a public and religious place). Restoring the temple area, however, was essential for the continuation of Scoglietto's connectivity function, especially in connection with the manufacturing activities at Spolverino. Even with two different stories (one of decline and one of growth), the two sites are intimately linked and they work as part of the same system to guarantee wealth to the private donors (who may also have been the owners of the different recycling workshops) for the restoration of the temple.

In the mid 4th c. AD the situation changes again. Scoglietto is abandoned and soon after will be completely demolished¹⁶. A burial was interred along the western wall of the temple and 3 other individuals were hidden in the cistern¹⁷. At Spolverino, we see the reorganization of the workshops, with the creation of a larger one dedicated to metal processing (Period 3 Phase B, Room I and II). Room III and VIII are now joined together to provide the kitchen and storage facilities for food, while the lead workshop is still in use. This arrangement collapses in the second half of the 5th c. AD, when the workshops were abandoned and humble floors were laid reusing tiles from the collapsed buildings. Only a lime kiln is built, where marble pieces were smashed and cooked to create mortar. The final use of this is unknown but it is hard to think that it was an industrial activity. Much more likely it served some local builders, both for nearby settlements or for attempts at restoring some of the rooms still concealed under the clay.

With the definitive abandonment of the site, the area was converted into a tiny necropolis. As mentioned above, only four burials have been recorded. During the summer 2014 analyses of the skeletons will be carried out by Prof Todd Fenton (University of Michigan, USA) in order to determine sex, diseases, bone stresses and DNA of the individuals.

To conclude, four years of archaeology at Spolverino have been able to demonstrate the existence of a large manufacturing district whose chronology covers the entire Imperial period. Its importance lies in the perfect state of conservation due to the presence of a thick deposit of alluvial clay covering all the structures. To fully understand them, we have decided to halt the excavations for the next two years and to concentrate our efforts on the analyses of the material culture and stratigraphy. This will provide even more substantial historical evidence for the arguments outlined above. In the meanwhile, in order to fill in the general picture on economic and settlement networks, the excavation of a maritime villa, located between Spolverino and Scoglietto, has been planned and will start in summer 2014. In the meantime, our research at Alberese since 2009 has been shedding new light on a micro-regional network made up of villas, a *mansio*, a temple area, a manufacturing district, farms, caves and the *via Aurelia vetus* itself.

Acknowledgments

The 2013 archaeological season was attended by undergraduate and postgraduate students of the University of Sheffield, Edinburgh and Queensland under the Field School Programme organized in partnership with John Cabot University at Rome and the Associazione Culturale "Progetto Archeologico Alberese". A special thank to Daniel Diez Merida (area supervisor), Nicoletta Barocca (site assistant), Valeria Fommei (lab assistant), Andrew Mclean, James Donaldson, Lee Eales, Hannah Holbrook, Chris Presland, Katarina Warren and April Williams. Our thanks also to a number of people who visited the site or spent their time in helping with the interpretation such as Inge Lyse Hansen, Richard Hodges, John Moreland, Sally Cottam, Caroline Jackson, Mariagrazia Celuzza, Nancy de Grummond, Francesco Cini, Massimo Brando, Massimo de Benetti, Veronica Aniceti, Gabriella Poggesi, Mario Cygielman, Simona Pozzi, Paolo Nannini, Mariangela Turchetti, the students of the University of Bern and the local community of Alberese.

The excavation has been possible thanks to the help and support of the Terre Regionali Toscane and the Ente Parco Regionale della Maremma whom goes our warm acknowledgment.

Alessandro Sebastiani

Marie Curie IE Fellow, University of Sheffield UK

E-mail: a.sebastiani@sheffield.ac.uk

¹⁶ SEBASTIANI, CHIRICO, COLOMBINI 2013.

¹⁷ Personal note from Veronica Aniceti. The study of these individuals is actually in progress and a final report will be presented soon.

REFERENCE

- CIAMPOLTRINI G., RENDINI P., 2005, "Il sistema portuale dell'ager Cosanus e delle isole del Giglio e di Giannutri" in R. TURCHETTI (ed.), *Le strutture dei porti e degli approdi antichi*, Soveria Mannelli: 127-150.
- DE BENETTI M. 2007a, "I reperti numismatici della Grotta dello Scoglietto", in C. Cavanna (ed.) *La preistoria nelle grotte del Parco Naturale della Maremma*, Atti del Museo di Storia Naturale della Maremma, suppl. al n. 22, Grosseto: 99-116.
- DE BENETTI M. 2007b, "Spacassasso (Grosseto): I ritrovamenti monetali ed un contrappeso da stadera" in C. Cavanna (ed.) *La preistoria nelle grotte del Parco Naturale della Maremma*, Atti del Museo di Storia Naturale della Maremma, suppl. al n. 22, Grosseto: 243-248.
- POGGESI G. 2004, *I rinvenimenti di età romana nel territorio di Alberese: le Frasche e Montesanto*, in M. Cygielman (a cura di), *La Villa romana di Nomadelfia, Aspetti dell'insediamento rurale nel territorio rusellano*, Arcidosso: 113-119.
- SAVI SCARPONI A., 2013, "Fornaci da calce di epoca romana e medieval in territorio capenate", in www.fastionline.org/docs/FOLDER-it-2013-301.pdf.
- SEBASTIANI A., 2014, "Alberese nel periodo romano. Territorio e popolamento dalla Romanizzazione alla Tarda Antichità", in *Marittima* 3: 5-12.
- SEBASTIANI A., 2013, "Spolverino (Alberese – GR). Relazione alla III Campagna di scavi archeologici", in www.fastionline.org/docs/FOLDER-it-2013-287.pdf.
- SEBASTIANI A., CHIRICO E., COLOMBINI M., 2013, "Dinamiche insediative di età romana nel territorio della foce dell'Ombrone: l'area dei templi di Scoglietto (Alberese – GR). Relazione alla campagna di scavo 2010", in www.fastionline.org/docs/FOLDER-it-2013-276.pdf.
- TRAINI L. 2013, *La lavorazione della calce dall'antichità al medioevo. Roma e le province dell'impero*, Fecit te 2, Roma.
- VACCARO E., 2007, "L'occupazione tardoantica delle grotte di Scoglietto e Spaccasasso", in C. CAVANNA (a cura di), *La preistoria nelle grotte del Parco Naturale della Maremma*, Atti del Museo di Storia Naturale della Maremma, suppl. n° 22, Grosseto: 227-242.
- VACCARO E., 2008, "An Overview of Rural Settlement in Four River Basins in the Province of Grosseto", in *Journal of Roman Archaeology* 21: 225-247.