

# What's beyond the Etruscan bridge?

Analysis and dating of the Vignale plateau

San Giovenale. Results of excavations  
conducted by the Swedish Institute  
of Classical Studies at Rome and  
the Soprintendenza alle Antichità  
dell'Etruria Meridionale  
Vol. VI, fasc. 2–3

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Published with the aid of a grant from Stiftelsen Enboms donationsfond

The English text was revised by Rebecca Montague, Hindon, Salisbury, UK

Back cover: Bridge (illustration by R. Holmgren).

Dust jacket: The enigmatic Stone Platform excavated on Vignale in 1959, looking north-west (photograph by C.W. Welin, courtesy of SIR). See p. 183, *Fig. 155*.

ISSN 0081-993X

ISBN 978-91-7042-188-4

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Printed by PrintBest (Viljandi, Estonia) via Italgraf Media AB (Stockholm, Sweden) 2024

## ABSTRACT

Yvonne Backe Forsberg & Richard Holmgren, *San Giovenale VI:2–3. What's beyond the Etruscan bridge? Analysis and dating of the Vignale plateau* (Skrifter utgivna av Svenska Institutet i Rom 4°, 26:6:2–3), Stockholm 2024.

The Etruscan site of San Giovenale has been excavated periodically since 1956. From the beginning the main focus has been the question of settlement remains. However, a fundamental area within the site had still not undergone the inquiry necessary for a complete understanding of the site as a whole. The Vignale plateau, connected to the main site by an Etruscan bridge, was surveyed and partly excavated in 1959–1960, but not published. The Vignale Archaeological Project (VAP) began new investigations in 2006 that aimed to answer the question of “What's beyond the Etruscan bridge?” This publication focuses on the initial investigations of 1959–1960, augmented by new ground- and aerial remote sensing surveys.

The current volume is divided in six chapters. Through an introduction, and geological/topographic and historical/archaeological settings (*Chapters 1–3*), the reader achieves a general understanding of Vignale within a larger framework. The main archaeological studies of various features on the plateau, their function and dating are covered in *Chapter 4*, where Vignale from the Final Bronze Age to medieval times is approached with an emphasis on the Etruscan periods. The study of the latter investigates the connection to Vignale's sister plateau (the Acropolis area), and the plateaus' connection to the surrounding landscape. An intrinsic aspect of Vignale is the association with wine over time. *Chapter 5* therefore elaborates on wild and domesticated vines with emphasis on production, ritual, and material remains, concluding with a summary and synthesis in *Chapter 6*. Two extensive appendices follow, one detailing the material remains and data connected to the southern Bridge Complex, and the other a treatise on the Etruscan awareness of their local mineral salt, alunite.

**Keywords:** San Giovenale, Vignale, Etruscan, viniculture, viticulture, cisterns, infrastructure, necropolis, remote sensing, LiDAR, aerial, bridge, ram's head, settlement, photography, defence structures, platform, quarry, wine press, alun, alunite

<https://doi.org/10.30549/actarom-4-26-6-2-3>

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# Chapter 2. The Vignale plateau

## Geological, topographic, and historical setting

San Giovenale, both its medieval and its modern name,<sup>12</sup> is an ancient site situated in southern Etruria, 60 km north-west of Rome, 25 km east of Tarquinia, and 30 km north of Cerveteri. More specifically it is located in the environs of the Tolfa Mountains, west of Lago di Bracciano (*Lacus Sabatinus*) and Lago di Vico (*Lacus Ciminius*) (Fig. 5).<sup>13</sup> The settlements at San Giovenale discussed in this volume are situated on two high plateaus, generally referred to as the Acropolis and Vignale respectively.<sup>14</sup> In this book the Acropolis hill is also referred to as the “main Acropolis” or the “main settlement”, which includes both the Borgo area and the higher plateau to the west. These sister plateaus of the Acropolis and Vignale are delimited by several Etruscan necropoleis on the surrounding hills (Figs. 6, 7).<sup>15</sup> Most of these different areas were previously studied to varying degrees through excavations or soundings in the years 1956–1965 by the Swedish Institute of Classical Studies in Rome.<sup>16</sup>

The sedimentary rock underlying San Giovenale is limestone. This is the geologically oldest rock, dating to the late Palaeocene–Eocene period. The limestone is covered by a thick layer of ignimbrites with *tufa rosso*—a red to orange-brown rather soft rock which is the result of volcanic pyro-

clastic flows in the late Pliocene into the early Pleistocene period. This tufa material, typical of the area, has been utilized as building material since at least the Etruscan era. There are also conglomerate beds associated with clay from the Miocene period. The streams carried stones and pebbles which created the characteristic and massive stone beds which are often seen in deep riverbeds.<sup>17</sup> Such lenses of conglomerate can be seen along the Vesca river and are also clearly visible along the banks of the Pietrisco brook (Fig. 8).<sup>18</sup>

The Vignale plateau, which measures *c.* 80–440 m in width and rises 175–180 m ASL, is delimited to the north by the brook of Fosso del Pietrisco and to the south by the river Vesca. It measures just over 1.1 km in length from the westernmost tip to the main Blera–Civitella Cesi road (Fig. 9). It is located to the south-east of the sister plateau of the Acropolis area and separated from it by the Fosso del Pietrisco. The main plateau of San Giovenale is in turn divided in two parts—the Acropolis in the west (*c.* 180 m ASL) and the Borgo in the east (173 m ASL). The Fammilume brook runs north of the Acropolis and forms the boundary between the settlement and the Porzarago necropolis plateau.<sup>19</sup> The area to the south is limited by the Vesca river and the Pietrisco brook—the latter of which is a tributary to the river, both running south-west. Thus, the Pietrisco brook forms a natural boundary between the promontories of the Acropolis with its necropolis of Casale Vignale and the Vignale tableland. Vignale itself is limited by the river Vesca in the south, where a wetland and the slopes themselves form a shelf-like area between the river

<sup>12</sup> The Etruscan name of the site is unknown. Colonna 2014, 100–101, on a probable Etruscan name, *Veascium* (cf. the Vesca river).

<sup>13</sup> Stoddart 2016, 51–52.

<sup>14</sup> Backe Forsberg 2005, figs. 2–3, 100. The study of the Pietrisco Bridge emphasizes the importance of the settlement on the Vignale hill and its interrelations with the settlements on the Borgo and Acropolis areas, i.e., the San Giovenale plateau.

<sup>15</sup> See ‘Discussion and parallels—burials and necropoleis’ in Chapter 4.

<sup>16</sup> Hanell 1962, 289–310; *San Giovenale* I; Thordeman 1962; Welin 1962; Östenberg 1962. San Giovenale was mentioned in documents dating from the 12th century AD onwards and was later marked as a settlement on maps dating from 1674, 1791, and 1881, see Hemphill 2000, 43; *San Giovenale* VI:4; Thordeman 1962.

<sup>17</sup> Hemphill 1993, fig. 2; 2000, fig. 1; Judson 2013, 37–38; Tobin-Dodd 2015, 11, figs. 2, 4; Perkins 2017, 1240–1242.

<sup>18</sup> Backe Forsberg 2005, figs. 15a–b, 16; Hemphill 2000, 19.

<sup>19</sup> *San Giovenale* I:1, map 2. The brook is also called Fosso del Pitale, see Santella 1981, map no. 7. See also Judson 2013, 40, figs. 17–18.

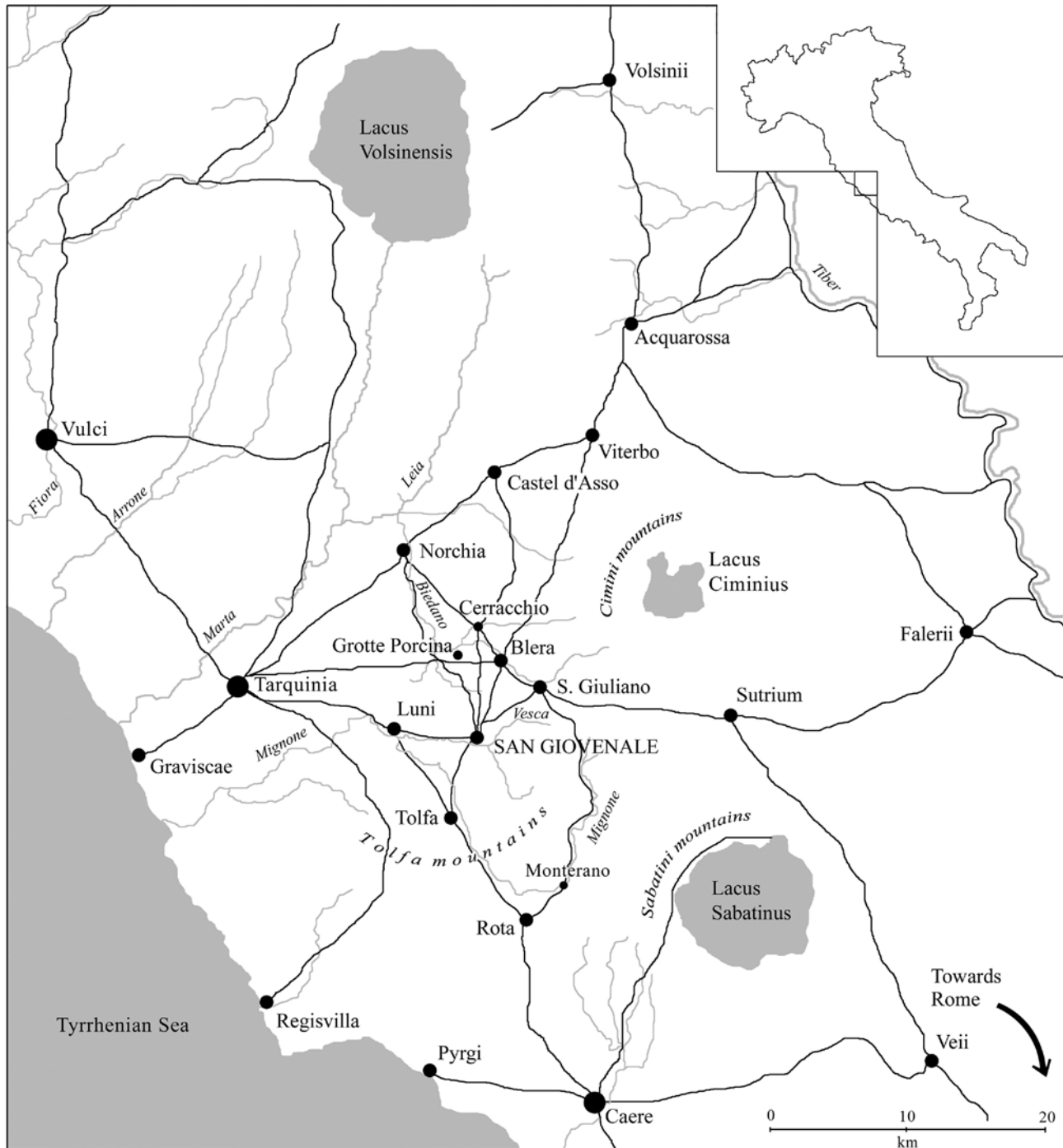


Fig. 5. Map of South Etruria showing the position of San Giovenale, Luni sul Mignone, and Blera among other larger important sites (illustration by M. Lindblom in Backe Forsberg 2005, fig. 1, after Gierow 1986, fig. 1, courtesy of SIR).

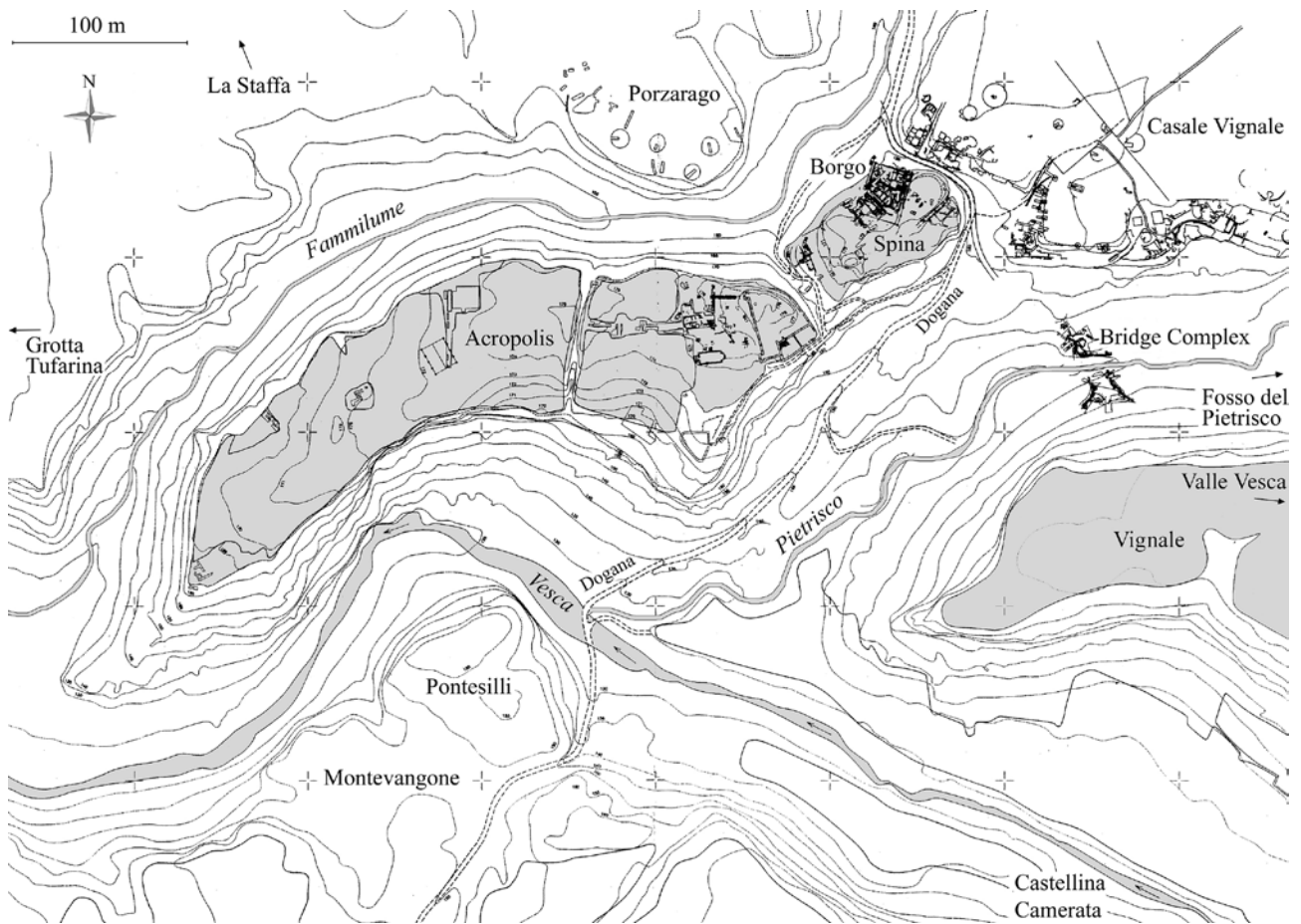


Fig. 6. Plan of San Giovenale, showing the western part of the Vignale plateau (right), the Acropolis (left) with the Borgo area (upper right) with the directly adjacent Spina (illustration based on computerized drawing by S. and A. Tilia 2002, courtesy of SIR).

and the plateau. This lower land with its broadest part in the west is likely the result of a sedimented river bank (Fig. 10).<sup>20</sup>

The ancient roads and smaller streets in San Giovenale cleverly follow the natural shape of the landscape. The most effective way into the settlement is to follow the large transit and transhumance road called the Dogana/La Doganella (the customs road), also named Via Ceretana.<sup>21</sup> It runs in a

gorge between the Borgo/Spina area and the Casale Vignale necropolis, and then continues along the southern side the Acropolis—a gradual incline to avoid steep climbs and descents. In the valley bottom, at the point where the Pietrisco brook flows into river Vesca, the Dogana fords the river. It is worth noting that the river Vesca is a tributary to the Mignone river, which forms a natural border between the territories of Caere and Tarquinia (Fig. 5).<sup>22</sup> The flow in the watercourses varies considerably during the year. Flooding during the

<sup>20</sup> CEO notebook IV 1959, 21–27. See also Tobin-Dodd 2015, 8–10, figs. 2, 4.

<sup>21</sup> A papal decree issued in AD 1257 indicated that La Dogana (the customs road) continued to be a socially and economically important communication route used for transhumance during the medieval period, see Santella & Ricci 1994. This road seems to have been abandoned during the 14th century AD but was in use again in the middle of the 15th century, and finally abandoned in 1881. See, for instance, Hemphill 2000, 84. See also Santillo Frizell 2004, 84–85, fig. 1; 2006, 33–37, 42–46, 203; 2007, 5–6, fig. 9; 2018. This transhumance route (a seasonal migration system) referred to as the *Dogana dei Pascoli del Patrimonio di S. Pietro in Tuscia* in AD 1289, was used for moving animals from their winter

pasture in the Maremma and the Roman campagna on the coastal plains to the summer grazing area up in the mountains of Abruzzi, Marche, and Umbria. Another migration system in southern Italy was named the *Dogana delle Pecore* and founded in AD 1231 by the Spanish kingdom in Naples. This transhumance route, in use during the Bronze Age, continued to be an important economic resource for the Etruscans and the Romans. Recently Via Dogana was named Via Ceretana by Proietti & Sanna 2013, 15–16, fig. 3, pl. 1:6.

<sup>22</sup> Zifferero 1998.





Fig. 7. Aerial photograph of the two settlement plateaus and the surrounding burial-grounds with the transhumance road the Dogana (Via Ceretana), 2007. View towards south. Borgo and Spina in the lower centre front, Acropolis in the middle right with the Vignale plateau in the middle left. For a better understanding of the position of the visible features, see Fig. 212 (photograph by R. Holmgren).

spring, the autumn and winter months necessitates the construction of bridges. In the dry season the brooks and streams and larger rivers are easily forded (crossed on foot) (Fig. 11).

There was however an alternative route over the Pietrisco brook. A smaller road, named by VAP *Via Pontalto*, detached from the Dogana and led to the “*sacellum*” positioned beside the Pietrisco brook. This road continued further south via the Etruscan Bridge Complex, of which only the foundations remain today, leading directly to the northern slope of the Vignale hill (Fig. 12). The shortest distance between the banks of the brook is estimated at slightly less than 20 m, making it possible to span the brook using long logs of, for example, oak attached to protruding abutments. The logs required for such a venture may have been used in an earlier all-wooden construction,<sup>23</sup> later replaced by a superstructure combining

wood with stone abutments such as the ones still visible today (Fig. 13).<sup>24</sup> Initially, a crossing was created using a few timbers over the brook or possibly via a more elaborate wooden bridge similar to the modern one at Monterano.<sup>25</sup> A bridge over the Pietrisco brook may have already existed here during the Proto-Villanovan phase, i.e., pre-construction phase 2, as suggested by the presence of pottery and cooking stands which indicate a residential use of the area. Hence in early times, the

Fries 1962, 242; Wetter 1962, 184; Colonna 1986, 374; Rendeli 1993, 128. For early wooden bridges, see Galliazzo & Chevalier 1994–1995, 3, 6–7, 42–46, 55–58, 275; Ward-Perkins 1962; 1964, 187–191. Our thanks to Prof. Pontus Hellström for this information.

<sup>24</sup> “If they knew how to build timber bridges, then it is probable that others knew how to build them as well”, “... stone bridges were likely to be second or third generation structures, built to replace earlier crossings, constructed in a stable environment, with access to adequate and known resources and a developed infrastructure”, O’Connor 1993, 132.

<sup>25</sup> See, for example, the modern wooden bridge at Monterano in Backe Forsberg 2005, figs. 68–69; Fries & Mark 1962, figs. 224–226.

<sup>23</sup> The supply of timber was probably not a problem. On the fertile plains, north of San Giovenale, there may have been large oak forests,



*Fig. 8. Conglomerate layer at the Bridge Complex along the Pietrisco brook, looking north (photograph by S. Hallgren in 1962, courtesy of SIR).*

bridge would have been equally important to facilitate contact between the hut villages on the Acropolis/Borgo with yet another possible settlement on top of the Vignale hill. One obvious reason for the large bridge abutments is their function as retaining walls for the volatile soil of the surrounding slopes. The effect is also evident from the rebuilding of the Bridge Complex during the Archaic period: substantial earth moving was undertaken during this rebuilding.<sup>26</sup>

The topography of the Vignale plateau varies from its western point to the eastern part, where the Blera–Civitella Cesi road establishes a modern-day threshold to a more level terrain. In the west the slopes are very steep and the plateau is equally difficult to access from the northern and southern valleys. This did not prevent the ancient dwellers constructing roads and tracks on the most severe slopes.<sup>27</sup> Over the cen-

turies, soil erosion and landslides probably forced the inhabitants to rework the access to the various sites. It is hard to determine if the many variations of roads are remnants of temporary solutions due to geological and topographical changes, and whether the seemingly defensive walls should primarily be interpreted as retaining walls.

Since the Vignale plateau is not delimited by ravines to the east, it is difficult to determine the settlement's possible size or the area of occupation. The necropoleis in the eastern part (see TS3 in *Fig. 26*) should however be considered as the outer limits of the site proper. This would then make Vignale the largest of the steep-sided tufa plateaus in the San Giovenale locality. The plateau has an easily defensible drop to the west which slowly transforms to a more level landscape to the east—well-suited to cultivation (*Fig. 9*). Accordingly, most of this large area of land has been affected by ploughing from the time of the first settlers up to the deeper ploughing of the second half of the 20th century. Ploughing in general has caused much damage to the ancient remains, as evident from the ex-

<sup>26</sup> Backe Forsberg 2005, 51–56.

<sup>27</sup> See the 'Infrastructure' section in *Chapter 4*.





Fig. 9. View showing the study area of Vignale from the Blera–Civitella Cesi road towards the western tip of the plateau. Observe the two pozzolana quarries, one rectangular in the foreground, and a circular variant in the centre of the photograph. To the right is the necropolis of Casale Vignale with the Acropolis at the far end (photograph by R. Holmgren).

cavations of the 1950s and 1960s.<sup>28</sup> The soft rock below the surface soil shows clear traces of plough marks.<sup>29</sup> The pattern is not uncommon and can be seen in many Etruscan towns, such as on the top of the walls in Area F of the Acropolis of San Giovenale, at Luni sul Mignone, Veii, and Ara della Re-

gina at Tarquinia (see *Figs. 158–160*).<sup>30</sup> When the Swedish excavators started to explore the site in the 1950s, the grain fields were still tilled by draught animals with a traditional plough, very much like their Etruscan progenitors (*Fig. 14*). One immediately recalls the Etruscan small bronze figure found in Arezzo, dated to the 4th century BC, showing a man with a pair of oxen attached to a plough.<sup>31</sup> Today the land is cultivated with animal feed crops, mostly grazing for sheep in the western and more narrow portion of the plateau, while

<sup>28</sup> Barbaro & De Angelis 2010, 176–177, a description of ‘31. Vignale presso San Giovenale’. Unfortunately, the author has erroneously placed the Vignale settlement plateau on the Casale Vignale necropolis. The Vignale plateau was excavated in 1959–1960 and not 1970; see also Tobin-Dodd 2015, 62, n. 328.

<sup>29</sup> See Rykwert 1976, fig. 38 (a man with a plough [ritual ploughing], 6th–5th centuries BC), fig. 106 (the so-called Talamone plough, 2nd century BC), fig. 108 (statuette of a hero or divinity ploughing with an Archaic wooden plough to which two bulls [?] are yoked, 3rd century BC). For various types of ploughs, see van Joolen 2003, chapter 4. Recent plough marks were also found in the Porzarago necropolis, *San Giovenale* 1:5, 19–20, pl. II, no. P115, see n. 306.

<sup>30</sup> Wetter 1962, fig. 154; Strandberg Olofsson 1984, 32–34, 38, fig. 8; Wendt & Lundgren 1994, 108–109. For Luni sul Mignone, see Bengtsson 2001, 12–13, nn. 47–48; Hanell 1962, fig. 299. See also Pozze Fontanile del Sambuco, Ricciardi 1990a, 155–156, figs. 16–17.

<sup>31</sup> Boëthius 1962, figs. 12–13, the figurine dated to the 4th century BC or later is on show in the Museo Nazionale Etrusco di Villa Giulia in Rome, Fries 1962, figs. 219, 221, 323; Wetter 1962, 163–196, fig. 154.





Fig. 10. Wetland below the south-western tip of Vignale, looking east. The river Vesca is visible at the lower right (photograph by R. Holmgren).

Fig. 11. Due to heavy rains in the early spring in 2006, as well as in the autumn and winter months, the volume of waterflow in the Vesca river can change rapidly. The resulting changes in water level necessitated the construction of the ancient bridges in San Giovenale. The Pietrisco brook flows into the river Vesca at the left of the photographs, looking east (photographs by Y. Backe Forsberg).



the eastern part is covered with hazel, almond, and olive trees, and fruit trees supplemented with vineyards (Fig. 9).<sup>32</sup>

As the region is seismologically active, it has been affected by earthquakes over the centuries, with the perhaps most violent event dated to 550/530 BC. This caused massive destruction and landslides, and damage resulting from this earthquake is evident in the archaeological remains on the Acropolis and, as already mentioned, at the Pietrisco Bridge Complex.<sup>33</sup>

The Vignale settlement, although incompletely investigated in the 1950s, was then considered a suburb to the Acropolis. Since the two heights were connected by means of several

connections, for example, via the monumental Bridge 1,<sup>34</sup> the excavators of the 1950s–1960s came to the conclusion that the Acropolis, the Borgo, and Vignale all belonged to the same settlement group. This community lived at San Giovenale for a long period of time, a conclusion based on similar finds in the tombs of the surrounding grave-fields.<sup>35</sup> In the discussion of Vignale as a suburb or perhaps a separate entity deserving of its own name, it may be interesting to mention a famous passage in an ancient text. It has been speculated that San Giovenale could be connected with one of the two Etruscan cities, Cortuosa and Contenebra, mentioned by Livy.<sup>36</sup> In the volume *Etruskerna* (the Etruscans) from 1960, the ques-

<sup>32</sup> On climate, environment, and vegetation see, for example, Perkins 2017, 1242–1244, table 1.

<sup>33</sup> Blomé *et al.* 1996; Blomé & Nylander 2001; Backe Forsberg 2005; *San Giovenale* V:1, 141–142; Nylander 1997, 236–237 on the oldest documented earthquake in Italy.

<sup>34</sup> Hanell 1962, 304–307; Forsberg 1984; Backe Forsberg 2005.

<sup>35</sup> *San Giovenale* I:4, 6.

<sup>36</sup> Scholars have long discussed where the two towns mentioned by Livy could have been situated. Sites suggested are San Giovenale, Blera, Civitella Cesi, and Monteromano, all placed under the jurisdiction of Tar-

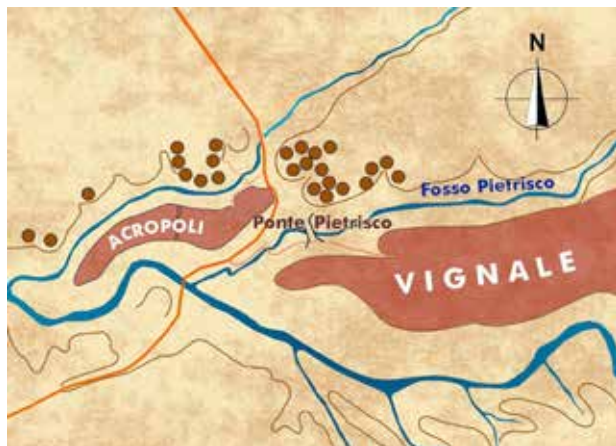


Fig. 12. Map of San Giovenale showing the position of the Etruscan Bridge Complex (here Ponte Pietrisco) connecting the area between the Acropolis area and the Vignale plateau. The red dots are representing tumuli on the adjacent necropoleis. (© courtesy of Museo Nazionale Etrusco di Villa Giulia).

tion was discussed by Erik Wetter.<sup>37</sup> He stated that the discoveries on and around Vignale opened interesting perspectives, and speculated whether this could be the city that the Romans conquered through a surprise attack. He is referring to Livy 6.4.8–11, where Livy writes that when the Romans in 388 BC invaded the territory of Tarquinia (25 km west of San Giovenale), the two Etruscan cities of Cortuosa and Contenebra were captured.<sup>38</sup> These two unidentified cities might have been located close to each other, since they are cited together by Livy. How close is a matter of speculation, and there are many Etruscan cities in the area that could be considered to neighbour each other. In Livy's story, however, there may be a clue to this in the issue of the so-called *Tribus Arnensis*, a Roman

quinia. See, for example, Pulcinelli 2016, 20, n. 13; Rossi Danielli 1960, 185–198; *San Giovenale* V:1; Olsson 2021, 126–127.

<sup>37</sup> Wetter 1960, 180–182.

<sup>38</sup> “These men led one army against the Aequi, not to war—for they confessed themselves vanquished—but from hatred, in order to waste their territories and leave them with no strength to make new trouble; with another they invaded the district of Tarquinii, where they captured by assault the Etruscan towns Cortuosa and Contenebra. At Cortuosa there was no struggle: in a surprise attack they carried the place at the first shout and onset, and then sacked and burned it. Contenebra held out for a few days, but the continuous fighting, without respite either day or night, overcame them. The Roman army had been divided into six corps, of which each in its turn went into battle for six hours; while the townsmen were so few that the same men were exposed to an attack that was constantly renewed, until at last they gave away and afforded the Romans an opening to enter the City. The tribunes decided that the booty should go to the state, but were less prompt in issuing orders than in planning; and, while they procrastinated, it was already in the hands of the soldiers and could not be taken away without offending them.” Livy 6.4.8–11, transl. Foster 1924.

regional administration to which the nearby town of Blera belonged. According to Livy the administration was founded in 387 BC, a year after the Romans conquered the two cities.<sup>39</sup> At any rate the passage in Livy reveals that the Romans arrived in the neighbourhood of San Giovenale during a time soon after the conquest of the cities mentioned. Although uncertain, it is of course exciting to play with the idea that San Giovenale might have represented two populated and distinct plateaus—perhaps two inhabited plateaus referred to by different names, and as such identified as two nearby settlements, Cortuosa and Contenebra. Since we currently do not know the extent of the remains preserved throughout the Vignale plateau, it is problematic to speak of two separate acropoleis, even if it may have seemed that way to an outsider in antiquity. According to Livy the Romans looted both the cities. Cortuosa was burnt whereas the fate of Contenebra is uncertain.<sup>40</sup> In any scenario, it is essential to consider the reasonably monumental size of the bridge connecting the two sites. This could perhaps mirror the importance of what is still to be uncovered on the Vignale plateau. And again, this was also an important question for the Vignale Archaeological Project, one which deserved a satisfactory answer.

The Etruscan name of the San Giovenale settlement, Vignale included, is as mentioned unknown.<sup>41</sup> The name San Giovenale originates from Sanctus Juvenalis, a saint and a bishop of Narni, who was revered in the area between the 4th to 9th centuries AD. The twice-rebuilt chapel that is to be found on the Acropolis, west of the medieval castle, was probably dedicated to the saint in the 8th century AD (Figs. 15–16). The modern name San Giovenale appeared for the first time in medieval documents attributed to AD 1141. The noble di Vico family acquired the castle and initiated the construction of a defence system on the surrounding Acropolis in AD 1240.<sup>42</sup>

The toponymy of Vignale refers to an area dominated by viticulture. The same connection is to be seen in the toponymy of the plateau north of Vignale—that is, Casale Vignale. The association with viticulture is also found in names such as

<sup>39</sup> Livy 6.5.1–8: evidence for the Roman Blera as a municipium belonging to the rural *Tribus Arnensis*, see Ferracci & Guerrini 2014, 476, n. 46; *CIL* VI, 221, 2608; *CIL* IV, 32519 (or *Eph. Epigr.* IV n. 887). On Blera in general see *CIL* XI, *pars* 1, VII. See also Taylor & Linderski 2013, 8–49, 73, 271, 387; Olsson 2021.

<sup>40</sup> Livy 6.4.9–11.

<sup>41</sup> Colonna 2014, 100–101, on the new hypothesis on the name Vesca as a possible Etruscan name of the site (Veascium); Santella 2019, 20.

<sup>42</sup> For the medieval period, see *San Giovenale* VI:4, figs. 5–7; Ferracci 2006/2007. The legend of Sanctus Juvenalis tells that he became bishop at Narni, a place not far from San Giovenale, in AD 369, and died in AD 376. His remains were brought to Lucca in AD 878 but removed to Narni in AD 880. His grave was incorporated in Narni cathedral in the 12th century AD, *San Giovenale* VI:4, 4–9, figs. 1–2; VI:5. See also Del Lungo 1999 on the modern name.



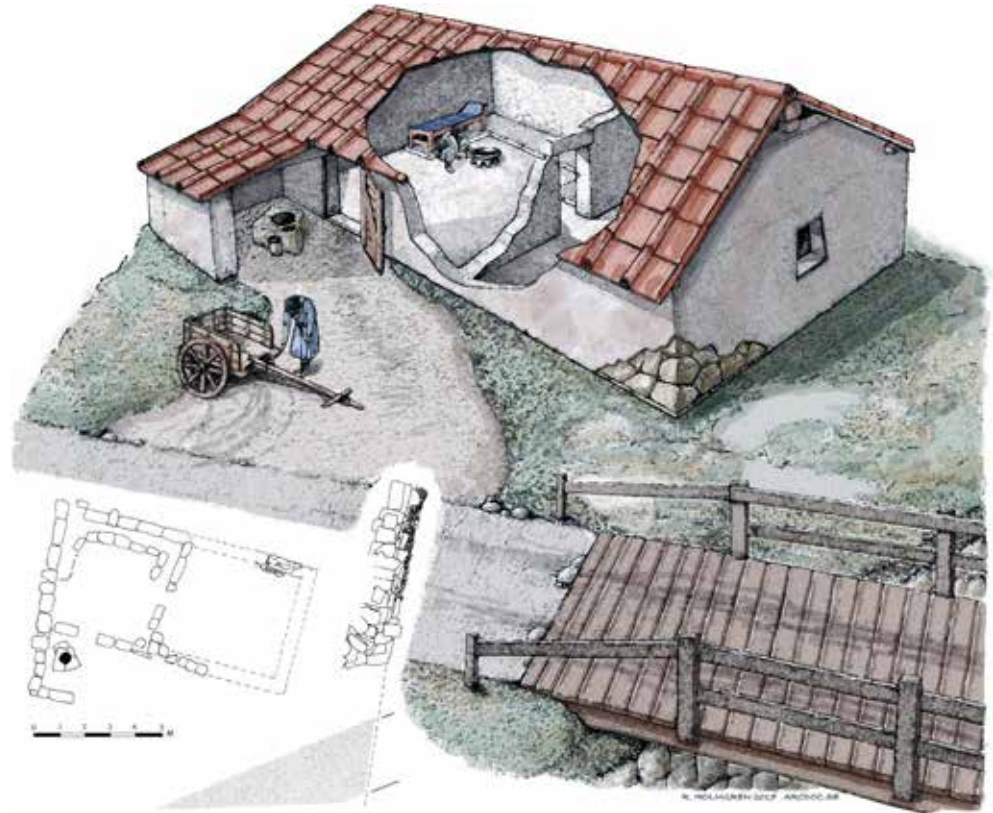


Fig. 13. Reconstruction of the northern abutment of the Etruscan Bridge Complex—connecting Via Pontalto with the Vignale area. The illustration shows a possible wooden bridge on a stone abutment adjacent to House 1, a “sacellum” (illustration by R. Holmgren).

Vignolo and Vigna—for example, at the site of Luni sul Mignone.<sup>43</sup> The word Vignale has been traced back to medieval Latin and the etymology of the word *wine* can be traced to the Proto-Indo-European (PIE) words *woi-no* or *wei-no*; the Latin word is *vinum*, Italian—*vino*, English—*wine*, German—*Wein*, Russian—*vino*, and in Old Irish—*fin*. The PIE words are also connected with grape, vineyard, edible fruit, and compound words such as grape cluster and wine steward.<sup>44</sup> The Etruscan word for wine—*vinum*—has been detected in several Etruscan texts, such as in the Hellenistic Linen Book from Zagreb (*Liber Linteus*) and on several ancient items.<sup>45</sup> As

well as a handful of cultivation trenches found on the Vignale summit (CT1–3), which indicate that the ancients practised viticulture,<sup>46</sup> there are some revealing archaeological finds from San Giovenale that indicate the practice of viticulture during ancient times,<sup>47</sup> such as pottery associated with serving, drinking, and storing wine. The perhaps most obvious evidence is the presence of wine presses (*pestarole*), either cut into the bedrock or present as large and free-standing tufa blocks.<sup>48</sup> Another indication of the plateau’s excellent properties for vine cultivation is demonstrated by the present-day use of the area, with a major part of the plateau planted with vine-

<sup>43</sup> The place names *Vignolo* and *Vigna* have the same meaning, see Bengtsson 2001, 58, n. 33. “Viticulture” refers to the science, study, and production of grapes, while “viniculture” refers to the same thing, but for grapes specifically for wine. The terms are in general used somewhat interchangeably. However, the current authors use “viticulture” when discussing the more practical aspects of horticulture/growing and when defining assorted species, but “viniculture” when embracing the entire process where wine is the end product.

<sup>44</sup> McGovern 2003, 33–34.

<sup>45</sup> *Liber Linteus* IV, 21 on the word *vinum* in Etruscan texts and the translation of the Etruscan word *traula* (*trau vinum pruxs*), Van der Meer 2014, 170 on the word libation (*vacil*) on the Capua tile, *vinaith* = April w.i.n.u.m. on the *Liber Linteus* IX.7: Faliscan inscription from 7th century BC, Wallace 2008. The “Roman augurs were the religious official of

the vineyard”, and “Vinu was an essential part of the secular and religious life in Etruria”, Pieraccini 2013, 136. See also Petroselli 1974.

<sup>46</sup> Pohl and other archaeologists believe that the large trenches on the summit of Vignale (CT1–3) were intended for vines, and that the grape harvest from there was transported to the wine presses on the Borgo. Pohl 1985, 43–63. If this hypothesis is true, it may indicate that the big *pestarola* on the steep northern side of the Vignale is a later installation. Parallel cultivation trenches indicate cultivated grapes. One or two trenches in the Porzarago necropolis seem to be cultivation trenches: a drain covered with large slabs was also found near some tombs, see *San Giovenale* I:5, 19–20, fig. 7 and pl. II, no. P115.

<sup>47</sup> Evidence of the cultivation of grapes and wine-making in Etruria is common during the Bronze Age, Pieraccini 2016a, 145, or even earlier: see, for example, Alessandri 2013, 86.

<sup>48</sup> Masi 2005; Vallelonga 2012b.



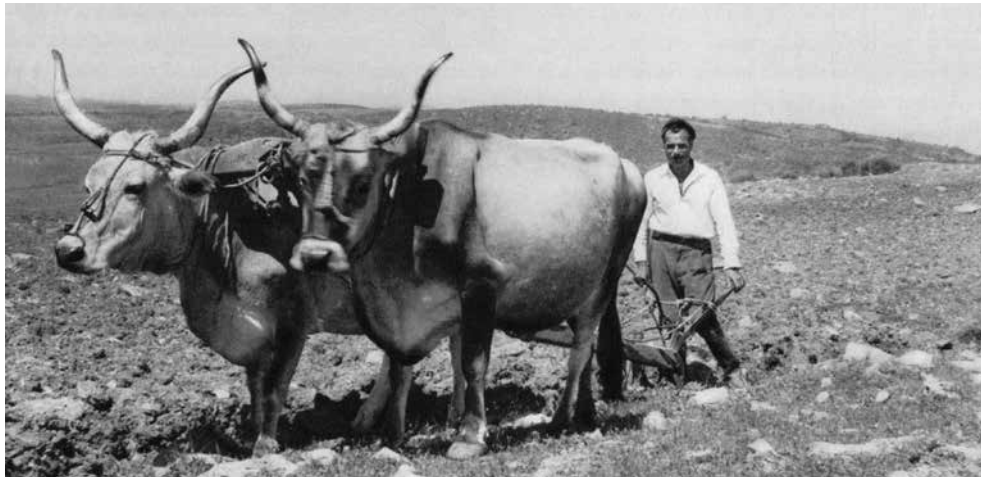


Fig. 14. Draught animals pulling a traditional plough in San Giovenale's surroundings during the 1950s (photograph by E. Wetter, courtesy of SIR).

yards. The fertile soil, resulting from the area's volcanic past, covers the entire plateau.<sup>49</sup>

In the early 1970s the land was also used for quarrying pozzolana, or *tufa grigio*, a rock of minor usefulness for building structures, but more suitable for mortar. The quarrying occurred in both the western and eastern parts of the Vignale plateau,<sup>50</sup> and today these modern, cavernous pozzolana quarries, when not water-filled, are reused for pig breeding, goat enclosures, and plantations (Figs. 9, 176).<sup>51</sup> Such reuse of features in the vicinity of San Giovenale also involves a plethora of cultural remains from the ancient past. These are perhaps most visible on the slopes and among rocky areas which have never been ploughed, and thus the remains have been better preserved. A good example of recent activities exploiting the ancient structures at San Giovenale is the Bleranian farmer/herdsman who owned an allotment on the southern slope of Casale Vignale. In this location, he had constructed a small barn for his horse and reused the adjacent and long-since plundered chamber tombs for storing and as animal shelters. He also reused ancient terraces for growing fruits and vegetables. Another farmer used a very fertile and suitable ancient terraced plot near the Etruscan Bridge Complex for growing hazelnuts. A similar situation can be seen on the lower southern slope of Vignale, where ancient terraces have been walled for multiple usage: to prevent erosion, to fence in animals, and to define property boundaries. This lowest part of the slope, i.e., the valley bottom, has been walled with various kinds of stones, mostly reused tufa blocks deriving from the settlements above. In one case, a large boulder had been carved for repurposing as a wine press. A small area between this block

and an adjacent rock face created a suitable enclosure. The small space was furnished with a rectangular basin next to a small square bowl used for watering animals, both made out of volcanic rock (peperin).<sup>52</sup> The enclosed structure was abandoned and in bad condition when found. The area had also been used as a dump of various kinds of goods, unfortunately not decomposable, which were removed before the documentation (Fig. 86).

Near an opening in a long stone wall, bordering the valley bottom north of the Vesca river and on the lowest terrace, a small building was discovered, a cottage which we call the "hunting lodge" (Fig. 17).<sup>53</sup> It consisted of a square room built of walls in various courses constructed of reused, large and small Etruscan ashlar and wedged blocks, again placed between two large boulders fallen from above. The lower courses may be *in situ*. The gabled roof was covered by corrugated iron sheets placed on wooden beams neatly fitted in cuttings in the walls and the two boulders. Etruscan and medieval tile fragments were scattered inside the room and were also used within the walls. Some modern roof tiles made by Fornaci di Laterina, a factory active until the middle of the 1950s, were found both on the roof and around the cottage.<sup>54</sup> These give us a *terminus ante quem* for the construction date of the cottage. At the rear side of the room stood a wooden bed with traces of a fireplace on the right corner. Who constructed this cottage, when, and for what purpose? The date of the construction is uncertain but judging from the items inside, it may have been used in the beginning of the 20th century or even later. However, it seems to have been quite a while since the cottage was used considering the state of the interior remains. According

<sup>49</sup> Judson 2013.

<sup>50</sup> Judson 2013, 38.

<sup>51</sup> Colonna 1973, 537 reported on the destruction of some tumuli and cube tombs discovered when the pozzolana quarry along the Blera–Civita della Cesi road was constructed in the early 1970s.

<sup>52</sup> Unfortunately, the basins are now missing.

<sup>53</sup> Position: Vignale south slope near the valley bottom, approx. 42°13'20.6"N 12°00'12.1"E.

<sup>54</sup> Similar tiles were also found inside the ruins of an old house along Via Clodia on the south-western slope of Blera in 2015.



Fig. 15. Aerial photograph of the medieval castle of the di Vico family adjacent to the Byzantine chapel of Sanctus Juvenalis on the Acropolis, looking north-west (photograph by R. Holmgren).



Fig. 16. The southern walls of the Sanctus Juvenalis chapel with the medieval castle in the background (photograph by R. Holmgren).

to a local farmer, the most recent use of the building may have been that of a landowner's shelter and/or as a "hunting lodge". Still another possibility would be hiding place for partisans during the Second World War when people from Civitavecchia, children and women, were transported to Blera;<sup>55</sup> or recently, during the 1950s–1970s, as a shelter for tomb-robbers. Their activities in the area around that time was one reason for the Italian archaeological authorities asking the Swedish Institute of Classical Studies in Rome for help in surveying and excavating the area in 1956, which continued on a large scale until 1965. Smaller investigations were carried out during the 1990s and the 2000s.<sup>56</sup> The chronological results of the whole site will be briefly commented upon in *Table 1* and more specifically in *Table 2* for the Vignale area.<sup>57</sup>

The evidence of human presence at San Giovenale and its surroundings reaches back several thousands of years, more specifically to the Middle Neolithic in Area B on the Acropolis and to the Late Neolithic on the southern bank of the Pietrisco brook. Pottery of the Pienza Palidoro style indicates that there were already settlers on the plateau during the 4th millennium BC (*Table 1*).<sup>58</sup> After a short hiatus or lack of evidence, the history continues during the Middle and Late Bronze Ages based on archaeological finds primarily from the western part of the Acropolis (*Table 1*).<sup>59</sup> The activity then continues during the Final Bronze Age and the Proto-Villanovan and Villanovan periods (dated from the 11th

<sup>55</sup> Pers. comm. Giancarlo Panico (2007), who as a young boy during the Second World war hid around Blera during the bombings of Civitavecchia.

<sup>56</sup> Bellerba & Alroth 2013.

<sup>57</sup> The "hunting lodge" is discussed as a parallel to the animal shed close to Wine Press WP2.

<sup>58</sup> Backe Forsberg 2005, 51–52, n. 247, fig. 75:1–2. See also Gierow 1984, 17, figs. 2, 16, Area B, AP 3/60 and *San Giovenale* II:2, fold-out plan B for location. Prof. Gierow was not able to publish the Neolithic and Bronze Age pottery from the Acropolis before his death: see *San Giovenale* II:1. Middle Neolithic pottery found at Luni sul Mignone is dated to 3445 ± 80 BC, Östenberg 1967, 256.

<sup>59</sup> Gierow 1984, 17–19, figs. 3–17: for location on AP 3/60, see *San Giovenale* II:2, fold-out plan B.





Fig. 17. Left: the “bunting lodge” with reused Etruscan building stones and fragmented tiles. Right: the larger photograph shows a medieval pantile and the inset photograph shows a modern roof tile made by Fornaci di Laterina, a factory active until the middle of the 1950s (photographs by R. Holmgren and Y. Backe Forsberg).

century BC to the middle of the 8th century BC),<sup>60</sup> when we find traces of hut settlements and remains from daily activities as well as graveyards for the first time.<sup>61</sup> The following period, c. 675–400 BC, is characterized by the Etruscan civilization. The dominant remains then comprised tiled roofs, and stone houses adjacent to necropoleis, where tholos tombs and rock-cut chamber tombs on the surrounding plateaus were close in sight (Table 1). The Archaic Etruscan houses extended all over the Acropolis as well as on the western half (?) of the Vignale tableland. There are however indications that only the westernmost promontory of the Vignale plateau was inhabited during the Late Etruscan period.

The subsequent Roman expansion, starting with the siege and conquest of Veii in 405–396 BC and Sutri in 394 BC, affected the inhabitants at San Giovenale in various ways.<sup>62</sup> There are abundant archaeological remains indicating a Roman presence over several centuries into the early medieval period (the Byzantine period) at San Giovenale and its environs. This is methodically illustrated by Pamela Hemphill in her article on ‘The Romans and the San Giovenale area’ from 1993 and her book *Archaeological investigations in southern*

*Etruria. The Civitella Cesi Survey* published in 2000.<sup>63</sup> The Late Roman and early medieval–Byzantine periods, i.e., 4th–9th centuries AD, were first identified by the Swedish excavation team when exploring the chapel west of the medieval castle.<sup>64</sup> A Late Roman graveyard with five tile-covered tombs as well as *fossa* graves were found both outside and inside the small church (Figs. 15–16).<sup>65</sup>

Recently published research yielded evidence of early medieval activity on the western part of the Acropolis. Near the Etruscan houses in Area F East, Byzantine pottery (Forum ware) from the 7th century AD and onward was found scattered all over the area.<sup>66</sup> Pottery fragments of plain ware, as well as Forum ware, were also found dispersed west of the castle all the way up to the moat (*fossa*). These wares were studied by Elisabetta Ferracci and Paula Guarrini.<sup>67</sup> During the 13th century AD the di Vico family started to build the castle on the main plateau, but it was never finished due to times of unrest.<sup>68</sup>

<sup>60</sup> Karlsson 1999; *San Giovenale* IV:1, 137–138; Karlsson 2001. On Sub-Apennine pottery in Area B on the Acropolis, see *San Giovenale* II:2, 24–33; Gierow 1984, 17–19, figs. 16–17. On Middle and Late Bronze Age pottery in Area A inside the medieval castle, see Gierow 1984, 17–19, figs. 3–18.

<sup>61</sup> *San Giovenale* V:1, 12, ‘Chronological concordances of periods on the Borgo area and Area F East’.

<sup>62</sup> Hemphill 1993, fig. 4; 2000, 137–146, figs. 203–206. On the Roman expansion and the colonies, see also Ceccarelli 2016, 28–29, 32, fig. 3.1.

<sup>63</sup> Hemphill 1993; 2000.

<sup>64</sup> Thordeman 1962.

<sup>65</sup> Östenberg 1962; Berggren, E. 1984.

<sup>66</sup> Hjohlman 2006, 170–174, n. 132. The dating of Forum ware has been much debated. Berggren, E. 1984, 83 dated the ware found east of the large trench on the Acropolis to c. AD 600, a date questioned by Hjohlman 2006 who suggested c. 9th–10th centuries AD. See also Forum ware dated to 7th–13th centuries AD displayed in the Crypta Balbi Museum in Rome.

<sup>67</sup> Ferracci & Guirriani 2014; Ferracci 2001; 2006/2007. Hjohlman 2006 identified the same types of wares in Area F East, i.e., on the other side of the moat.

<sup>68</sup> Thordeman 1962; *San Giovenale* VI:4.



Table 1. Chronological periods based on ancient finds from settlements and necropoleis at San Giovenale.

Area/period	Middle Neolithic c. 3440 BC, Late Neolithic c. 3300 BC	Middle Bronze Age–Late Bronze Age 1400–1125 BC	Final Bronze Age, Proto- Villanovan/Villanovan c. 1125–750 BC	Orientalizing 725–575 BC	Archaic Etruscan 575–400 BC	Late Etruscan (Classical–Hel- lenistic) 400–275 BC	Roman 2nd/1st centuries BC–4th century AD	Byzantine/medieval 7th–14th centuries AD and later
Vignale <sup>I</sup> slopes and settlement	x		x	x	x	x	x	x
Pietrisco Bridge Complex north side <sup>II</sup>			x	x	x	x	x	x
Acropolis <sup>III</sup>	x	x <sup>IV</sup>	x	x	x	x	x <sup>V</sup>	x
Borgo NW and NE the <i>Spina</i> <sup>VI</sup>			x	x	x	x		
Vignale Southwestern Necropolis <sup>VII</sup>						x		
Porzarago <sup>VIII</sup>			x	x	x	x?		
Grotte Tufarina <sup>IX</sup>				x	x			
Montevangone/Pontesilli <sup>X</sup>			x <sup>XI</sup>		x			
Casale Vignale <sup>XII</sup>					x	x	x	
La Staffa <sup>XIII</sup>				x	x			
Castellina Camerata <sup>XIV</sup>				x	x			
Valle Vesca <sup>XV</sup>				x	x	x?		
Fosso del Pietrisco <sup>XVI</sup>			x	x		x		

<sup>I</sup> Östenberg 1962; Backe Forsberg *et al.* 2008a; 2008b.<sup>II</sup> Östenberg 1962; Forsberg 1984; Nylander 1986, fig. 13; Backe Forsberg 2005.<sup>III</sup> Östenberg 1962; *San Giovenale* IV:1; VI:5; Gierow 1986; *San Giovenale* I:5; II:2; III:1; Nylander 1986, fig. 13; *San Giovenale* II:5; II:4; Malcus 1984; Berggren, E. 1984; Blomé 1984; Berggren, K. 1984; Nylander 1984b.<sup>IV</sup> One Mycenaean IIIC pottery fragment was found in the fill of the oval huts in Area D, see Malcus 1979; 1984. Five Mycenaean III A2, IIIB–IIIC painted fragments were also found at the Apennine settlement at Luni sul Mignone, Östenberg 1967, 128, 142–151, figs. 31–32:1–5; Bengtsson 2006–2007, 13–14; 2017, 18, 21, fig. 4. For the occurrence of Mycenaean pottery in Italy, Late Bronze Age, 1325/1300–1175/1150 BC, Bengtsson 2019, 24, fig. 5; see also Alessandri 2013, 34, 39, 87.<sup>V</sup> Roman *loculi* cut into the cliff south and east of the medieval castle along the road to the Acropolis, *San Giovenale* VI:4, figs. 14, 19; VI:5, fig. 1. See also *Fig. 190*.<sup>VI</sup> Nylander 1986, fig. 13; *San Giovenale* V:1; V:2; V:3.<sup>VII</sup> Backe Forsberg *et al.* 2008a; 2008b; Lasaponara *et al.* 2012.<sup>VIII</sup> *San Giovenale* I:4; I:5; I:9: a chamber tomb excavated by P. Åström and archaeology students in 1969, unpublished: see Tobin-Dodd 2014, n. 16; MdC notebook 1959.<sup>IX</sup> *San Giovenale* I:5; Tobin-Dodd 2015.<sup>X</sup> *San Giovenale* I:5; Tobin-Dodd 2015.<sup>XI</sup> According to results of a geophysical investigation in 2014, there seem to be traces of oval huts, probably Proto-Villanovan, see Berry & Hay 2015.<sup>XII</sup> Ricciardi 1984; 1987a, 21; Santella 1981; Fuglesang 1997–1998; Tobin-Dodd 2014; 2015.<sup>XIII</sup> *San Giovenale* I:4; I:6; I:9; Tobin-Dodd 2015.<sup>XIV</sup> *San Giovenale* I:4; I:9; Ricciardi 1984; Tobin-Dodd 2015.<sup>XV</sup> *San Giovenale* I:4; I:8; I:9; Hemphill 2000.<sup>XVI</sup> *San Giovenale* I:4; I:8; I:9; Backe Forsberg *et al.* 2008a; 2008b; Lasaponara *et al.* 2012.

