

## **Monti Lucretili Landscape Project. Surveying an upland landscape around the Montefalco castle (2020-2022)**

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*The Monti Lucretili Landscape Project (MoLuLaP) aims to reconstruct the long-term landscape history of a mountainous area northeast of Tivoli (Latium, Italy), included in the Monti Lucretili Regional Natural Park. One of the main aims of the research project is to look at the changing patterns of economic activity that have affected the landscape over time, such as agricultural exploitation, pastoralism, and transhumance practices, and their effects on the environment and on the settlement pattern. The first archaeological survey campaigns between 2020 and 2022 focused on the Montefalco castle, one of several deserted medieval castles in the area, and the surrounding landscape, and were conducted by the Department of Humanities of the University of Roma Tre. The fortified villages formed a network of highly nucleated fortified centres, each controlling and exploiting a well-defined micro-region within the wider area, which are selected as optimal sample research units to be investigated in the long-term.*

### *The Monti Lucretili Landscape Project*

The *Monti Lucretili Landscape Project* (MoLuLaP) focuses on the reconstruction of the long-term landscape and settlement history, from Prehistory up to modern times, of a mountainous area NE of Tivoli (Rome), which formed the largest part of the *Monti Lucretili Regional Natural Park* (Latium, Italy). One of the main goals of the research project is to examine the changing patterns of economic activities that have affected the landscape over time, including agricultural exploitation, pastoralism and transhumance practices, and their impact on the environment<sup>2</sup>.

Between 2020 and 2022 the Department of Humanities of the University of Roma Tre<sup>3</sup> carried out the first archaeological survey campaigns in the area surrounding the Montefalco castle, one of several deserted medieval castles of the area, and among the best preserved and most easily accessible (fig. 1)<sup>4</sup>. Those fortified villages, which characterised the landscape of Monti Lucretili area during the Middle Ages, had a strong impact

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<sup>2</sup> On a similar project in a nearby area (Cicolano - Mount Velino area) see FARINETTI 2007; FARINETTI 2010; FARINETTI 2013; FARINETTI 2015.

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<sup>4</sup> On the Medieval castles in the Monti Lucretili area see BERNARDI 2021.

on the landscape, transforming the previous settlement pattern. They formed a network of highly nucleated fortified centres, each controlling and exploiting a well-defined micro-region within the wider area<sup>5</sup>.

The territory of a castle was chosen as an optimal sample research unit to be investigated in the first seasons in the field. It represents a well-defined community area<sup>6</sup> for a precise period of history, within which it is possible to see a shifting of the main nucleated settlement (from Montefalco castle to the nearby village of Monteflavio, still inhabited), a fact that could bring about further focus on human occupation in other periods within the same territory<sup>7</sup>. Furthermore, the castle territory can be analysed within an articulated network of castle centres, as well as the related mobility patterns, and this can throw light on the long-term internal connections among communities within the district, as well as their connections to larger regional networks.

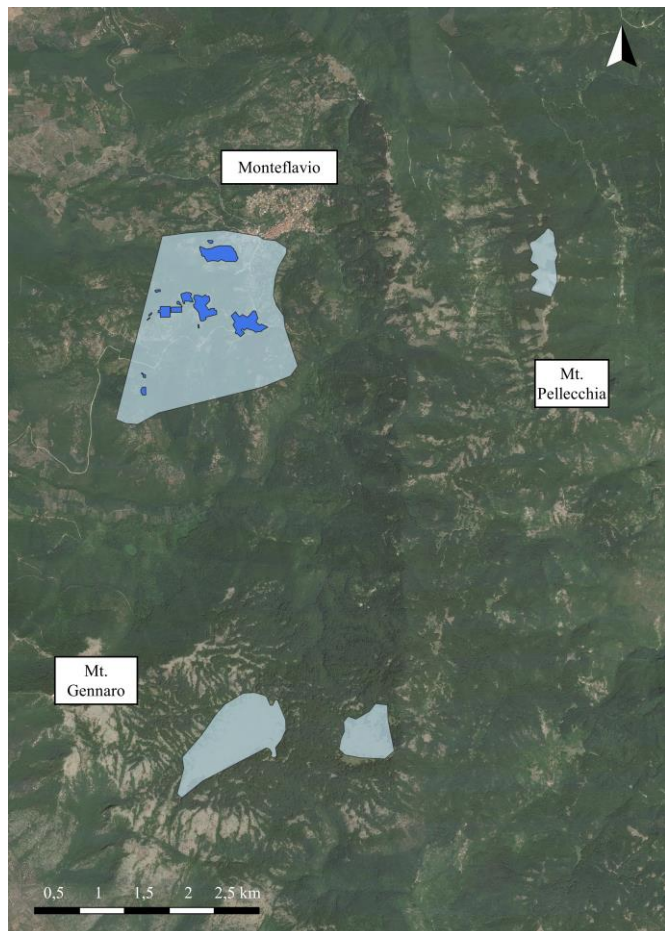


Fig. 1. The areas surveyed in the 2020-2022 field seasons, covered intensively and systematically (dark blue – detailed map in fig. 9 and 11) as well as non systematically (light blue) - (map by G. De Coste).

Within this research framework, the involvement of the local community in research activities has thus far proven to be of very great value for the research results, and will be vital in order to achieve the ultimate goal of any landscape research project: to provide local communities with a better consciousness of their past, and of the memory values and meanings embodied in the landscape palimpsest.

M.B., E.F.

#### *The Monti Lucretili area: the environmental framework*

The Monti Lucretili area is located in the central Apennine region, within the Roman Sabina, which is identifiable with the north-eastern part of the modern Latium administrative province. The area is protected by the *Monti Lucretili Natural Park* (which extends over 18,000 hectares), a landscape marked by variegated flora and fauna patterns: in fact, the area shows all the specific characteristics of the Mediterranean bush (in the hilly areas up to 600 m a.s.l.) and of the mesophil wood environments of mixed deciduous forest in the mountainous areas (up to 1000-1100 m a.s.l.)<sup>8</sup>.

The Monti Lucretili are a series of limestone mountainous reliefs corresponding to the southern portion of the Monti Sabini, of which they are a subgroup. The mountains are located on the left side of the Tiber river and, along with the surrounding

<sup>5</sup> The definition of micro-regions and their transformations in the long-term, read together with the changes in the settlement pattern, are currently the main topic of a master's research thesis at the University of Roma Tre (Giordano De Coste).

<sup>6</sup> A community area can be defined as the area where a community performed its activities in the long term, distributed over the landscape and represented by a specific material culture. It often corresponds to a sub-regional unit, which can recall the settlement chamber approach of the *Landeskunde* tradition (see KUNA 1991; VENCLOVA 1995; FARINETTI 2011: chapter I.1).

<sup>7</sup> For a similar approach see FARINETTI 2016. In the area surveyed so far, we have only been able to narrate the history of the nucleated settlement for more recent periods, whereas for antiquity and prehistory we do not have enough data available for the small district investigated (see below in the text).

<sup>8</sup> For further information about the environmental characteristics of the Latium region, see DE VECCHIS 2007. For further information on the geomorphology of the Monti Lucretili see also BERNARDI 2021: 17-21. On the *Regional Monti Lucretili Natural Park*, see the park's official website: [www.parcolucretili.it](http://www.parcolucretili.it).

mountains Monti Tiburtini and Monti Prenestini, form the westernmost tip of the limestone Apennines towards the Tyrrhenian lowlands.

The natural and administrative boundaries are marked as follows: to the north by the Corese river; to the northeast by the Provincial Road n. 39, which connects the two hamlets of Scandriglia and Orvinio; to the east by the Licenza stream with its valley; to the south by the Aniene river and the route via Tiburtina-Valeria; to the southwest by the road that leads from Tivoli to Marcellina; and to the west by the Provincial Road n. 636 - Maremmana Inferiore and the Cornicolani mountains.

The Monti Lucretili area is characterised by the presence of karstic phenomena and of specific environmental forms, including geomorphological features such as furrowed fields, karst valleys, caves, dolines, and sinkholes<sup>9</sup>. Mountainous plateaus are polje of karstic origin. The area is characterised by the presence of different tectonic units, which have determined its appearance as an Apennine chain today, and constitute a unique and multifaceted environmental context<sup>10</sup>.

The Lucretili mountains are rich in water sources, which are concentrated mainly in the eastern part of the Park. The main watercourse is the Licenza stream, which flows from the North (near Orvinio) and heads South towards Vicovaro, where it flows into the Aniene river. In the area marked by karstic phenomena, the Licenza stream was originally fed by the rich natural springs located nearby, whose water carved underground cavities over time. The Licenza watercourse has always been a fundamental water resource for the populations settled in this territory. The areas close to the river were, and still are, the most fertile and productive.

M.B.

#### *A long-term landscape history: a review of current knowledge*

The Monti Lucretili area has never been covered by systematic archaeological survey, but the archaeological literature does contain the results of topographic surveys conducted at various times during the 20<sup>th</sup> century and the last two decades, mostly focusing on the archaeology of specific periods. Furthermore, a somewhat heterogeneous picture of records originates from rescue excavations linked to building or agricultural works as well as accidental discoveries by local people, some of which are reported in the archives of local communities. Based on this, we will trace here a very brief summary of the long-term settlement history in the wider Monti Lucretili area<sup>11</sup>.

In terms of the Prehistoric period, sporadic finds were discovered in the mountainous areas during field investigations, mainly carried out by local historians in the last century, who reported a number of sites related to the Middle Palaeolithic<sup>12</sup>, including one on Mt. Pellecchia and a couple on Mt. Gennaro, that were probably connected to the practice of mountain hunting<sup>13</sup>.

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<sup>9</sup> DE VECCHIS 2007: 34.

<sup>10</sup> COSENTINO, PAROTTO 1986; PAROTTO, MICCADEI 1993: 179. For further information on paleogeography and lithostratigraphy of the Lucretili area see MONTONE, NICOSIA, DE ANGELIS 1995: 160-186.

<sup>11</sup> A systematic study of the available legacy data is currently in process in the form of an MA dissertation.

<sup>12</sup> BIDDITTO, DE ANGELIS 1995: 474.

<sup>13</sup> BARKER 1975; BIDDITTO, DE ANGELIS 1995: 476-477; CERULEO 1982.

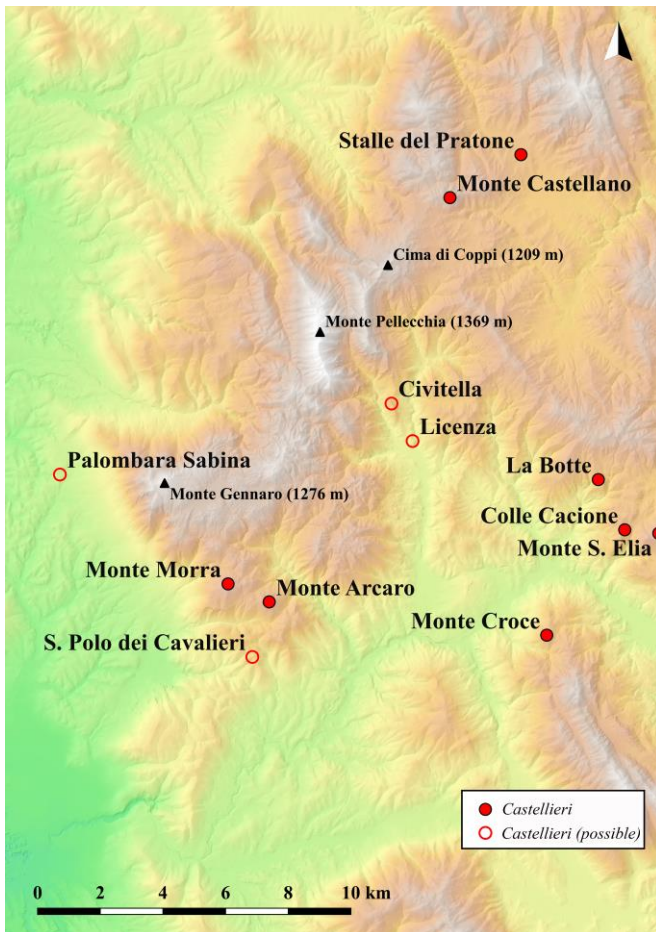


Fig. 2. Map of the known and possible 'castellieri' in the wider Monti Lucretili area (data from the bibliographical record, map by G. De Coste).

For the Neolithic period, the known evidence refers to cave sites used for funerary practices, such as the case of Grotta Pila<sup>14</sup>, and to sites at the bottom of valleys<sup>15</sup>. Archaeological remains related to the Bronze Age are also linked to occasional or accidental finds, which testify to the presence of human settlement in the Monti Lucretili area in this period, both in the upland zone<sup>16</sup> and in the alluvial valleys<sup>17</sup>. In our survey area, Middle Bronze Age pottery has so far only been reported at one location<sup>18</sup>.

A different pattern emerges between the Late Bronze Age and the Early Iron Age<sup>19</sup>; during this period, the landscape is marked by the presence of a network of settlement sites, the so-called "castellieri", located on mountain peaks, which overlooked the plain and the upland economic zones, as well as the main routes<sup>20</sup>. These sites, such as the well-known Monte Morra, are characterised by fortified enclosures and strategic locations<sup>21</sup>. These hilltop settlements share, with some exceptions, the following characteristics: a high altitude, between 500 and 1100 meters a.s.l.; the proximity, or direct control, on the main mobility routes; and an excellent panoramic view of the surrounding area and the economic zones (mainly pastoral land) within the territory<sup>22</sup> as well as a high degree of inter-visibility within clusters (fig. 2). The MoLuLaP 2020-2022 sample area of Montefalco-Monteflavio has not thus far been shown to have been included in any of the castellieri zones known, either because the archaeological record is still incomplete,

or because the area lay outside the main mountain corridors that featured transhumance and inter-regional mobility at the time<sup>23</sup>.

During the Roman period, the Monti Lucretili area continues to be a landscape zone with a clear human presence, in particular along both large and small river valleys. The archaeological and written sources have revealed the presence of rural settlements<sup>24</sup>, but overall the MoLuLaP sample area of Montefalco-Monteflavio seems rather marginal in the overall Roman period, and a settlement focus has so far not been located. Villas in the Lucretili area date mainly to the second and first centuries BC, and are well attested along the Licenza valley

<sup>14</sup> CERULEO 1999: 14-15.

<sup>15</sup> CERULEO 1982: 43; MARI 1983: 25; ANGLE, GUIDI 1995: 514.

<sup>16</sup> ANGLE, GUIDI 1995: 518.

<sup>17</sup> ANGLE, GUIDI 1995: 514-516.

<sup>18</sup> The football pitch of Monteflavio (FILIPPI, GUIDI 1991-1992: 715; BELARDELLI *et al.* 2007: 136)

<sup>19</sup> For a recent study from the Eneolithic Ages to the Iron Ages on the Middle Aniene Valley that includes some sites of this area see FESTUCCIA, GUIDI 2019.

<sup>20</sup> CERULEO 1980: 3-27; CERULEO 1982: 7-49; ANGLE, GIANNI, GUIDI 1982: 80-83.

<sup>21</sup> CERULEO 1980: 11-13; ANGLE 2007: 248.

<sup>22</sup> ANGLE, GUIDI 1995: 519.

<sup>23</sup> Only a comparative analysis between different districts within the wider Monti Lucretili area, along with a detailed study of the mobility, can answer this question. The MoLuLaP's next survey campaigns will cover other areas and microlandscapes, with the aim of applying this comparative approach.

<sup>24</sup> Rural settlements in the area have been linked to a *pagus-vicus* system (MARI 1994; MARI 2005; MARI 2020) that needs to be further investigated. For some notes on a similar settlement pattern in the Roman period in a neighbouring area see FARINETTI 2015.



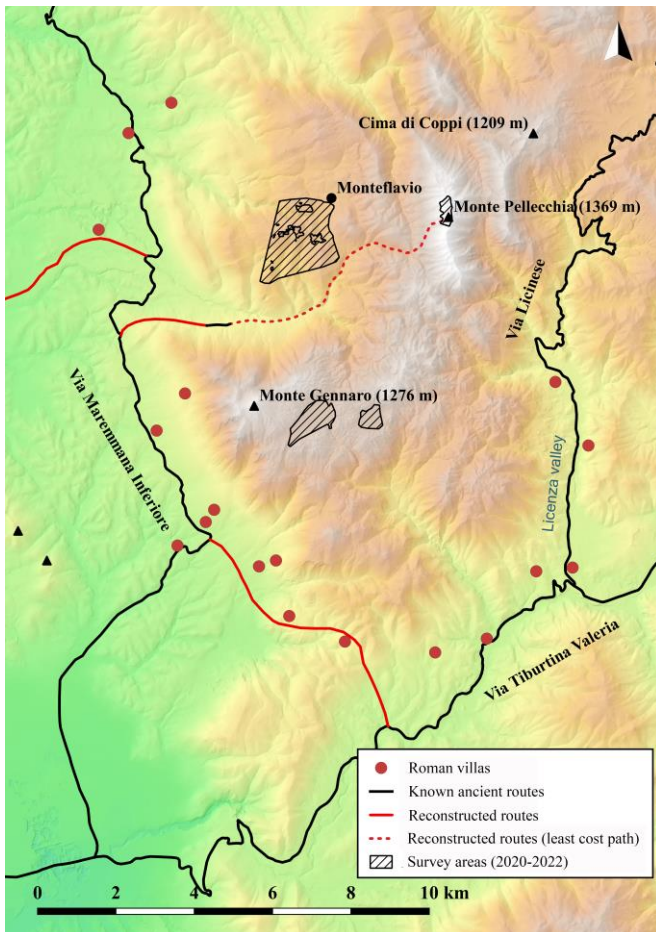


Fig. 3. The Roman landscape in the wider Monti Lucretili area, as is known from the bibliographical record. For ancient routes see fig. 12, footnote 68 and passim in the text (map by G. De Coste).

and the western foothills (fig. 3), such as the well-known case of the so-called “Villa of Horace” in the Licenza Valley<sup>25</sup>. Only a systematic survey can shed light on the true character of the early Roman settlement pattern in the Monti Lucretili upland district, as well as local variabilities within the Roman period.

In Late Antiquity, the rural landscape underwent some changes, following regional trends<sup>26</sup>: the human landscape was marked by the presence of a small number of large estates with a wide rural area available for pastoral exploitation<sup>27</sup>. No archaeological remains are reported so far for the Early Middle Ages, but according to contemporary written sources such as the *Regestum Pharphaensis*<sup>28</sup>, the presence of a dispersed settlement pattern in the rural territory of the Monti Lucretili area can be assumed: the population used to gather around rural churches for Christian rituals<sup>29</sup>. Later, during the Middle Ages, the entire area was populated by a network of ‘castelli’, fortified settlements aimed at the defence and/or economic exploitation of the surrounding territory<sup>30</sup>.

M.B., E.F.

### The «incastellamento» phenomenon in the Monti Lucretili area

The Italian phenomenon known as «*incastellamento*» can be described as the concentration of a rural population within fortified hilltop sites – the newly created nucleated settlements – that occurred between the 10<sup>th</sup> and the 11<sup>th</sup> century AD.

The debate on this topic was stimulated by the historian Pierre Toubert with the publication of his hugely influential thesis in 1973<sup>31</sup>. His research, mainly based on written medieval sources, focused on Medieval Latium, and the author analysed the Sabina landscape as a sample region, in which the Monti Lucretili area is located.

Following Toubert’s publication, many researchers have addressed the «*incastellamento*» phenomenon, giving additional and varied results concerning the development of castles. New research projects developed,

<sup>25</sup> On the ‘villa of Horace’ see the last monographic study FRISCHER, CRAWFORD, DE SIMONE 2006.

<sup>26</sup> AUGENTI 2016: 82-112.

<sup>27</sup> MARI 1994: 45-49; MARI, SPERANDIO 1995: 565-566.

<sup>28</sup> GIORGI, BALZANI 1879-1914.

<sup>29</sup> AMORE 1979: 222. For further discussion about the settlement pattern in Late Antiquity and Early Middle Ages see BERNARDI 2021: 22-31. In general, though, either systematic intensive survey or excavation is needed to better understand transitional periods that are less visible in the archaeological record (PATTERSON, DI GIUSEPPE, WITCHER 2004).

<sup>30</sup> BERNARDI 2021:187-190.

<sup>31</sup> TOUBERT 1973.

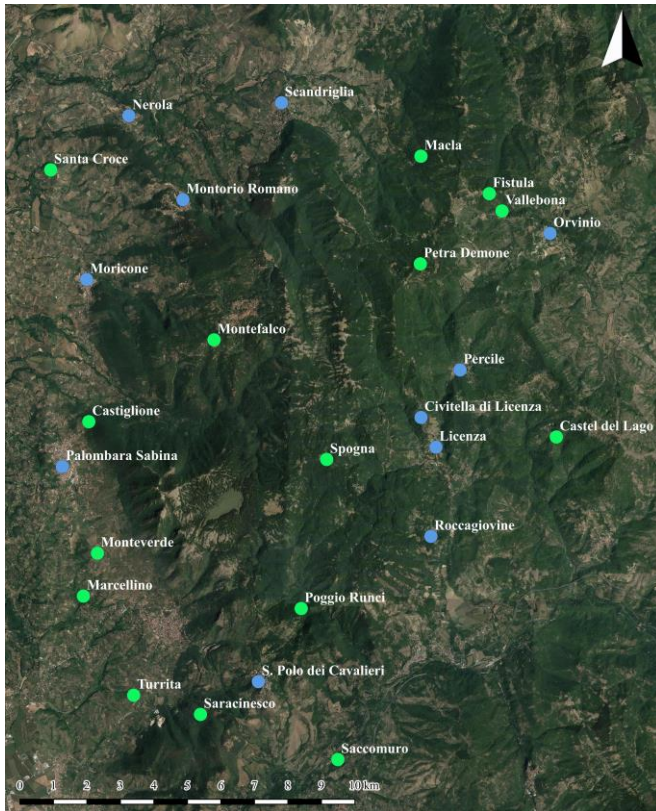


Fig. 4. Monti Lucretili castles - distribution map. Green: abandoned castles; Blue: castles developed into modern villages (map by M. Bernardi).

the majority of these (fifteen) were deserted between the late 14<sup>th</sup> and the early 15<sup>th</sup> century (fig. 4). However, eleven of them were not abandoned at the end of the Middle Ages, and are still populated today<sup>39</sup>. The recent study revealed a strong dichotomy between fortified sites: there are castles with productive economic roles and castles whose roles were mainly strategic and defensive. Assigning a castle to one category or the other appears essential in order to understand the reasons behind the castle abandonment registered between the end of the 14<sup>th</sup> and the beginning of the 15<sup>th</sup> century. During that period, the hilltop sites with a mainly strategic function were abandoned. The strategy of settling on remote hilltops far away from trade routes turned out to be unsuccessful over time – when social and historical factors led to a less intense land use and to a decrease in population, the more distant settlements were the first to collapse<sup>40</sup>.

M.B.

mainly based on excavations of hilltop sites, especially in Tuscany<sup>32</sup>. At the end of the 70s and during the 80s, other historians focused their studies on medieval castles in the Sabina area: Orsola Amore<sup>33</sup>, who analysed the Licenza Valley<sup>34</sup> and Jean Coste<sup>35</sup>, who concentrated his research on the entire Monti Lucretili area. After this, the area ceased to be investigated for about thirty years; within that time span, the focus on castles was limited to other Italian regions, or other Latium districts.

Nevertheless, some castles have been partially excavated in this region. In particular, in northern Sabina, along the Turano valley on the border with the Abruzzo region, the Caprignano site was investigated in the 80s<sup>36</sup>, and at the beginning of this century several excavations of castles sites were carried out by Étienne Hubert, shedding light on the different forms of fortified settlements<sup>37</sup>.

In the last few years, attention has again turned towards the «*incastellamento*» phenomenon in the Monti Lucretili area, with wider research on the rural and nucleated landscape during the Middle Ages, which marked the starting point of the new project we are presenting here<sup>38</sup>. Twenty-six castles are attested within the Park, which show various stages of settlement development: according to written sources,

<sup>32</sup> On pioneering research, see FRANCOVICH 1985a; FRANCOVICH 1985b; FRANCOVICH, PARENTI 1987; FRANCOVICH, CUCINI, PARENTI 1990; FRANCOVICH 1991; FRANCOVICH 1993; FRANCOVICH, HODGES 2003; FRANCOVICH 2004. On more recent archaeological excavations of Medieval sites in Tuscany see VALENTI 1996; BIANCHI 2004; VALENTI 2004; VALENTI 2008; VALENTI 2012; BIANCHI 2014; BIANCHI, HODGES 2018; BIANCHI, HODGES 2020. For a more recent publication on the «*incastellamento*» phenomenon see AUGENTI, GALETTI 2018. For a review on this topic for the Latium region see LANCONELLI, ROMAGNOLI 2018; BERNARDI 2021: 33-46.

<sup>33</sup> AMORE 1979. In the same years, other studies were published on castles in the Sublacensis Valley: DELOGU, TRAVAINI 1978; TRAVAINI 1979.

<sup>34</sup> For recent research on the «*incastellamento*» phenomenon in the Licenza Valley see BERNARDI 2014.

<sup>35</sup> COSTE 1988.

<sup>36</sup> NOYÉ 1984; BOUGARD, HUBERT, NOYÉ 1986; BOUGARD, HUBERT, NOYÉ 1988.

<sup>37</sup> HUBERT 2000; HUBERT 2002. On the other archaeological research and excavation project in the Latium region and in fortified sites see BERNARDI 2021: 38-40.

<sup>38</sup> Ph.D. research was carried out (2013-2016) by Martina Bernardi under the supervision of prof. Riccardo Santangeli Valenzani, published in 2021: BERNARDI 2021. For some insights see BERNARDI 2015a; BERNARDI 2015b; BERNARDI 2018a; BERNARDI 2018b.

<sup>39</sup> These data were confirmed through a detailed examination of the architectural remains.

<sup>40</sup> BERNARDI 2015a; BERNARDI 2015b; BERNARDI 2018a; BERNARDI 2018b; BERNARDI 2021.



### *Montefalco castle*

The castle of Montefalco (fig. 5) is located in the central-western part of the Monti Lucretili Park. The castle was first mentioned in the 13<sup>th</sup> century<sup>41</sup>, but through the building techniques it is possible to date the structure to the 11<sup>th</sup>-12<sup>th</sup> century<sup>42</sup> (fig. 6). Written sources appear to date the abandonment of the site to a period between the mid-14<sup>th</sup> century and the beginning of 15<sup>th</sup> century, as is the case with the majority of castles in the Monti Lucretili area<sup>43</sup>. Montefalco castle is considered by the inhabitants of modern Monteflavio as their original settlement, even if there is no direct link between the abandonment of the castle and the birth of the new *burgus* founded nearby<sup>44</sup>.



*Fig. 5. The enclosure of Montefalco castle (ph. V. Lattanzi).*

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<sup>41</sup> TOMASSETTI, BIASIOTTI 1909: 104; COSTE 1988: 393; BERNARDI 2015b: 115; BERNARDI 2018b: 160-161; BERNARDI 2021:119.

<sup>42</sup> The chronological attribution is suggested through the observation of the buildings made of stone material; it is not possible to exclude a previous settlement phase with structures made of wood or perishable material (BERNARDI 2015b: 115; BERNARDI 2018b: 160-161; see also BERNARDI 2021:119-124). To confirm this hypothesis, it would be worth a stratigraphic excavation along the enceinte, in order to solve doubts about the castle chronology and the definition of the development phases.

<sup>43</sup> See BERNARDI 2018a: 142; BERNARDI 2021: 204-209.

<sup>44</sup> The foundation of the modern village of Monteflavio occurred more than one century after the abandonment of Montefalco castle. The new nucleated settlement occupied the same settlement chamber (micro-region) of the abandoned castle (for the diachronic application of the micro-regional settlement approach see FARINETTI 2011). For those reasons, Monteflavio citizens consider the Montefalco castle as the village of their origin.

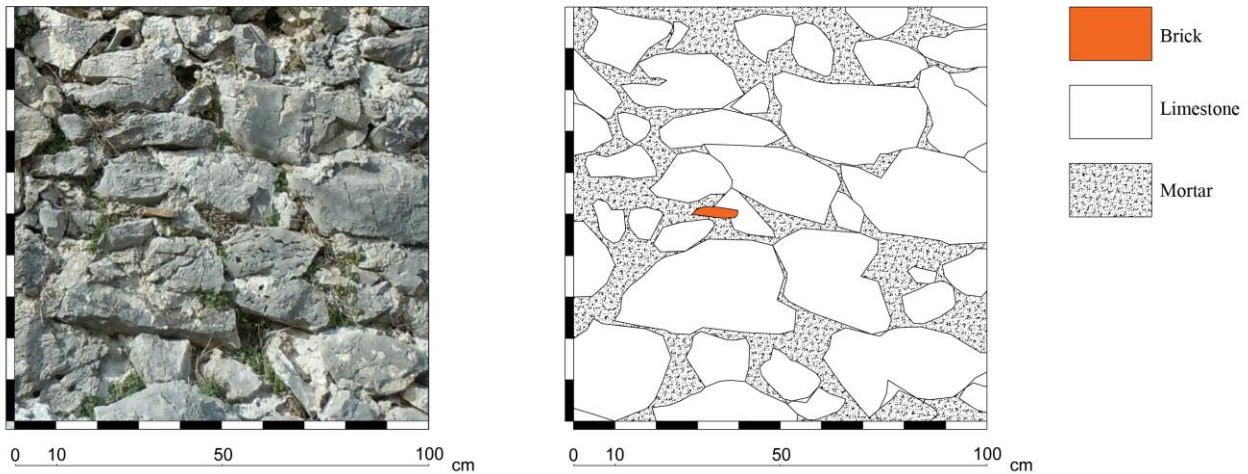


Fig. 6. Building techniques used in Montefalco's enceinte dated to the 11<sup>th</sup>-12<sup>th</sup> century (ph. M. Bernardi).

Montefalco castle (894 m a.s.l.) is located to the southwest of the hamlet of Monteflavio, in a strategic position that allowed the castle to overlook all the surrounding territory. A careful study of the remains revealed the castle structure, marked by a well-preserved, fortified enceinte with towers along it, enclosing the inhabited area. The walled area is about 0.6 ha. In the Middle Ages, peasants lived mainly inside the fortified castle, but many buildings outside the enclosure are attested, which probably served for housing and other activities. The most significant feature of the castle is the inner fortress, provided with an underground cistern and located at the highest point of the site, which represented the core of the settlement.

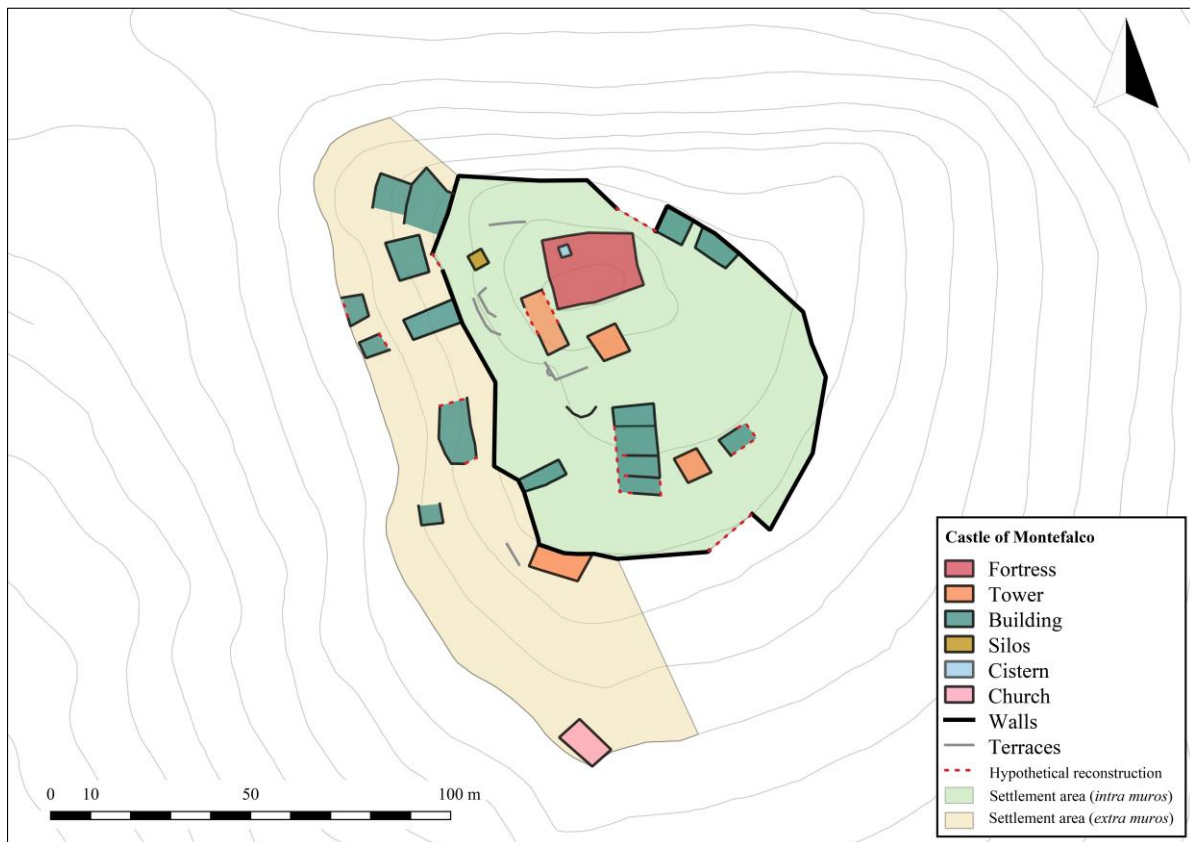


Fig. 7. The layout of the Montefalco castle with the visible structural remains (map by M. Bernardi)



Various types of buildings can be found inside the wall (fig. 7): quadrangular towers, aimed at controlling the southern side of the castle and the main trade routes crossing the area; rectangular buildings with one or more rooms used for the inhabitants' daily lives; a silos where agricultural products were stored (likely also used for storing snow). One feature that any castle community would need is a church, either inside or outside the village itself: a structure located in the immediate surroundings of the castle to the southwest, a few meters away from the enclosure, can be interpreted as a building serving the castle for worship<sup>45</sup>. According to the written sources, during the Middle Ages the Montefalco territory had at least four churches<sup>46</sup>.



Fig. 8. A stretch of road marked by two parallel lines of dry-stone walls ("macere") framing the path (ph. F. Fasson).

The castle landscape is marked by human activities linked to pastoralism. The geomorphological characteristics of the surrounding mountainous area promoted the practice of vertical transhumance, which in the past took place on Pellecchia Mountain (1369 m. a.s.l.), rich in upland pastures during summer, while in the winter season pastoral activities moved to the lower, flat land surrounding the modern settlement of Palombara Sabina. Agricultural exploitation is also attested in the landscape of Montefalco; in particular, olive groves (which are common in the entire Sabina region) cultivated on terraces built along the slopes, possibly since the Roman period, as well as crops from fruit trees. The landscape is characterised by the presence of forests, which cover a large part of the Montefalco area, today as in the past, with diachronical variations in their extension due to recurring shifts in major economic activities. In the uplands, the forest is constituted mainly of beech (*fagus sylvatica*) and maple trees; at a lower altitude, the environment is marked by the presence of the Mediterranean scrub, holm oaks, and groves/woods of turkey oaks.

Anthropogenic features related to agro-pastoral activities support the entire territory, in the form of dry-stone walls (named *macere*) defining enclosures, which were traditionally used to define properties as well as

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<sup>45</sup> Only an archaeological excavation could confirm the function.

<sup>46</sup> COSTE 1988: 393-394.

different land uses within these properties<sup>47</sup>. Movement patterns in the landscape could be roughly defined after the first field seasons, and will be the subject of further research. For the time being, the available data suggests that the main access to the castle was from the south, where two parallel lines of dry-stone walls framing a path were identified during fieldwork (fig. 8). This route offered easy access both to the enclosed castle and to the area west of it, where field enclosures related to the castle are still visible.

M.B.

### *The 2020 and 2022 field seasons: methodology and preliminary results*

During the first field seasons on Montefalco castle and its surroundings (2020 and 2022), we decided to proceed step by step, testing a survey methodology designed to investigate the intra-site activities<sup>48</sup> and getting a preliminary idea of the rural landscape around the castle.

Generally speaking, three different survey methodologies were applied: a systematic on-site survey based on total collection of pot sherds and architectural mapping (the castle area and the sites detected: MONF-S2, MONF-S4 and MONF-S5 – the red-orange scale gridded sites in fig. 11); a systematic off-site transect based survey (the blue-light green scale areas in fig.11); and a non-systematic survey within the forest along the main paths still in use today, as well as on the hilltops and upland plateaus (the light blue areas in fig. 1).

On the Montefalco castle site (named MONF-S1), the systematic on-site survey methodology was based on three slightly different fieldwork strategies that combined architecture and ceramic surveys.

First, the architectural survey of the castle structural remains, already started as a preliminary work on the site and carried out by Martina Bernardi as part of her Ph.D. research, was completed<sup>49</sup>. Dedicated fieldwork registered a total of 27 UTs (Topographical Units), i.e. the structural archaeological evidence, photographed and documented in specific survey forms. A ceramic survey was carried out on these UTs, in the inner area of the definable structures (fig. 9). The limits of the survey areas are thus dependent on the shapes of the preserved structural remains, and are named S1\_R\_UTx (where R stands for *rocca* – castle, and x as progressive numbering).

Second, a ceramic survey was carried out in the remaining areas of the fortified site, outside the UT structures. The survey units are named S1\_Rx and were spatially defined either by joining the external corners of the visible structures/buildings (UTs), or by following the terrace walls or the line of the castle fortification, when feasible. Within the enclosure of the castle, the strategy of collecting ceramics according to the functional areas as defined by the visible structures resulted in highly irregularly shaped survey units<sup>50</sup>. Drone flights (Dji MAVIC) were performed over the site in order to better define the structural UTs and the areas in between, producing an integrated reference map which also combines data from satellite images and historical aerial photographs<sup>51</sup> (fig. 9).

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<sup>47</sup> These dry-stone walls were certainly in use during the modern period, as attested by archive documents. Nevertheless, as is often the case with dry-stone walls – characterised as they are by long-term use that is hard to detail chronologically – we cannot yet be sure of the chronological attribution of the Montefalco *macere* to earlier periods, although the suggestion that they were connected to the medieval castle is strong. Both terrace walls and division walls, built using dry-stone building techniques, are attested for the medieval period in Italy (MARTIN 1993: 388-399; STRANIERI 2009; D'ALTILIA, FAVIA 2021). STRANIERI *et al.* 2009 report on excavation pits aimed at the chronological attribution of dry-stone walls (see also HARFOUCHE 2007: 40-42); in the near future, we are planning a similar, invasive investigation.

<sup>48</sup> For the application of intensive artifact surface survey on fortification sites see FACHARD 2016, who focused on research on Classical-Hellenistic rural fortifications in central Greece. The work refers to a different timespan, but constitutes a very interesting reference in terms of the methodological implications involved.

<sup>49</sup> BERNARDI 2021.

<sup>50</sup> The combination of architectural surveys and ceramic surface surveys is rather popular in the Mediterranean area, especially in surveys on city sites, and has been discussed thoroughly in the volume edited by VERMEULEN *et al.* 2012.

<sup>51</sup> Volo Base (GAI) photos of 20<sup>th</sup> August 1954 (f. 144, str. 36, fot. 1099, neg. 24222), © AFN-ICCD, fondo VB; Aeronautica Militare photos of 26<sup>th</sup> July 1962 (f. 144, str.2, fot. 2357, neg. 179009), © AFN-ICCD, fondo AM.



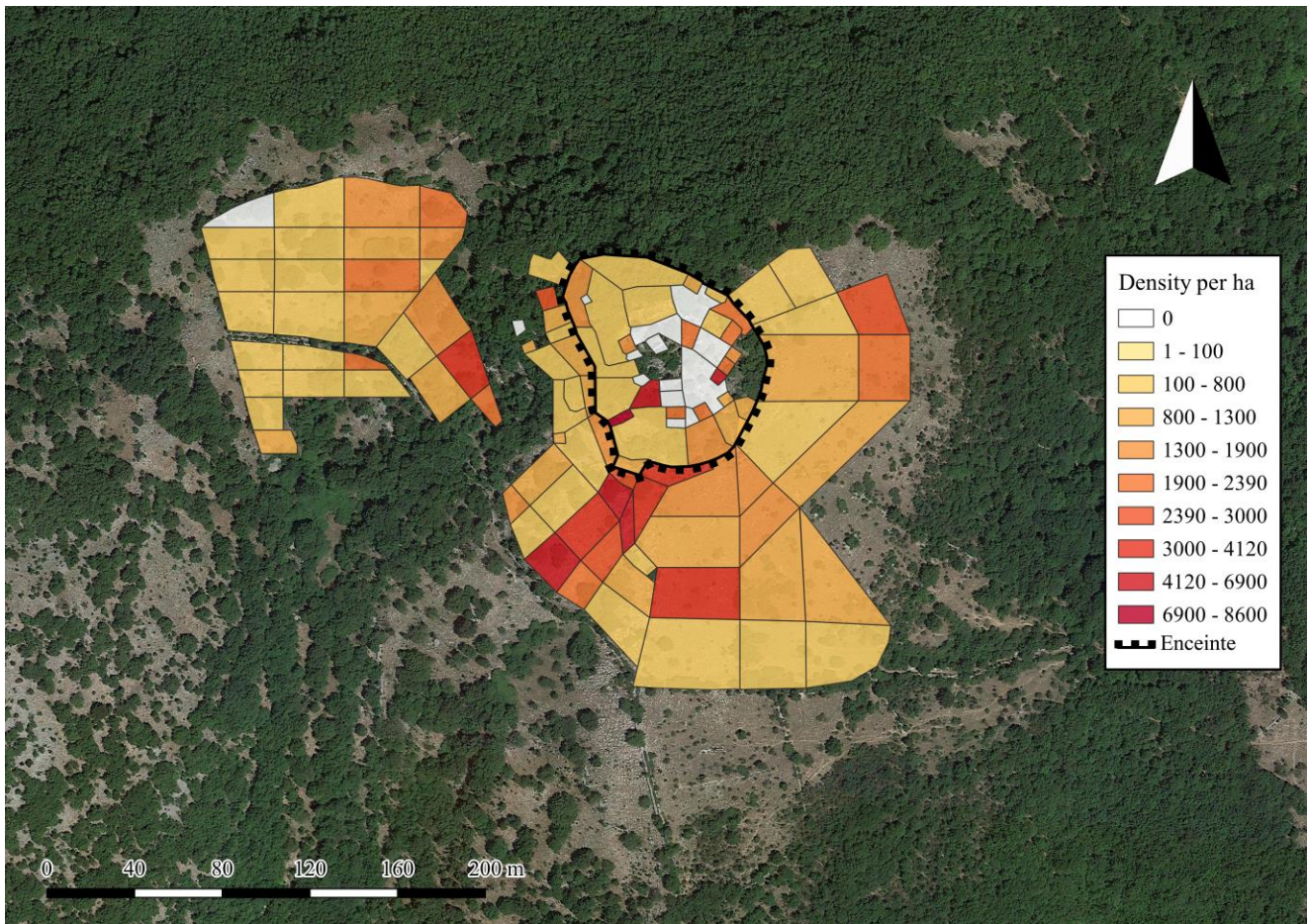


Fig. 9. Ceramic density map of the surveyed units inside and around Montefalco castle (GIS map by G. De Coste).

Third, in the areas strictly connected to the fortified site, i.e. the structured open zones immediately outside the enclosure, survey units were similarly designed, according to the surviving structural evidence, as well as their spatial relation to the castle enceinte. The ceramic evidence in these areas consists of dispersed material among the sporadic structural evidence, such as dry-stone walls (the *macere* enclosures mentioned above), terrace walls, and a few rubble stone lumps (a product of the partially collapsed walls, rather than of field clearance)<sup>52</sup>. These may have been property boundaries of defined zones used for agricultural or pastoral activities. Since those areas are very much connected with the walled castle and can be considered a part of it, survey units were numbered after the site name, i.e. S1\_x (where x stands for a progressive number).

All the survey units were located with absolute GPS<sup>53</sup> coordinates and were drawn on Google Earth satellite images (dated to 7/1/2019), acquired in the periods of the year when vegetation is lower and there is greater visibility of the ground. This is also why our survey seasons took place in February: ploughed fields are absent along the castle hill slopes and very rare in the surrounding area, and thus we could get the greatest visibility during the winter season, when vegetation is low and bare. For each survey unit, sherds were counted (following a total count approach) and visibility values were registered (on a 1 to 10 scale). A total count strategy was applied, and the pot sherds were all collected.

<sup>52</sup> A detailed mapping of the dry stone walls and terraces in the area is planned for future research, aiming at the protection and enhancement of the traditional agricultural structures linked to the agro-pastoral use of the land in their historical dimension (for similar attempts see BEVAN 2003 and the protection rules concerning the traditional British rural landscape – HOLDER 1999).

<sup>53</sup> Portable GPS with an enhancement of the antenna signal.



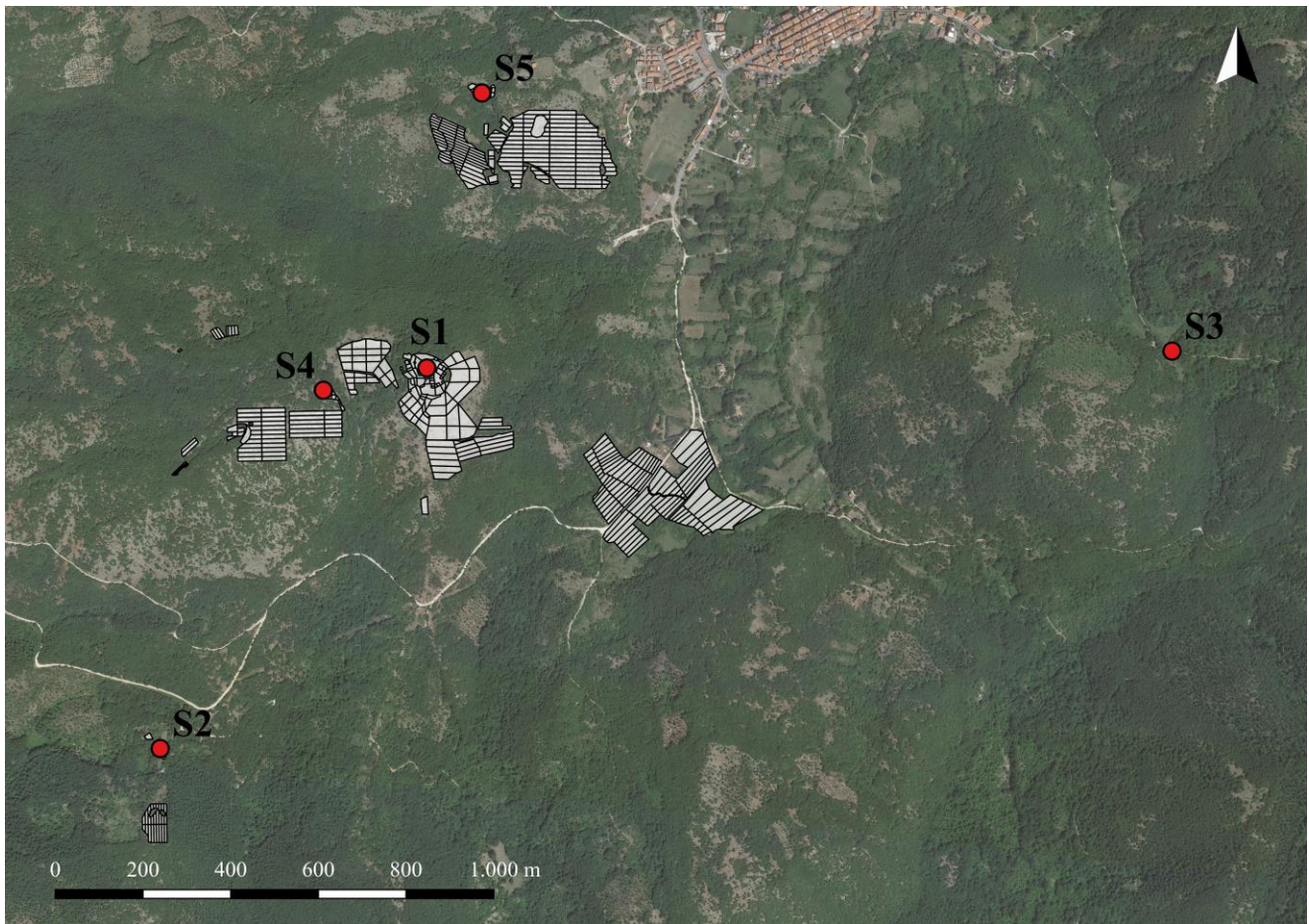


Fig. 10. The transects surveyed around Montefalco castle and the sites discovered, probably connected to the castle in the Middle Ages (S1-S5). The modern hamlet of Monteflavio is visible in the upper section of the map (by G. De Coste).

Outside the castle area and its immediate surroundings, a systematic off-site transect-based survey was carried out on the slopes surrounding the Montefalco castle and the small upland valley to the northeast of which leads to the modern village of Monteflavio. The transect-based off-site survey was extended in 2022 on the south and southwest slopes of Monte Calvario, a hilltop located north of Montefalco site, and likely related to the castle during the Middle Ages (fig. 10).

Intensive-systematic surface survey standard strategies were employed, mapping transects (40 to 100m long) defined according to field boundaries, recognizable both on the base satellite images and on the ground. Surveyors walked along parallel lines at a distance of 6-10m (named TRx - where x stands for a progressive number). For each transect lane, potsherds were counted (based on a 1m wide line representative of the entire transect lane), and visibility values were registered (on a 1 to 10 scale). Density values were calculated considering both the visibility factor and the actual walked area in sqm (fig. 11). Values were then projected into a hectare based scale, in order to allow for comparisons with other survey projects<sup>54</sup>. Two sites were detected in this way (MONF-S4, MONF-S5 see below). The off-site areas systematically surveyed are limited (20 ha up to now – in dark blue in fig.1) due to the heavy forest coverage and the strong presence of undergrowth.

In these areas, which are less easy to systematically walk, an extensive yet non-systematic survey was performed in 2021 within the wider mountainous area (the light blue areas in fig.1 – ca. 300 ha). In the forest, where a lack of visibility and inaccessible conditions do not allow for a proper systematic survey, we went directly

<sup>54</sup> See for instance BINTLIFF, HOWARD, SNODGRASS 2007; BINTLIFF *et al.* 2017. For density values per ha used for comparative purposes see ATTEMA *et al.* 2020.

to sites known to the local inhabitants and visited their immediate surroundings (MONF-S2, MONF-S3 -fig. 10-). The slopes were thus examined under the guidance of local people, though non-systematically and without using transect coverage. In addition, we followed the main paths still in use today to survey their sides, when possible. The visibility was zero due to the dense undergrowth and accumulation of fallen leaves, even though we examined the ground carefully up close; we decided not to proceed to a sample clearance after a few attempts to clear the soil from vegetation in small sample areas. In fact, no surface material was revealed in the few samples we cleared, and the procedure turned out to be too time-consuming for our small team and restricted budget. Instead, an attempt has been made to map the material evidence of economic use of the hilltops and upland plateaus, such as the snow pits, as illustrated below.

Outside the forested areas, ceramic density values in the countryside shown on the map (fig. 11) can be related to the presence of the castle. The density is quite low on the slopes, and material does not seem to have been washed down the hill. Higher density values can be found on the slopes towards the south: this is probably due both to the morphological structure of the castle hill and the movement of surface water, as well as to people moving to and from the castle, who probably used the path still recognisable today on the southern slope, marked by a double line of parallel dry-stone walls (*macere*) - see above fig. 8. High density values are also visible in the transects crossing the hill to the immediate W of the castle, at a lower altitude (850 m a.s.l.). The presence of ceramic material shows the location of a small site (MONF-S4), Medieval in date, extending over small terraces with a view over the Montefalco castle to its east. The site was gridded, visibility was recorded, and pot sherds were counted on a total count basis and collected (fig. 10 and 11). These represent a small focus of activity, probably a group of huts connected with the castle activities (see below).

On the S and SW slopes of Monte Calvario, survey activities aimed at understanding the economic use of this portion of countryside, which was probably located inside the territory and was thus under the control of Montefalco castle during the Middle Ages. These slopes, facing south, were located to the N of the castle hilltop, from which they were separated by a deep stream valley, although fairly easily reachable through local inner routes (fig. 12). Paths marked with a dashed black line are not mapped on the local cadastral maps but have been reconstructed following paths visible on aerial photos; these also clearly appeared on the ground during fieldwork and were GPS mapped. The slopes carry traces of agricultural terraces, concentrated in the downslope areas where eroded soils from the higher, steeper slopes could be collected. Their presence facilitated soil accumulation, increasing agricultural capabilities. In the hilltop area and the higher, steeper slopes, however,

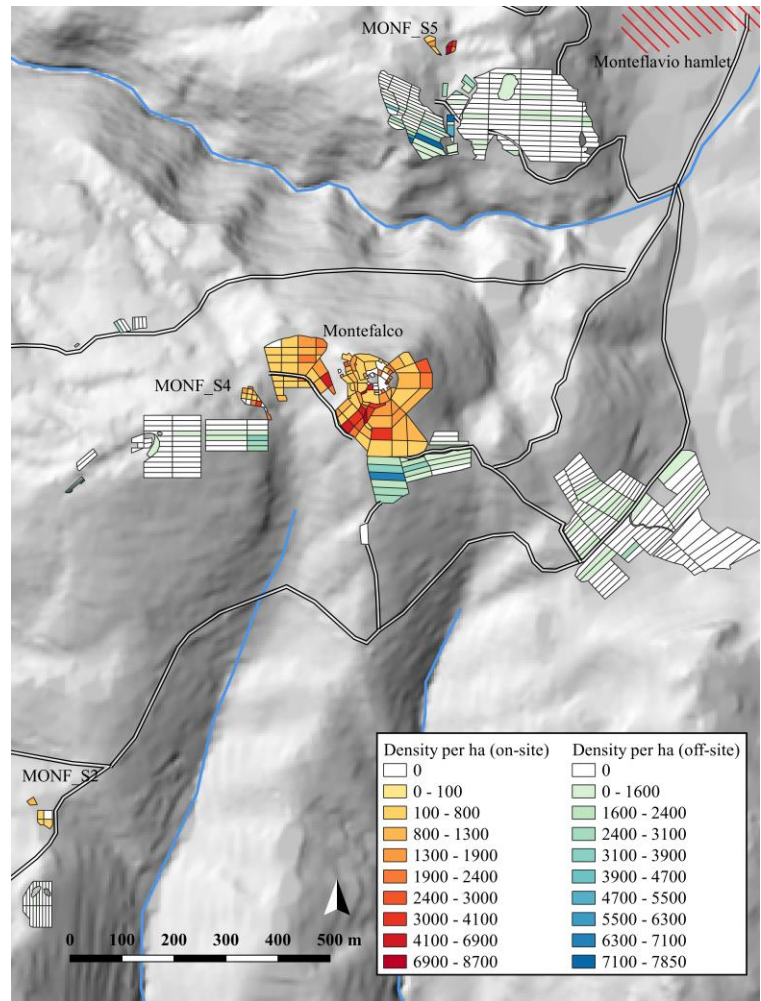


Fig. 11. Pottery density map of the transects surveyed around Montefalco castle in the 2020-2022 field seasons. During the Middle Ages, all this area was probably under the castle's jurisdiction (GIS map by G. De Coste – E. Farinetti).



outcrops of base rock appear and almost no soil is left, except in certain small, fenced zones (marked by dry-stone walls, called “cese” by the local people). The “cese” testify to a long-standing tradition of defining spaces in the upland rural environment. In fact, these structures were used to keep out wild or domesticated animals from the cultivated small sectors, and their long-term use appears to be testified by the presence (which remains today) of rich, dark brown soil of organic origin. A high density of sherds corresponding to the “cese” also indicates their intensive agricultural use. By contrast, potsherds in the areas devoted to stock breeding are almost absent. Here, the soil has been eroded away. The long-term agricultural use of this area, probably since the Middle Ages, appears to be confirmed by a rural site from that period detected during the intensive survey (MONF-S5). The site was gridded, visibility was recorded, and pot sherds were counted on a total count basis and collected (fig. 10 and 11).

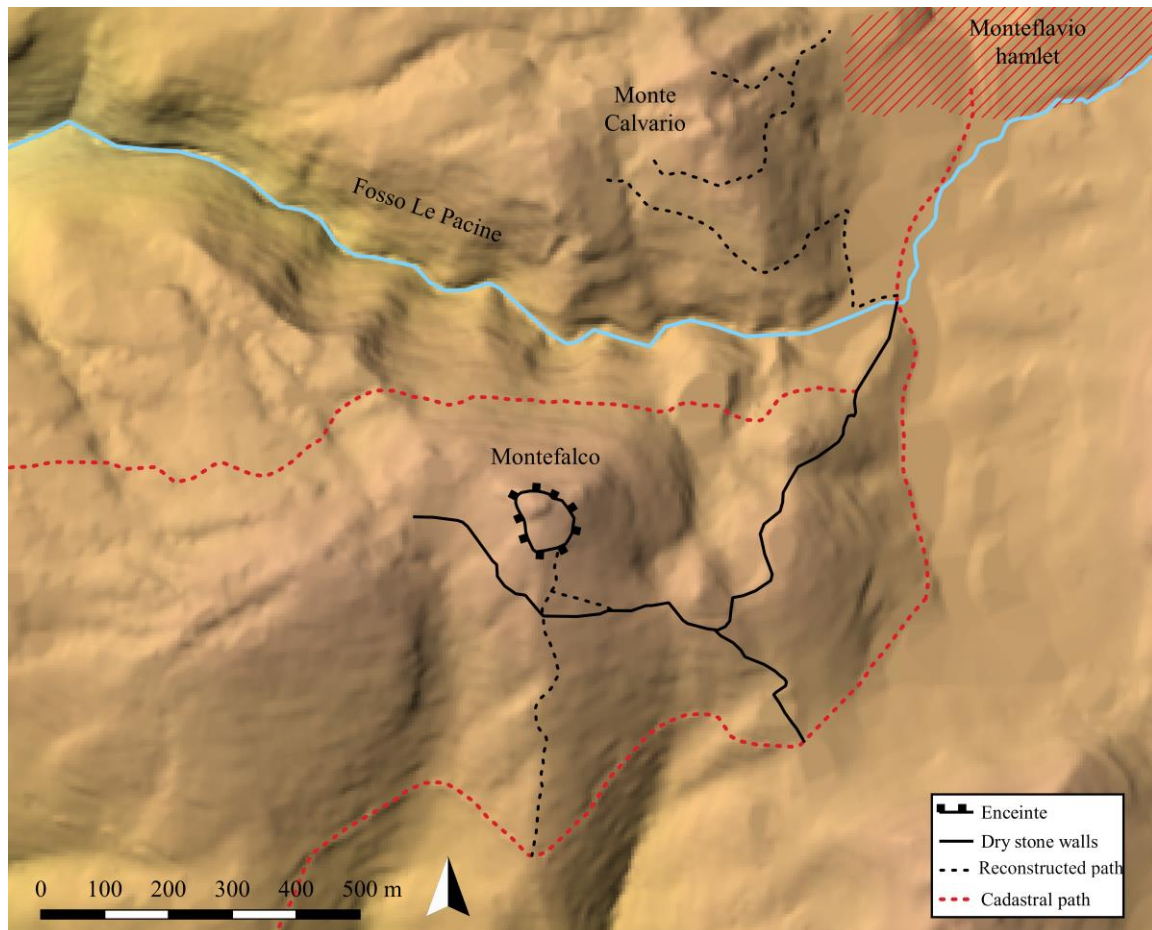


Fig. 12. Reconstruction of the routes leading to Montefalco castle. The paths that connected cultivable and breeding lands with the castle are outlined; the ‘dry-stone walls’ marking the paths are still visible on the ground (map by G. De Coste – E. Farinetti).

Systematic collection from both sites (MONF-S4 and MONF-S5) shows a clear medieval occupation, but an earlier phase also seems to appear, likely datable to the Early Iron Age. Only a detailed study of the coarse material will shed light on the precise chronology and character of the human activity in these locations.

To the southwest of Montefalco, on the spur of Colle Storo, an ancient cistern well known to the local population was visited and recorded. The structure, with an apsidal shape, is built with a cement conglomerate made of limestone and mortar (fig. 13)<sup>55</sup>. Nearby, on the other side of an unpaved road, an area of activity was

<sup>55</sup> Despite the ‘given name’ (it is called ‘Roman cistern’ by the local inhabitants), the structure does not seem to date to the Roman period, according to the building technique.



detected, with many structures made of rubble stone (without the use of mortar) and as yet undetermined courseware pottery on the surface (MONF-S2). From Colle Storo hill there is a perfect view of Montefalco castle; we thus cannot exclude that the site (a hamlet?) might have been connected with the fortified village, although a definitive chronological attribution is yet to come<sup>56</sup>. The unpaved road mentioned above is delimited by dry-stone walls (still in use in the modern period) and likely marks an ancient route coming from the long-trade route network (of Tiburtina Valeria) and leading to the Montefalco castle hill and the innermost area, towards Monte Pellecchia (see below)<sup>57</sup>.

E.F.



Fig. 13. The cistern located on Colle Storo slopes (MONF-S2) (ph. M. Bernardi).

### *The castle survey: a first attempt towards the reconstruction of the landscape in the Middle Ages*

The first field survey seasons on and around the Montefalco site created many research questions and constituted a first attempt to answer some of them, setting up a research framework with a multifaceted methodology. The diachronic approach followed by the landscape research project left space for more detailed, historically oriented research focused on the Medieval period, due to the character of the main site known for the sub-regional unit, the Montefalco medieval castle. Here we present a first attempt to analyse the interactions

<sup>56</sup> The nearby cistern could have been used as rainwater storage for the inhabitants.

<sup>57</sup> A study of the human mobility in the area is planned, which would integrate the analysis of the main and secondary roads in the region with the transhumance routes and with the routes linked to specific economic activities, such as the snow trade.



between humans and environment and the landscape transformations that occurred during the Middle Ages: how and where the peasants of the castle exploited the available natural resources, and which areas were used for animal husbandry and/or agriculture in the surrounding areas of the fortified village.

The intensity and the character of the built structures inside the castle area show that the medieval population was mainly concentrated inside the castle enceinte (see above fig. 7 and 9). At first glance, the artefacts registered on the surface, along with their density pattern, indicate that the site developed between the 11<sup>th</sup> century and the 14<sup>th</sup> century, in accordance with previous research on the castle (see above<sup>58</sup>). Further analysis on the material and more invasive research on the site may determine the chronology of the castle and allow us to better understand the early phases of the castle system.

The high density of ceramic material found in the area immediately outside the enceinte, especially in the southeast and west sectors, where density values exceed those inside the enceinte, could only be partially the result of erosion and wash-out, which push soil out from the castle interior, at points where severe damage to the enceinte has occurred. The regular presence of wild animals (wild pigs in particular) and cattle also influence the taphonomic condition of the area. Nevertheless, the high-density values certainly represent traces of a community life nucleated in and around the castle. In particular, metal slag and other waste material refer to past craft activities, especially along the western slope of the site, where buildings can also be found, some of which registered as UTs (see above).

Conversely, the transects covering the valley running N-S along the eastern foothill of Montefalco castle did not return high quantities of material (see above fig. 11). Density values were very low, and over large areas surface pot sherds were entirely lacking. This testifies to little or no movement of the soil down the slope on that side of the hill, since material from the top did not reach the foothills. Furthermore, the absence of surface evidence for human activities in the lower area is probably due to the marshy character of the terrain, which would not permit regular agricultural exploitation, whether cereal cultivation or the cultivation of fruit-trees. The latter were cultivated, though not in abundance, on the calcareous rocky slopes, as early modern archive documentation attests<sup>59</sup>.

Generally, the field survey highlighted the low suitability of the land surrounding Montefalco for agricultural exploitation. The material signs of human activities linked to the agricultural exploitation of the land are poor and are exclusively found on small terraces along the slopes, which are adequate for restricted agriculture activities, though likely only for family subsistence. The geomorphological character of the land close to and around the castle does not allow for an

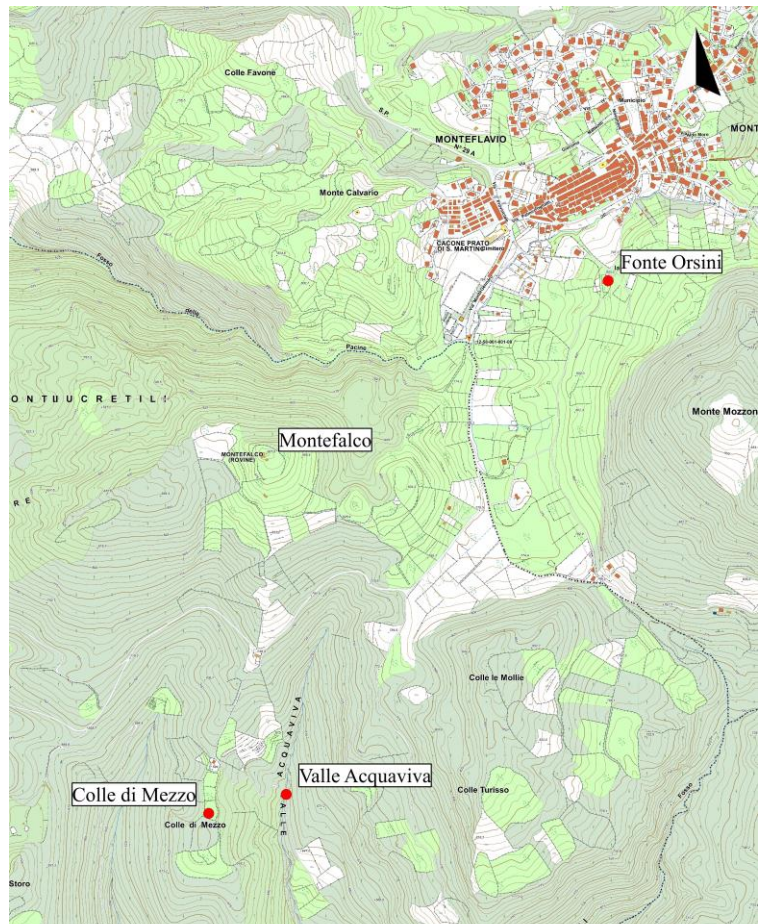


Fig. 14. Water sources in the surroundings of Montefalco castle: Colle di Mezzo, Acquaviva, Fonte Orsini (map by G. De Coste - CTR 1:5,000 base map).

<sup>58</sup> BERNARDI 2018a: 142; BERNARDI 2021: 119-124.

<sup>59</sup> See Urbano Urbani, "Per la comunità di Monteflavio. Della territorialità di Montefalco", a leaflet printed in Rome in the 1908.

extensive agricultural exploitation. The family properties were, as mentioned above, marked by dry-stone walls that formed enclosures.

All those elements seem to show that pastoralism was the main source of subsistence for the castle community. This hypothesis has also been confirmed by the inhabitants of Monteflavio, and in particular by shepherds: for centuries, animal husbandry in this area was characterised by vertical transhumance, up towards Monte Pellecchia (in the summer months), and back to the lower lands by Palombara Sabina (in wintertime)<sup>60</sup>.

This may have influenced the Medieval settlement pattern, marked by the strong role played by the only nucleated settlement (the castle), overlooking a dispersed pattern of small hamlets or groups of huts throughout the area at fairly large distances from one another<sup>61</sup> (MONF-S4 being the closest to the castle, and MONF-S2 and MONF-S5 being the other possibilities). The area around the church of S. Martino, located in the valley below the modern village of Monteflavio along the road towards Montefalco castle, and known to local people by the name of *capanne*, or huts in Italian, may also be another possible location.

For the time being, no water sources have been identified in the area. One hypothesis suggested by local people suggests that the modern spring *Fonte Orsini* (17<sup>th</sup> century) and the natural spring on Colle di Mezzo hill (fig. 14) could have been the water sources for the castle, but there are no archaeological or historical data to confirm this. Furthermore, the toponym *Acquaviva*, attested in the area to the south of the castle, between the hills of Colle di Mezzo and Colle Turisso, suggests the (former) existence of a spring.

M.B., E.F.

#### *Current lines of research for the long-term study of the Monti Lucretili landscape: patterns of trade and mobility*

The intensive survey results, with the help of extensive non-systematic survey activities within the highly wooded areas, present interesting lines of research on trade patterns and various scales of mobility.

Following path n. 312 of the Monti Lucretili Regional Park from the village of Monteflavio, the ruins of a small medieval church appear on the left: this is the so-called *Madonna della Neve* or *Madonna delle Carbonere* (MONF-S3). The structure is rectangular and is oriented E-W. The few wall sections preserved show different styles of masonry (fig. 15), testifying to the long-term use of this place of worship. The name assigned to the chapel, changing over time, reflects the economic use of the route along which it was placed, namely the 'snow route', employed for the snow trade that served the city of Rome and its surroundings<sup>62</sup>. Traces of this economic activity can be found in several local place names along the physical routes in the area. When the snow trade ended, the commercial route skirting the chapel was used for the charcoal trade. Following this repurposing, the small church was referred to as "Madonna delle Carbonere" by the local people. The evidence testifies to the strong devotional character that both these activities, strongly rooted in the region, assumed in the perception of the local population, which is still alive in oral traditions.

With an eye to the material and intangible evidence of past economic uses, which could date back to much earlier periods, the last field season was partially focused on the snow trade, an economic process in which the area was involved until the end of the 19<sup>th</sup> century (when it ceased on account of the introduction of refrigerators) and the material signs of this activity. To map this activity, we marked the upland snow pits<sup>63</sup> on different sets of aerial photos and also GPS mapped them on the ground on the highest hilltop plateaus: Campitello-Pratone (1020 m a.s.l.) of Monte Gennaro, which dominates the SW portion of the district, and Monte Pellecchia, which

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<sup>60</sup> Research is still needed on the reconstruction of the land-use in the area in the Medieval period, especially as far as the extension of the forest coverage is concerned.

<sup>61</sup> BERNARDI 2021.

<sup>62</sup> Snow, like salt, was a key element for food conservation.

<sup>63</sup> The snow pits are often natural sinkholes, sometimes (but not always) defined by a masonry curb of truncated conical shape, with exposure to the north to ensure a cold climate, and often with a clear slope, to facilitate the spontaneous collection of snow in these cavities during the winter months, which can also be aided by someone performing a rolling action. Their dimensions range from 11 m. to about 25 m. in diameter. On previous research on snow pits in the area see SCOTONI 1972 and SCOTONI 1995. For a comparison on this issue see STAGNO 2018: 141-165.



dominates the NW portion of the district - 1369 m a.s.l.<sup>64</sup> (fig. 16). We surveyed the interior of most of the pits, and their immediate surroundings – a 5m radius far from their border – and no material was detected. Random walking across the area to look for any extra pits not visible from the aerial photos was also performed. In addition, we followed and mapped the material signs of the snow routes, used for the snow trade<sup>65</sup>.



*Fig. 15. The ruins of the medieval church named by local people "Madonna della Neve or Madonna delle Carbonere" (MONF-S3) (ph. M. Bernardi).*

Upland specialised mobility was strictly linked to the main regional mobility network in the wider area and to the long-distance roads, in particular the via Salaria towards the north and the via Tiberina-Valeria through Tibur towards the south. Generally, mobility patterns within the Monti Lucretili district, often related to transhumance practices<sup>66</sup>, can be traced back to the Pre-protolithic period, when physical routes, such as the

<sup>64</sup> No pottery was found during survey on the pits and in the immediate surroundings.

<sup>65</sup> The paths used for the snow trade were typically very wide, enough for a small wagon drawn by mules. A double passage for pedestrians and chariots can still be seen along some roads today. The roads were defined by dry stone walls, which could also act as retaining walls, forming terraces.

<sup>66</sup> BARKER 1981: 156; BARKER 1989; ANGLE, GUIDI 1995: 518.



Aniene valley, were used and developed to connect the Tirrenic coastal plains to the inner Apennine valleys<sup>67</sup>. In fig. 3 we can see the main routes in the area back to the Roman period, and the reconstructed paths based on actual archaeological evidence, as reported in the bibliography<sup>68</sup>.

In historical times, snow, like salt, was a luxury good, and we can follow the movement of these 'white' elements by simplifying the process in general terms: carrying salt upwards, and carrying snow downwards. The same carrying agent may have been used in both cases, and this may have been the shepherds at certain times of the year. The trade might not have been exclusive to these goods, but it certainly involved them. For the medieval period, Toubert (one of the major scholars on Medieval Latium) refers to wood from the uplands, along with cereals and wine from the hilly lands in between, taken over by salt on the way back<sup>69</sup>. Similar commercial routes, incorporated into a regional commercial network, may also have functioned in earlier periods, such as during the Roman period, when complex, controlled and organised commercial networks were active in the wider Latium region<sup>70</sup>. In our project we are looking for archaeological evidence to support this hypothesis. In more recent periods, the collection of snow was a practice involving the whole community, as can be gleaned from interviews with the local people, who shared their memories with us. We firmly believe that the ethnographical examination of more recent periods can reveal clues to past experiences of the same landscape.

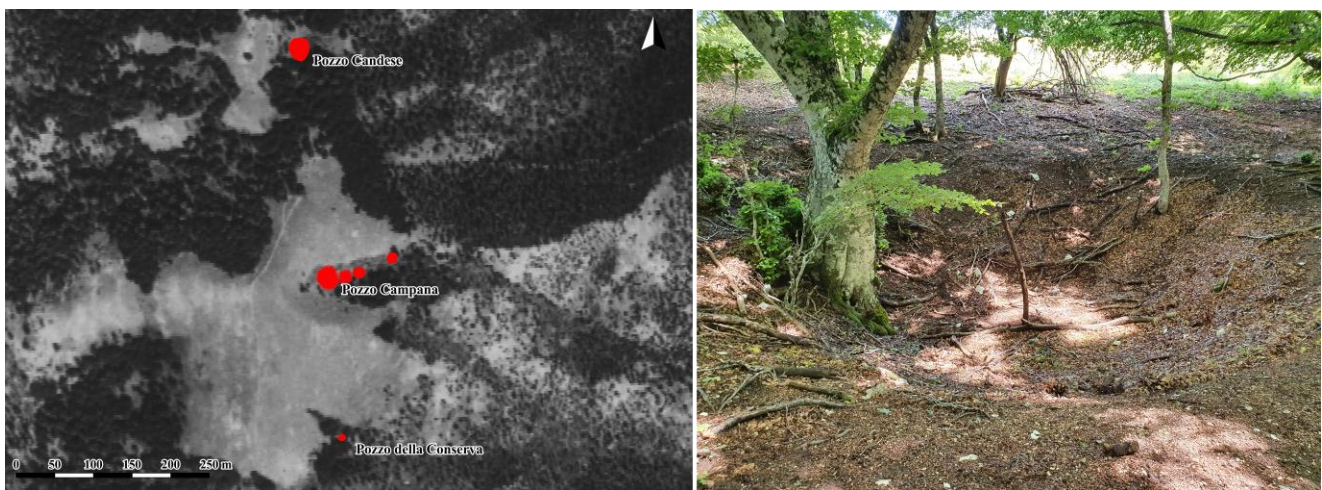


Fig. 16. Left: Some snow-pits on Mt. Pellecchia, mapped on the airphoto from 'Volo Base' (GAI) October 9, 1954: f. 144, str. 84, fot. 917, neg. 203563 (© AFN-ICCD, fondo VB. Licenced by MiC). Right: A picture of a snow pit on Mt. Pellecchia (ph. M. Bernardi).

In fact, the study of the recent rural past within the project follows an ethnoarchaeological-approach, in an attempt to establish a dialogue with local communities by listening to their recent past narratives and observing their current habits and perceptions of the landscape in order to understand the genesis of cultural traditions. These were produced by previous legacies and based on the territory's social history, visible through its material culture and landscape forms<sup>71</sup>. As mentioned earlier, a fruitful landscape research also depends on the local community's awareness of the ongoing studies. Local people were very keen to help us find our way through the

<sup>67</sup> In addition, the connection between the Tibur area (via Tiburtina) with the Reate basin (via Salaria vetus) certainly interested the area, as the least cost path analysis shows. This has been hypothesised for the Protohistoric period and is attested since the Roman period (CERULEO 1980: 7-8; ASHBY 1986: 71).

<sup>68</sup> The dashed line in fig. 3 has been reconstructed on the basis of short segments that are still visible, included in the least cost path resulting from a GIS analysis. The anisotropic Tobler's hiking function was applied, using the graphic interface RStudio 4.2.0 (DEM resolution 5x5 m.) - ALBERTI 2019. The path segments still visible and mapped have been included as start and end points in the least cost path analysis.

<sup>69</sup> TOUBERT 1973; TOUBERT 1995.

<sup>70</sup> The snow-trade may have started in the Roman imperial period for which it is attested as an intensive commercial activity (Sen., Nat. Quaest., IV, 13, 3-9; Gell., Noctes Atticae, XIX, 3-10; Plin., Nat. Hist., XXXI, 3. See also DEL SIGNORE 1997: 217-219). For the medieval period see BERNARDI 2022.

<sup>71</sup> CHANG, TOURTELLOTTE 1993; SEGUI, CREIGHTON 1998; ATTEMA, LAROCCA, DE NEEF 2019.



history of their land and the recent agro-pastoral past. Activities planned for the near future will include progressively more public participation in local heritage, with the organisation of further participatory workshops aimed at the direct involvement of citizens in research and landscape planning, in the name of a ‘heritage community’, as the 2005 Faro convention states<sup>72</sup>.

Once the snow trade was over, in the early modern period, the same uplands routes were used until more recently for the activities related to charcoal production, exploiting the same upland landscape. These shifts in the exploitation of the mountainous area led to two main changes. In terms of human agency, local people would have been involved in the new charcoal production and trade from the beginning, but were soon replaced by specialised labourers, the so-called ‘Carbonari’<sup>73</sup>, involving population transfers from other Italian regions. In terms of landscape, these shifts in the exploitation of the uplands, always alongside the main activity of stock breeding, lead to a decrease in the size of the forest, due to the high degree of exploitation of wood (taken from the slopes) for charcoal production, while the tops of the hills were devoted to pasturage<sup>74</sup>.

In conclusion, the first seasons in the field have resulted in positive and encouraging outcomes, highlighting the strong potential of the research area, which shows signs of a long-lasting human influence over the centuries. At the same time, there are clear challenges for this type of research, especially regarding the precise chronological attribution to material features and related human activities, as well as the coverage of the terrain that can be surveyed. Although promising, the field survey of the territory of the Montefalco castle was just the first step in a wider landscape research that we are planning for the coming years.

E.F.

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<sup>72</sup> For best practices in this field see BARATTI 2012. See also RIVA 2017, and in particular BARATTI 2017.

<sup>73</sup> The ‘Carbonari’ were people who produced charcoal, a useful resource in craft activities or daily life. They were often specialised workers who moved from one region to another. They cut trees and often burned the boughs on the spot, in the forest itself, building peculiar features made of wood and soil for the purpose (the so-called ‘*carbonaie*’). We do have written and oral memories on their activities in the Monti Lucretili area until the middle of the previous century, and these go back to the beginning of the 19<sup>th</sup> century (source: archive of the Monti Lucretili Regional park). For a parallel from the Liguria region see MONTANARI, STAGNO 2015.

<sup>74</sup> Through aerial photographs and the study of historical maps, we attempted to reconstruct the vegetational history of the Monti Lucretili area. We are planning a survey campaign dedicated to mapping former forest borders and human mobility by reading signs on the trees and the shape of tree branches. An équipe of ecologists will take part in this survey.

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