

# Rethinking the Concept of 'Healing Settlements': Water, Cults, Constructions and Contexts in the Ancient World

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Cover image: Viterbo, Terme Carletti. A free thermo-mineral spring (courtesy of Matteo Annibaletto)

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# The Thermo-Mineral Springs at Veii (RM) and its Territory: New Discoveries and Old Excavations

Ugo Fusco

**Abstract:** The site of Veii has been the subject of in-depth archaeological research in recent years, bringing to light a complex human frequentation from the Iron Age to the early Middle Ages. This article focuses on the issue of thermo-mineral springs and their archaeological context, with a special emphasis on the Imperial period. It examines three distinct areas (Campetti south-west area, Vignacce and 'Bagni della Regina'), located outside the boundaries of the Roman *municipium* and comprising thermo-mineral springs (active and/or extinct) and more or less monumental archaeological structures. Among these sites, the main novelty is the archaeological complex of Campetti, south-west area, located on the edge of the Veii plateau and interpreted, thanks to recent wide-ranging archaeological studies, as a complex healing sanctuary with springs active from at least the Early Imperial period. The state of documentation on the other two sites, Vignacce and 'Bagni della Regina', is uneven: for Vignacce the available data are still very limited and the site is no longer visible. At 'Bagni della Regina', by contrast, the numerous structures discovered, some of which remain partially visible, make it possible to propose an up-to-date stratigraphic and architectural interpretation of the site, based on the study published by G.B.D. Jones in the last century.

**Keywords:** Veii, thermo-mineral springs, archaeological site of Campetti south-west area, Vignacce, 'Bagni della Regina'

## Introduction

The objective of this study is to analyse the thermo-mineral springs and their archaeological context on the plateau and in the peri-urban territory of the ancient city of Veii in the light of the most recent archaeological discoveries and with a special focus on the Imperial period. Over the years, the vast topic of thermo-mineral springs in Italy and their healing functions has drawn the attention of numerous scholars.<sup>1</sup> Specifically, we should note the work by the University of Padua to catalogue and analyse the thermalism phenomenon from a historical and archaeological point of view; this project has resulted in a series of publications that now represent a fundamental reference point for studies of this topic.<sup>2</sup> As the authors themselves acknowledge, the contexts were selected for analysis on the basis of restrictive criteria<sup>3</sup> as is natural in such a wide-ranging project, and this entailed the exclusion of some instances that were more problematic and uncertain in nature. Here, therefore, it is worth calling attention to the context of Veii, where the thermo-mineral springs and related archaeological features reveal a fairly complex and anomalous picture that is not always easy to interpret.

As concerns the site of Veii itself, our state of knowledge has progressed considerably in recent years thanks to the publications of the British School at Rome<sup>4</sup> and the multi-year 'Progetto Veio', born in 1996 out of the agreement between La Sapienza, University of Rome and the current Soprintendenza Archeologica, Belle Arti e Paesaggio per l'area metropolitana di Roma, la provincia di Viterbo e l'Etruria meridionale, which has resulted in both general overviews<sup>5</sup> and monographs on specific sectors.<sup>6</sup>

This study analyses three contexts: the site of Campetti south-west area, located on the plateau but outside the boundaries of the Roman *municipium* (Figure 1, A); the site of Vignacce, located in the peri-urban area (Figure 1, B) and, finally, 'Bagni della Regina', in a marginal area with respect to the previous two (Figure 1, C). The study concludes with some brief general considerations.<sup>7</sup> Generally of great interest is a passage by *Dionysius of Halicarnassus* (12.15.21) in which he provides a fairly exhaustive account of the environmental features and water resources of the city and territory of Veii. The historian describes the area as being endowed with fertile land, a landscape comprising hills and plains, and clean and healthy air. Finally, he mentions water: it is abundant, not brought in from outside and of excellent quality for drinking.

The introduction, the description of the sites of Campetti south-west area, and Vignacce, and the conclusion are by Ugo Fusco (UF); the analysis of the site of Bagni della Regina is by Lianka Camerlengo (LC).

<sup>1</sup> The bibliography on the topic is now vast, and we cite only the most recent works: Annibaletto, Bassani and Ghedini 2014; Bassani and Ghedini 2016; Broise 2015; Chellini 2002; de Cazanove 2015; Gasperini 2006; Guérin-Beauvois 2015; Scheid 2015; Scheid 2007-2008.

<sup>2</sup> Annibaletto, Bassani and Ghedini 2014; Bassani, Bressan and Ghedini 2013; Bassani, Bressan and Ghedini 2012; Bassani, Bressan and Ghedini 2011.

<sup>3</sup> Ghedini and Bassani 2016: 81; Ghedini and Bassani 2014: 10-11.

<sup>4</sup> Cascino, Di Giuseppe and Patterson 2012.

<sup>5</sup> Cascino, Fusco and Smith 2015.

<sup>6</sup> Bartoloni 2009; Bartoloni and Acconcia 2012.

<sup>7</sup> Other thermo-mineral springs are attested in the peri-urban territory of Veii for which no evidence of an ancient frequentation is currently known: Ward-Perkins 1961: 58, fig. 16.

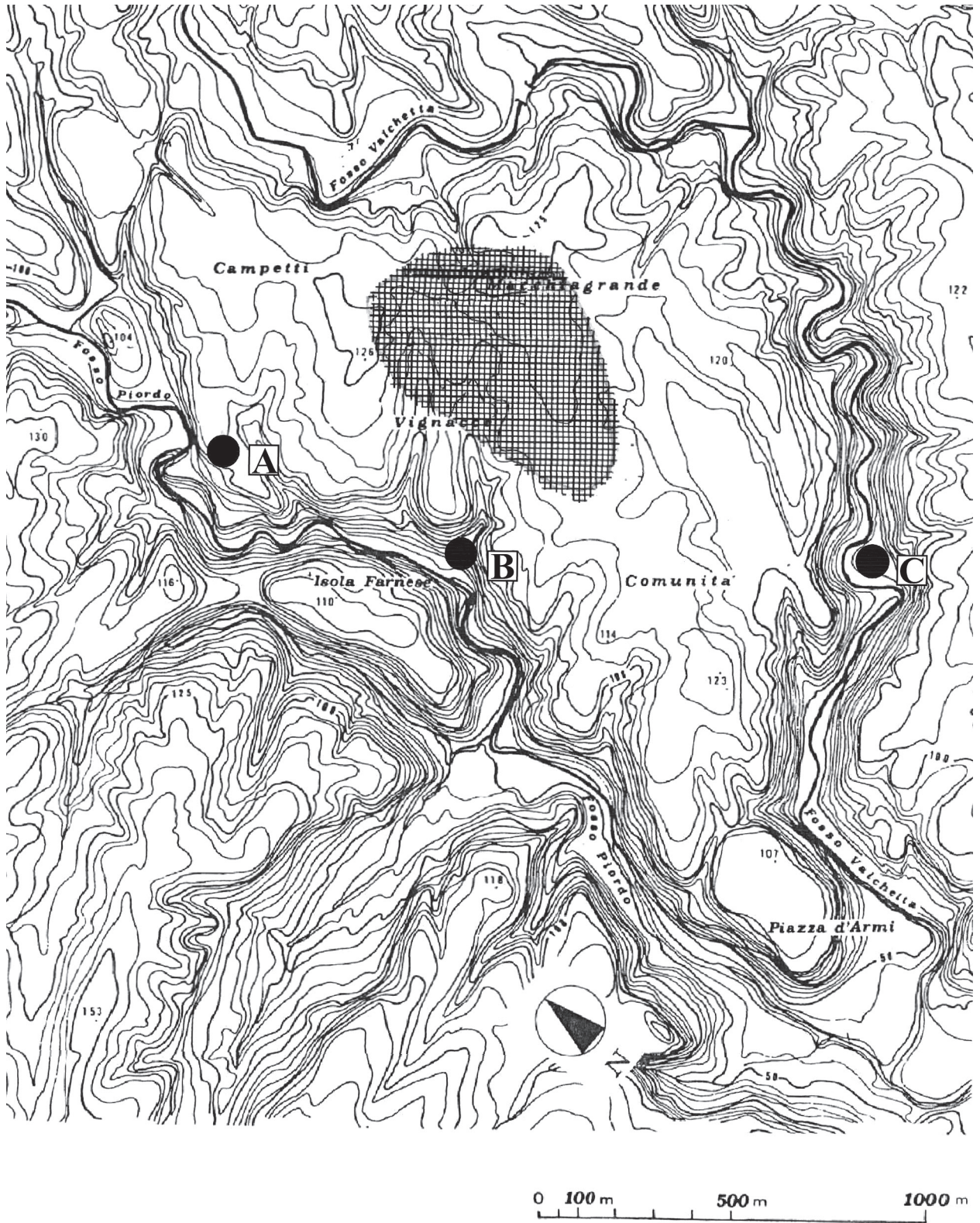


Figure 1. Location of the sites under examination: A. Campetti, south-west area B. Vignacce C. Bagni della Regina (reprocessed from Fusco 2001: fig. 1).



Figure 2. Helicopter photo of the site of Campetti, south-west area (from Fusco 2013-2014: fig. 1).

### Campetti, south-west area<sup>8</sup>

**Location.** The site is located on the edge of the vast plateau, on the immediate outskirts of the Roman *municipium* of Veii and extends over two natural terraces: the upper terrace lies between an altitude of 110 and 112m a.s.l. while the lower terrace lies between 105 and 107m a.s.l. It covers an area of approximately 10,000sqm. The location outside the city limits is common to all healing bath complexes while its architectural organization into terraces, though documented in Roman religious architecture, is not an exclusive feature of this type of structures (Figure 2).

**Springs.** The springs were initially attested only by an epigraphic source of the Imperial period mentioning the therapeutic qualities of the area's *Fontes*<sup>9</sup> (Figure 3). Further geological research has located at least one area connected with the springs:<sup>10</sup> north of the lower terrace, approximately 5m beneath ground level, is a vast network of tunnels dug into the bedrock (Figure



Figure 3. Votive inscription with dedication to Hercules and the Springs from the site of Campetti, south-west area (from Fusco 2008-2009: fig. 7).

4). Though there are probably other entrances, only one can be identified with certainty. A careful analysis of the site revealed a diffuse system of mineralized fractures on the walls of the tunnels. These are generally open fractures inside the bedrock (up to 5cm), probably resulting from tectonic processes, with mineral concretions on one or both sides. The current absence of water at the site can be attributed

<sup>8</sup> Fusco 2013-2014; Fusco 2008-2009; Fusco and Maras 2016; Fusco, Sperti and Pilutti Namer 2015.

<sup>9</sup> Fusco 2008-2009: 451-475.

<sup>10</sup> Maggi and Latini 2015.

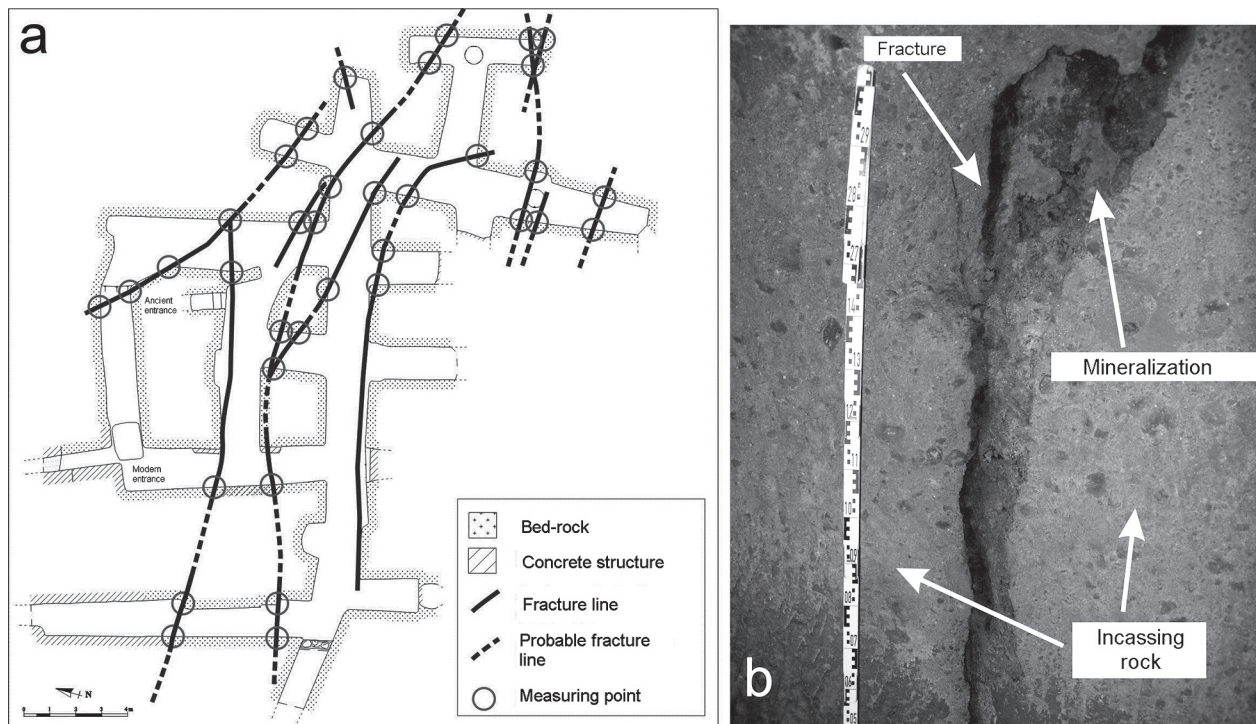


Figure 4. Plan of the underground tunnels with a reconstruction of the fracture lines (a) and photo of a fracture (b) (reprocessed from Fusco 2013-2014: fig. 4).

either to a natural lowering of the water table perhaps due to tectonic events (like earthquakes) or anthropic causes such as the increasing urbanization of the area. X-ray diffractometry analyses (XRD) of some samples of mineral concretions showed that the type of water originally running through the fractures is compatible with that of the 'Bagni della Regina' spring<sup>11</sup> (hypothermal springs with iron-rich carbonated water). If the proposed identification is correct, then these springs were not used for bathing as there are no obvious structures inside the tunnels nor any sign of systems to take the water to the surface to feed water tanks.<sup>12</sup> This is a substantive difference between this site and other known thermo-mineral healing complexes, where the mineral waters were used directly for bathing and for curative purposes.<sup>13</sup> Campetti thus represents a variant with respect to known typologies and indicates that our knowledge of this phenomenon cannot yet be considered complete. However, since the aforementioned votive inscription referred to an unspecified number of springs (*Fontes* and not *Fons*), the presence of other thermo-mineral springs used for bathing in unexplored parts of the site cannot be ruled out with certainty. The picture unfolding before us may

be very similar to that presented by Pliny the Younger in his description of the sacred and possibly curative area of *Clitumnus* in Umbria, which mentions several springs within a single sacred context.<sup>14</sup> There are no clues with which to establish a certain chronology for the system of underground tunnels at Campetti but some evidence of building activities dating to the Early Imperial period has been found; this is therefore the *terminus ante quem* for the construction and use of the structure.<sup>15</sup>

**Cults.** A distinguishing feature of healing baths is doubtless the plurality of deities venerated.<sup>16</sup> Among the most interesting evidence is a fragment of a votive inscription, not necessarily related to the thermo-mineral springs, dating to the second half of the 7th century BC and dedicated to the god *Tina*.<sup>17</sup> Later, in around the early 5th century BC, we find some fragments of terracotta statues attributed to two statue groups: according to G. Colonna, the first portrays Aeneas and Anchises<sup>18</sup> and the second *Hercules-Hercle* wrestling with another figure<sup>19</sup> (Achelus?). The statue of *Hercules-Hercle* is probably connected to the

<sup>11</sup> Maggi and Latini 2015: 47-48.

<sup>12</sup> These springs present in the underground tunnels might have had a different purpose: (oracular?) On the functions of springs in the Etruscan-Italic and Roman world: Comella 2005; de Cazanove 2015; Romizzi 2005.

<sup>13</sup> Annibaletto 2014: 133-138.

<sup>14</sup> *Epist.* 8, 8, 2-6. On this passage see the commentary in Bassani 2012: 405-406.

<sup>15</sup> Fusco 2013-2014: 313-316.

<sup>16</sup> Buonopane and Petracca 2014; Fusco 2008-2009.

<sup>17</sup> Fusco and Maras 2016.

<sup>18</sup> Colonna 2009 and also Fusco 2011a.

<sup>19</sup> Fusco 2011b.





Figure 5. Hypothetical plan of the early Imperial period (end of the 1st century BC- 1st century AD) (by F. Soriano).

presence of thermo-mineral springs given the close relationship in Etruria between this hero and springs.<sup>20</sup> By contrast, some votive inscriptions from the site of Campetti south-west date to the Imperial period. These have already been published<sup>21</sup> so we will only outline them briefly: a votive inscription with a dedication to the goddess *Hygieia* and perhaps to *Aesculapius* (2nd century AD); an inscription with a dedication to *Hercules* and *Fontes* (first half of the 2nd century AD); and an inscription with a dedication to *Diana* (second half of the 2nd century AD). The only complete inscription is that with a dedication to *Hercules* and *Fontes* mentioning a person cured of a type of malarial fever.<sup>22</sup> The other votive texts, despite their fragmentary state, can be assumed to refer to health and healing.

**Water-related structures.** Given the numerous building phases identified, we will offer some brief considerations only for the phases of the imperial period (end 1st century BC – 3rd century AD). In the Early Imperial period (end 1st century BC – 1st century AD) (Figure 5) numerous structures connected with water are present: there are two structures thought

to be pools for bathing on the upper level and one on the lower level.<sup>23</sup> The location of these structures near the entrances (main and secondary) of the site must be due to their function for ritual and purificatory bathing, as frequently attested in sacred areas.<sup>24</sup> There are also water reservoirs<sup>25</sup> (or tanks used for practical or productive purposes), 10 cisterns<sup>26</sup> and the small *Nymphaeum*.<sup>27</sup> The function of the large T-shaped structure<sup>28</sup> in the centre of the lower terrace is still uncertain (a *natatio* or water reservoirs?). The water-supply system of these buildings has not survived, and we can only suggest a delivery system from an external spring.<sup>29</sup> The buildings used for bathing in this phase were not heated, so presumably the water used was cold.<sup>30</sup> Furthermore, the lack of evidence for mineral concretions on the walls of the structures used for bathing leads us to rule out the use of thermo-mineral water.<sup>31</sup> Alongside the structures described, which are relatively easy to identify, are numerous other rooms

<sup>20</sup> Buonopane and Petracca 2014: 222-223; Fusco 2008-2009: 455-462; Guérin-Beauvois 2015: 412-416. For further evidence of cult activities at this site: Cerasuolo and Di Saracina 2015.

<sup>21</sup> Fusco 2008-2009 and Fusco 2001.

<sup>22</sup> Fusco 2008-2009: 451-475.

<sup>23</sup> Fusco 2011c (V. Zeppieri): 269-270.

<sup>24</sup> de Cazanove 2015: 183-185.

<sup>25</sup> Fusco 2011c (L. Camerlengo): 272-273.

<sup>26</sup> Fusco 2011c (B. Lepri and L. Lattanzi): 266-268.

<sup>27</sup> Fusco 2011c (F. Soriano): 270.

<sup>28</sup> Fusco 2011c (L. Camerlengo and C.M. Marchetti): 270-272.

<sup>29</sup> Fusco 2011c: 276-277.

<sup>30</sup> Fusco 2013-2014: 332-338.

<sup>31</sup> On the coexistence within a single complex of different types of water, not all of which were necessarily thermo-mineral: Annibaletto 2014: 135.



Figure 6. Hypothetical plan of the late Imperial period (2nd-3rd century AD) (by F. Soriano).

of various sizes that may have hosted those frequenting the area (for convalescence, healing and rest) but also the large specialized staff needed to ensure the functioning of such a substantial site.<sup>32</sup>

In the later Imperial period (2nd-3rd century AD) (Figure 6), the area occupied by the complex shrinks<sup>33</sup> and the earlier facilities for bathing are obliterated or replaced by new buildings with heating systems.<sup>34</sup> The location of the new structures is identical to those of the previous period, suggesting a continuity of function. Again, there is no evidence for the water-supply system. In conclusion, in none of the cases described above can the water used in the facilities for bathing be connected to the springs identified and located on the lower level.

#### Vignacce<sup>35</sup>

**Location.** The site is located outside the Veii plateau, along the valley of the Fosso Piordo (Figure 1, B).

**Spring.** After C.E. Gerhard's survey, the existence of a ferrous mineral spring is mentioned.

**Cults.** No trace of cult activities has hitherto been discovered.

**Water-related structures.** The site has not yet been subjected to specific archaeological studies and only the existence of a circular brick basin is known (*conceptio* of the spring?; diam. ca. 2.80m), with at least 2 steps and partially obliterated already when C.E. Gerhard visited in the 19th century.

UF

#### 'Bagni della Regina'<sup>36</sup>

**Location.** North-east of the town plateau, at Vaccareccia and on the left-hand bank of the Valchetta stream are the structures belonging to the so-called 'Bagni della Regina' (Figure 1, C).

**Spring.** The small bath complex lies near two active hypothermal springs with iron-rich carbonated water.<sup>37</sup> A survey undertaken on 30 July 2016 showed that along the banks of the Valchetta stream, the ancient Cremera, are numerous active springs, characterized by substantial reddish ferrous deposits.

<sup>32</sup> In general see the observations in Ghedini and Bassani 2014: 269.

<sup>33</sup> Fusco 2013-2014: 338-343.

<sup>34</sup> Fusco 2011c (T. Latini and M. Gristina): 273-275.

<sup>35</sup> Chellini 2002: 82; Gerhard 1832: 24 c; Ward-Perkins 1961: 71 app. I, 83 item c.

<sup>36</sup> Canina 1847: 73; Chellini 2002: 81-82; Jones 1960; Marcato and Zanetti 2014: 287, nr. 59; Turchetti 1999: 82-83; Yegül 1992: 116-117.

<sup>37</sup> Chellini 2002: 81.

**Cults.** The only evidence for possible cult activities consists of the presence inside a cavity, dug into the bedrock near the springs, of a serpentine axe and of a leech fibula; the latter dates to between the late 8th-6th century BC.<sup>38</sup> The context has been interpreted as a potential votive deposit.<sup>39</sup>

**Water-related structures.** The site is currently in a poor state of conservation due to the constant erosion caused by the Valchetta stream and the abundant vegetation, which almost completely covers the wall structures. During the survey, we were only able to identify some of the structures. We propose a new stratigraphic and architectural interpretation of the site accompanied by archaeological and reconstruction plans, to complement and update the earlier plans by J.D.B. Jones<sup>40</sup> (Figure 7) and to suggest a new date for the first occupation phase in the Roman period thanks to the comparison with the sequence of building techniques attested at the site of Campetti, south-west area. Three periods of occupation of the area have been identified (Figs. 8-9.a), and will be briefly described. The subdivision into phases and the chronology proposed by Jones is unfortunately based on only a few finds and especially on the typology of the building techniques. There is also a short description and depiction of the monument by L. Canina.<sup>41</sup> The engraving (Figure 10), whose authenticity has never been questioned, is of enormous interest since it shows: a massive wall structure made of blocks on the left and a wall structure with a pillar made of little blocks at the centre, within which are two apertures of which the lower right-hand one is arched. The buildings described, though they no longer exist and are impossible to identify in the field given the violent floods of the stream<sup>42</sup>, are important because they show the complex architecture of this site.

**Period I** (Figs. 8-9.b): three pits were dug<sup>43</sup> into the bedrock and within one of these a green serpentine axe and a leech fibula (8th-6th century BC) were sealed with a layer of mortar of Period II. These finds represent the earliest frequentation of the area, but it is impossible to determine its nature (sporadic or stable) or its relationship with the springs (cult activities?).<sup>44</sup>

**Period II** (Figs. 8-9.c): the first unitary architectural complex is built, using two thermo-mineral springs

and developing on two levels: on the lower level a small channel<sup>45</sup> takes water from the springs into two successive small basins<sup>46</sup> (1.50m average diameter) that served as decantation basins for the deposits left by the ferrous minerals. From these basins, the water was channelled into a large circular basin<sup>47</sup> (4.80m in diameter) used for bathing. The whole system described is dug into the tufa bedrock and is currently submerged beneath the waters of the Valchetta stream, making it impossible to verify our data.<sup>48</sup> For functional reasons, some wall structures with a facing in *opus reticulatum* can be ascribed to the same system. We could mention the boundary wall<sup>49</sup> of the complex, running east-west ('river wall'), which protected the area from the river and thus made it usable. The wall structures, built on a foundation of large square tufa blocks,<sup>50</sup> have a facing in *opus reticulatum* on both sides; the east side was not visible due to the packing of mortar and tufa<sup>51</sup> used to overcome the difference in altitude between the bedrock and the upper level. To the west, near the area with the basins, is another structure made of large tufa blocks<sup>52</sup> (resembling those of the foundation of the 'river wall'), running north west-south east; this could be interpreted as the foundation of a wall structure, no longer extant and perhaps connected to the boundary wall of the complex. Next to the circular basin is a short portion of a semi-circular wall structure<sup>53</sup> of uncertain function (step? seat?). Additionally, in the central area evidence survives of a flight of stairs, reused and renovated in Period III with steps in *opus reticulatum*,<sup>54</sup> and a small remnant of a wall structure<sup>55</sup> with a facing on the east side. The stairs<sup>56</sup> were built to overcome the difference in altitude of about 1.25m between the level with the circular basin and the upper level, where the entrance to the site is thought to have been located.<sup>57</sup> Based on Jones's description, a wall structure located south-east of the pits of Period I may also belong to this period. This is a wall (3.08m) made of badly dressed stone blocks<sup>58</sup> and mortar laid on top of a row of tufa blocks; it is crossed by a channel<sup>59</sup> with a covering of tiles. In the vicinity is another wall structure<sup>60</sup> consisting

<sup>38</sup> Jones 1960: 66, fig. 10.

<sup>39</sup> Chellini 2002: 82.

<sup>40</sup> The new analysis of the site entailed the identification and numbering of the SUs (stratigraphic units) and of the SWUs (stratigraphic wall units) on the archaeological plans. GPS points were also recorded for the structures that are still visible to determine the GPS coordinates of the site: Chellini 2002: 81.

<sup>41</sup> Canina 1847: 73.

<sup>42</sup> Jones 1960: 55.

<sup>43</sup> Figure 9.b: SU 55, 56, 57.

<sup>44</sup> On cultic frequentations at thermo-mineral mineral springs: Bassani 2014.

<sup>45</sup> Figure 9.c: SU 35. For the subsequent alterations to the system of channels (SWU 74): Jones 1960: 66-67.

<sup>46</sup> Figure 9.c: SU 34 and 31.

<sup>47</sup> Figure 9.c: SU 28.

<sup>48</sup> For a reconstruction of the path of the Valchetta stream: Jones 1960: 55 and Figure 10.b.

<sup>49</sup> Figure 9.c: SWU 1.

<sup>50</sup> Figure 9.c: SWU 2. Dimensions 1.95x0.85m (Chellini 2002).

<sup>51</sup> Figure 9.c: SU 75: fill of mortar and tufa: Jones 1960: 59, fig. 3.

<sup>52</sup> Figure 9.c: SWU 29.

<sup>53</sup> Figure 9.c: SWU 30.

<sup>54</sup> Figure 9.c: SWU 26.

<sup>55</sup> Figure 9.c: SWU 27.

<sup>56</sup> Altitude 54.01m a.s.l.

<sup>57</sup> It was impossible to determine the altitude of the spring, but the altitude near the basins is about 52.60m above sea level.

<sup>58</sup> Figure 9.c: SWU 36. For a description: Jones 1960: 67, the author uses the term 'tufelli' for the cubilia of *opus reticulatum*. On the inner side are traces of plaster 3cm thick.

<sup>59</sup> Figure 9.c: SWU 37.

<sup>60</sup> Figure 9.c: SWU 58.

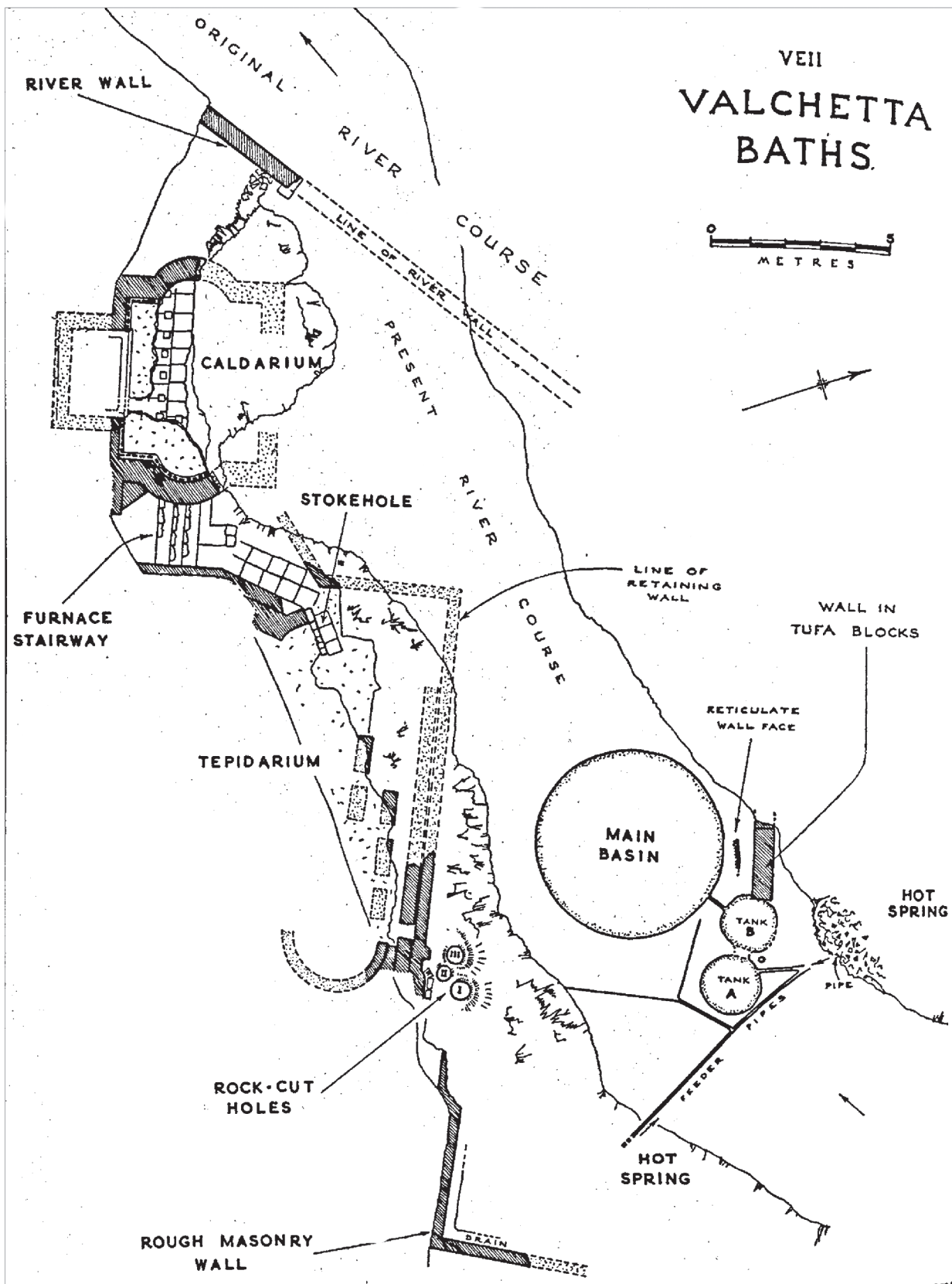


Figure 7. Plan of the site of Bagni della Regina (from Jones 1960: fig. 2).

Interphase plan	Hypothetical plan
<ul style="list-style-type: none"> <li>■ Period I (Etruscan age)</li> <li>■ Period II (half 1st century BC-1st century AD)</li> <li>■ Period III (first half 2nd-3rd century AD)</li> <li>■ Uncertain chronology</li> <li>▨ Stratigraphy</li> <li>■ Bed-rock</li> <li>□ River</li> <li>💧 Hot spring</li> <li>- - - - Limit of excavations</li> </ul>	<ul style="list-style-type: none"> <li>■ Preserved structure</li> <li>■ Preserved floor/stratum</li> <li>■ Probable structure</li> <li>■ Probable floor/stratum</li> <li>■ Bed-rock</li> <li>■ Probable bed-rock</li> <li>↔ Entrance</li> <li>* Hot spring</li> </ul>
Archeological plan	Section
<ul style="list-style-type: none"> <li>■ Structure in phase</li> <li>■ Surface in phase</li> <li>■ Structure reused</li> <li>■ Uncertain chronology</li> <li>■ Bed-rock</li> <li>💧 Hot spring</li> <li>- - - - No original limit</li> <li>- - - - Limit of excavations</li> </ul>	<ul style="list-style-type: none"> <li>■ Surface in phase</li> <li>▨ Sectionade structure</li> <li>■ Bed-rock</li> <li>□ Mortar</li> <li>■ Level of hot spring</li> <li>- - - - Limit of excavations</li> <li>- - - - Cut</li> </ul>

Figure 8. Legends for the plans of the site of Bagni della Regina (by L. Camerlengo).

of three irregular tufa blocks whose construction entailed the partial destruction of pit SU 56 (Period I) and the pouring of a layer of mortar that filled<sup>61</sup> and sealed the three pits. Of the three tufa blocks, that to the north presents a shallow depression that can be interpreted as a little channel for the outflow of water<sup>62</sup> from a structure uphill that no longer survives. There is insufficient information on the structure in question to suggest a reliable date.<sup>63</sup> Jones's proposed date for the structures in *opus reticulatum* is the late Augustan or Tiberian period, and is based exclusively on the generic chronology of the construction technique.<sup>64</sup> This *opus reticulatum* consists of blocks of local red tufa with black inclusions,<sup>65</sup> of homogeneous size<sup>66</sup> (8x8cm) with the exception of the remnant next to the flight of stairs where the blocks measure 10x10cm and the steps 11x11cm. Based on the data supplied by Jones it is impossible to determine if the differences in the size of these building blocks indicate different construction phases.

**Period III** (Figs. 8-9.d, e): the complex underwent a major renovation entailing the construction of two

<sup>61</sup> Fill of the pits: SU 76, 77, 78.

<sup>62</sup> Figure 9.c: SU 59.

<sup>63</sup> The British scholar only provides a reading of the stratigraphic relationships but no interpretation or chronological context. The remains are considered to be earlier than Period III: Jones 1960: 65-66. Chellini 2002: 82 interprets the structures as earlier than the Imperial period and thus as dating to between Periods I and II of this study.

<sup>64</sup> Jones 1960: 68.

<sup>65</sup> Jones 1960: 68: 'local reddish-brown stone'.

<sup>66</sup> Jones 1960, plate XX Fig. b.

roofed buildings for bathing, A and B. There are two distinct construction phases: in phase 1 the stairs of Period II were rebuilt and turned into service stairs, with the creation of two brickwork wall structures (*opus testaceum*) on the east side, perhaps serving to support a roof.<sup>67</sup> The four steps are paved with tiles.<sup>68</sup> On the upper level, west of the staircase, building A was constructed in brickwork (*opus testaceum*);<sup>69</sup> only the southern half is preserved. It consists of two apsidal walls, to the east<sup>70</sup> and west<sup>71</sup>, and a basin<sup>72</sup> built into the wall closing the room to the south-east. Also preserved are the *tubuli* along the internal perimeter, the suspended floor and the lower sub-floor in bricks with the *pilae*.<sup>73</sup> The suspended floor is covered with a layer of mortar<sup>74</sup> preserving the imprints of the marble slabs of the original floor and some marble wedges still *in situ*. The *praefurnium* has not been identified, but is thought to have been on the south-east side.<sup>75</sup> The laying of the floor inside the room presents some differences in construction technique compared to the perimeter walls; furthermore, the alignment of the *pilae* and the dividing walls seems uneven. This may be a result of different construction phases or, according to Jones, to a restoration entailing the laying of a new floor. The building has been dated to the early decades of the 2nd century AD based on the discovery of an otherwise unidentified fragment of African red slip ware ('Red Polished ware') inside the brickwork.<sup>76</sup> Again during this phase, east of the staircase, a retaining wall was built that appears to delimit a terraced area above the circular basin of Period II. The wall structure was built using a technique similar to that of the perimeter walls of building A and runs east-west. A long stretch to the east survives,<sup>77</sup> alongside a corner<sup>78</sup> at the foot of the staircase. We do not know if other structures of the same phase were present, since during phase 2 this area was occupied by building B. The latter was constructed in brickwork (*opus testaceum*), less carefully made than in room A.<sup>79</sup> A stretch of the apsidal west perimeter wall survives<sup>80</sup> as does the north wall running east-

<sup>67</sup> Figure 9.d: SWU 38 and 39. According to Jones 1960: 62 the roof was of the lean-to type. On wall SWU 38, a restoration was identified, SWU 21, in *opus mixtum* with tiles and little tufa blocks that must belong to the final phases of life of the area (Jones 2006: 62 and plate XXI-XXII a).

<sup>68</sup> Figure 9.d: SU 41. Dimensions 44x44cm, height 4cm.

<sup>69</sup> Jones 1960: 59-61.

<sup>70</sup> Figure 9.d: SWU 3 and 4.

<sup>71</sup> Figure 9.d: SWU 10 and 12.

<sup>72</sup> The covering in hydraulic mortar has been identified: SU 7.

<sup>73</sup> Figure 9.d: internal perimeter SU 8 and 11; floor SU 18; *pilae* SWU 16 (beneath the basin are 6 piers to provide greater support).

<sup>74</sup> Figure 9.d: SU 14.

<sup>75</sup> Jones 1960: 62.

<sup>76</sup> Jones 1960: 62. It is clear that further data are needed to date this building more reliably. The ceramic find mentioned, in the absence of other information, only provides a *terminus post quem* for the construction of the bath building.

<sup>77</sup> Figure 9.d: SWU 50.

<sup>78</sup> Figure 9.d: SWU 24.

<sup>79</sup> Jones 1960: 63-65.

<sup>80</sup> Figure 9.d: SWU 23.

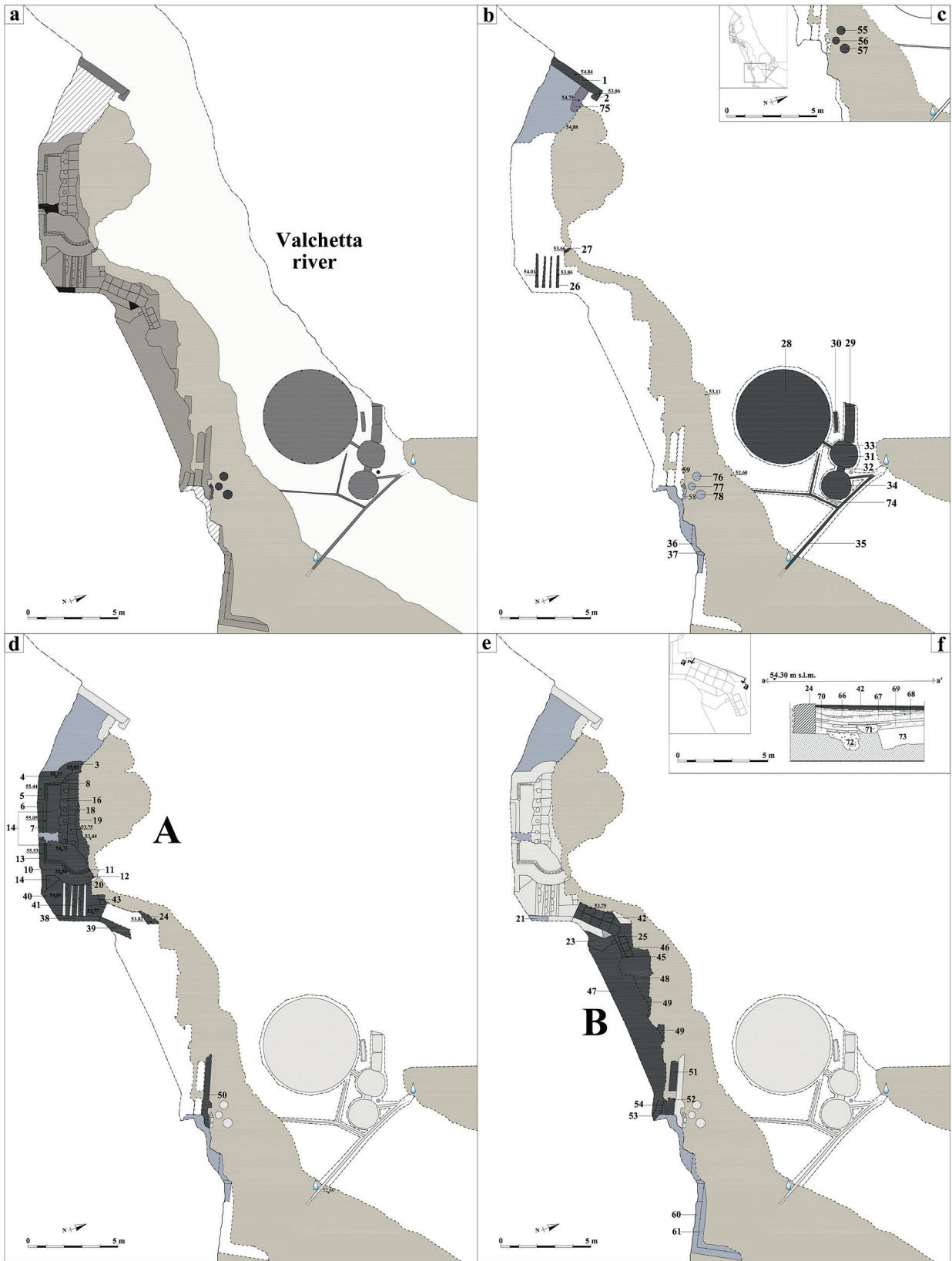


Figure 9. Interphases plan (a). Archaeological plan: Period I (b), Period II (c), Period III, phase 1 (d), phase 2 (e). Section (f) (by L. Camerlengo).



Figure 10. View of the Baths (from Canina 1847).

west.<sup>81</sup> To prevent the seepage of water from the nearby spring a series of precautions were taken when laying the hypocaust floor, which is partially preserved. The suspended floor<sup>82</sup> is supported by piers<sup>83</sup> in place of the traditional *pilae*. Between the brick sub-floor<sup>84</sup> and the bedrock, covered with a layer of mortar and tufa chips, an air circulation system was created.<sup>85</sup> Also presumably due to the damp, a gap seems to have been created between the outer retaining wall of phase 1 (Figure 9.d, SWU 50) and the new wall of the building (SWU 51-52): some tiles were placed vertically between the two walls to avoid them coming into contact.<sup>86</sup> Finally, at the internal base of the perimeter wall ran a channel connected to the system of *pilae*, perhaps to collect condensation. The *praefurnium* was also built on the west side during this phase.<sup>87</sup> The paved area in front presents numerous renovations;<sup>88</sup> the brick floor<sup>89</sup> may date to this same phase or to a later period.<sup>90</sup> Apparently belonging to the same construction phase is the rebuilding of SWU 36 of Period II: the earlier wall running east-west is prolonged with a wall structure of irregular tufa blocks, tiles and mortar<sup>91</sup> which turns after 1.80m at a right angle towards the north for another 2.30m. A (drainage?) channel<sup>92</sup> cut into the tufa bedrock runs alongside the wall.

<sup>81</sup> Figure 9.d: SWU 51-52.

<sup>82</sup> Figure 9.d: SU 47.

<sup>83</sup> Figure 9.e: SWU 49.

<sup>84</sup> Figure 9.e: SU 48.

<sup>85</sup> For an accurate and complete description of the system: Jones 1960: 64-65, fig. 7.

<sup>86</sup> Jones 1960: 64, fig. 8.

<sup>87</sup> Surviving are the south parapet (SWU 45), two tufa blocks from the mouth (SWU 25), the brick floor layer (SU 46) and four bricks from the roof arch not visible on the plan. Further details in Jones 1960: 63.

<sup>88</sup> Figure 9.f: 6 superimposed floor layers were identified, and it is plausible that the various renovations were rendered necessary by structural problems and damp (Jones 1960: 63).

<sup>89</sup> Figure 9.e: SU 42.

<sup>90</sup> It is currently impossible to identify the level of the same phase as the construction of the building equipped with a *praefurnium*.

<sup>91</sup> Figure 9.e: SWU 60.

<sup>92</sup> Figure 9.e: SU 63.

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**Interpretation:** there is little to say on Period I given the few data available. Very different is the situation for Period II, for which we can usefully suggest some new thoughts on the chronology of the architectural complex. Figure 11.a-b shows a comparison between the sample of *opus reticulatum* belonging to the boundary wall of the complex under examination here and those attested at the site of Campetti south-west area, dated using the stratigraphic method.<sup>93</sup> At the site of Campetti (Figure 10.b), the first type of *opus reticulatum* has a wall facing of local red tufa blocks with black inclusions whose size ranges from 8x8 to 11x11cm and which is dated to the first half to mid-1st century BC.<sup>94</sup> Given the close similarities between the two building techniques,<sup>95</sup> we can date the wall structure at the site of ‘Bagni della Regina’ (Figure 11.a) to the same period. It is also significant that the *opus reticulatum* of the late Augustan-Tiberian period attested at Campetti, south-west area presents some specific features: the average size of the *cubilia* is between 6x6 and 7.5x7.5cm (with a few smaller blocks measuring 5.5cm or larger ones measuring 8cm per side) and they are made of a variety of yellow tufa; they are evenly laid.<sup>96</sup> As such, the chronology of the first architectural structure of the Roman period at the ‘Bagni della Regina’ site might precede the establishment of the *municipium* of Veii, generally dated to the end of the 1st century BC.<sup>97</sup> Unfortunately, aside from the large basin for open-air bathing<sup>98</sup> and the access staircase, we cannot hypothesize the presence of other structures given the limited extent of the area investigated (Figure 11.c). Overall, the size of the site in this Period can be calculated as at least 390sqm. During Period III there is a marked enlargement of the earlier building project, with the new buildings A and B (Figure 11.d) giving the complex the typical layout of public *balnea*.<sup>99</sup> Building A, equipped with a hypocaust system, has a heated pool on the south side with the access stairs on the north. It is plausibly interpreted as a *calidarium*.<sup>100</sup> The reconstruction of building B presents greater problems due to the scanty remains preserved: based on the comparisons identified we can interpret the structure as a rectangular *tepidarium*, with a hypocaust

<sup>93</sup> A monograph on the site is currently under preparation; here we anticipate some information on the typology and chronology of the building techniques.

<sup>94</sup> The limited nature of the structures found, due to the sudden abandonment of the building project, makes it impossible to offer a reliable interpretation of this area between the 2nd and 1st century BC.

<sup>95</sup> Figure 11.b: the wall structure SWU 559 is the closest parallel.

<sup>96</sup> Figure 11.c: SWU 297 and 505.

<sup>97</sup> For the date of the *municipium*: Liverani 1987: 144-145.

<sup>98</sup> Yegül 1992: 117. In Chellini 2002 a different theory is proposed according to which the shallow depth (0.58m) of the large circular basin suggests that it is a *conceptio*.

<sup>99</sup> Annibaletto 2014.

<sup>100</sup> Jones 1960: 59, *calidarium* of the ‘Reihentyp’ type.

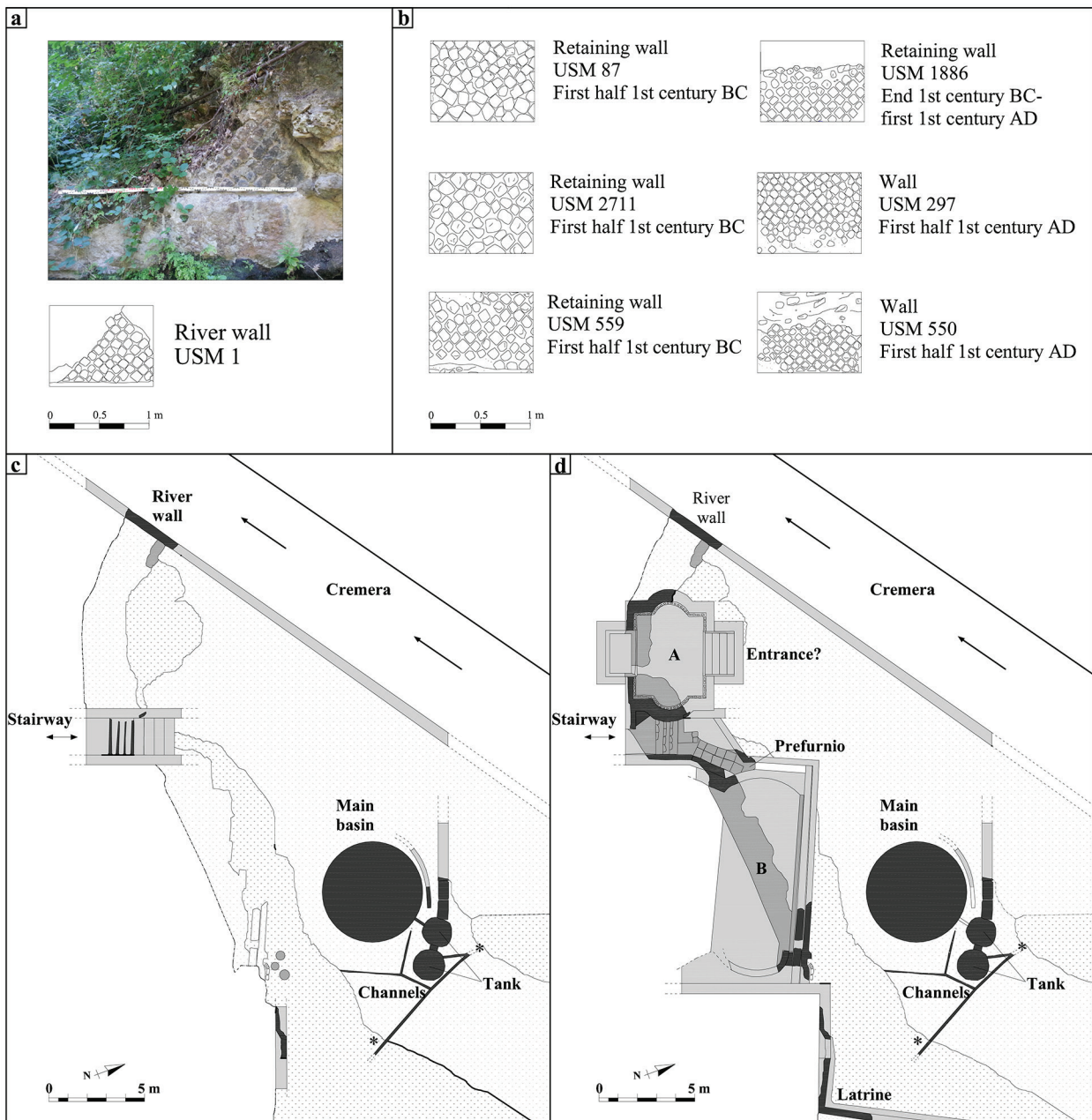


Figure 11. Comparison of the samples of walls in opus reticulatum from the site of Bagni della Regina (a) and the site of Campetti, south-west area (b). Hypothetical plan: Period II (c), Period III (d) (by L. Camerlengo).

system and apsidal short sides,<sup>101</sup> perhaps equipped with basins.<sup>102</sup> Towards the east is the corner of a room with a drainage channel that can be interpreted as the remains of a latrine. Probably also belonging to this site are two cisterns, perhaps originally five in number, dug into the tufa bedrock and covered in waterproof cement, and a tunnel. These structures, identified in

the steep tufa bluff behind the site,<sup>103</sup> must have served to supply water to the buildings (A and B for example) of the *balneum*, as commonly attested in other cases.<sup>104</sup> The buildings reconstructed for phase 2 of Period III (Figure 11.d) cover a total area of about 550sqm. Even without knowing the full extent of the complex described, we should suggest, as already proposed for the site of Campetti south-west area, the existence of a series of other buildings destined for both the

<sup>101</sup> According to Yegül 1992: 117 the apse is present only on one side. For the type of tepidarium with two apses: Nielsen 1992: 86, fig. 54 Roma, 'Balneum of the Arval Brethren at la Magliana' and fig. 55 Roma, 'Lateran Baths'.

<sup>102</sup> Jones 1960: 63-64.

<sup>103</sup> Jones 1960: 57. For a schematic location: Ward-Perkins 1961: 58, fig. 16.

<sup>104</sup> Annibaletto 2014: 135.



Tab. 1. Sites in Veii with thermo-mineral spring.

Site	Location	Spring/s	Cult/s	Architecture	Management
Campetti, south-west area	peri-urban area, on terraced slope	Attested in votive inscription; possibly identified in underground tunnels; currently extinct	<i>Hercules</i> ; the Springs; <i>Diana</i> , <i>Hygieia</i> (and <i>Aesculapius</i> ?)	complex of monumental type	public
Vignacce	peri-urban area	Mentioned in archaeological publications	not currently attested	facility limited to a single structure	private (?)
'Bagni della Regina'	peri-urban area, on terraced slope	Active and documented in scholarly publications	votive deposit? (serpentine axe and leech fibula)	complex limited to some bathing rooms and cisterns	public

customers and the specialized staff responsible for maintaining and running the area. The enlargement of the complex in Period III reflects a change in taste that during the 2nd century AD led to the emergence of bath complexes with water heating systems.<sup>105</sup>

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### Conclusion

Below we propose some considerations on the relationship between the sites described, the town and its territory, on the springs, the cults, the architectural layout and potential management type.<sup>106</sup> The three contexts analysed are not understood to the same extent from an archaeological point of view: the site of Campetti, south-west area has been the object of wide-ranging, though not yet wholly complete, studies; the site of 'Bagni della Regina' has only been excavated to a limited extent: finally, the site of Vignacce should be considered as essentially unexplored. This state of affairs explains the discrepancies in the table 1 above, which collects the principal data on each area, though it is thought likely that all the sites belong to the same typology.

As concerns their location, the sites of Campetti and Vignacce are near the settlement of the Roman period (Figure 1). However, whilst the site of Campetti was connected to the *municipium* of Veii by a nearby major road,<sup>107</sup> the site of Vignacce lay in a more isolated area and could be reached only by secondary roads.<sup>108</sup> Evidently this reflects a difference in importance: the former, monumental in its layout, had a privileged and direct relationship with the town and a public management; the latter, by contrast, far smaller in size, played a secondary role and was probably privately run. The marginal location of the 'Bagni della Regina' site suggests that it was used mainly by the settlement

system outside the town and its public management is accepted by scholars. Thermo-mineral springs are attested with certainty only at 'Bagni della Regina', but based on the data collected it is likely that they also existed at the other two sites. Significant evidence for cult activities is present only at the site of Campetti, south-west area, but we believe that its almost complete absence at the other sites is due purely to the limited research hitherto undertaken. From a structural point of view, it is worth noting that two sites (Vignacce and 'Bagni della Regina') contain a similar structure for bathing: the circular basin, very common in complexes of this type.<sup>109</sup> The absence of such a structure at Campetti, south-west area might be due to the different function of the springs here.

This study has outlined the current situation of the Veii context, demonstrating the enormous potential for improving our knowledge of the area still further. As such, it is to be hoped that a larger-scale research project will be undertaken. This should entail on the one hand a systematic survey of all the thermo-mineral springs attested in the peri-urban territory of the town (we refer particularly to those springs marked only on the historical and archaeological cartography mentioned above). On the other, it should envisage the start of systematic archaeological research on less well known sites such as Vignacce and, at the same time, the conservation, enhancement and further study of the site of 'Bagni della Regina'.

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<sup>105</sup>In Yegül 1992: 116, parallels between the Taurine Baths and the site under consideration.

<sup>106</sup>For this type of considerations on geothermal mineral complexes in Italy: Ghedini and Bassani 2014.

<sup>107</sup>Ward-Perkins 1961: 8-13.

<sup>108</sup>Ward-Perkins 1961: 58, fig. 16.

<sup>109</sup>Annibaletto 2014: 133-135; Ghedini and Bassani 2014: 268.

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