

Günther Schörner

## Introduction

The present book contains a collection of papers that resulted from a two-day workshop held in June 2018 at the Department of Classical Archaeology of the University of Vienna. The workshop took place in the context of the pluriennial research project ‘Val di Pesa and Val Orme as a changing rural landscape: an integrated approach’<sup>1</sup> which was focused on investigating land-use and human activities in a well-defined micro-region in inland Northern Etruria by applying a multi-stage and multi-scalar fieldwork scheme (fig. 1).

### 1 The Vienna Orme and Pesa Valley Project (VOPP)

Although the project has been designed to be chronologically inclusive, examining sites ranging from the Etruscan period to the early Middle Ages, it particularly focuses on the Roman period from the late Republic to the late imperial period (150 BCE – 400 CE).<sup>2</sup> Our area of study has seen less archaeological research for the Roman period compared to the coastal areas of Pisa, the Lucca plain and the Cecina valley to the west, and the region of Grosseto to the south.<sup>3</sup> Archaeological research regarding Roman Northern Etruria was and still is lagging behind, especially in contrast to the *suburbium* of Rome and the adjoining region of the Tiber valley.<sup>4</sup> This poor state of research is due to a concentration of research on the Etruscan and medieval periods.<sup>5</sup> The lack of interest in Roman rural settlement in Inland Etruria is clearly shown by the state of research regarding the ‘classic’ Roman type of rural settlement, the *villa*. So the most conclusive monograph about Roman villas in Italy indicates a void south of the Arno,<sup>6</sup> but also a recent article on archaeozoological research in Roman Italy includes no site in the region under study.<sup>7</sup> Aside from the villae, the morphology of Roman-period smaller rural sites in central Italy is almost entirely unknown.<sup>8</sup> Due to the focus on excavations, the spatial dimension of archaeological research is significantly restricted. Even research dedicated

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<sup>1</sup> FWF P 27476-G21. The project was running from February 2015 till January 2019.

<sup>2</sup> The focus had to be expanded due to the findings of the last two excavation campaigns in 2018 and 2019; see below.

<sup>3</sup> Coastal area of Pisa: Pasquinucci – Menchelli 2008; Lucca plain: Ciampoltrini – Zecchini 2005; Cecina valley: Terrenato 1992; Grosseto region: Ghisleni et al. 2011; Vaccaro et al. 2013; Vaccaro et al. 2013; Bowes et al. 2017.

<sup>4</sup> Patterson 2004; Coarelli – Patterson 2008

<sup>5</sup> e. g. Valenti 2004; Acconcia 2012.

<sup>6</sup> Marzano 2007, especially 648 map 19.

<sup>7</sup> Ikeguchi 2017, 17 map A.

<sup>8</sup> Rare exceptions in the Cecina Valley: Motta – Camin – Terrenato 1993, in Southern Tuscany: Ghisleni 2011; Vaccaro 2013; Bowes 2017; in the Elsa valley: Schörner 2013; see in general: Rathbone 2008.



Fig. 1 Study area of the Vienna Orma and Pesa Valley Project (D. Hagmann)

by name to entire regions is dedicated to single sites.<sup>9</sup> Intensive surveys like those in South Etruria or the coastal regions have never been conducted in inland Tuscany because survey archaeology was always about identifying sites by unsystematically collecting grab samples with no attempt to analyse the archaeological record further.<sup>10</sup> Thus, all previous studies of the rural landscape of Roman Etruria are restricted to mere lists of chance finds and interpretations of toponyms.<sup>11</sup> The map provided by Rob Witcher most clearly indicates the lack of surveys, showing a major lacuna in the Arno plain, but even the other surveys in northern inland Etruria gave no conclusive results.<sup>12</sup> The image of inland Etruria provided by these few unsystematic surveys remains that of a nearly empty and impoverished region.<sup>13</sup> This account and the contradictory hypothesis of an increase in villa settlement lack a sufficient archaeological basis.<sup>14</sup>

<sup>9</sup> E.g. Ciampoltrini 2008.

<sup>10</sup> List provided by Witcher 2006a, 92-96.

<sup>11</sup> Empoli is one example: Città di Empoli 1984; Ferretti et al. 1995.

<sup>12</sup> Witcher 2006a, 98 fig. 1

<sup>13</sup> Witcher 2006a; Patterson 2006, 76; partially revised: Witcher 2013

<sup>14</sup> Alderighi – Cantini 2010, 56-60



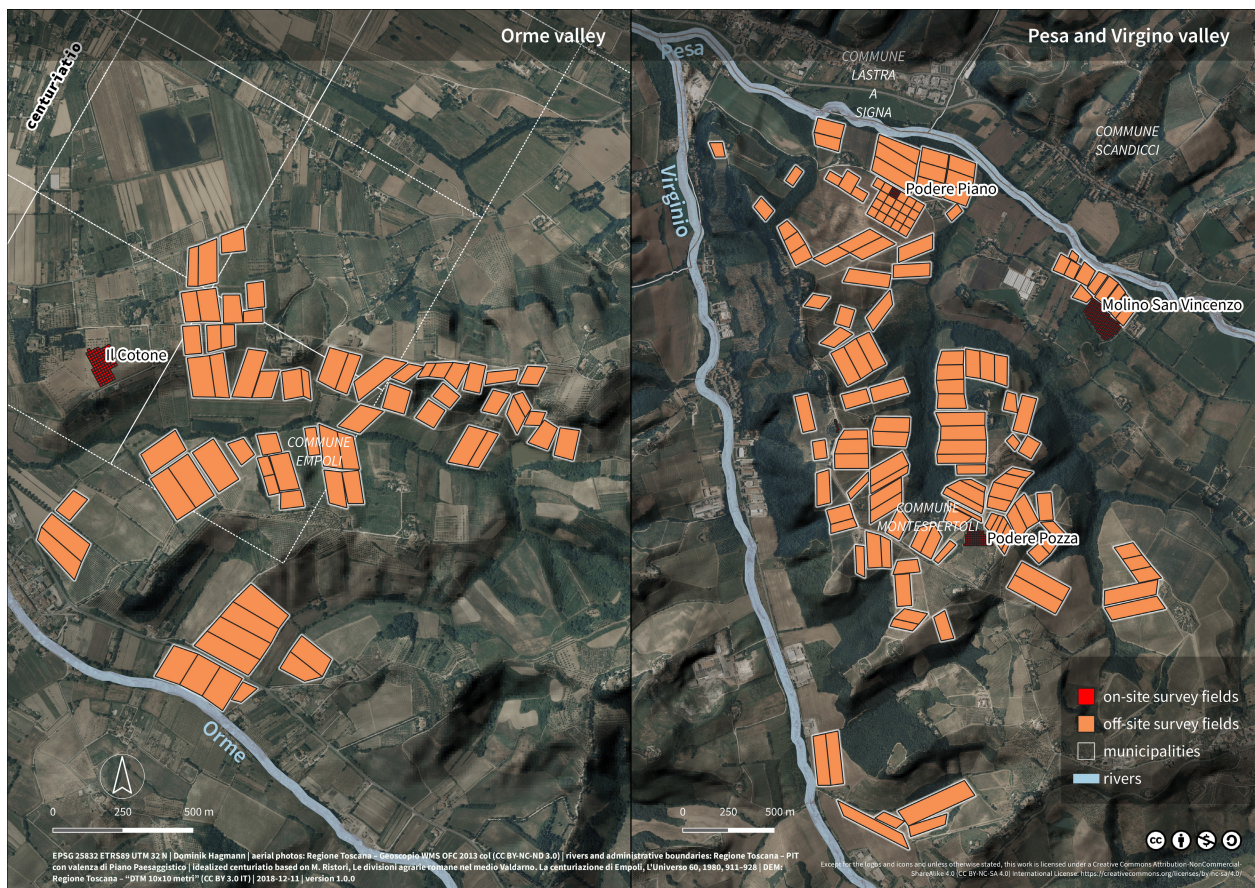


Fig. 2 Surveyed areas in the valleys of Orme, Pesa, and Virgino (D. Hagmann)

Due to that very unsatisfying state of research, the Vienna Orme and Pesa Valley Project was launched in 2014 by expanding already existing excavations at the Roman rural site of Molino San Vincenzo. This excavation has been ongoing every year since 2011, and by that, a realistic understanding of the building structures could be gained despite the destructions caused by modern agricultural technologies like deep-ploughing. In general, Molino San Vincenzo was the target of a broad array of very different methodological approaches like repeated on-site surface surveys, shovel tests, geophysical surveys, phosphate analysis, palynological and zoo-archaeological research as well as various methods in analysing the material evidence. As planned initially, the site served as the anchoring point for the Vienna Orme and Pesa Valley Project.

In a first phase, a broader approach had to be implemented to fill the gap in researching Roman inland Etruria: thus, the Vienna Orme and Pesa Valley Project was started to bridge the gap between excavations, pottery assemblage analyses, geophysical prospections, and systematic on-site surveys with their emphasis on single sites and intensive off-site surveys (fig. 2), remote sensing, and geoarchaeological investigations with their broader regional approach. Consequently, the project conducted systematic data collection from diverse sources and covered multiple scales of analysis from the household up to the regional level.

More specifically, the Vienna Orme and Pesa Valley Project intended to investigate changes and continuities in different aspects of human behaviour in the landscape within a well-defined micro-region, whereby landscape is understood as a dynamic space of social, cultural, and ecological significance, which develops interactively with the people inhabiting it. Within this broad-ranging interest, several main objectives will be addressed:

1. The changing (or unchanged) nature of rural land use and the processes that cause/trigger any form of transformation
2. Issues of site definition and site classification
3. The relationship between town and rural area
4. Identifying diverging patterns of material culture usage

Land-use figures prominently in landscape archaeological projects: agricultural systems are the main constitutive components of landscapes for agriculture-oriented societies. A wide variety of factors like soil fertility, the availability of hydrological resources, distance to urban centres, and the presence of principal routes could all affect land-use. A particular case of changing land-use and a changing landscape was caused by the *centuriatio* in the lower Pesa and Orme valley and the Arno plain near Empoli.<sup>15</sup>

Linked to both land-use- and urban-rural relations, roads are essential in developing agriculture as they open up greater areas within urban hinterlands and allow small-scale producers an outlet for exchange.<sup>16</sup> The *Via Quinctia* and natural routes along the rivers were the main lines of communication. Here, the study of old cadastral maps, archival documents, and the present landscape's autoptic study can be very informative.

Regarding studying land-use, knowing which sites exist in the study region is essential, but site definition and site classification is a notoriously complex and challenging problem,<sup>17</sup> which cannot be solved by merely applying a firm set of criteria (*e.g.* the size of artefact scatters etc.). Although comparison with assemblages from excavated sites, whose function is determined or with assemblages from sites whose architectural layout is known by geophysical prospection would help to define the function of sites based on surface assemblages, it became apparent that site classification creates only a very coarse picture of the ancient reality as the entire procedure is too schematic.<sup>18</sup>

Much more productive was the study of changing relations between town and countryside. Two opposite ideas of Roman rural landscapes were constitutive: the older model of the consumer city, which was fed by the produce of the rural world<sup>19</sup>, and the urbanised countryside.<sup>20</sup> The project's integrated, multi-scale approach was ideal for coping with the split between rural and urban spheres. Studies of town-country-relationship usually focus on consumption

<sup>15</sup> Limitatio in Empolese: Ciampoltrini 1991.

<sup>16</sup> Mosca 1992; Mosca 1999; Methodology: Cifani et al. 2007; Grey et al. 2015.

<sup>17</sup> See for example Witcher 2012.

<sup>18</sup> See also Bowes 2017 and pers. comm.

<sup>19</sup> Fundamental: Finley 1999, 123-150. The city still as model of consumption: van Oyen 2015.

<sup>20</sup> Rajala –Mills 2011. For the – correct – view of mutual interdependence: Taylor 2013.

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whereby the rural population has been reduced to the mere function of production, storage, and transportation.<sup>21</sup> The assumption that rural consumption is either a *quantité négligable* or a more inferior and flatter version of urban consumption, however, does not hold, as the study of other regions shows: analyses of assemblages from rural sites in Roman Britain indicate distinctive patterning and very different attitudes to material culture in social relations.<sup>22</sup> Also, Molino San Vincenzo is proof that rural consumption has distinctive traits.<sup>23</sup> In doing this, identity issues could be addressed by asking whether people aspired to be urban and copy an urban life-style or attempt to preserve or establish a distinctly rural identity.<sup>24</sup>

Because the town-country interactions feature prominently in the research program, the spatial relationship between Empoli and the sites of the Pesa and Orme Valleys is essential. The significance of this point was an important factor in determining the extent of the research area. As particularly interesting the statement of L. de Ligt has been regarded that the rural population will visit markets in cities within a day's walk for the fulfillment of demand, with 15 km commonly considered the maximum distance which farmers traveled to town regularly.<sup>25</sup> The excavated site of Molino San Vincenzo together with three other sites in the Pesa valley (Villa del Virginio, Podere Piano, and Podere Pozza) lay within Empoli's 'catchment area', as does the Orme valley and the entire centuriated field system in the Arno valley (with Il Cotone). Thus, various sites with specific finds assemblages can be compared with each other and with assemblages from Empoli. To verify that more remote sites will own diverse material culture, the villa site of Ponterotto could be used for comparison.

## 5 The Vienna Workshop in June 2018

Although the analysis of the collected data and the integration of the results were still on-going in summer 2018 (and still are), a workshop was organized. The key purpose was for the team of the Vienna Orme and Pesa Valley Project to present their first results which were achieved by using the different methodological approaches described. It has also been thought to be a first step to successfully integrating the outcomes. For that, not only the collaborators of VOPP took an active part in the workshop but also colleagues working on neighbouring sites, namely the Villa del Vergigno and the Villa del Ponterotto. In order to put the Vienna Orme and Pesa Valley Project in a broader context, Kim Bowes gave a keynote lecture on her Roman Peasant Project, which heavily influenced VOPP regarding both methodology and content. The sequence of the single chapters in this volume, which corresponds to the sequence of papers given during the workshop, reflects the Vienna Orme and Pesa Valley Project's strategy, starting with the site Molino San Vincenzo and subsequently adopting a more regional approach.

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<sup>21</sup> Critics inter alia by Witcher 2006b; for a new sophisticated approach based on targeted research: Collins-Elliott 2019.

<sup>22</sup> E.g. relative frequency of decorated Terra sigillata-vessels: Willis 1997, 39s.; rarity of lamps: Eckhardt 2002.

<sup>23</sup> See below.

<sup>24</sup> Heeren 2014.

<sup>25</sup> De Ligt 1991, 46.



## Part I: Research on Molino San Vincenzo

Dominik Hagmann gives an overview of the research activities applied at the site of Molino San Vincenzo since 2008, with a particular focus on the studies carried out by the Department of Classical Archaeology at the University of Vienna from 2012 until 2017. These archaeological studies range from non-invasive actions, like geophysical and intensive systematic field surveys or aerial imagery analysis, to invasive methods like geoarchaeological corings and archaeological excavations. Furthermore, this chapter presents the most important archaeological features and recently obtained results based on the studies of the last excavation campaigns.

Günther Schörner continues the reports on the investigations of Molino San Vincenzo. He highlights the assets and shortcomings of the various methodologies applied. A special focus is laid on comparing two intensive on-site surveys conducted under differing conditions in 2013 and 2016 from which divergent results were attained. This provides an opportunity to evaluate on-site survey methods in a more general way.

As already stated, one of the main aims of the Vienna Orme and Pesa Valley Project was the investigation of the economic relationship between the Roman town of Empoli and the rural sites in the valleys of Pesa and Orme.

Veronika Schreck provides an overview of the pottery found at Molino San Vincenzo and uses pottery as a tool for tracking indications of subsistence production and/or manufacturing for exchange. By identifying the raw materials through archaeometrical analyses, production centres can be determined, and the pottery found at Molino San Vincenzo can be categorized as local, regional, and supra-regional. Consequently, this led to new possibilities for tracing trading routes along the primary and secondary itinerary roads in the Arno valley, facilitated by the pottery. In conclusion, identity issues could be addressed, asking if people in the Etrurian valleys want to copy an urban life-style or attempt to preserve or establish a distinctly rural identity.

Elena Rattigheri and Anna-Maria Mercuri report on the archaeobotanical study of Molino San Vincenzo. The integrated analyses of pollen and non-pollen palynomorphs provide information on site function, associated land use, and the palaeoenvironment. As a result, the landscape can be reconstructed as open, sparsely wooded, and mainly consisting of pasture, cereal, and legume fields.

Complimentarily, Nisa Kirchengast analysed the zooarchaeological material found at Molino San Vincenzo, inserting it in the context of other rural sites in Roman Tuscany. First, the results achieved by a throughout analysis of the bones found during several campaigns are presented, including a discussion of various parameters like the *Minimum Number of Individuals* (MNI), the *Number of Identified Specimens* (NISP), the dispersion of skeletal elements, and the range of age and sex. On that basis, an interpretation of the livestock husbandry and diet at Molino San Vincenzo can be attempted.

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## Part II: The Val Pesa and Valdorme

Roderick Salisbury and Erich Draganits report on the geoarchaeological studies, more precisely reconnaissance surveys, corings, and soil phosphate surveys, which were carried out as part of the Vienna Orme and Pesa Valley Project. The main purpose was to characterize sediments, collect samples for geochemical analyses, and place sites and artifacts in their geological context. Natural outcrops, cores, and exposed profiles and excavation profiles were used to characterize on- and off-site sedimentary sequences and bedrock geology. Furthermore, soil phosphate analysis was employed to identify the location and extent of human activity and land-use. The results have several implications for work in the region: sediments and soils in the study area are prone to slope failure and erosion, and modern agricultural practices have exacerbated this tendency. Deep plowing has destroyed many archaeological contexts and still influences the results of geochemical and geophysical prospection methods and field walking. They conclude that fluvial and erosional activity with respect to ancient settlement patterns and current site preservation deserve additional research.

In the autumn of 2016 and the summer of 2017, the Austrian Archaeological Institute at the Austrian Academy of Sciences carried out geophysical surveys within the Vienna Orme and Pesa Valley Project's framework. Aside from applying ground-penetrating radar at Molino San Vincenzo, the works were extended to three more sites in the valleys of Pesa (Podere Piano) and Orme (Il Cotone, Martignana). Klaus Freitag presents a sketch of the results, which provide new insights into the settlement patterns of Etruria's rural landscape.

Il Cotone is presented in more detail as an example of the other sites, which have been studied in addition to Molino San Vincenzo. Non-invasive methods have intensively investigated this rural site, which lies in short distance to Empoli. Hadwiga Schörner discusses the results of the on-site survey and compares them with the outcome of the geophysical prospections. A further focus is laid on the material culture found (especially various pottery types), which covers a time span from the 2nd century BCE to the 5th century CE.

Leonardo G. Terreni focuses on the traffic routes and their traces in the region of Empoli and the valleys of Orme, Virginio, and Pesa. Apart from Roman main communication corridors, a dense web of minor roads can be traced based on detailed geomorphological observations, historical maps, and other archival sources. In total, a detailed picture of the connectivity of the area of study in historical times can be reconstructed.

Raffaella Woller presents models for different agricultural cultivation in Roman Tuscany. The research area includes the valleys of the rivers Pesa, Virginio, Orme, and the upper Elsa, and by that, the article has the most extensive geographical scope. By evaluating ecological factors like slope and aspect, as well as the known Roman infrastructure according to Roman farmers' preferences and priorities, maps can be drawn that denote regions that are broadly suitable for specific types of cultivations.

A different subject is treated in Dominik Hagmann's second article. In the course of the Vienna Orme and Pesa Valley Project, various digital and analogous methods were applied for data collection, followed by management, data processing, and publication. This chapter aims to give an overview of the different methods applied to different questions within the context

of a landscape archaeology project and wants to summarize selected insights from the (digital) research activities in Tuscany.

### Part III: Contextualizing Molino San Vincenzo

The last two contributions relate to excavations and projects which were no integral? components of the Vienna Orme and Pesa Valley Project, but, nevertheless, are eminently crucial for providing excellent opportunities for comparative studies and for inserting the VOPP in a broader context.

Lorella Alderighi and Agnese Pittari present the so-called Villa of Ponterotto. This rural site is the best-documented excavation of an Etruscan and Roman settlement in the Pesa valley. Apart from treating the various building phases and material culture assemblages, a detailed history of the site can be established. This leads to re-assessing the site's traditional interpretation as *villa*, suggesting an alternative interpretation as a road station (*mansio*) which has the potential to add an essential new element to our idea of rural settlement in Northern Etruria.

The starting point for Kim Bowes is that 90% of the Roman population consisted of poor, rural peasants, about whose life habits, economies, and diet virtually nearly nothing is known. The "Roman Peasant Project", centred in Cinigiano in the Maremma area of Tuscany, is a major attempt to fill that obvious research gap. Over six years, the Project excavated farms, habitations, and workplaces of Roman peasants. By analysing their houses, their access to local and imported goods, the organic remains of their meals, and mapping local soils and resources, the Project revealed the lived experience of the largest and most invisible group of ancient Romans.

In a further talk, C. McKenzie 'Mac' Lewis reported on the excavation campaigns at the so-called Villa del Virginio, c. 2 km downstream the Pesa from Molino San Vincenzo near modern Montelupo Fiorentino. His paper instructively presented that rural site's building structures and gave a glimpse of the rich material culture found. In conclusion, he proposed a new interpretation of the building complex as a road station (*mansio*) as Lorella Alderighi and Agnese Pittari did for Ponterotto.

Unfortunately, Mac could not prepare his manuscript in readiness for printing: To the great dismay and sadness of us all, he died unexpectedly in March 2020. Our discussions about villas and rural settlement in Roman Etruria (together with many other subjects) came to a sudden and untimely halt.

## 6 First conclusions and further thoughts

Instead of a conclusion, some observations and insights gained during and after the workshop shall be presented. These remarks based on the integration of the outcomes made by the individual project parts may also demonstrate where further research is needed.

The most surprising result is based on archaeobotanical research. Palynological studies in Molino San Vincenzo revealed that cereal cultivation took place in the surroundings of Molino San Vincenzo while no evidence of olive trees and vines was found. Thus the landscape has a totally different appearance compared to what we regard as typical Tuscan. Still more ex-



traordinary was the recognition that the environment was characterised by pasturelands. The attested legumes (*Fabaceae*), together with *Poaceae*-wild group of true grass plants, have probably been cultivated for fodder. That outcome hints at the existence of a highly developed ley farming system already in early imperial times.<sup>26</sup> The new picture of land-use has corroborated the results of zooarchaeological analyses and off-site surveys: the observed slight dominance of sheep bones in surely Roman contexts hints at pasture grazing. The very low quantities of artefacts found in the surroundings of Molino San Vincenzo do not imply activity zones or intense manuring around the site. In general, the off-site surveys in the Pesa Valley provide no strong indication of the manure hypothesis.<sup>27</sup> That last observation must be treated with caution since, firstly, seen from a methodological viewpoint, *argumenta ex silentio* are always disputable and, secondly, the geoarchaeological studies revealed that sediments in and adjacent to archaeological sites in the study area are in many cases post-occupation colluvium. Furthermore, erosion and fluvial activity have buried or moved artifacts to non-site locations. Thus the data collected by off-site surveys deserve a case-by-case assessment.

VOPP clearly revealed the difficulties of categorising sites and ascribing them to hierarchically ordered types like *villa*, *villa rustica*, farmstead, and so on. These categorizations are mostly based on an unsystematic combination of artefact scatter size, a superficial qualification of finds, and a functional designation drawn from Latin literature. In that sense, the extent of the scatter observed at Molino San Vincenzo and the artefact assemblage's composition do not fit together (not to mention the excavation results) if we want to apply widely used classification schemes.<sup>28</sup> Thus the question if Molino San Vincenzo should be termed *villa*, *villa rustica*, or farmstead is impossible to answer unambiguously. Generally, it is necessary to rethink whether it is useful to give sites a firm label.

Additionally, the combination of on-site-surveys, analyses of material culture, and geophysics showed that the Roman-period rural landscape should not be conceptualized as *villa landscape* with high-status sites as the primary determining factor.<sup>29</sup> Even a reduction of land-use to agricultural production only is too narrow-sighted. The multi-scalar and multi-methodological approach of the Vienna Orme and Pesa Valley Project revealed that inland Northern Etruria was dotted by sites with various functions like pottery kilns, small repositories for agricultural production, and road stations – and not only by small and large farmsteads. Thus it is to agree with Kim Bowes (see below) to see the rural landscape in Roman Tuscany not as *villa landscape* but as *landscape of production*. One caveat: what is valid for Roman Inland Tuscany is not necessarily valid for other parts of the *regio VII*, not to mention the entire peninsula, considering the complexity and diversity of Roman Italy.<sup>30</sup>

The analysis of material culture proved that Molino San Vincenzo shows significant differences in pottery supply and consumption. Although the rural site was part of the empire-wide

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<sup>26</sup> A similar conclusion has been reached by the Roman Peasant project: Bowes 2017.

<sup>27</sup> For that hypothesis: De Haas 2012, 60-62; Forbes 555-559.

<sup>28</sup> E. g. Witcher 2011, 19 table 3.

<sup>29</sup> For the term used in an Italian context e. g. Platts 2011.

<sup>30</sup> For example de Haas 2017, 51.

trade network and intensive export activities are attested, import pottery rates were relatively low and restricted to regionally produced vessels. Neighbouring rural sites of similar size, however, show very different assemblages. Thus it is not sufficient to establish a simplistic dichotomy between urban and rural, but a more adequate differentiation is necessary. Evidently, *centuriatio* played a decisive role as a comparison between Molino San Vincenzo and Il Cotone revealed.<sup>31</sup> That the material culture of Molino San Vincenzo, however, was not only a more inferior and flatter version of urban consumption, is shown by the fact that the range of tableware found at Molino San Vincenzo is greater than that attested at Empoli.

A particular challenge is to establish a historical trajectory and to address questions beyond economic issues. Also, in this context, it is essential to consider individual sites. Here, the comparison between the two neighbouring sites of Molino San Vincenzo and Ponterotto is revealing: in relative terms, elaborate tableware such as *bucchero*, gray ware, and *vernice nera* vessels were more numerous in the early occupation of Molino San Vincenzo, while the simple, locally and regionally produced tableware starts to dominate from the 2nd century BCE onwards. Ponterotto, only 5 km upstream the Pesa, however, shows a marked increase in the quality of material culture in that Late Republican period. These results prove the very fragmented and localized developments, which show the need for ‘micro-histories’.<sup>32</sup>

One of the most interesting historical problems regarding Molino San Vincenzo and its surroundings became prominent through the excavation campaigns in 2018 and 2019 – the question of the beginnings of settlement activities at the site. In the excavation campaign of 2018, a pit has been found filled in with animal bones, fragments of wattle-and-daub walls, and a vast number of pottery sherds. A first reading of the findings allows dating of the deposited material to the Archaic period.<sup>33</sup> Thus a series of questions emerged: does this find complex stem from an Etruscan predecessor of Roman Molino San Vincenzo? Is there any continuity of place and/or function? Furthermore and more generally, what is the relationship between Etruscan and Roman rural landscapes in Northern Inland Etruria?

Hopefully, the chapters in this volume show how the Vienna Orme and Pesa Valley Project considerably extended the knowledge about Northern Etruria as our work fits in the context of other landscape archaeological projects and excavations of neighbouring rural sites.

Nevertheless, much remains to be done to better understand the functions of the numerous smaller sites scattered across the landscape. Also, the relationship between town and country has proven more complicated than previously thought. However, all the contributors hope that this book presents some promising first steps and will contribute to get a better idea of the manifold realities of Roman rural landscapes.

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<sup>31</sup> For that see Schörner, forthcoming.

<sup>32</sup> For the concept: Ribeiro 2019.

<sup>33</sup> Schörner et al., forthcoming

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## 7 Acknowledgments

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The Vienna Orme and Pesa Valley Project is a shining example of fruitful teamwork. Most colleagues and friends directly involved in the project are contributors to the present volume. I would like to thank them all for their devoted commitment and inspiring work. Furthermore, I would like to thank Stefan Groh, Klaus Freitag, and Ivan Repetto (both Austrian Archaeological Institute) for organising and conducting geophysical surveys even under harsh conditions. Alarich Langendorf and Andreas Steininger (Archaeo Perspectives) very kindly provided equipment and expertise for digital photogrammetry.

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Since all the project participants took an active part in the workshop and provided papers, the contributions were not subjected to a formal peer-review. Nevertheless, I thank PD Dr. Ralph Häussler for his comments on two, especially critical contributions. I would particularly like to thank Dominik Hagmann, who not only did all the GIS-work in the project and designed all plans and 3D models but also prepared the chapters for print. Dr. Davide Bianchi translated the texts written initially in Italian by Lorella Alderighi and Agnese Pittari as well as Leonardo G. Terreni. The English texts were proofread and edited by PD Dr Ralph Häussler, Dr Sarah Cormack and Folkert Tiarks †.

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