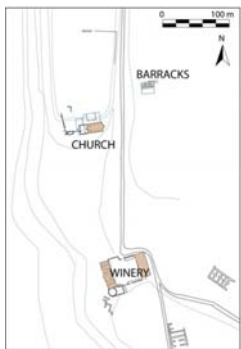


Excavations at Villa Magna 2009

Elizabeth Fentress - Caroline Goodson - Marco Maiuro

The fourth season of excavation at the site¹ was aimed more at extending our knowledge of the structures already discovered than at breaking new ground. However, we went well beyond confirming our hypotheses, and this penultimate season has come close to completing our investigation of the three principle structures discovered so far: the winery, the slave barracks, and the church of S. Pietro in Villamagna.



The Winery (fig.1)

The 2009 Archaeological Campaign in the area of the winery has provided important information and new data in regards to both the Roman building and the post-Roman phases of the site, substantially confirming our interpretation in the previous reports. Under the general supervision of Andrea di Miceli and supervision of the trenches by Seth Bernard, Dirk Booms, Janine Young, Raffaele Laino, Ismini Milariesis, Candace Rice, and Darian Totten, no less than 6 trenches of varying size and depth were opened. Where appropriate, a bobcat helped remove the modern overburden.

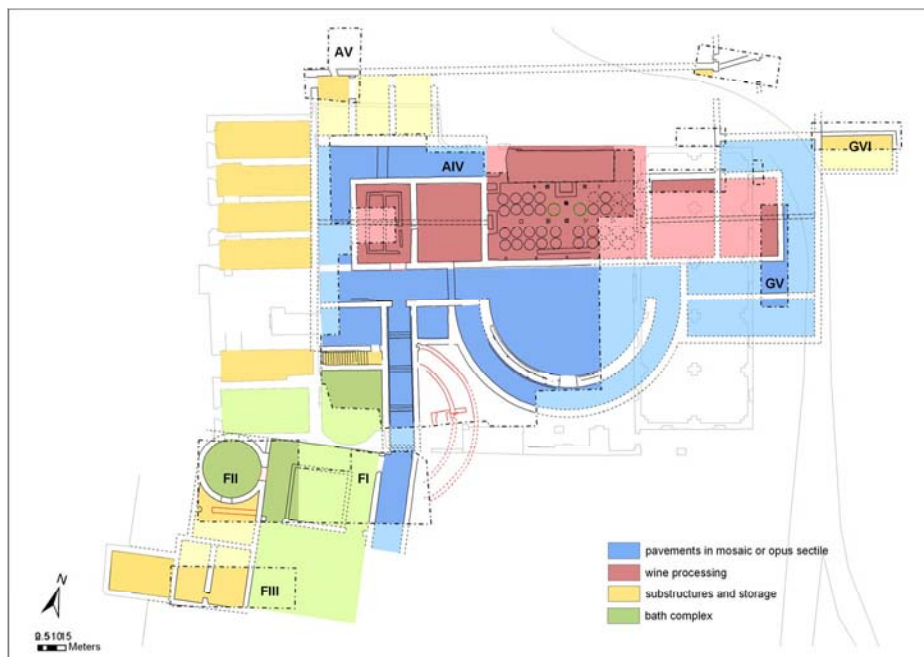


Fig. 1. The plan of the winery (Andrew Dufton).

¹ The excavations were again generously supported by the 1984 Foundation and the Banc'Anagni Credito Commerciale. We are very grateful to Charles K. Williams II, Cataldo Cataldi, and Gioachino Giammaria for their constant support, to Rodolfo Cesaritti for his hospitality, to Dr. Lorenzo Spaziani and the Laboratory Euritmia for their help with the osteological material and to the volunteers from the *liceo Dante Alighieri* for their cheerful labour. Many of our participants received assistance from their universities and we thank them for the support: Birkbeck College (University of London), Brown University, Columbia University, Oxford University, Rhode Island School of Design, Stanford University, University College London, and the University of Pennsylvania which, together with the British School at Rome and the Soprintendenza ai Beni Archeologici del Lazio, directs the project.

A small trench was opened within the courtyard of the nineteenth-century Casale. The trench, an extension of AIV, aimed at clarifying the plan and function of the room with a quadripartite *opus signinum* basin at its centre. The most important result from this trench is the discovery of a robber trench cut into the yellow clay, continuing the line of the structure indicated as a channel for the wine in 2008. This interpretation remains uncertain, however. This corridor was probably originally used to move the grapes from the quadripartite basin, where they were originally deposited, to the main *calculatorium*. The exact path traveled by the grapes and the pressed will be studied in the final season.

Into the remains of the building were cut a trenched foundation for a post-built rectangular hut, which produced a piece of Forum Ware. This is the earliest medieval pottery found inside the Casale, complementing the new evidence to the south of it and in the substructures.

Trench AV was opened north of the modern Casale in order to determine the extension of the Roman building and to investigate the vaulted substructures on which the winery was built. An east-west *opus mixtum* wall, 60 cm. wide, is to be identified as the outside wall of the winery complex. Traces of red painted plaster on the exterior face of the wall and the presence of a conduit running along the outside of the structure, possibly a drain or, more plausibly, a cavity drain for the purpose of protecting the structure from humidity, confirm that this was the northern side of the winery. To the north of this wall, an *opus signinum* floor was replaced in the late antique period by a coarse mosaic with cubic white marble *tesserae*, each measuring 4 x 4 cm. This indicates that part of the exterior of the building was paved as well. Although one might imagine some sort of path or a paved open area to the rear of the winery (the main access to the winery, as seen in our previous reports, was from the opposite, southern, side), it is also possible that this was a working room, paved first with *opus signinum* and then with a coarse mosaic: both are common in wine installations². Within the winery a vaulted corridor, runs east-west, linking a series of parallel north-south vaults. The height of the rooms to the springing of the vaults is 2.40 m. and ca 4.20 m. overall. The use of this area in Roman times is not certain, although its position below the press rooms suggests that it was used for the storage of wine in *dolia*. In a later period a wall in *opus latericium* partially closed off the corridor from the inner space of the vault, perhaps protecting its contents.

A substantial transformation of the area took place in the early middle ages when a pavement made of tiles was laid and the area was used for productive activities (fig. 2). A large pit was cut into the construction clay, allowing the reuse of a Roman drain running through the exterior wall as an oven: layers of ash from the cleaning of the oven gradually filled the pit, while a large sherd of Forum Ware on the pavement dates the structure to the ninth-tenth centuries. After the oven went out of use it was blocked with coarse masonry, and a deposit of earth and rubble accumulated through the twelfth century.

Trenches on the northeastern flank of the Casale provided important new data for the understanding of the plan of the winery, demonstrating that it was essentially symmetrical around the axis of the exedra. GV, oriented north-south, measured 3 x 11.5 m. It brought to light a series of rooms symmetrical to the processing rooms on the west side of the building. A drain, 1.40 m. deep, led down to a larger horizontal drain heading east toward the outside of the building. This was filled during the fifth century, which gives an important chronological indicator for the abandonment of the structure.



Fig. 2. The northern vault, showing the Roman drain used as an oven in the early middle ages, and the pit in front of it.

² FRANKEL 2009: 3.

Fig. 3. The northeast corner of the winery, with a later wall abutting it to the north.

GVI, a trench oriented east-west, 3 x 9 m, revealed the northeast corner of the winery. The eastern wall of the terracing structure was found at the western limit of the trench (fig. 3): its technique, width and general features are consistent with the walls ascribed to the first phase of the building. It was abutted by a wall extending northward on the same alignment as the previous one. The construction material and the technique of this wall seem to be of a later date, with rougher and probably re-used *cubilia*. A rectangular structure running east from the original exterior wall, and also abutting it, had *cubilia* reemployed in the mortar along with fragments of wall plaster: its *opus incertum* technique indicates a rather late date. A circular depression probably intended for a *dolium*, cut within the first pavement of the room helps to determine the function of the complex.



Perhaps there was a shortage of space in which foodstuffs and wine could be stored, and the room was an extension of the winery and the enlargement of the storage capacity of the entire complex. Unfortunately, time and resources did not allow for an extension of the trench towards the south: nevertheless, it is apparent that in a late phase the storerooms of the winery were enlarged and that wine was still produced in the estate in large quantities. No more exact chronological definition of the later additions is possible at the moment.

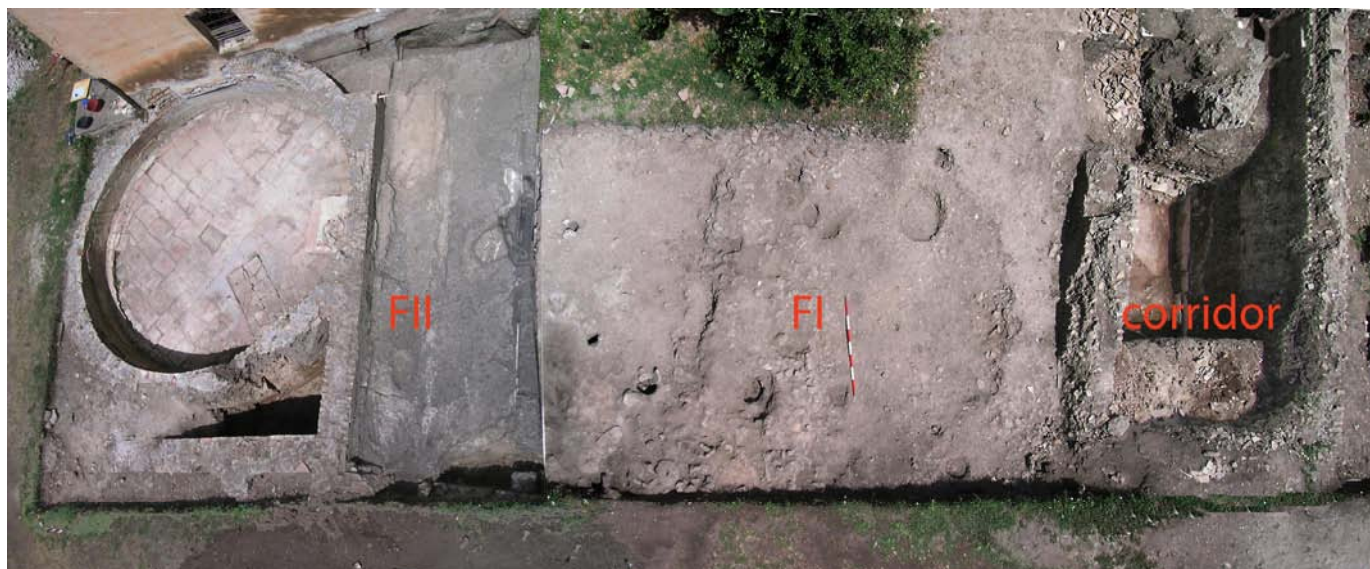


Fig. 4. Trenches FI and FII.

In zone F, to the south of the Casale (fig. 4), the 2009 campaign was intended to investigate the end of the processional stair and the bath building suggested last year by a round room. This room was fully excavated in trench FII. It is built in *opus latericium* and has been persuasively identified as a hot room in a bathing complex, either a *laconicum* (sweat room) or a *tepidarium* (fig. 5). The interpretation rests not only on the typical round shape, but also on the presence of an opening for the passage of hot air from a *praefurnium* to the south. The doors to the north, south and east opened 80 cm. above the pavement, indicating the existence of an upper pavement raised on a hypocaust. This floor was dismantled in a later phase, along with all features relating to its former use: the drain was blocked, the *tubuli* for the circulation of steam were destroyed, the floor was paved with *bipedales* and the wall was plastered. A stair was built to reach the eastern door, while the southern and northern entrances were blocked. The restructured circular room might have served as a storeroom in this phase. East of the round structure a corridor paved with a fine white mosaic, gave access to both the hot rooms and to the rooms south of the excavated area. The corridor proved to be part of a L- or U-shaped portico, whose main function was to connect the ceremonial stair-

Fig. 5. The laconicum or tepidarium.

case (see below) to the baths. The space must have been a small atrium, providing a source of light for the surrounding buildings. Traces of the bases of the columns are visible on the stylobate.

Trench FI, whose excavation began in the 2008 season, covers the rest of the area occupied by the atrium. Here, just below the nineteenth-century garden structures described in the 2008 report, the extremely complex stratigraphy revealed a sequence of at least nine huts, dated approximately from the ninth to the twelfth century. In the earlier huts a shallow oval cut in the earth served as the base of the little buildings, whose structural elements must have consisted in wooden stakes around the sunken floor and in walls of wattle and daub or similar perishable material. A constant element is the hearth,



made of bricks and broken tiles which formed a cooking surface, usually placed at the centre of the hut. The finds associated with this phase are mainly coarse and cooking wares. Interestingly enough, three querns were found in correspondence with the deepest levels reached so far, roughly mid-ninth century in date, and can be associated with a well defined sequence of three huts of different orientations. The construction technique of the later huts shows the use of more substantial timbers, placed in large postholes and wedged with stones (fig. 6). In the final huts in the series the sunken floors characteristic of the earlier phase are absent, and the structures are defined by a series of large postholes. This archaeological context is of great importance, as it is one of the otherwise poorly known nucleated settlements, or *villae*, of the central centuries of the middle ages in central-southern Italy. We are planning to continue the excavation down to the Roman floor in 2010.

To the east of this area a deep corridor was found, continuing south from the entrance to the 'processional' stair, although, as in the case of the rest of the southern structure, it joined the stair at an angle of 15°. At 3.15 m, it was 55 cm. wider than the stair. Like the stair, it was paved with a fine white mosaic, and its walls were veneered with panels of Portasanta, Numidian and Carrara marbles (fig. 7). Windows opened in the vault above it, apparently decorated in plain plaster. The end of this corridor has not been established, although aerial photographs suggest that it extended a substantial distance to the south.



Fig. 6. A sunken-floored building dating to the tenth-eleventh century.



Fig. 7. The east wall of the corridor, with the Carrara marble molding replaced over the portasanta veneer.

Trench FIII, to the south of FI and FII, revealed two rooms, oriented north-south and probably covered with barrel vaults (fig. 8): here the floors were substantially lower than those in the public rooms of the baths. Probably used for wood storage and access to the *praefurnia* in the Roman period, they were also reoccupied in the middle

Fig. 8. Trench FIII, from the east.

ages, when the door through the two rooms was blocked with a wall in order to limit the access to the eastern room: the western room was filled with rubble at the same time. This eastern room was used (possibly as a shelter for live-stock) in the middle ages. In the western room, we excavated down to Roman layers. Here, a cubic structure made of courses of bricks, certainly later in chronology than the original walls of the room, was placed against the corner of the room, with the probable function of buttressing the apparently precarious Roman structures. Alternate layers of ash and clay on the floor suggest the presence of a *prae-furnium* nearby.

It is now certain that the bath complex, together with the corridor leading to the ceremonial stair, was built at an angle of ca.15° with respect to the rest of the winery. This difference in orientation implies a certain time lapse between the construction of the winery and the baths, although there is no visible difference in the construction techniques. Figure 9 shows the rooms excavated so far, with our hypothesis as to the layout of the structure as a whole.

There were numerous changes to the structure in late antiquity. Some of these were minor (the blocking of the vault in AV, walls in AIV, the closing of the doors in FII etc.), others more major, (new storerooms in GVI, the transformation of the round hot room). Although the finds are few, the chronology of the abandonment of the drain in GIII, around the middle of the fifth century, is nevertheless consistent with what we have supposed to be the moment of abandonment of the winery.

However, the most important new finds concern the medieval period. The earliest huts in FI date from the ninth-tenth centuries which is the chronology established for the first layer that covers the stylobate in FII and the transformation of AV into an oven. The village that we have already seen in the courtyard, but been hitherto unable to date, thus seems to date to the ninth century, before the institutional foundation of the monastery of S. Pietro in Villamagna.

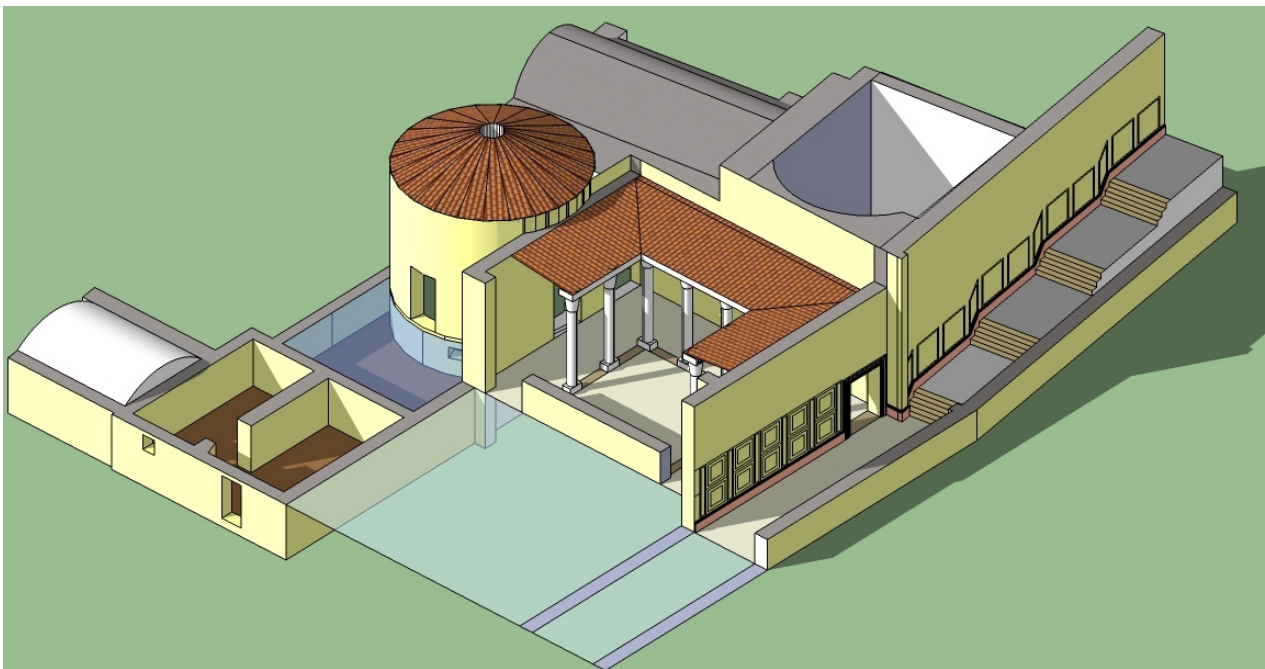


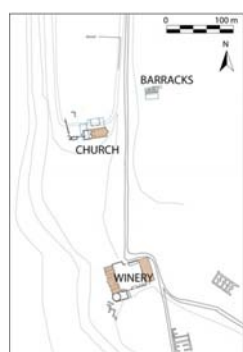
Fig. 9. Axionometric reconstruction of the baths, showing the corridor and the processional stair beyond it (Dirk Booms).



Fig. 10. Site D at the end of the excavation, from the west.



Fig. 11. Schematic plan of the structure, overlaid with an hypothesis as to the original plan.



The Slave Barracks (fig. 10)

The identification of the large building along the road at site D as a slave barracks received substantial confirmation through extensions to the west, north, and east. Excavations within the portico, the alley, and rooms 4, 25 and 28 of the structure were completed, as was the clearing of the road itself. These excavations were completed under the supervision of Serena Privitera and Margaret Andrews.

The cleaning of the section of the road where it was cut by the late defensive ditches confirmed that it was laid along the line of an earlier cobbled road which was flanked at some point by a wall on its north side. This wall was leveled when the later building was constructed. We have no firm dates for the early road or the wall.

Fig. 12. Room 23, showing the pit from which the dolium was removed, and the foundation of a cupboard (?) in the southeast corner.

The northern extension revealed the construction cuts for the building, apparently created in the natural yellow clay of the site. This, like the earliest floor of room 23 and the earliest fill of the central drain in the alley, appears to date to the first half of the third century. Although the building's plan as excavated is markedly crooked, we have reason to believe that it has suffered considerably from earth movement down the slope, which caused the rather fragile walls to shift from their original positions. Figure 11 shows a schematic plan of the building, along with a more regular hypothesis as to its original plan.



The building comprises two blocks of rooms on either side of a central alley. The south block, revealed over the previous two years, has a portico facing the paved east-west road that runs up towards the centre of the villa. However, the row of rooms adjacent to this portico does not communicate with it, opening instead onto the alley. To the north of the alley the block is two rooms wide, and, where doors are visible or may be inferred, they open onto the alley. Each block is at least ten rooms long, but the magnetometry suggests that there are no more than eleven, and probably only ten in all. All rooms, as well as the central alley, were paved with beaten earth, with an admixture of yellow clay.

The new rooms excavated show that there are some differences between them, although most of the excavated rooms measure 10 x 12 Roman feet, and no room communicates with its neighbours to the east and west. The robber-trenches that held *dolia* are found in all of the rooms in the south block, as are hearths and, in three cases, querns. In the north block, however, hearths were found in the rooms opening onto the alley, while only one of these rooms, 14, provided possible evidence for a *dolium*, in its second phase. The single room excavated in the northern range, room 23, contained a substantial *dolium* pit as well as the base of what appears to be a cupboard, on analogy with Pompeian houses (fig. 12). This, along with the fact that room 23 communicated with room 14, suggests that in the block north of the alley a dwelling unit might have comprised two rooms, with a hearth in the front room and storage and sleeping arrangements to the rear.

A second exception to the standard plan was found in room 25, which was almost 20 Roman feet wide and was thus larger than its neighbours to the south. In its northwest corner was found a basin measuring 85 x 90 cm., raised on masonry supports and lined with *opus signinum*. Water could be drawn from it through a lead pipe, probably closed by a tap. There is no indication as to how it was filled, but we might suggest that it represented the water source for the inhabitants of the building. The position of the latrines, if they existed, remains obscure.

The structure was certainly two stories tall, as the base of a staircase in the alley and a fallen wall originally measuring at least four m high show: this would be an impossible height in single-storey rooms measuring only 3.20 m. in width. There are also multiple downspouts which suggest drainage from the upper floor. We may thus suggest that the original plan comprised thirty rooms on the ground floor with an additional forty on the upper storey, one row of which would have been supported by the portico (fig. 13). Access to the rooms on the upper storey would have been provided by walkways running over the alley.

The interpretation of the building is based on its regular plan, and appa-

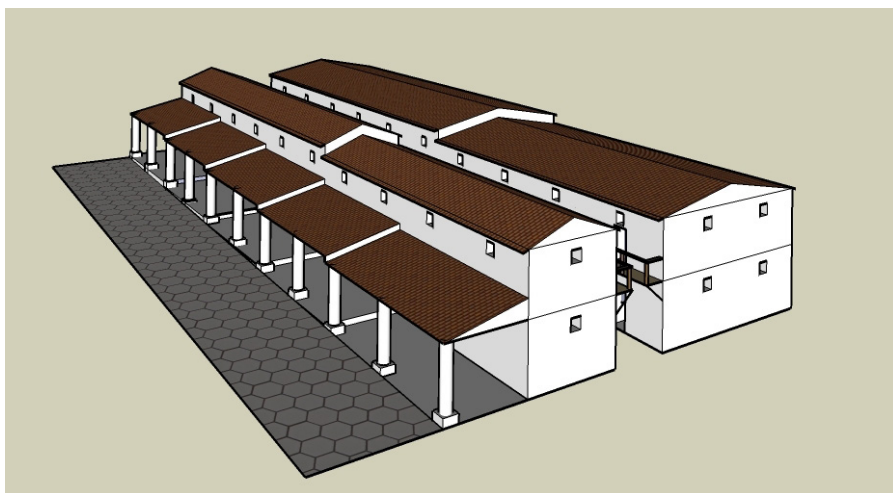


Fig. 13. Reconstruction drawing of the barracks (Dirk Booms)



Fig. 14. Infant burial from room 13.

rent regimentation. As noted last year, the plan resembles barracks buildings found along the northern frontiers of the empire, which immediately suggests a military interpretation. However, this is inconsistent with the good evidence that each dwelling unit contained a hearth and a *dolium*, and that querns were recovered in several of them. Finally, this year the tombs of several newborns and infants under one year of age were found under the floors of rooms 13 and 23 (fig. 14).³ In room 13 there were two infants, buried one on top of the other and separated by horizontal tiles, while in room 23 there were four of which three were buried successively in the same tomb, the earliest buried on a slab of marble. Another infant burial was found just outside the building along the north wall. The low density bones of the infants revealed by x-rays suggest that they were notably undernourished.⁴ Burials in villas become common in the Roman countryside in the late empire,⁵ but the burial of infants in rooms that were still occupied is less frequent.⁶ They certainly argue strongly against the interpretation of the structure as an exclusively military residence. The conclusion that the barracks housed families seems inescapable. We cannot prove that these families were servile, although the



Fig. 15. Intaglio from the destruction rubble of the barracks, showing an eagle with a crown in its beak and a spear.

regimentation of the plan and the lack of access to the portico and street certainly suggest this. The differentiation of the units into one and two-room dwellings may reflect differences of status among the slave families, as does the range of jewelry from the site, including a tiny intaglio with imperial *insignia* found in the destruction rubble, probably from an upper floor (fig. 15).

The phases of occupation have become much clearer, although detailed phasing awaits the final publication. The finds from the alley drain, examined by Mihaela Ciausescu, show a distinct hiatus between a first two layers of deposition, dating to the third century, and the later fills, which date from the last third of the fourth century into the fifth century. Further, the vast majority of the coins from the destruction layer are Constantinian in date, which suggests that the earlier occupation concluded in that period, probably with the collapse of much of the structure. The event that caused the collapse remains obscure. A central section of the road to the south subsided almost a meter, either because of the presence of a hollow, such as a cistern, beneath it, or as the result of earth movement that affected the building as well. Consistent cracks in the walls are found on a roughly north-south axis across the building, extending from the point where the road collapsed, which suggests the latter conclusion. The stress on the building would have brought down the second storey, whose collapse spilled over onto the road, and was then cut away to free the passage over most of the road's width. The area of subsidence was then patched with earth and

stones. Somewhat later, parts of the building were reoccupied, a process which presumably entailed the clearance of substantial quantities of rubble. In the portico makeshift repairs and adaptations created a new unit by walling off part of the portico and knocking a door through to one of the rooms in the original range, room 4. A further door lin-

³ A further infant burial was found last year in room 7, but at the time it was interpreted as later than the building's occupation. Both multiple burials were found under trampled surfaces, although that in room 23 was cut after the removal of the *dolium*. That in Room 13 was covered by a subsequent surface.

⁴ Information from Francesca Candilio.

⁵ DE GENNARO AND GRIESBACH 2003.

⁶ At the villa of Cazzanello, near Tarquinia, there were several newborns among the 12 infants, however, it is impossible to understand from the brief excavation report where exactly they were buried (AOYAGI, ANGELELLI AND FUJISAWA 2003: 211.). See also the villa of Torrespaccata where tombs of infants and adults inside the structure certainly date to the time of its occupation (DE GENNARO AND GRIESBACH 2003: 152)

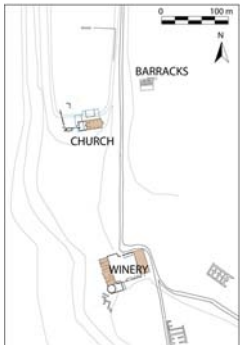


Fig. 16. The occupation of the portico after the fire: the hole for the dolium clearly cuts the ashy deposit on the floor.

ked that room to the unexcavated room 3 to the west. In these rooms were found consistent traces of burning covering the new floor surfaces and hearths. However, the fire does not seem to have ended their occupation, as the burned floor of the southern room, in the old portico, was cut in order to insert a new *dolium* there (fig. 16). Perhaps at the same time a large double masonry tank was built in the middle of the alley, which appears to have been cleared of further debris, while the floor over the drain was roughly paved with pieces of marble veneer. Failing excavation to the south of it, the function of the tank remains unclear, however, it does point to some production activity in the later phase,

rather than simply squatter occupation.

During this phase the columns from the portico along the street were robbed out; we cannot be certain that the single fragment of a granite column found in the portico came from the original set. Still later, the defensive ditch excavated in 2007 was dug through the destruction rubble: it may relate to a series of very large postholes which cut the same layer to the west of it. Finally, the trench tentatively interpreted in 2008 as a robber trench because of its substantial width and vertical sides, seems now more likely to relate to the trial trenching of the area by the excavators of the eighteenth and nineteenth century, although no certain modern finds were recovered from its backfill.



The Church and Monastery

The area to the north and west of the church of S. Pietro in Villamagna was reopened in 2009, continuing the excavation of the cemetery (begun 2006) and the monastic buildings (begun 2007). The trench was enlarged by two meters to the north, in order to understand better the nature of the rectangular building interpreted as a cloister. The excavation of the rest of the area continued by hand with the aim of reaching the earliest medieval phases of use of the site and eventually the Roman period structures which underlie all of these. Archidio Mariani and Megan McNamee supervised excavation in MON B II, the area of the monastery, while Corisande Fenwick continued her excavation of the cemetery in front of the church.

Use of this part of Villamagna can be usefully divided into periods which have smaller phases. The general divisions into these periods made during the previous seasons of excavation were confirmed by excavation this year, and the results are here discussed in order of periods.

At the same time as the rest of the villa was constructed in the second century, an extensive limestone pavement was laid, apparently directly into a dense bed of yellow clay; this appears in the whole of the western area of the trench (fig. 17). The yellow clay stratum, which is very consistent and contains small amounts of Roman pottery, is similar to layers used in construction elsewhere in the villa. The pavers are smooth and level, measuring



Fig. 17. The pavement south of the Roman building. It is overlain by later structures related to the church.



Fig. 18. The foundations of a Roman building under the blocked door of the church.

roughly 25-40 cm. each, and thus smaller than those used for the road running through Area D. Although badly damaged by subsequent construction, its extent within the trench is fairly clear. Its eastern edge runs parallel to a wall which appears to be intact Roman *opus latericium* masonry (fig. 18). The wall runs under the medieval masonry in the northern part of the church façade, beneath the level of the door sills. It seems that the church was constructed on top of a Roman building, preserving the same orientation. Roughly perpendicular to this wall are two structures, at presently only partially exposed, which will be the subject of a targeted excavation in the 2010 season. The northernmost wall, running east-west in the northern limit of excavation, is built in *opus mixtum*, while the struc-

ture to the west comprises two rectangular blocks of Roman brick masonry, poorly preserved and only partially exposed at present, which might be identified as the piers for a portico, running parallel to the *opus mixtum* wall and perpendicular to the wall beneath the church. The pavement does not continue to the north of the masonry blocks, suggesting that a portico there would have had a different paving. Towards the east, the yellow clay is covered by a (still unexcavated) pile of building debris, including collapsed roof tiles, and the crest of a north-south wall of roughly dressed limestone blocks is emerging, abutting the *opus mixtum* wall. Given the different typologies of masonry between *opus mixtum* wall, masonry piers, and the emerging wall, it is possible to imagine that the piers represent the rebuilding of an earlier portico, which was closed off in the east and re-roofed, though this, too, will be further explored in future excavation. The whole is apparently a very large building, with what appears to be a monumental façade opening to the south onto a square paved with white stones. This façade in all probability forms the front of the very large block visible on the magnetometry⁷ and currently interpreted as the residential sector of the villa. The paved area would thus represent a wide court in front of it, with a building as yet unidentified to the east.

Our understanding of the period in which the church was constructed has been clarified by this year's excavation, which brought to light more of the structures related to the narthex, cut and overlaid with subsequent building and burial activity. The narthex in front of the entrance was apparently added very shortly after the construction of the church. Both the church and the narthex were built in *opus listatum*, reusing Roman bricks, with thick beds of pozzolana mortar. The foundations of the narthex, where visible, are made of mortared tiles and stones, and have an offset projecting beyond the surface of the wall. These sit on top of the Roman pavement, clearly posterior to it, though outside the narthex the paved area appears to have been preserved after the construction of the church, while the preserved ground level of the narthex is not much higher than the pavement. In the southern part of the narthex, two reused Roman marble slabs are still *in situ*, used as paving and placed over the foundation offset of the wall. The strata beneath them await excavation. The rest of the pavements were cut away by later building activity, including the insertion of a number of tombs. The chronology of the construction of the church and narthex is still determined by the presence of residual materials (such as a *nummus* of Justinian I (CO 1)) in the associated strata, and the typology of the masonry. It is hoped that further excavation will refine this chronology.

The earliest series of graves may have been concurrent with the narthex, while the others appear to have been cut in from above. The earliest tomb, with a north-south orientation, was built against the façade of the church, with side walls of tufa and mortarted tile and stone. The adult individual buried in this tomb awaits excavation in 2010. Two tombs of an infant and of a child in tombs made of reused Roman tiles oriented west-east and one oriented north-south may be associated with this phase of burials.

Subsequent tombs were cut into the floor of the narthex, with walls built of reused marble or tufa blocks; there are at least five of these tombs in this phase. These tombs were either lined by marble or faced on the interior, and have a variety of orientations (N:S; E:W; SW:NE). Six tombs located in the west of the trench are related stratigraphically to this phase. The narthex underwent structural changes during the early Middle Ages, as a white plastered floor surface attests. It paves the northern part of the narthex, abutting its western wall and the façade of the church as well as lapping up over the base of a wall, previously interpreted⁸ as the foundation for a porch in a later period. This suggests that the pavement must have been laid in conjunction with the reconstruction of the entrance to the church by the creation of some sort of projecting doorway.

⁷ FENTRESS ET AL. 2006 : fig. 1; FENTRESS ET AL 2007 : fig. 1.

⁸ FENTRESS ET AL. 2008

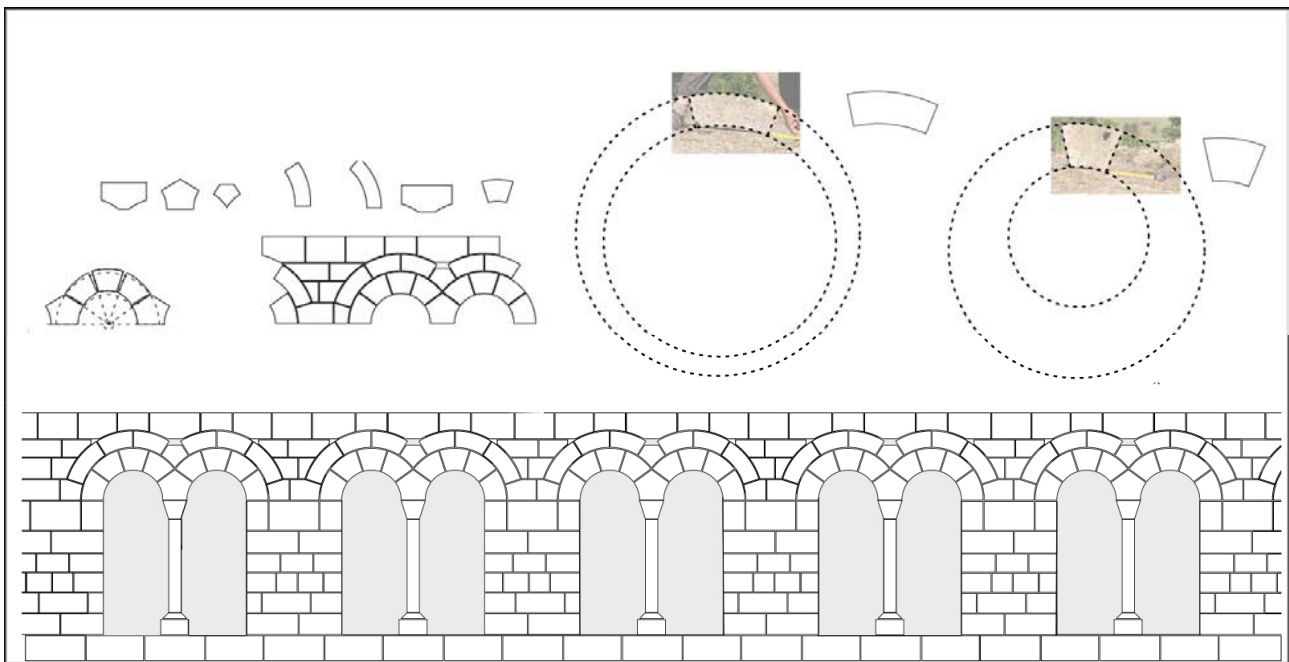


Fig. 19. Reconstruction of the cloister elevation (Cezar Nicolescu).

After the destruction of the Roman buildings in the area and the construction of the church and narthex, the area to the north of the church was taken over by what appears to be a large building supported by posts; materials associated with its abandonment date to the ninth or tenth century. Several burials are also found in this area. Excavation in 2010 should clarify this phase of occupation, which predates the construction of the monastic enclosure.

The construction of the western wall of the monastery, abutting the north wall of the narthex, was marked by substantial deposits of building materials on its exterior. The wall covered the razed Roman *opus mixtum* wall in the north of the trench, and its foundations cut down to the limestone pavement. Another wall, parallel to this, runs some 19 m. to the east and these two delimit an area which we continue to interpret as the monastic enclosure, associated with the creation of the monastery of S. Pietro in Villamagna, which the foundation documents date to AD 976.⁹ The eastern wall terminates with a face running parallel to the church flank, suggesting an entrance at that point. The enclosure was never roofed, and the beaten earth pavements contain a mix of human bone and crushed pottery, mixed with yellow clay, similar to the deposits into which tombs were cut in the area beneath the later bell tower. Indeed, graves with west-east orientations have been identified throughout this floor of the enclosure, three of which are simple earthen graves, and one of which is lined with marble and stone slabs, running along the outer edge of the narthex wall, clearly postdating the blocking of the northern narthex wall. Another tomb within the monastic enclosure was a deep earthen grave with a slab of limestone as a partial covering of an adult male, buried north-south.

To the west of the enclosure, the ground level to the north of the church rose in level, covered over by a deposit of dark loam rich in organic materials and with very little pottery or other anthropogenic materials. This deposit, some 35 cm. thick in places, covered most of the northwest quadrant of the trench. The stratum was enriched by the addition of burned organic materials, leaving several layers of black charcoal and burned loam. It may have served as a garden in the early monastic phase.

The structures and spatial organisation of the area remained consistent for a couple of centuries, until the monastery reorganised in the late eleventh-thirteenth centuries. These phases were excavated in previous campaigns, with the exception of the cloister, and this season's work corroborated previous hypotheses.

The cloister was constructed with ashlar walls cut into the beaten earth surface of the earlier monastic enclosure. The cloister elevation has been reconstructed by Cezar Nicolescu, using the architectural elements which came out of the destruction layers. The ashlar blocks framed biformal windows in the cloister, with projecting ridges of voussoirs (fig. 19). The excavation of the centre of the cloister has brought to light a curious and sophisticated water collection system with cistern below. The walls enclose a rectangular courtyard centred between the earlier walls and the flank of the church, paved with a hard cement. The floor surface slopes steeply towards four funnel drains, at the four corners of the subterranean cistern. The cistern below is groin vaulted and its walls are made of the same hard cement as the floor of the cloister garden. The depressions around the funnel drains are filled with large blocks of limestone (25-40 cm.) which is covered by a layer of black volcanic gravel and then a layer of homogenous dark red silt (figs. 20 and 21). These materials seem to have filtered the rainwater which presumably ran off the roof of the cloister corridors into spouts and into these funnels. It may be that the area, which was open to the sky, was co-

⁹ FLASCASSOVITI 1994: n. 1, 2.



Fig. 20. The pozzolana and stone 'filters' filling the drain holes into the cloister cistern.

vered over with humus and plantings, as the filters would have aided water drainage like a modern French drain system does. With the exception of a layer of fine sand, however, the deposits excavated were beaten earth floors with materials datable to the fourteenth century, the phase of abandonment of the monastery and the destruction of its buildings.

Before the destruction of the monastic buildings, an adult male was buried in a south-west-northeast oriented earthen grave built against the east wall of the cloister. Outside the cloister, we excavated 5 graves, containing adults and juveniles from this period which were cut in a west-east orientation into the black loam of the garden. A single tomb, built of slabs of cut cocciopesto and reused tiles resting on top of the limestone pavement, was used for approximately six individuals. The construction of the bell tower entailed a substantial accumulation of earth over the whole of the area of the cemetery, raising the level by as much as 40 cm. The majority of the graves in the area of the churchyard date to this phase, after the construction of the freestanding belltower aligned with the new porch in front of the church door. There are over 100 simple earthen graves of this period, cut in a west-east orientation. No grave markers, have been found in situ, though the tombs do follow more or less systematic rows. There are also eight rectangular walled collective tombs on a west-east orientation, built of coursed limestone or volcanic rock. Some of these graves were cut into the structures of the porch. At least two later collective tombs were found beyond the area given over to earthen graves: an example of these is a stone-built tomb cut along the north side of the bell tower containing nine individuals, probably from the same family (fig. 22). The first four depositions (a man and three women between thirty and forty years old) were moved to accommodate the burial of a woman between twenty five and thirty years old: over the latter were found a further two women of the same age, while over her were found a young woman between fifteen and twenty years old, with a baby.¹⁰ The skeletons examined this year by Francesca Candilio and her team demonstrated notable signs of diseases related to malnutrition, a suggestion supported by Erika Nitsch's work on the isotopes from a sample of the burials in the cemetery. This shows very little evidence for

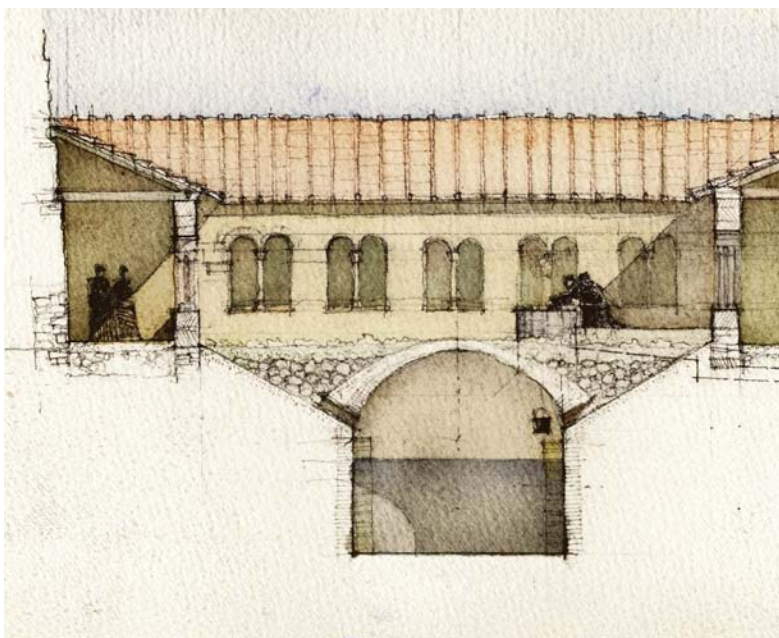


Fig. 21. Reconstruction of the section of the cloister and cistern (Nicola de Pace).

¹⁰ Francesca Candilio pers. comm.

the consumption of meat by the males, and almost none by the females.¹¹ Work next year with a larger anthropological team should bring important new data on the general health of the population, which by now counts over 410 individuals.



Fig. 22. Tomb with multiple burials abutting the northern edge of the bell tower.

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¹¹ Erika Nitsch pers. comm.