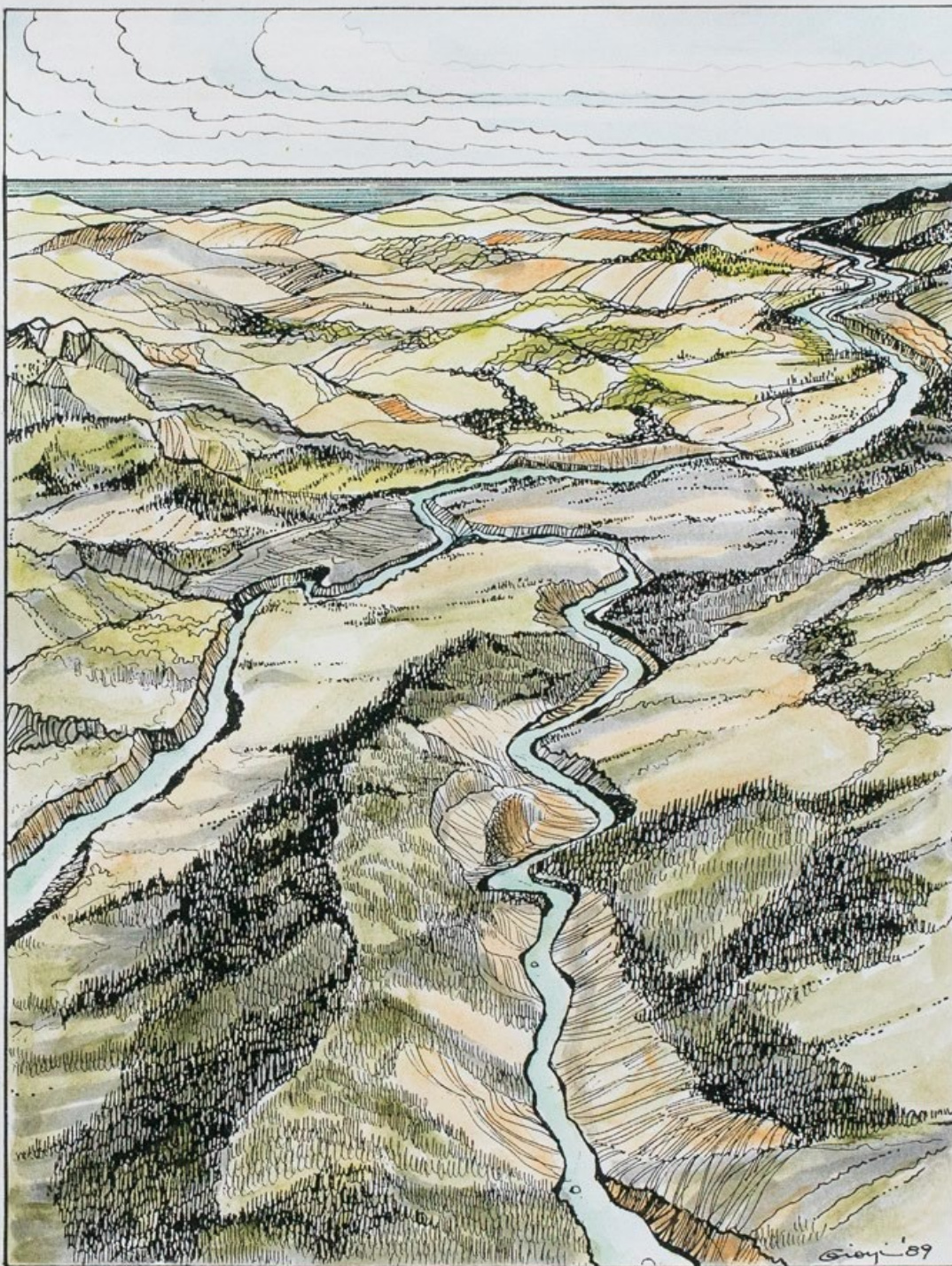


# *Picenum* and the *Ager Gallicus* at the Dawn of the Roman Conquest

Edited by  
F. Boschi, E. Giorgi, F. Vermeulen



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***Picenum and the Ager Gallicus at the Dawn of the Roman Conquest.***  
**Landscape Archaeology and Material Culture**

*F. Boschi, E. Giorgi, F. Vermeulen (eds.)*

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*Wieke de Neef, Ghent University*

### **Summary**

The area of Monte Franco (Pollenza, province of Macerata) in the central Potenza Valley is well-known for the large *Piceni* burial ground of Moie di Pollenza, partly excavated in the 1960s (Lollini 1963, 1966). Its settlement history has received much less attention, despite the results of the diachronic Ghent University surveys which indicated a dense, and long-term occupation of the wider area between the Bronze Age and the Middle Ages (Percossi *et al.* 2006: 112-114; Vermeulen *et al.* 2017, De Neef and Vermeulen 2018). This paper presents new non-invasive and geo-archaeological research from the Monte Franco zone, which contributes to unravelling the occupation phases and land use strategies in this archaeological palimpsest. The Monte Franco example illustrates the processes and changes in settlement organization in Central-Adriatic Italy prior to Romanization, and highlights the contribution of non-invasive prospection and geo-archaeological approaches to the study of changing land use systems.

### **Introduction**

The transformation of settlement and land use systems in Central-Adriatic Italy during the fourth to second centuries BC is generally discussed in terms of broad-scale social dynamics, political instability, and Romanization, yet exactly how these transformations affected local populations remains difficult to grasp, despite several regional archaeological surveys and an increasing number of excavations that demonstrate radical changes in settlement, infrastructural, and economic systems during this period. One reason for this is the fragmented nature of this part of Italy in the centuries before Roman intervention, characterized by heterogeneous ethnicities, the migration of the so-called 'Gallic' or 'Celtic' groups, and a low level of political and economic centralization. The impact of new social, political and economic realities on local communities, before and following their integration into the Roman world, needs to be studied in detail if we want to assess existing models of transition in the wake of Romanization. This paper focuses on this local level through the identification of settlement and land use changes in the micro-region of Monte Franco in the central part of the Potenza Valley (Marche, Italy). It highlights the potential of non-invasive archaeological prospection and geo-archaeological approaches in the study of local transition processes in the later first millennium BC, and discusses how such micro-regional research can be integrated with wider narratives of cultural transformation.

The Monte Franco area case study is often presented as an example of long-term social dynamics in this part of Marche, because we have a relatively good idea of its diachronic development (see also Vermeulen, this volume). Monte Franco is the name of a hill on the southern bank of the River Potenza, part of a north-south oriented sandstone ridge between Pollenza and Treia (**Fig. 1**). The archaeological significance of the area is often explained by its strategic position, where the narrow passage of the River Potenza crosses through the ridge at Passo di Treia, providing an east-west and north-south crossroads connecting the Apennine inlands, river valley, inland hill ranges, and coastal zone (De Neef and Vermeulen 2018). The area is well known for the Iron Age burial ground of Moie di Pollenza which was

in use between the ninth and fifth centuries BC, preceded by a Middle Bronze Age settlement in the same location in the Potenza Valley floor (Lollini 1963, 1966; Fig. 1).

Another Middle-Recent Bronze Age settlement was partly excavated near the summit of the Monte Franco hill in the 1950s (De Neef and Vermeulen 2018; De Neef and Vermeulen in press). Although there is evidence for Final Bronze Age occupation in the upper layers of Lollini's trenches (mixed with Picene and later material), the site seems to have been abandoned towards the end of the Bronze Age (Lollini 1979b, 209, Fig. 7; De Neef 2017). In 2001, the Potenza Valley Survey project of Ghent University recorded material concentrations in the arable fields at the base of the hill, which attest to the intensive occupation of the area between the Bronze Age and late antiquity (Percossi *et al.* 2006; Vermeulen *et al.* 2017). A cluster of Iron Age artefact concentrations along the eastern base of the hill was interpreted as a settlement zone, while a discrete Roman artefact scatter was interpreted as a small habitation centre occupied between the late Republic and late Imperial times (Vermeulen *et al.* 2017; Fig. 45, Site 77). The archaeology of the northern river bank is less known due to the expansion of the modern town of Passo di Treia, but surveys and aerial photography analysis by the Ghent team identified Picene and Roman traces here too, and small-scale rescue operations in the town centre indicate the presence of Iron Age burials (Percossi *et al.* 2006; Vermeulen *et al.* 2017; Vermeulen and Mlekuz 2012; De Neef and Vermeulen in press). A cluster of artefact scatters of first -second century AD settlement material found in conjunction with a Roman road traceable by aerial photography was interpreted as a large roadside settlement of at least 8 hectares (Fig. 1, sites 94 and 79).

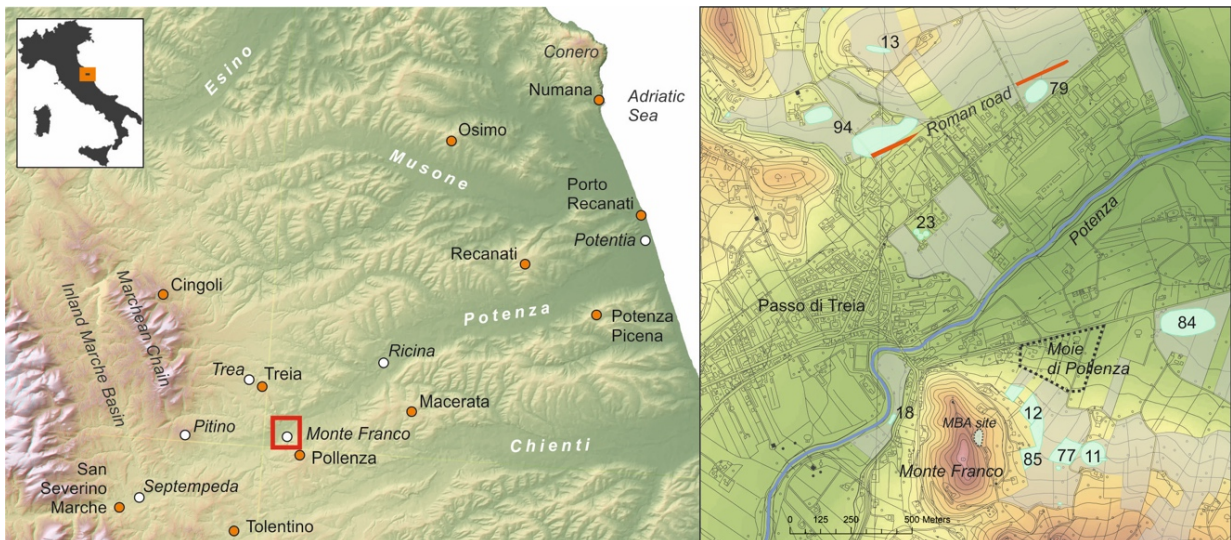


Fig. 1. Left: location of Monte Franco in the Potenza Valley of Marche, Italy. Archaeological sites are indicated with a white dot and italic font; towns with an orange dot. Right: overview of archaeological sites in the Monte Franco area. Surface sites recorded by the Potenza Valley Survey are blue areas.

On the basis of this data, we can tentatively propose the following timeline: after an interruption in the last phase of the Bronze Age, a major but not exceptionally rich Iron Age indigenous *Piceni* group centre developed in the vicinity of an earlier Bronze Age site. The *Piceni* site declined after the fifth century BC and was replaced by a less centralized and still poorly understood occupation system in the fourth and third centuries BC. The settlement system changed again after the Roman conquest and became primarily tied to the newly established *Via Flaminia* branch on the north bank of the Potenza (Roman name *Flosis*), firmly positioning Monte Franco on the route between the Roman towns of *Septempeda* and *Ricina*, a system which continued well into the later Imperial period and possibly longer. Meanwhile,

the area witnessed a process of rural infill between farmsteads and small hamlets (see also Vermeulen, this volume).

While such a schematic narrative is useful to recognise broader historical trends in conjunction - or perhaps contrast - with other areas, it does not clearly explain or illustrate how these events took place or affected the local groups at Monte Franco. At a local level, many questions remain unanswered. For instance, the chronological and spatial association between the Moie di Pollenza necropolis and the broadly dated Iron Age surface artefact clusters along the base of the hill need to be clarified. Occupation traces from the elusive fourth and third century BC need to be located, and, if possible, characterized. Furthermore, with only a few Roman rural settlements in Marche investigated in detail, it is difficult to interpret the discrete Roman artefact scatter on the right bank. The overarching question for all these phases is how this landscape was managed and exploited – and whether this changed as drastically as the settlement system appears to have done. In the following sections, I will present the results of recent research into the settlement history of the Monte Franco area, focusing on these issues, and illustrate how non-invasive and geo-archaeological approaches have helped to unravel them.

### **Current research at Monte Franco (Pollenza)**

The Monte Franco area is one of the study areas in a spin-off project from the Potenza Valley Survey (PVS, 2000-2017) focusing on pre-Roman settlement and land use. The FWO-funded postdoctoral research project 'Neighbours and Nobles' (2017-2020) focuses on the social organization of pre-Roman communities as expressed by their spatial behaviour in settlements and their catchments. The project aims at a better understanding of the poorly understood settlement record of local protohistoric groups in Central-Adriatic Italy through the non-invasive prospection of micro-regions with habitations and their surroundings. The analysis and interpretation of the integrated data from geophysical surveys, field walking surveys, aerial photography, topographical work, and geo-archaeological studies offers new insights into the daily organization and territorial arrangements of pre-Roman groups. This provides a valuable addition to the well-known Iron Age burials of this part of Italy: the pre-Roman Picene people are still known mostly from the funerary record, and the settlement and economy of these groups, and their Bronze Age predecessors, remain underexplored. We also use prospection data not only as a means to put dots on the map, but to analyse the arrangement of space as an expression of social norms. To this end, we have to look beyond 'the site' and instead focus on the wider habitus of the communities under study. The project therefore investigates a series of case study areas where settlement traces are expected on the basis of artefact surveys, known funerary clusters, or other (legacy) data suggesting pre-Roman occupation. So far, the results of the multidisciplinary field campaigns of 2018 and 2019 demonstrate the enormous potential of non- and minimally-invasive prospection in the study of protohistoric communities (De Neef *et al.* forthcoming, De Neef and Vermeulen 2018).

In 2018 and 2019, teams of Ghent University staff and students conducted artefact surveys, geophysical surveys, and soil studies at Monte Franco (**Fig. 2**). These resulted in high-resolution datasets which can now be integrated to confront the many open questions about the occupation dynamics of the area, as outlined in the introduction above. In 2018 the arable fields east of the Monte Franco hill were re-surveyed, with a surface coverage of ca. 40%, and materials were collected in units of 30 x 30 m. High-density finds areas were subsequently resampled at 100% coverage, during which the locations of artefacts of special interest, such as pottery with datable features or specific functional characteristics, were recorded individually using a Leica Viva GNSS system. Visibility was not particularly high in 2018, but part of the research area was ploughed in September 2019 and therefore re-surveyed to obtain more, and more datable, material. In addition to the information from the lower resolution PVS surveys



(large collection units, lower coverage, extended area) conducted in 2001, these targeted re-surveys provide more spatial and chronological detail, as well as the opportunity to evaluate the preservation of the (near-)surface archaeological record over a time span of 18 years.

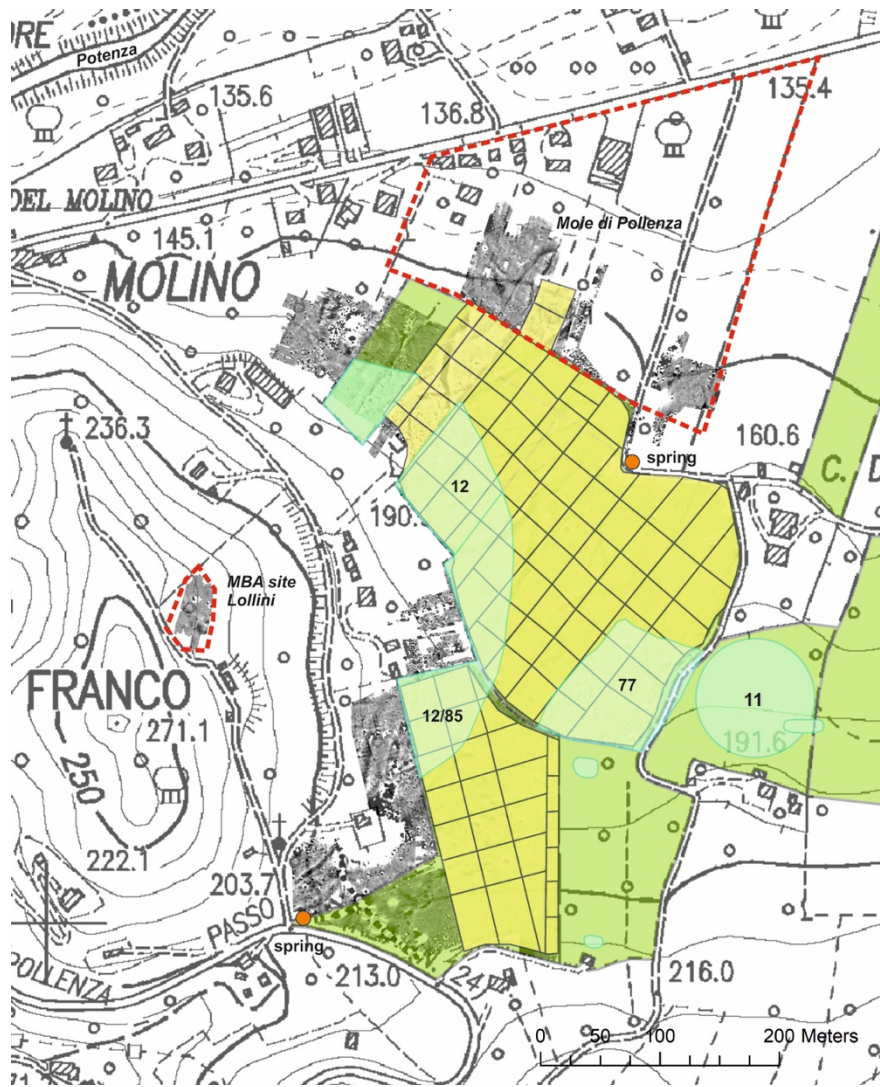


Fig. 2. Overview of the investigated areas at Monte Franco. The extensive PVS survey areas of 2001 are light green; the PVS sites are light blue. The 2018 and 2019 artefact survey areas are light yellow. The known archaeological sites of Moie di Pollenza and Monte Franco, both investigated by Delia Lollini, are outlined in a dashed red line.

The artefact surveys were paired with large-scale geophysical mapping of the same area. In 2018 we tested two common geophysical techniques, ground-penetrating radar (GPR) and magnetic gradiometry, for the prospection of archaeological remains under the local conditions at Monte Franco. The latter technique, performed with a LEA-Mini mobile cart array with four Sensys FM650 fluxgate gradiometer probes at 0.5 m intervals, proved to be especially suitable for detecting a wide range of anthropogenic and natural features (Fig. 3). The GPR survey by Dr Lieven Verdonck, using an ATV-towed modular system for a Sensors & Software SPIDAR network consisting of 15 pulseEKKO PRO 500 MHz antennas, was less successful in detecting subsurface features due to the high clay content of the local soils (De Neef and

Vermeulen 2018). We thus focused on the full mapping of the Monte Franco research area by magnetometry. A total of 13 hectares were covered prior to ploughing in 2019.



Fig. 3. Magnetic gradiometry survey at Monte Franco in 2018.

To understand the landscape formation and depositional processes affecting the preservation and detection of archaeological traces, we took a series of manual cores to characterise the local soils. We also took targeted cores from selected geophysical features in order to establish whether they were of archaeological relevance, and if so, how they could be characterized, and at what depth they occur. Archaeological artefacts and datable ecofacts (charcoal, seeds, bone) were collected from these cores; we are currently awaiting the C14-dating results from a number of these samples. These targeted cores allow us to make temporal and spatial associations between the surface archaeological record and the buried subsurface record, and to link tangible archaeological remains to more ephemeral activities and artefact-less land use.

## Results

Here I briefly present the results of the archaeological, geophysical, and geo-archaeological fieldwork of 2018 and 2019. I structure these according to the following themes: the extent of the Iron Age necropolis of Moie di Pollenza; the extent, internal organization, and chronology of the pre-Roman Site 12 at the eastern base of Monte Franco; functional areas outside the site core; further traces of pre-Roman occupation; the character of Roman Site 77; evidence for land management and controlled hydrology.



### *The necropolis of Moie di Pollenza*

The excavations at Moie di Pollenza are unfortunately not published in detail and the precise location of Lollini's trenches and the recorded archaeological contexts are unknown. What we do know is that the excavated burials and preceding settlement traces are situated on the lower slopes to the north east of Monte Franco, in an area now built with houses and related structures (Lollini 1963; 1966; Fig. 2). Locals recall the impact of earthmoving and deep ploughing on these slopes, pointing out that archaeological contexts will most likely not be preserved in the direct vicinity of the houses. Originally, the necropolis extended at least as far as a tarmac road for a planned business park, the construction of which was stopped after the discovery of more burials (Percossi 2005). Several people recall a large number of archaeological metal objects found in a field behind a truck garage; this field was densely overgrown during 2018 and 2019 and could not be investigated.

Diffuse protohistoric hand-made *impasto* pottery concentrations occur in the northernmost part of the survey area, where they can be associated with the nearby funerary zone of Moie di Pollenza. Two *impasto* spindles found in this zone are among the objects often, but not exclusively, found in Iron Age graves. The recovery, however, under favourable conditions in September 2019, of several small bronze fragments strongly suggests that the protohistoric materials collected in this area come from ploughed-out burial contexts. A strong argument for the presence of burials across a much larger area than previously known comes from a fragment of human jawbone from a 20-25 year old, not very robust individual (so probably a woman) found on the surface during the magnetometry survey (**Fig. 4**).



Fig. 4. Fragment of a human jaw with three molars, found on the surface during the 2019 magnetometry survey. The find location is indicated in Figure 5.

The morphology of the fragment and the wear of the three teeth, indicates a diet which was not very refined and required hard chewing, suggesting a pre-Roman date (pers. comm. Prof. Dr I. de Groot, Ghent University).

The jaw fragment was found in direct association with a sub-circular magnetic feature with a diameter of ca. 17 m (**Fig. 5**). Targeted coring suggests that this anomaly was caused by a stone-filled ditch, but this should be verified by further invasive work. Such circular stone enclosures are typical of egraves of the seventh and sixth centuries BC, and were also recorded at Moie di Pollenza (Lollini 1966: figure 55). It seems, therefore, very likely that the Picene cemetery extended at least this far. The absence of more circular features or other tomb-like anomalies in the magnetometry data demonstrates the poor preservation of the burial ground.



Fig. 5. Magnetometry results of sites 12/85, 77, and the Moie di Pollenza zone. Sites 12/85 and 77 are outlined with a dashed grey line; the production zone near site 12/85 with a white dashed line. Magnetic features mentioned in the text are numbered; specific features are outlined in orange.



The 2018 and 2019 artefact surveys confirmed the presence of a dense pre-Roman artefact concentration at the foot of the hill (Site 12), however, it is smaller and its boundaries are more defined than the large, partially overlapping artefact scatters recorded along the eastern base of Monte Franco in 2001 (Fig. 5). As in 2001, the western and northern extent of the artefact scatter could not be established because of an un-ploughed field and a densely vegetated olive grove. Instead, the magnetometry survey revealed that a cluster of archaeological features continue towards the SW. Targeted coring confirmed that these features can be chronologically linked to the artefact scatter. The magnetometry data shows a series of strongly magnetic features aligned in a 12-15 m wide, sinuous strip running south west-north east (Fig. 5, Feature 1). The most remarkable feature is a highly magnetic, semi-rectangular zone of ca. 10 x 16 m with magnetic positives up to 40nT above the natural background (Feature 2). The strong dipole characteristic indicates thermoremanent magnetization: burnt materials. Targeted coring indeed confirmed the presence of archaeological deposits with large and medium ceramic fragments, including *impasto* pottery, as well as pieces of burnt cob. Pending further invasive work, we tentatively interpret this feature as a habitation structure, possibly a hut or house. Further north along the sinuous strip, an inverse-comma-shaped anomaly of ca. 11 x 6 m was detected within the Iron Age pottery scatter [3]. Here, too, targeted coring confirmed its direct association with the surface materials: a dark anthropic layer with abundant ceramic fragments and charcoal was found at depths between 110-160 cm. The other magnetic features within the feature strip are also likely to be of high archaeological relevance.

The majority of surface finds can be dated to the pre-Roman Iron Age, but the site also has a Roman occupation phase, in 2001 recorded separately as Site 85 (Fig. 6). The assemblage of the *Piceni* phase includes protohistoric building material (tiles and daub), coarse thick-walled *impasto* pottery (storage vessels), medium-thick *impasto* pottery (cooking and consumption wares), *bucchero grigio* fine ware, coarse and fine wares, bronze objects, bone, and fragments of household objects such as grinding stones and portable *impasto* stoves (*fornello*). The fine wares include fragments of Italo-geometric red painted ware similar to Orientalising wares found elsewhere in *Picenum*. The general impression of this assemblage is that of a consistently seventh-sixth century settlement context.



Fig. 6. Selected artefacts from site 12 / 85 at Monte Franco. Top left: red painted ware; top centre: satyr's head appliqué; right: grinding stone; bottom left: Greek imported ware; bottom centre: incised bucchero wall fragment.



Site 85, the Roman phase, was identified in 2001 in the general area around the Antino farmstead and generally placed in the Roman-Late Antique periods, but the clear centre of this later occupation could not be identified. The scatter was tentatively interpreted as a Roman Republican farmstead on the basis of black gloss pottery and Roman storage wares (Percossi *et al.* 2006: 168). The re-survey of 2018 confirmed the generally simple character of the Roman occupation here, with common coarse and plain wares, some building materials, amphora fragments, and three black gloss sherds. No clear indications of Late Roman presence were found, such as African cooking ware or ARSW. The only 'special' object was a ceramic appliqué of a satyr's (?) head, for which we have yet to find a parallel (Fig. 6, top centre). The magnetometry data indicates that this settlement had a clear internal spatial layout of aligned house compounds and associated features, such as pits and auxiliary structures. It is for now impossible to say whether or how this settlement continued further north, but we may assume that it extended into the olive groves and gardens belonging to the modern farmstead of the Antino family. The Iron Age settlement preference for the break of slope below Monte Franco thus overlaps with the present-day occupation. In Section 3.5 below, I will explain how magnetometry has helped us explain this antique and modern location preference in light of slope stability and erosion dynamics.

#### *Functional areas and spatial organization beyond Site 12*

An important result of the magnetometry surveys is the identification of functional zones beyond the habitation cores at the base of Monte Franco. There is a cluster of magnetic features directly south and upslope of Site 12, which cannot be associated with surface material and has different morphologies than the magnetic anomalies in the sinuous strip [Fig. 5, Feature Cluster 4]. The artefact survey in this zone yielded low densities of off-site material, however, targeted coring in and outside a number of features confirms their archaeological character. Archaeological deposits with abundant charcoal and burnt clay pieces, but only a few small pottery fragments, occur at depths between 80-180cm. A remarkable, strongly magnetic anomaly, probably caused by thermoremanent magnetism, was confirmed by coring. This produced burnt clay and charcoal deposits, wedged between two layers of hard material at depths between 60-200 cm [5]. We tentatively interpret this feature as a kiln but this should be verified by invasive research. The few pottery fragments found in these features are small and eroded, and poorly datable; we are awaiting C14-dates to confirm whether they are indeed contemporary with Site 12. Pending the C14-dating, we interpret this general area as a productive zone related to, but clearly separated from, the habitation further northwest, with at least one kiln and several pits with industrial waste.

The evidence for the spatial organization of the settlement area and productive zones is another important result of the magnetometry surveys in tandem with the artefact surveys and coring. The separation of the habitation from the production area is emphasized by a number of linear features. The most eye-catching of these is a curvilinear feature running from the rectangular structure to the east [6]. Coring at two locations in- and outside this feature confirm that it was most likely a (possibly paved) ditch filled with settlement debris of (protohistoric) ceramics, charcoal, bone, and burnt clay. Furthermore, the magnetically quiet zone north of the curvilinear feature indicates that this area had a different functionality. Indeed, the Site 12 surface artefacts are situated mostly north of the curvilinear feature.

#### *The longue durée of Site 77*

The recent re-surveys and geophysical work at Monte Franco offer new perspectives on the long-term occupation and functionality of Site 77. This Roman artefact scatter of less than one hectare, downslope

of an agricultural terrace east of Monte Franco, was first recorded in the extensive 2001 PVS surveys. Several functional areas were distinguished during this first visit. A concentration of building material, including tiles, and worked and unworked limestone blocks, was recorded in an area of ca. 70 x 20 m. There were piles of pebbles in some areas. Most ceramic material was collected in the eastern part of the site, and it consisted of common, storage, and transport wares, as well as one *terra sigillata* and three African Red Slip Ware fragments. A separate, very small concentration of tiles and Roman pottery was recorded in an area of ca. 30 x 10 m some 180 m east of the large core, next to a natural spring. This small core was interpreted as part of Site 77 (Percossi *et al.* 2006: 161).

The 2019 magnetometry survey confirmed the observations made in 2001 (Fig. 5). In fact, the concentration of building materials over 70 x 20 m corresponds directly to a series of linear and aligned single magnetic features with the same dimensions [Fig. 5, Feature Cluster 7]. These can clearly be interpreted as the remains of a building. A strongly magnetic dipole anomaly to the SE of the building was confirmed to be a kiln by targeted coring, with a hard red baked clay floor recorded at a depth between 60-90 cm, directly on top of the weathered bedrock [Fig. 5, Feature 8]. The surface survey recovered one ceramic waster that may be related to the kiln.

The repeated surveys recorded high densities of Roman building material, especially to the west and north of the magnetic features. Interestingly, the 2018 artefact assemblage consisted almost exclusively of building materials, common coarse and plain wares, transport and storage wares, and very few fine ware sherds. Out of a total of 1041 collected artefacts, only four black gloss and two African Red Slip Ware sherds were recovered, and no *terra sigillata*. This may be partly explained by the poor surface visibility and inexperience of some field walkers, but this near-absence of fine ware was also typical of the assemblage collected in the 2001 survey. Our impression of Site 77 is that this was a single farmstead with its own kiln, focused on the storage and transport of agricultural produce. The surface assemblage gives us only a few dating clues. The presence of Lamboglia 2 and Dressel 6A amphora fragments plus the black gloss sherds indicate occupation during the Roman Republic and early Imperial periods, while the ARSW sherds suggest presence up to the fourth/fifth centuries AD (Percossi *et al.* 2006: Fig. 127). Further work may help to establish whether the site was continuously in use, or abandoned and reoccupied during several phases.

In addition to the Roman evidence, the 2018 re-surveys added another chronological element to site 77: almost 30% of the artefacts collected in 2018 were identified as 'pre-Roman'. The highest densities of handmade impasto pottery and pre-Roman roof tiles were not directly associated with the structural magnetic features, but occurred to the north and west. Pre-Roman storage wares do overlap with a series of aligned magnetic features, however [7]. Although the pre-Roman ceramics do not have well-datable features and the finds densities are decidedly lower than those dating to the Roman phases, Site 77 evidently had a pre-Roman phase which was not recognized in the earlier surveys. The wares suggest a date in the later *Piceni* Iron Age, demonstrated by the typical roof tile fabrics. *Piceni* roof tiles are characterized by porous fabrics with many quartz-calcareous inclusions and orange-red or –brown exteriors and grey interiors, and were produced in *Picenum* from the late sixth-fifth century BC onwards (Ciuccarelli 2009: 4). Again, there is an absence of fine ware, which distinguishes this site from the rich assemblage of nearby Picene Site 12.

#### *Evidence for land management and controlled hydrology*

A striking element in the magnetic gradiometry data is the series of long curvilinear features throughout the research area (Fig. 5). These generally run from the higher parts towards the valley floor, but they

often have very peculiar shapes and various orientations. Rainfall typically results in erosion gullies in these intensively cultivated fields, which the present-day owners try to mitigate using a series of small ditches. We therefore hypothesized that the large linear features were also related to natural or managed water flow. Studying the morphology of these large magnetic features, in conjunction with targeted coring, indeed indicates that most are artificial. They attest to the already intensive, controlled land use by ancient settlers at Monte Franco.

The large, weakly magnetized feature running from the SW corner of the research area towards the NE is a recent drainage gully excavated some 30 years ago (pers. comm. Mr Ilari Antino): it starts at a natural spring, follows the natural slope, and is relatively wide [Fig. 5, feature 9]. It cuts through the curvilinear feature [6] and ends in a much stronger magnetic feature [10] further down the slope, which curves in from the west. Coring in this feature [10] demonstrated that it is a very deep, narrow gully reaching almost 4 m in depth from the present-day surface. Another deep and narrow gully of almost 2.5 m deep runs further north [11]. Both deep gullies carry archaeological materials in the lower levels, indicating that they were filled at an early date. A shallower ditch crosses the cemetery area [12]. A series of three parallel, very straight lines with intervals of ca. 17 m run east-west; one of these cuts into the newly detected circle tomb and must therefore be younger [13]. A remarkable zig-zag feature near Site 77 seems to be composed of several elements and must be artificial, considering its shape [14]. The presence of two kilns in this zone [8 and 15] means that it is likely that the inhabitants actively controlled water flow towards the production areas.

The erosion of the Monte Franco slopes unites the ancient and present-day inhabitants of the area. It is therefore probably not accidental that ancient and modern habitations are located on either the stable sandstone base of the Monte Franco, or in the valley bottom. The slopes themselves are unstable except for local outcrops of harder rock, such as at Site 77. The production area near Site 12 is located in an erosive slope zone and seems to have been chosen deliberately. Our coring work indicates that the dense network of gullies is directly related to water management between proto-history and the present; some of the gullies may also have been installed to supply kilns and related production zones.

The peculiar directions and morphology of some of the gullies suggest other intentions. The two very deep, curving gullies [10 and 11] are very likely to be artificial, considering their sudden angles and curves. In fact, they may have been intended to stop water running through the burial zone of Moie di Pollenza, and thus be more or less contemporaneous with the necropolis. The 2018 and 2019 non-invasive work means we know that the burial ground was much larger, and at least one circle tomb was found there. The straight and narrow parallel lines [13] belong to a later phase, because they cut the circle tomb. They are most likely connected with land management, and possibly even parcelling. All in all, the magnetometry uncovered a complex palimpsest of artefact-less human activity traces that can only be understood in relation to the organization and management of the landscape related to the subsequent occupation foci.

### **Discussion: settlement and land use (dis-)continuity at Monte Franco**

Let us now return to the questions posed in the introduction and see how our interdisciplinary work has helped to understand the impact of the broad socio-political and socio-economic transformations related to Romanization on the local communities at Monte Franco. The combined efforts of geophysical prospection, high-resolution artefact survey and soil studies through coring indeed offer new insights into the diachronic development of the area (Fig. 7). First of all, we have a better grasp of the starting situation in the *Piceni* Iron Age. The spatial and chronological links between the Moie di Pollenza necropolis and the Picene Site 12 are now well-established: Site 12 is a well-organized, stable settlement context which chronologically overlaps the later phase of the necropolis (seventh-sixth century BC). It

has a distinct habitation area on the stable upper slopes, and a separate production zone which included a (pottery) kiln. The magnetometry survey paired with surface survey demonstrates that the necropolis was larger than previously known; the distance between settlement and necropolis is some 200m. The burial ground is not clearly demarcated, but the curious directions and depths of artificial gullies suggest that the community made efforts to direct water away from the necropolis.

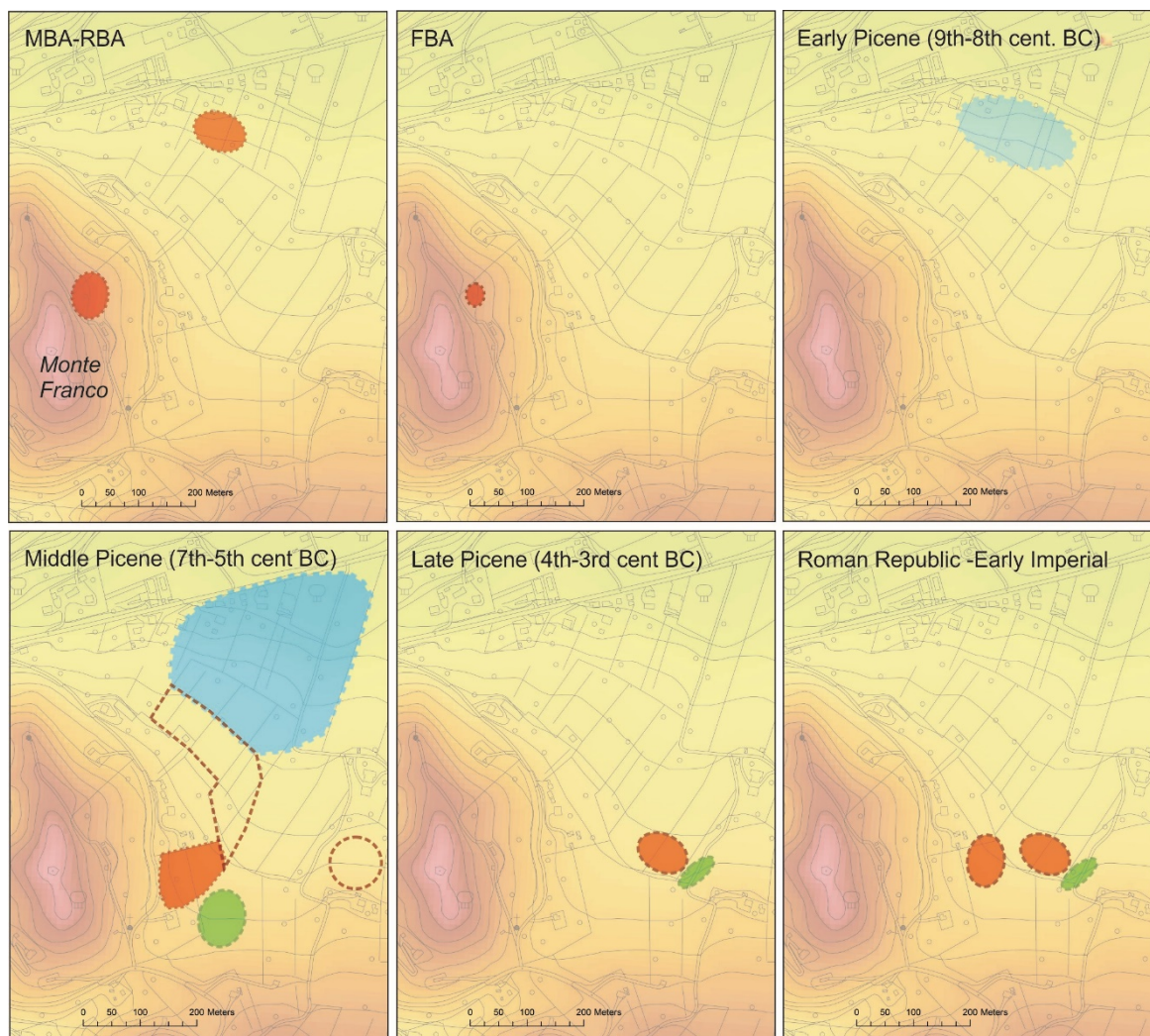


Fig. 7. Diachronic settlement and land use patterns in the Monte Franco area. Red: habitation; blue: funerary area; green: productive zone; dashed red outline: possible settlement zone (not confirmed in 2018/2019 surveys).

The reasons for the abandonment of Site 12 and the necropolis are unknown; pending further invasive work we can only speculate that the highly magnetic rectangular feature is the result of intentional fire. In any case, our detailed work reveals that the area was not abandoned altogether, and that a new Picene site appears some 100m to the east (Site 77). This new site with *Piceni* roof tiles and impasto wares was not identified in previous studies because it was obscured by abundant Roman remains in the same location. The near-absence of fine ware provides a marked contrast with Site 12, and is also characteristic of the Roman Republic and Early Imperial occupation of this location.

After a chronological gap, part of Site 12 was re-occupied in the Roman Republican period (Site 85). The location choice is logical, since this is the stable part of the slope. Like the Picene and Roman phases of Site 77, this site can be interpreted as a single simple farmstead. The results of the magnetometry survey show that Site 77 had its own (pottery) workshop (Feature 8). The inhabitants of Sites 77 and 85 faced the same erosion problems as the previous settlers of the area, and continued to manage slope wash in the surrounding fields with intentional gullies. Water continued to be essential for the use of the kilns. This is demonstrated by the magnetometry traces of a further rectangular structure [16] near a spring on the lower slopes near Moie di Pollenza, spatially associated with another kiln confirmed by coring [15]. The date of this structure is uncertain in the absence of datable surface material, but present-day inhabitants of the area do not remember a building here, and it may be medieval.

This brief overview reveals the crucial transformation of the Monte Franco area that seems to have taken place before the fourth century. The abandonment of the Moie di Pollenza necropolis and Picene site 12 occurred around the fifth century BC. This crucial moment marks the transition of the Monte Franco zone from a 'hub' at the crossroads of several inland routes, reflected in the imported fine wares at Site 12 and the various burial customs at Moie di Pollenza (Lollini 1963, 1966), to more small-scale rural occupation, such as at Site 77. The artefact assemblages of both the Picene and the Roman phases of Site 77 have very few (imported) fine wares, which suggests at least a partial disconnection from main infrastructure networks, although the presence of transport amphora fragments are present. Vermeulen suggests that the settlement focus of the Passo di Treia corridor shifted from the right to the left bank after the construction of the reinforced road in the valley bottom following the Roman conquest (Vermeulen, this volume; Vermeulen and Mlekuz 2012; Fig. 1). The rise of a new, large roadside town on the other side of the Potenza in the first and second centuries AD indeed demonstrates the great impact of stable road systems on the Roman settlement system of the Middle Potenza Valley, but this specific development takes place several centuries after the Via Flaminia was constructed. In summary, there was settlement change at Monte Franco some time before the fourth century BC, and the resulting system of rural farms continued for centuries afterwards. The land use system for this particular area is very persistent; the mitigation of slope wash and the water supply for local workshops are important elements here. The Roman rural infill of the countryside is therefore, in this particular case, rooted in the earlier settlement patterns of the late Picene phases. On the basis of our work at Monte Franco, I believe that there may be more continuity than discontinuity in the Romanization of the inland Adriatic communities.

## Conclusion

The case study of Monte Franco in the Middle Potenza valley demonstrates the value of detailed interdisciplinary work in micro-regions for the scrutiny of broad historical narratives. Taking a long-term perspective revealed the roots of the rural Roman 'infill' as the direct successor of an existing late *Piceni* system. Moreover, the land management strategies of the area are very persistent, at least since the Orientalising period onwards, and centred on controlling slope wash and the supply of workshops. There was a sharp discontinuity in the settlement system in, or shortly after, the fifth century BC, when the large Picene settlement at Site 77 and the related necropolis of Moie di Pollenza were abandoned. Further invasive work will have to confirm whether this was the result of conflict, as suggested by a strongly burnt structure detected by magnetometry.

The application of non-invasive prospection techniques have been crucial in coming to these first conclusions about the 2018 and 2019 fieldwork, which now have to be supported by robust C14 or



archaeo-magnetic dates. The results presented in this paper emphasise the value of off-site studies for the understanding of ancient land use strategies. Large-scale magnetic gradiometry survey has provided us with essential clues about the spatial organization of the Monte Franco micro-region. The results are especially valuable in the recognition of controlled hydrological systems related to human occupation, but also in mapping the extent of the necropolis and revealing previously unknown production zones. The presence of a separate productive area on the slope near Site 77 was not recognized in the 2001 and 2018 surface artefact distributions, and the detection of kilns gives us more information about the economies and resources of the ancient inhabitants. Geophysical prospection has thus yielded important information about artefact-less activities in this landscape, and provides a more extensive view of the communities at Monte Franco than we would have based solely on artefact distributions.

The high-resolution re-surveys and targeted coring have, in conjunction with the geophysical surveys, added more chronological detail to the existing datasets for Monte Franco. The Picene phase of Site 77 was a crucial discovery; the presence of *Piceni* roof tiles may indeed be related to some of the foundations mapped by the magnetometer. The extent of the Moie di Pollenza necropolis was confirmed by the surface recovery of a jaw fragment and funerary objects. The targeted corings confirmed the archaeological relevance of many magnetic anomalies and thus the intensive use of the landscape by its ancient inhabitants. As the Monte Franco case demonstrates, scholarship on cultural transformations is very much in need of detailed, interdisciplinary studies at a micro-regional level. Only with such bottom-up approaches can we start to write a nuanced story about the impact of large-scale processes on local communities.