

## The Second Archaeological Season at Podere Cannicci (Civitella Paganico - GR)

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*This paper presents the preliminary results of the second excavation season (May-June 2018) at the archaeological site of Podere Cannicci (Civitella Paganico – GR). The season aimed to enlarge the excavation area after the discovery of a number of rooms related to a previously exposed building that was the focus of 2 years of excavations by the Soprintendenza (1989-1990). At least three other rooms were recognized in 2018: two of them clearly present markers of production connected to metalworking activities and pottery kilns; a third room is interpreted, instead, as a possible open space. The finds show that the complex at Podere Cannicci was used between the 3<sup>rd</sup> and the 1<sup>st</sup> c. BC before being abandoned after a violent fire, possibly related to the Social War. The paper also describes the results of the geophysical campaign that took place in June 2018, which allowed for the identification of a number of buildings in an area of circa 8 ha in the neighborhood of the main excavation site.*

### Introduction

Between May and June 2018, the second archaeological season at Podere Cannicci in the municipality of Civitella Paganico (GR) took place. The site is located in a gentle valley, a few hundred meters away from the course of the Ombrone River in its middle valley (fig. 1). The geological setting favoured the creation of a settlement as an abundance of natural springs facilitated the water supply and, most likely, the establishment of a sacred place or sanctuary from the late Etruscan period<sup>1</sup>. Evidence for this *templum* is seen in the recovery of a significant number of *ex-votos*, studied by Fabiana Fabbri and modeled in the shape of uteri. These are accompanied by fragments of loom weights, a bronze bovine, and terracotta statuettes, one of which possibly depicts *Minerva*<sup>2</sup>.

Podere Cannicci was already known in the archaeological literature as, in 1989-1990, the Soprintendenza undertook a rescue excavation during the laying out of a gas pipeline<sup>3</sup>. On that occasion, a Republican settlement was discovered and interpreted as a portion of a *villa rustica*. It has been already argued elsewhere<sup>4</sup> that a reassessment of this interpretation was needed, as the continuation of research about the wider Roman countryside has shown the presence of different categories of rural settlements, and that the site at Podere Cannicci may instead be part of a *vicus* relating to the nearby sanctuary or cult area<sup>5</sup>. The first investigations in the late 1980s retrieved an important hoard of silver *denarii*, now displayed at the Archaeological Museum at

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<sup>1</sup> EDLUND-BERRY 2018: 38-39.

<sup>2</sup> SEBASTIANI *et al.* 2018: 7-9; FABBRI 2019: 96-100.

<sup>3</sup> BARBIERI 2005.

<sup>4</sup> SEBASTIANI *et al.* 2018; SEBASTIANI forthcoming.

<sup>5</sup> FABBRI 2019: 96-100; SEBASTIANI forthcoming.

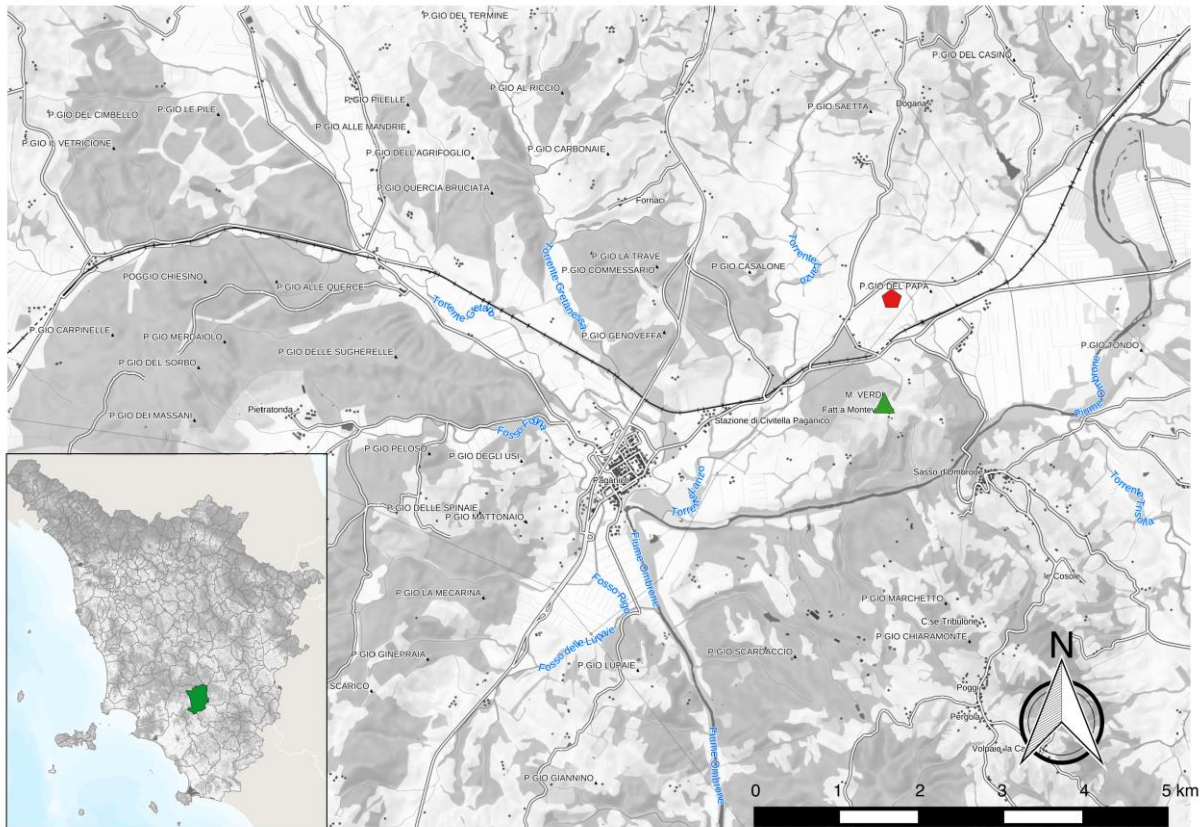


Fig. 1. Map and location of the Roman site at Podere Cannicci (red) and the modern farm of Monteverdi (green).

Grosseto, dated to the beginning of the 1<sup>st</sup> century BC<sup>6</sup>. These coins, as well as a large quantity of early 1<sup>st</sup> c. BC pottery, provide the *terminus post quem* for the destruction and definitive abandonment of the Republican settlement at Podere Cannicci.

As Thomas Hobbes would say, curiosity is the lust of the mind: the necessity of understanding the original function and extension of the settlement at Podere Cannicci as well as its fate after the 1<sup>st</sup> c. BC period were the research questions at the core of the establishment of the IMPERO (Interconnected Mobility of People and Economies along the River Ombrone) Project<sup>7</sup>. It is for these reasons that we returned to the site and conducted and extended the previous trench in order to expose more spaces of the complex and to try to solve some of the open questions of the 2017 season<sup>8</sup>. The excavations brought to the light at least three new rooms (III, IV and V) and the continuation of the large drain uncovered in 2017; moreover, a wider drain was discovered, perpendicular to the previous one, that opened a number of unexpected questions (fig. 2a and 2b).

At the same time that new trenches were opened, using a research grant awarded through the generosity of the New York Community Trust to the Department of Classics of the University at Buffalo<sup>9</sup>, a geophysical campaign was carried out in the fields immediately surrounding the main excavation site. The geophysics made it possible to see a number of features and to confirm some of the previously hypothesized ideas on the wider settlement at Podere Cannicci.

A.S.

<sup>6</sup> ADEMBRI 2001. "Century" is henceforth abbreviated as "c." in the text.

<sup>7</sup> The project is directed by the Department of Classics at the University at Buffalo in co-direction with The Cooper Union in New York and Michigan State University. More information at [www.imperoproject.com](http://www.imperoproject.com)

<sup>8</sup> SEBASTIANI *et al.* 2018: 14-15.

<sup>9</sup> The Research Grant "Reveal the Unseen" was awarded in May 2018 and allowed us to cover the expenses of the geophysical analysis and reports.

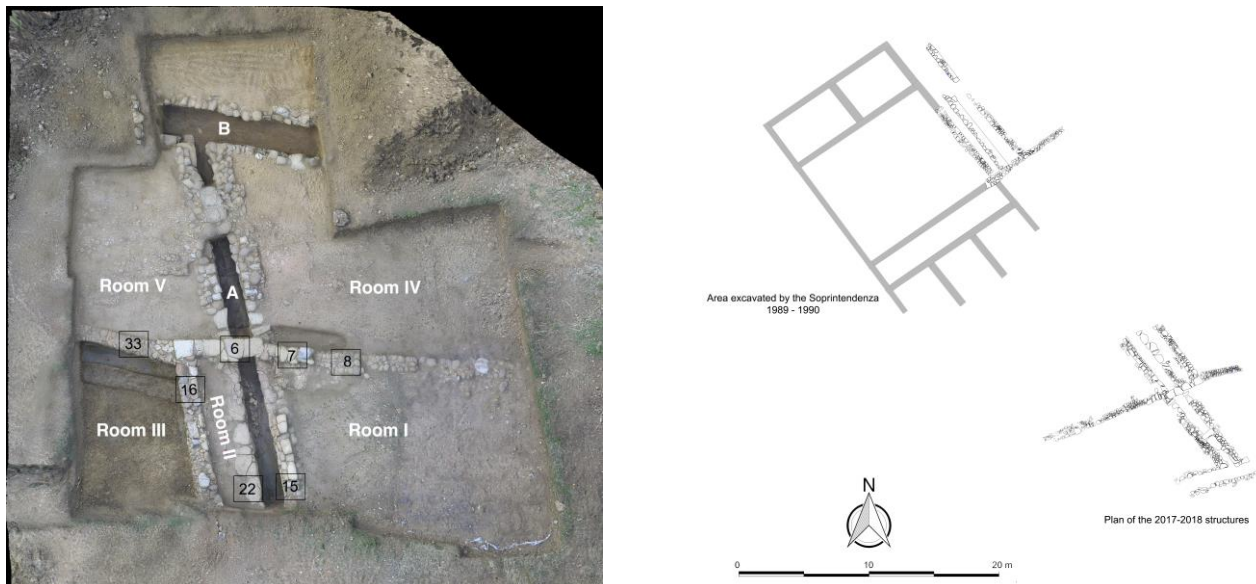


Fig. 2. Aerial picture of the excavation site at the end of 2018, with the different rooms, the location of the drains and labeled numbers of the walls cited in the text (a), and plan of the excavated areas (b). (Aerial picture by Josef Soucek and plan by Emanuele Mariotti).

### The 2018 Excavation

After the results acquired following the first excavation season conducted in 2017, we decided to extend the area of investigation around the structures identified in the previous campaign, with the exception of the rural site excavated in the '80s<sup>10</sup> as the gas pipeline remains our physical constraint between the two areas. After removing the spoil, we cleaned all the previous structures found last year: the drain, the walls and the little furnace<sup>11</sup>. Our objectives were, on the one hand, to understand what kind of activities were organized around the drain and the hierarchy between inside and outside in terms of living and productive spaces, and on the other hand, to clarify the archaeological sequence and the phases of occupation together with the function of the drain. Towards the NW side of the area, between the 2017 section and the new one, we continued to excavate in Room I (see fig. 2a). We also exposed another segment of wall 8, which continues under the NS section and is built of medium and small polished stones and was covered by an extremely dark layer, the same that was removed in 2017. The latter seems to confirm that some dramatic event, potentially a vast fire, involved this portion of the site and its structures. On the opposite side of the excavation area, wall 16, partially identified during the previous campaign, was brought to light, together with an unaligned wall (wall 33) connected to walls 16 and 6. Despite both of these walls disappearing under the EW and NS sections, we called the area that they bounded Room III. At present, it is completely excavated down to the foundations in order to precisely date the construction of these walls (for details see *infra*).

### The drain system

Beyond walls 8, 6, 7 and 16, we opened a large area where we found the continuation of Drain A (walls 10 and 9). The alignment of the two walls and the similar building technique, using large and medium sized squared stones, lead us to hypothesize that this was the result of a single action. We note that the last course of stones of the walls forming the drain is made by medium and roughly polished river stones.

In addition, we found what might be interpreted as what remains of the covering of the drain: a single block made by small, polished stones bound by mortar (fig. 3). As we were unable to remove the covering, we decided to dig the filling between wall 6 and the covering block, composed of a series of layers (Contexts

<sup>10</sup> BARBIERI 2005.

<sup>11</sup> For any details about those structures found during the 2017 excavation season, henceforth see SEBASTIANI *et al.* 2018.



Fig. 3. The continuation of the drain towards SE (left), and the covering block (right) with grooves.



Fig. 4. The second drain at the moment of its discovery (left); the drain after the removal of the fill (right).

**42/43/46/47/51/53**) belonging to different phases of the abandonment of the drain and its collapse. These layers were rich in materials that were quite well-preserved (slag, cooking ware, charcoal and bones), the result of an intentional refilling of the drain.

Towards the south, Drain A ends in another structure for collecting water, probably a second drain, larger than the previous one and placed at a right angle to this one (Drain B). This drain is also formed by two parallel walls (walls **49** and **50**), made with the same stones as the first drain and going under the sections in an EW direction (fig. 4). After removing the filling, we must underline how the layers were sandier and almost completely devoid of materials (Contexts **48/52/54**) compared with those of the NS drain. This was probably due to different moments of abandonment and to activities which produced different archaeological deposits.

E.V.

Fig. 5. Room 3 and its bounding walls, wall 33 (green) and wall 16 (red), highlighted.



Fig. 6. The alignment of walls 33 (green), 16 (red), and 6 (purple) and their point of conjunction. The additional bricks are bordered in black.



### Room III

Under the shadow of the newly discovered, unaligned wall that forms its southeastern boundary, the 2018 archaeological excavation uncovered a probable open-air space, Room III, in the northeastern corner of the site. Since this area was notably devoid of evidence of the collapse of a tiled roof,<sup>12</sup> we may presume that Room III was an open area probably used for the disposing of waste, progressively filled from the 3<sup>rd</sup> c. BC to the beginning of the 1<sup>st</sup> c. BC.

As illustrated, the space is bounded by two walls and the limits of the excavation (fig. 5). Wall 16, running NW-SE, is composed of medium-sized rounded stones with larger stones, some rectangular, interspersed and mainly occupying the top of the wall—particularly towards the western corner of Room III. Laid in two rows, this wall was exposed during the previous archaeological season. Wall 33, newly uncovered during the 2018 campaign, runs slightly NE-SW and joins wall 16 and wall 6 in the southern corner of the site. The position of this structure divides the dumping ground of Room III from the potentially productive area of Room IV. Characterized by three rows of small, rounded pebbles and some brick fragments, wall 33 is oddly askew in relation to the other walls of the site and, as is further suggested by an incongruity in building technique, seems to be of a different phase than wall 6. Wall 16, on the other hand, is itself marked by two phases of construction: as reaching Room III's foundations confirmed, wall 16 was first formed by polished river stones, and, in a later phase, constructed with large, flat stones, best preserved toward the meeting point of the structures. This southern portion of the wall likewise attests to a once-present entrance, sealed with stones larger than those that define the feature's first phase. At this corner of Room III, where walls 33, 16, and 6 meet wall 33 was thickened by bricks or roof tiles during the construction of wall 6 in order to form a new alignment (fig. 6).

The latest context of Room III, 34, stretched across the entire excavation area and consisted of firm, dark-brown clay and contained numerous fragments of pottery and other material—namely bronze and iron nails and small fragments of both metals. It covered the most substantial context in Room III, 35, which was made up of an even more compact, yellowish clay that dried to a dark brown and contained traces of charcoal, suggesting that it was the second abandonment or dumping layer of the room. Numerous sherds of pottery, mostly unfired Republican coarse ware with occasional fragments of uncooked black-gloss ware, were also found within this layer. In addition, the excavation team recovered a piece of copper, slag, and numerous fragments of bone and loom-weights<sup>13</sup> from 35. As excavations continued, the charcoal-laden clay of 35 gave way

<sup>12</sup> This evidence is crucial as it distinguishes Room III from Rooms I and II.

<sup>13</sup> Specifically, the fragments attest to four loom-weights.



Fig. 7. Loom-weight fragments found in Room 3, Context 40 (Photos by Emma Ramacciotti).

Thus, the removal of this final excavated layer, **41**, not only established the 3<sup>rd</sup> c. BC chronological boundary of ancient occupation for Room III but also provided an abundance of material culture for analysis that helps to contextualize the entire stratigraphy of Room III and to influence theories of the site's use and interrelationships. The finds brought to light through **41** add to the rich assembly uncovered throughout the excavations of the room: Pieces of malformed pottery, bones, and the existence of scattered metal material and slag corroborate the image of this space as a dumping ground, the prevalence of charred animal remains found at the site, signaling cooking alongside abundant coarse ware, attest to a domestic context, and the recovered loom-weights may even allow for further contextualization with the manufacturing district's neighboring cult space (fig. 7)<sup>16</sup>. As excavations investigate the surrounding structures at Podere Cannicci, the specific use of Room III and the significance of the artifacts therein will become increasingly clear.

E.W.

#### Rooms IV and V

In the SE portion of the excavation area, between walls **9** and **33** and the limits of the area (Room V), we exposed a hard layer (**38**), mostly concentrated in the corner at the junction of the NS and EW sections and composed of a high concentration of fragmented pottery and bricks, interpretable as a crude working floor.

On the other side of Drain A, between walls **10** and **8** (Room IV), another floor came to light, partially exposed, extremely compact and made by small pebbles with mortar (fig. 8). This floor seems to represent, for the moment, the only floor belonging certainly to a second phase of occupation. Above this floor was a clear

<sup>14</sup> **40** revealed a full loom-weight with a hole, a fragment of a loom-weight with half of the hole present, a fragment of a separate loom-weight, and one loom-weight found in two pieces.

<sup>15</sup> The fragments consist of the bottom and middle-portion pieces of a single loom-weight.

<sup>16</sup> Considering both the fragmented loom-weights discovered amongst the *ex-votos* studied by Fabbri (2005) and the productive center's proximity to and potentially close relationship with the hypothesized sanctuary, the loom-weights discovered in Room III may help to paint a more complex picture of non-elite ritual production as well as the individual and communal positioning of women's labor. In recent years, researchers have attested to a wider range of productive and symbolic functions for these textile-tools. See DI GIUSEPPE 1995: 141-149 for a careful consideration of the different material and conceptual values of loom-weights within their different contexts, including their potential sacred productive or votive connotations, their various practical uses in the domestic sphere as well as in secular manufacturing circumstances, and their connection to female activity. See GLEBA 2009: 80-81; MEYERS 2013: 249, 262 for considerations of production centers within or in proximity to sanctuaries and the intersections of class around these spaces. Ultimately, it is necessary to excavate Podere Cannicci further to truly locate the 'actors' behind both the manufacturing district and the potential sanctuary to begin to map the social and economic dynamics present here; moreover, Di Giuseppe attests to the complications of determining a given loom-weight's (potentially multiple) significations, and she reinforces the primacy of considering the find's location in any contemplation of use and value. Thus, we must be wary of marking such textile tools as evidence of certain agents, forms of labor, or interconnection. Further, due to the fragmentation of most of Room III's loom-weights, we must wait for additional finds to better reconstruct their use, particularly in comparison with textile tool finds in the surrounding area. While many contexts in the region have produced only one textile tool find, for example, several non-sacred sites have borne evidence of more differentiated production through a few different textile tools—in contradistinction with the typological consistency and deposit size found at the sanctuary at Talamonaccio (see CURRI 1978: 153, n. 87; CIAMPOLTRINI 1984, fig.19-20; PARIBENI 2001: 119, fig.127-9).

Fig. 8. The crudely pebbled floor in southern part of the site.



phase of abandonment dated to the first quarter of the 1<sup>st</sup> c. BC (**36**), widespread in this part of the site, with a burned, red circular layer (**45**) beside wall **10**. This layer was not removed, but the features of this archaeological deposit, such as the shape and composition, seem to be similar to those of the circular furnace found during 2017, indicating some artisan activity.

### *Preliminary interpretations*

Starting from the micro-context, some conclusions can be drawn. Firstly, the drain system has been confirmed to be the most ancient activity in the area, both from stratigraphic and contextual considerations. This consideration stems essentially from dating materials, but it is also strengthened by the building techniques, completely different from those of the rural structures of the rest of the settlement. The hydraulic system probably was not originally conceived to serve the rural settlement discovered in the eighties, essentially because of the size of the two drains together with the lack of true hydraulic cement. Room III was probably built immediately afterwards; the earliest dating materials of the site, dating to the second half of the 3<sup>rd</sup>-beginning of the 2<sup>nd</sup> c. BC, were found in **51**, inside Drain A, and in **40** and **41**, inside Room III. These layers may be interpreted as the phase of dumping when new walls and rooms were built. From these contexts comes a series of wasters of black-gloss ware vessels, mostly inspired in their shapes by a workshop in Northern Etruria<sup>17</sup>. The presence of roof-tiles and tiles in a highly fragmentary condition could be due to the impact of modern plough soil activities, but it may also be because of an ancient re-occupation of the area, as is testified by the crude floor made with broken pots and tiles.

The only rooms that were completely covered by a roof are Rooms I and II, where we found traces of burnt roof-tiles together with mud bricks belonging to the walls, while all the other spaces were probably open areas. The remaining rooms (III, IV and V), which were either built with a different orientation (wall **33**) or with different materials (polished river stones), seem to indicate another phase of occupation when the spaces were partially rethought. The covering block found above the continuation of Drain A seems not to be the original one but a restoration of the drain, or it may testify to the drain's abandonment.

The fills of the larger drain, extremely sandy and poor in material of any kind, tell us that the water must have flowed continuously inside it, while the fillings of the first and smaller drain, rich in organic layers and varied materials (bronze, iron, slags, ceramic, etc.), must be seen as the product of an intentional action, probably dumping activities. These changes in the area are testified to by the furnace, the crudelfloor, the restoration and the re-functioning of Drain A, and the building of wall **6** with the stone blocks of the drain.

The discovery of the second and larger drain (B) where it converges with the first tells us about a complex water management system involving not only a large quantity of water but also an organized effort in terms of the organization of labor (the extraction and processing of large stone blocks, the digging of channels, etc.). We could speculate that this drainage system was built to supply water for agriculture or specialized production activities, including wool-working, rather than as a simple outflow system for rainwater (fig. 9). A more domestic

<sup>17</sup> The ceramic diagnostic assemblage consists of 8 individuals. Following the typology of MOREL 1981, we are able to recognize 5 types of shapes: Morel 1123 (85-86), dated from the Morel 1282 (102), Morel 2672 (205-204), Morel 7223 (406-407), belonging to a Northern Etrurian workshop and dated from the beginning of the 3<sup>rd</sup> to the first half of the 2<sup>nd</sup> c. BC, and the Sicilian type of Morel 1333b (107), dated to the middle of the 3<sup>rd</sup> c. BC. Thanks to Massimo Brando for the preliminary information.



Fig. 9. The site at the end of 2018, looking north.

or possibly subsistence productive framework of the site seems to be suggested by the finding of a certain number of loom-weights in Room III, together with pieces of animal bones, similar to other rural settlements in the area<sup>18</sup>. The presence of wasters of black-gloss ware could suggest the presence of ceramic workshops, maybe functionally and economically connected to the sanctuary as a productive center<sup>19</sup>.

In any case, the presence of such structures and materials reveals a more articulated and larger settlement, dated from the second half of the 3<sup>rd</sup> c. until the beginning of the 1<sup>st</sup> c. BC. This seems to be corroborated by several anomalies revealed through resistivity surveys run last year in the surroundings of the site (see *infra*) together with traces of important and stable occupations dating from the 5<sup>th</sup> c. BC to the 1<sup>st</sup> c. AD.

This continuity in terms of occupation of the ancient landscape is due to the peculiar position of the site along a network of routes, coming from the North, via the Ombrone river valley, as well as from the inland, via the Orcia river valley. Furthermore, this territory represents a border area between different productive, political as well as natural landscapes, at the intersection of three important Etruscan and then Roman territories (Volterra, Roselle and Chiusi). The importance of this network is well-attested by modern maps that show, for instance, how the transhumance routes used to converge in this area along the river valleys.

E.V.

#### Geophysical analysis at Podere Cannicci

Electrical resistivity is a well-established and widely used prospection method. This technique has also become a valuable and inseparable tool in archaeological site evaluation and excavation planning<sup>20</sup>. It is for this reason that a geophysical survey was conducted in 2018 at Podere Cannicci in order to retrieve information on the location of other possible structures and to prepare the strategy for the upcoming seasons<sup>21</sup>.

#### Automatic Resistivity Profiler (ARP©)

The Automatic Resistivity Profiler (ARP©) method, developed in France by GEOCARTA company, a spin-off from the Centre National de la Recherche Scientifique (CNRS), France<sup>22</sup>, is a V-shaped multipole system with one transmitting dipole and three receiving dipoles, the lengths of which increase with their distance from the transmitter.

The principle of the ARP© is very simple because it relies upon the standard galvanic electrical method, widespread for different applications since its discovery by Marcel and Conrad Schlumberger in the '30s. This

<sup>18</sup> In the following sites situated in southern Tuscany were found a noticeable amount of textile production markers from different periods: CURRI 1978: 70 (n. 9), 109 (n. 43), 113-114 (n. 47), 150-151 (n. 84), 153 (n. 87), 156-157 (n. 88), 197-201 (n.114); FABBRI 2005: 313, FABBRI 2019: 96; FOMMEI 1997: 19, date 3<sup>rd</sup>-2<sup>nd</sup> c. BC; CIAMPOLTRINI 1984: fig.19-20; PERKINS, ATTOLINI 1992: 118 (fig. 10); PARIBENI: 119 (fig.127-129); GAMURRINI 1888.

<sup>19</sup> As suggested recently, there could be a relation between the presence of a kiln and a possible cult place in the vicinity, at least in the mid-Republican period, when sanctuaries used to be the main landowners DI GIUSEPPE 2012: 157.

<sup>20</sup> CLARK 1990.

<sup>21</sup> The surveyed area covered the whole of the site and its surroundings to a total extent of about 8 ha, and the survey was organized into four different acquisition zones. All the raw data were processed by a one-dimensional median filter along transects first and then interpolated by a spline bicubic process on a square mesh.

<sup>22</sup> DABAS 2009.



Fig. 10. DEM of the investigated area.

Fig. 11. Map at 0.5 Meter depth.

method reduces the effect of the superficial geophysical noise on larger receiver dipoles by using three investigation depths without switching and the size of the arrays which remains limited to a value equivalent to that of the investigation depth<sup>23</sup>.

The collected apparent resistivity data are presented in the form of 3 maps corresponding to the different measuring dipoles, and the recorded anomalies are interpreted in terms of possible buried archaeological structures. These maps represent the cumulative volume contribution of the soil from the top to the three dipoles that increase in length with the depth of investigations.

In special cases where a more quantitative interpretation is necessary, the 3D resistivity inversion of the data can provide additional information about the burial depth and the depth extent of buried relics<sup>24</sup>.

#### Data acquisition and results

##### 1. Acquisition

The ARP© results are extremely interesting, making it possible to add new and significant information to the depth of the features and to the northern side of the surveyed area as well as enabling the integration of resistivity data with the magnetic and radar data. The survey also produced a high-resolution DTM of the investigated area (fig. 10).

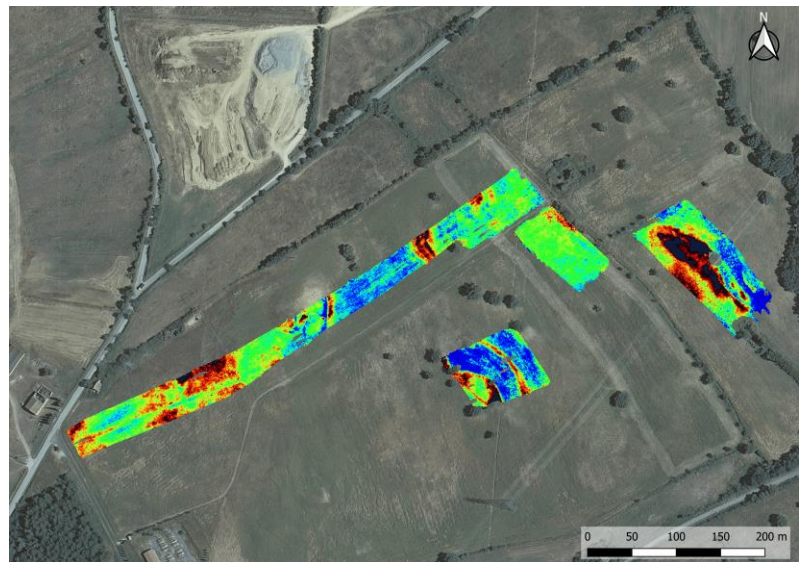
The output from the data inversion are presented with the warm colors indicating high resistivities (electrically resistive zones) and the cold colors indicating low resistivities (electrically conductive zones); in particular, the following outputs have been processed as a color-coded planar view, giving the planar extension of resistivity distribution and identified anomalies.

##### 2. Results

Here follows a description of the maps representing the cumulative volume contribution of the soil from the surface to the three increasing depths of investigations:

- 0.5-meter depth
- 1-meter depth
- 2-meter depth

Looking at the map at 0.5-meter depth (fig. 11), it is clear that the surveyed areas are characterized by both conductive and resistive values:



<sup>23</sup> PANISSOD *et al.* 1997; DABAS 2009.

<sup>24</sup> PAPADOPOULOS *et al.* 2007.

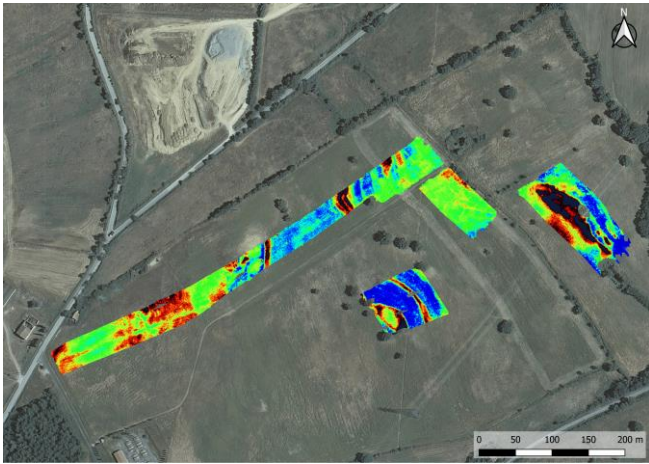


Fig. 12. Map at 1 Meter depth.

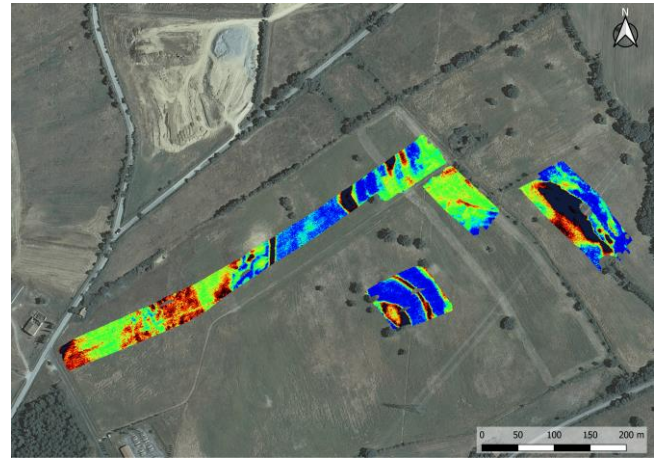


Fig. 13. Map at 3 Meter depth.

1. A large and highly resistive anomaly (red and black colors) with an elongated shape is visible on the eastern zone of the acquisition
2. A combination of conductive and resistive anomalies is visible in the southern zone of the acquisition; the curved shape of the resistive ones is apparent
3. A combination of conductive and resistive anomalies is visible in the northern zone, which is also the largest; the most evident is the cross-shaped conductive anomaly on the western part.

Looking at the map at 1-meter depth (fig. 12), it is possible to observe that almost all the anomalies shown in the previous map assume more defined geometrical shapes and that some new resistive anomalies are visible in the northernmost zone and the one immediately below it:

1. The large and highly resistive anomaly (red and black colors) with an elongated shape in the eastern zone of the acquisition is more evident
2. The shapes of both conductive and resistive anomalies in the southern area of the acquisition are more defined
3. The conductive cross-shaped anomaly is still visible at this depth, but what becomes important is to be able to detect the presence of other resistive anomalies.

Looking at the map at 3-meter depth (fig. 13), some anomalies, both resistive and conductive, shown in the previous maps have assumed a defined geometrical shape, and some, instead, are not visible anymore:

1. The large and high resistive anomaly (red and black colors) with an elongated shape in the eastern zone of the acquisition is still visible
2. The shapes of both conductive and resistive anomalies in the southern area of the acquisition are defined
3. The conductive cross-shaped anomaly is still visible at this depth, but it starts to have a less well-defined shape than before; the resistive anomalies visible in the northernmost zone are more defined as well as the resistive anomalies in the zone right below this one
4. In fig. 14, the shapes of the anomalies detected have been schematically drawn and superimposed on the map at 1-meter depth, considering it the most representative one.
5. Summarizing, both conductive and resistive anomalies are clearly visible in the maps at the three defined depths: the resistive ones are generally characterized by a geometrical shape, allowing us to suggest the presence of buried anthropic structures; the same thing can be said for some of the conductive anomalies, like the cross-shaped one, that maybe can be explained as an anthropic structure filled with earth and therefore represented by conductive values.

G.M.

### *Interpretation and preliminary chronology of the archaeological data*

The second campaign at Podere Cannicci revealed the existence of a number of functional rooms of the main Republican complex that were not expected after the 2017 season<sup>25</sup>. Their discovery opens multiple questions and adds to the larger idea that the Republican site discovered in 1989 can be hardly defined as just a *villa rustica*. In addition, the results of the geophysical survey open and confirm the idea that a wider and much more articulated settlement was in use here between at least the 5<sup>th</sup> and the 1<sup>st</sup> c. BC.

The excavation clearly shows that the hypothetical *villa* presented a large number of spaces that were in use between the 3<sup>rd</sup> and the very beginning of the 1<sup>st</sup> c. BC. All the new rooms discovered between 2017 and 2018 can be interpreted as open spaces related to the presence of nearby workshops which were focused on pottery production and metalworking activities. This is confirmed by the discovery and recovery of a large number of pottery wasters and metal slag all over the excavated area. While the final iron and metal productions still remain unclear, better hypotheses can be drawn regarding the pottery production.

As shown in fig.15, the area at Podere Cannicci was involved in the production of common and kitchen ware, *dolia*, roof tiles and bricks; nonetheless, the most interesting production recognized here is that of black-gloss ware and, possibly, of the experimental *sigillata*. At this stage of the research, it appears clear that the black-gloss production was influenced by Volterra, especially for what concerns the panorama of different vessel shapes. This is quite common in the *ager Rusellanus*, where there are other local productions of this pottery typology<sup>26</sup>. What is striking here is the reason behind this specific production of pottery.

The presence of a large drain did not surprise us at the very beginning. Its discovery in 2017 was accompanied by a simple interpretation that it was used for water disposal; however, the uncovering of a larger and perpendicular drain in 2018 (see fig. 2a and 2b) leads to a general reassessment of this structure. The area of the Republican settlement at Podere Cannicci naturally experiences an abundance of water. This is induced both by the presence of natural springs and the geographical position of the settlement, in a cleft between two small reliefs, which naturally causes periodic floods and the accumulation of rainfall (fig. 16). This

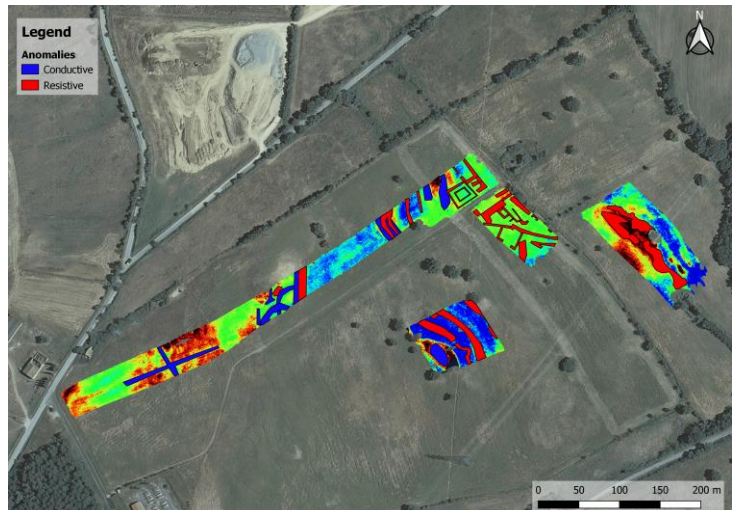


Fig. 14. Map at 1 Meter depth with anomalies sketches overlapped.



Fig. 15. Some of the pottery wasters collected during the excavations in Room IV and V.

<sup>25</sup> SEBASTIANI *et al.* 2018.

<sup>26</sup> MICHELLUCCI, ROMUALDI 1975.

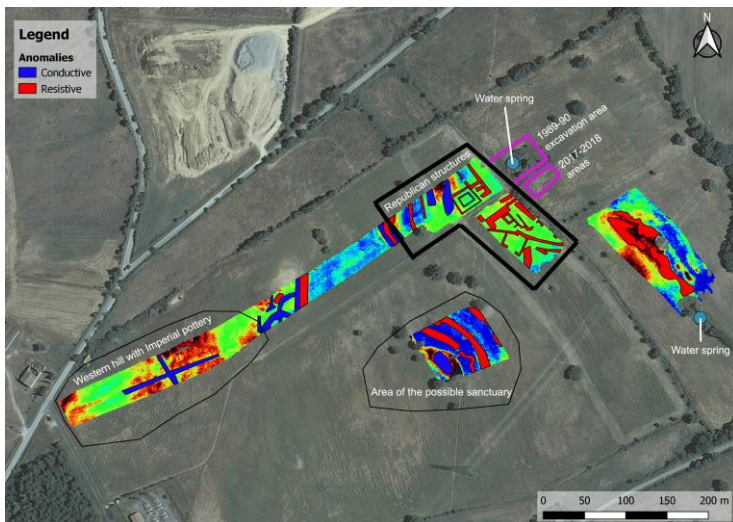


Fig. 16. Map of the interpreted geophysical anomalies, with indicated the known water springs.

environmental background led to the construction of a well-defined water disposal system, organized by drains and expected to terminate in cisterns. The new channel found in the southern edge of the exposed settlement suggests the need to keep the water flowing and running, at least during specific periods of time. It is highly possible that these periods coincided with the manufacturing activities that are witnessed in Rooms IV and V and dedicated, as mentioned above, to metalworking, pottery production, and possibly wool-working.

With wide, perpendicular drains to supply water (rather than to dispose of it), manufacturing activities tied to pottery and metalworking, the storage areas retrieved in the eighties, natural springs and votive offerings, what kind of settlement can we recognize at Podere Cannicci? Is this a *villa rustica* or some other form of settlement? In order to answer these questions, it was necessary to start understanding the original extension of the Republican settlement, and the ARP© survey offered the best option to investigate this. The analysis conducted over 8 ha in the area of Podere Cannicci clearly shows the area and presents a number of other structures. These can be grouped into different categories, and a preliminary interpretation of the anomalies can be given. As shown in fig. 16, the main excavated complex is surrounded by other buildings that can be dated to the Republican period: the preliminary chronology is given by surface materials, mainly black-gloss ware and building materials, that share the same chronologies as those retrieved during the excavations. This shows that the main complex is surrounded by other, related constructions, covering an area of c. 1.5 ha. It is highly possible that what was interpreted as a *villa rustica* is instead part of a village or *vicus* that arose in a flourishing, fertile area of the middle valley of the Ombrone River. Further, this portion of the territory was considered sacred by the local communities, who dedicated a number of votive offerings such as uteri, bronze bovines, and clay statuettes to the fertility of both family groups and the land. Minerva, whose statuette was recovered in 1989, is usually accompanied by Hercules, the god that protects flocks and transhumance. At Podere Cannicci, Hercules has not been found, but the growing presence of loom weights may recall the possibility that the site was interested by transhumance routes, and can we imagine shepherds grazing their flocks in the proximity of the *vicus*. While it is true that loomweights *per se* imply textile manufacture, we should not yet abandon the idea that the village was inserted in wider mobilities of people and goods as is also suggested by nearby research in the Commune of Cinigiano<sup>27</sup> The exact location of the sanctuary remains unknown, although it may be possible that the highest hilly relief could be a natural spot. Here, the geophysics showed concentric anomalies aiming towards the hilltop, and future investigations will define their nature (fig. 16).

The settlement at Podere Cannicci was violently destroyed by a fire. This is clear from the burnt walls and collapsed *pisé* recovered all across the excavated area. The *terminus post quem* for the destruction is given by plentiful pottery and the hoard of silver *denarii* retrieved in 1989. These all point to the '80s of the 1<sup>st</sup> c. BC, a moment of crucial changes in Etruria during the Social War. Sulla's troops probably destroyed the settlement at Podere Cannicci out of revenge for the local communities' support for Marius; paradoxically enough, Sulla's destruction of the site might reinforce the hypothesis that Podere Cannicci was not just a simple farm or *villa rustica*. Instead, its destruction might have been due to the economic nature of its manufacturing activities and the importance of the site for the local communities: a sanctuary of an archaic religion perpetuated through the centuries and recalling the identity of those living there. Through his retaliation, Sulla's troops did not only destroy a simple farm but struck at the profound meaning of the site. After that crucial moment, the Republican site was abandoned and never rebuilt.

<sup>27</sup> VACCARO *et al.* 2013; for a wider overview on the presence of weavers and shepherds, see DI GIUSEPPE 2017.

Nonetheless, the geophysics shows anomalies on the western hill, where a large number of pottery fragments were recovered during the field surveys carried out by the Soprintendenza in 1990-1991<sup>28</sup> (fig. 16). A preliminary analysis of the pottery, conducted in the 1990s and then reassessed recently by Massimo Brando, confirms an early Imperial chronology for this settlement, although little can be said at this stage of the research about its main function or plan.

A.S.

### *Final remarks*

Two years of archeological investigations at Podere Cannicci show that the Roman settlement previously excavated by the Soprintendenza is much more sophisticated in its nature and function within the territory of the middle valley of the Ombrone River. It may be time to interpret the settlement as a medium-sized village, built in the proximity of a sacred place/sanctuary. Podere Cannicci gives evidence for the dual aspect of local economies in the Republican period, when both agriculture and manufacturing activities were at the base of local wealth. This was encouraged by the sanctuary that boosted the economy and moulded the settlement network of the area. The political and social disturbances of the 1<sup>st</sup> c. BC put an end to a long-lived settlement: the archaic and late Etruscan materials recovered in 1989 transmit the idea of ancient rituals related to fertility in a landscape covered in natural springs. These rituals were undertaken by family groups of farmers who worshiped in order to provide for themselves and their descendents. The presence of a bronze bovine seems also to recall the importance of the fertility of the land that could guarantee the local economy and the subsistence of the communities.

Although the Social War and its consequences destroyed the settlement, a few decades later the area of Podere Cannicci was resettled, at least on the western hill. Future research should start to address this together with other issues, especially: i) the location of the sanctuary and its nature, whether it was monumentalized or a simple open, sacred area; ii) the origins of the settlement, whether they belong to the period of the so called Romanization or any earlier; iii) the eventual extension of the settlement in the Republican period and the different functions of the buildings identified by the resistivity; iv) the location of the pottery kilns and their relative complete volume of production, including all the different typologies of vessels; and v) finally, the integration of Podere Cannicci with the nearby Etruscan and Republican presences in the wider territory of the middle valley of the Ombrone River.

A.S., M.H.

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<sup>28</sup> BARBIERI 2005: 128-130.

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REFERENCES

- ADEMBRI B., 2001, "Un "tesoretto" di monete e frammenti di storia etrusca", in *Annali dell'Istituto Italiano di Numismatica* 48: 203-208.
- BARBIERI G., 2005, "Aspetti del popolamento della media valle dell'Ombrone nell'antichità", in *Journal of Ancient Topography* XV: 119-136.
- CIAMPOLTRINI G., 1984, "Un insediamento tardorepubblicano ad Albinia (Orbetello, Grosseto)", in *Rassegna di Archeologia* 4: 149-180.
- CLARK A., 1990, *Seeing beneath the Soil. Prospecting Methods in Archaeology*, London.
- CURRI C.B., 1978, *Vetulonia I. Forma Italiae. Regio VII, Volume V*, Roma: 153.
- DABAS M., 2009, "Theory and Practice of the New Fast Electrical Imaging System ARP", in S. CAMPANA, S. PIRO (eds), *Seeing the Unseen*, London: 105-126.
- DI GIUSEPPE H., 1995, "I pesi da telaio," in A. RUSSO TAGLIENTE (ed), *Armento. Archeologia di un centro indigeno*, *Bollettino di Archeologia* 35-36: 141-149.
- DI GIUSEPPE H., 2012, *Black-Gloss Ware in Italy: Production, Management and Local Histories*, British Archaeological Report, International Series 2335, Oxford.
- DI GIUSEPPE H., 2017, "The female pensus in the archaic and hellenistic periods: the epinetron, the spindle, and the distaff", in M. GLEBA, R. LAURITO (eds), *Archaeology of textile: production and contexts in the 1<sup>st</sup> millennium BCE*, *Origini Monograph* XL: 259-276.
- EDLUND-BERRY I., 2018, "Acque sacre nel territorio etrusco", in A. NOCENTINI, S. SARTI, G. WARDEN (eds), *Acque Sacre. Culto Etrusco Sull'Appennino Toscano*, Firenze: 33-40.
- FABBRI F., 2005, "Una nuova stipe votiva di età repubblicana da Paganico (GR)", in A. COMELLA, S. MELE (eds), *Depositum votivi e culti dell'Italia antica dall'età arcaica a quella tardo-repubblicana*, Atti del convegno di studi Perugia, 1-4 Giugno, Bari: 307-22.
- FOMMEI M.S. (ed), 1997, *Montepescali, storia, arte, archeologia*, Grosseto.
- FABBRI F., 2019, *Votivi anatomici fittili. Uno straordinario fenomeno di religiosità popolare dell'Italia antica*, Bologna.
- GAMURRINI G.F., 1888, "Talamone (Comune di Orbetello). Ruderanti antichi e oggetti scoperti sul poggio di Talamonaccio", in *Notizie degli Scavi di Antichità*, vol. 3, fasc. 11: 682-691.
- GLEBA M., 2009, "Textile Tools in Ancient Italian Votive Contexts: Evidence of Dedication or Production?", in *Votives, Places and Rituals in Etruscan Religion: Studies in Honor of Jean MacIntosh Turfa*, Brill.

- MEYERS G.E., 2013, "Women and the Production of Ceremonial Textiles: A Reevaluation of Ceramic Textile Tools in Etrusco-Italic Sanctuaries," in *American Journal of Archaeology* 117: 247-274.
- MICHELUCCI M., ROMUALDI A., 1975, "Per una tipologia della ceramica a vernice nera di Roselle," in *Studi Etruschi* 42, serie III: 99-110.
- MOREL J.-P., 1981, *Céramique campanienne: les forms*, Bibliothèque des Écoles françaises d'Athènes et de Rome 244, Roma.
- PANISSOD C., DABAS M., HESSE A., JOLIVET A., TABBAGH J., TABBAGH A., 1998, "Recent Developments in Shallow-depth Electrical and Electrostatic Prospecting Using Mobile Arrays", in *Geophysics* 63, 5: 1542-1550.
- PAPADOPOULOS N.G., TSOURLOS P., TSOKAS G.N., SARRIS A., 2007, "Efficient ERT Measuring and Inversion Strategies for 3D Imaging of Buried Antiquities, in *Near Surface Geophysics* 5: 349-362.
- PARIBENI E., 2001, *Gli Etruschi nella Valle dell'Alma: l'area archeologica di Poggio Tondo nel territorio di Scarlino*, Koine Multimedia, Scarlino.
- PERKINS P., ATTOLINI I., 1992, "An Etruscan Farm at Podere Tartuchino", in *Papers of the British School in Rome* 60: 71-134.
- SEBASTIANI A., forthcoming. "The Late Etruscan and Republican Settlement at Podere Cannicci (Civitella Paganico – Grosseto)", in A. SEBASTIANI, C. MEGALE (eds), *Landscapes of Roman Etruria*, Turnhout, Brepols.
- SEBASTIANI A., FABBRI F., TROTTA V., VANNI E., 2018, "The First Archaeological Season at Podere Cannicci (Civitella Paganico-GR)," in <http://www.fastionline.org/docs/FOLDER-it-2018-413.pdf>.
- VACCARO E., GHISLENI M., ARNOLDUS-HUYZENVELD A., GREY C, BOWES K., MACKINNON M., MERCURI A.M., PECCI A., CAU ONTIVEROS M.A., RATTIGHERI E., RINALDI R., "Excavating the Roman Paesant II: excavations at Case Nuove (Cinigiano-GR)," in *Papers of the British School at Rome* 81: 129-179.