

settlements found were predominantly small and dispersed. In the upper valley, in a further contrast, the survey found a hierarchy of rural settlement, from small farms to villages. (We shall return to the possible social interpretations of these variations in rural settlement at the end of this chapter.) Calculations based on the different sizes of the various categories of site indicate a fourfold increase in the population of the valley from the seventh to the sixth centuries BC.<sup>9</sup> Such a dramatic increase (mirrored in the other surveys of southern Etruria) implies an annual growth rate of about 3 per cent, not dissimilar to that suggested for the Athenian city state at the comparable stage of its development in the late eighth century BC.<sup>10</sup>

Very little is known of rural settlement in northern Etruria because of the limited extent of systematic archaeological survey, but where it has been practised, for example around the coastal centres of Populonia, Vetulonia and Roselle,<sup>11</sup> in the central Tuscan hills at Montarrenti near Siena<sup>12</sup> and in the Gubbio basin in Umbria,<sup>13</sup> it has uncovered evidence for networks of small hamlets and farms similar to those further south. Further north in the Po valley, even less is known of small-scale settlement, but survey in the Reno valley found surface remains of a small domestic site outside the town of Marzabotto, as well as numerous traces of small cemeteries every kilometre or so down the valley as far as the minor centre of Casalecchio di Reno, evidence which is taken together to indicate that the agrarian population lived in numerous small farms as well as in the centres.<sup>14</sup>

### The major centres

The Etruscan cities and smaller centres of Etruria were invariably located in positions of great natural strength (fig. 50) and further strengthened by impressive walls.<sup>15</sup> Masonry below later Roman and medieval walling or incorporated into entrance gates has been identified at several cities as Etruscan, though much probably dates to the later centuries of Etruscan settlement around the time of Romanization (see chapter 8); typical examples include Amelia (fig. 54),

9 Perkins, in press

10 Snodgrass, 1977

11 Cucini, 1985; Fedeli, 1983, 1984

12 Barker and Symonds, 1984; Barker et al., 1986

13 Malone and Stoddart, 1994

14 de Maria, 1991

15 Boitani et al., 1975



Figure 54 *Polygonal walling at Amelia (Umbria), probably late Etruscan in date. (Photograph: G. Barker)*

Perugia and Volterra. Etruscan stone walling was either ‘polygonal’, cut as irregularly shaped blocks and laid as a kind of vertical crazy paving, or ‘ashlar’, cut into roughly rectangular blocks and laid like modern bricks as headers and stretchers in courses. One of the best known – and most photographed – examples is the sixth century BC defences of Roselle, where almost 4 km of walling surrounded the city area. Traces of similarly substantial walls have been found in Rome dating to about the same period.<sup>16</sup> Figure 55 presents some examples of Etruscan walling as shown in the charming drawings used by George Dennis to illustrate his *Cities and Cemeteries of Etruria*. At Roselle (Rusellae), excavations on the northern boundary of the town have also found evidence for a seventh century wall constructed of sun-dried mud-brick on stone foundations;<sup>17</sup> no doubt the same technique was used elsewhere in Etruria. It is probably no coincidence that Rusellae replaced its mud-brick defences in the sixth century with a massive stone wall at just about the time that its great neighbour Vetulonia underwent a sudden decline.

One of the best studied defence systems is that of Veii (see figure 26, chapter 2). The acropolis or natural citadel of the town immediately south of the main city site, Piazza d’Armi, was enclosed by a well constructed wall of ashlar masonry with a rubble core, with a gateway through it protected by a large guardhouse.<sup>18</sup> The city itself was encircled by a defence system more than 6 km long, consisting of a massive earthen rampart more than 20 m thick fronted by an ashlar stone wall some 2 m thick, which survives in places to a height of 6 m.<sup>19</sup> The lower part of the wall-facing was much rougher than the upper section, suggesting that there may have been a sloping ‘glacis’ or earthen ramp between the edge of the cliff and the wall, to make an even more difficult angle of approach for an attacker. The system was probably constructed shortly before the Roman attack of 396 BC.

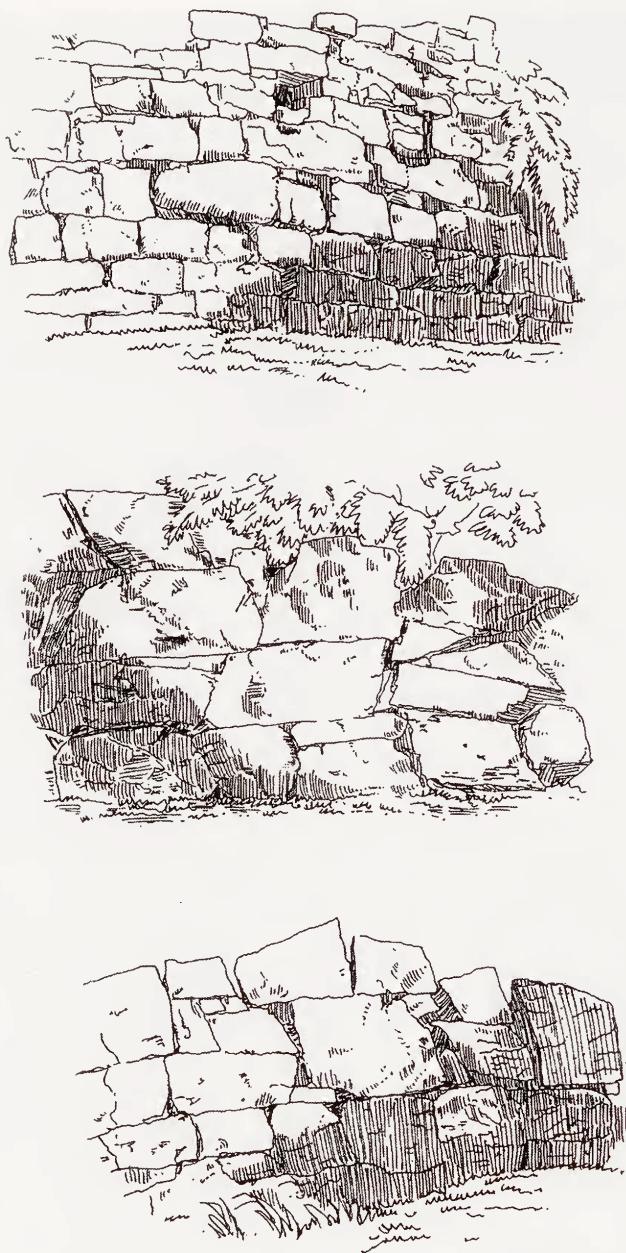
For the reasons mentioned in the introduction to this chapter, few of the major Etruscan cities have been adequately investigated by archaeologists and little is understood of town planning. The indications are that most Etruscan cities were laid out rather haphazardly, more like medieval hill towns than planned Roman towns. As yet no overall pattern emerges, though it seems likely that, as in

16 Cristofani, 1990

17 Canocchi, 1980

18 Stefani, 1922

19 Ward-Perkins, 1959, 1961



*Figure 55 Typical examples of Etruscan walling, redrawn from illustrations in Dennis (1883): Volterra (above), Populonia (centre) and Roselle (below). Volterra and Populonia as drawn by Dennis, Roselle as drawn by S.J. Ainsley.*

Greece, the growth of the old established centres was organic and rather haphazard, but that more formal planning was applied to new foundations. At Veii, there seems to have been a single main road running down the spine of the hill with streets branching off, an informal layout with curving streets has been revealed in a quarter of Vetulonia, and geophysical survey at Tarquinia has shown that

the axes of the streets vary in different parts of the site (fig. 56).<sup>20</sup> A more formal approach is probable (but only small areas have been tested) at Regisvilla<sup>21</sup> and Doganella, both founded in the sixth century, and has long been known at Marzabotto south of Bologna (see below).

There were probably public spaces at the centre of the towns, with other areas reserved for the monumental buildings. Such buildings differed radically from developed Greek architecture because the soft *tufo* rock of the region was ill-suited to sculpture in the round with intricate carved detail. Stone was often employed only for the footings of walls, the rest of the structures making extensive use of less durable materials of which the country has an abundant supply: mud-brick for walls; wood for columns, architraves and the framework of the roof; and fired clay (terracotta) for the tiles, the sheathing of exposed beams and all sculptural and architectural ornament.

Etruscan temples are discussed in detail in chapter 7, but a few comments on their physical appearance are apposite here. The temple stood on a stone platform, with a central flight of steps leading up to the entrance. The superstructure was mounted on a wooden frame of columns and cross beams, the walls being built mainly of unfired brick covered with plaster. The principal form consisted of an open colonnaded front and a closed rear space commonly divided into three rooms or *cellae*, the whole structure covered with a ridged roof decorated at the ridge, gable ends and edges with terracotta 'antefixes' and statues. The pediment, the triangular gap at the front of the temple formed by the roof pitch, was left open in the early temples but sometimes later decorated with sculpture. The terracotta decorations and probably exposed wood as well were painted in bright colours like red, white and green, so Etruscan temples must have been very striking, not to say gaudy.

Doganella, in the Albegna valley, has provided us with some of the best evidence for urban layout from the study of its surface artefacts, as the city is under the plough today (fig. 57).<sup>22</sup> The city walls enclosed an area of 140 ha; as at Veii there seems to have been a central cobbled street, with access to it via side streets from the different parts of the town. The distribution of surface debris indicates that the northern and western zones were used for food-processing,

20 Cavagnaro Vanoni, 1989

21 Tortorici, 1981

22 Perkins and Walker, 1990; L. Walker, 1985



Figure 56 Tarquinia: detail of street plan. (After Rasmussen, 1986a, courtesy of L. Cavagnaro Vanoni)

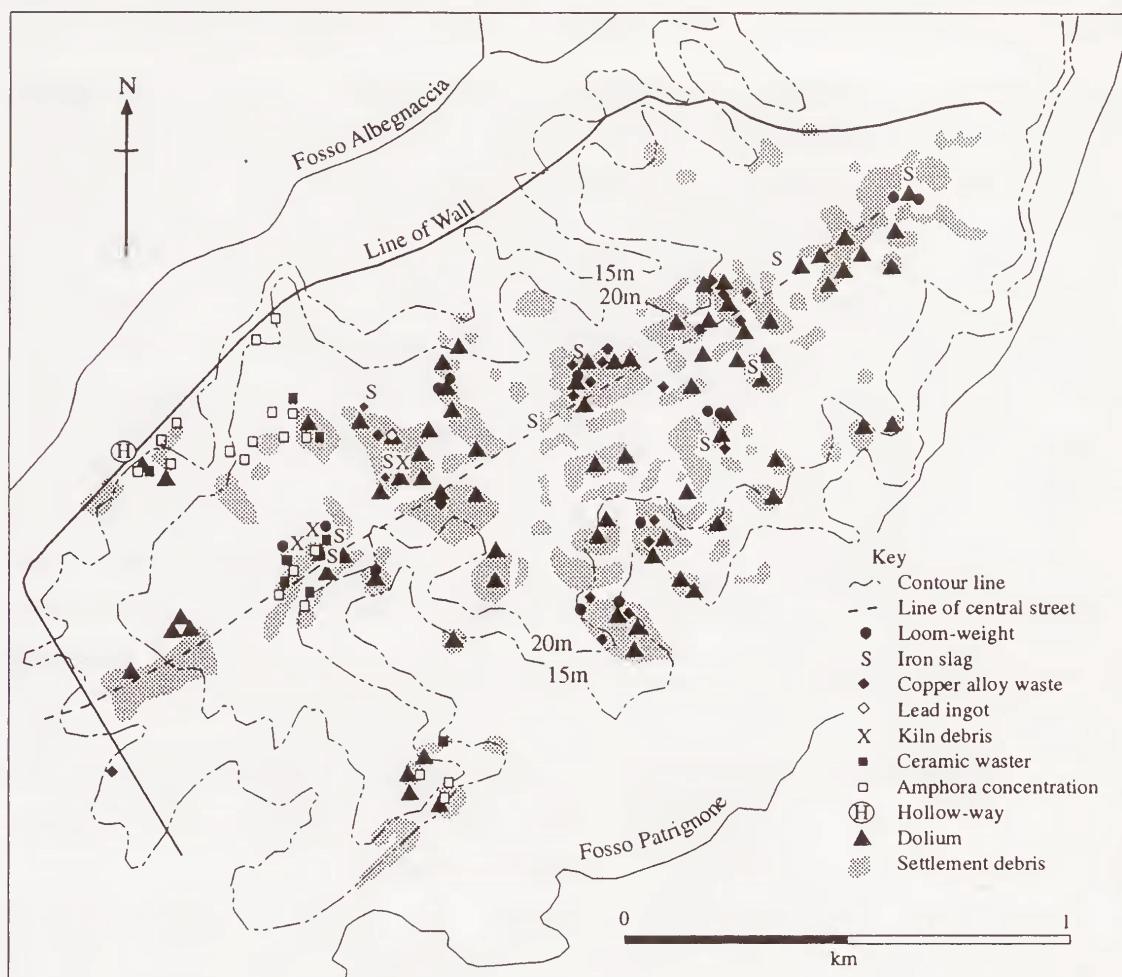


Figure 57 *Doganella: plan established by surface survey.* (After L. Walker, 1985)

food storage, metalworking and weaving; probably most of the population lived here, with many agricultural and craft activities operating at the household level. The western part of the site was used for amphorae production, suggesting that this activity was on a more organized, industrial basis – indications of the complexity of the Etruscan agricultural economy, to which we shall return in the next chapter. Some parts of Etruscan cities may well have remained open areas used for cultivation or grazing, like parts of some medieval cities in Italy. Perkins and Walker<sup>23</sup> calculated a population of between 8000 and 15,000 people at Doganella, whilst on the basis of population estimates for smaller settlements excavated comprehensively (see below), Spivey and Stoddart<sup>24</sup> suggested maximum

23 Perkins and Walker, 1990

24 Spivey and Stoddart, 1990: 61

populations for each of the main Etruscan cities of about 35,000 people.

There are no standing structures at Doganella, but we can begin to picture the appearance of the living quarters of the urban population from excavations elsewhere. In the area of the northwest gate at Veii, a Villanovan round hut with wattle and daub walls, timber posts and thatch roofs was replaced in the sixth century BC by a rectangular wooden house measuring about  $12 \times 5$  m, divided by wooden partitions into three rooms and fronted by a wooden portico.<sup>25</sup> This was replaced after a few decades by a rectangular building of stone, with a tiled roof. On the northern side of the town, Stefani found evidence of terraced houses with their ground floor rooms cut back into the bedrock, first floor rooms fashioned (at least in part) of drystone walling – timber was probably also used – and roofs of terracotta tiles.<sup>26</sup> Similar houses have been excavated by the northern perimeter wall at Roselle.<sup>27</sup> The traditional terraced housing of many Italian hill towns and villages today is comparable in its design and – before the days of the ubiquitous cement rendering – probably not dissimilar in appearance. In such housing, the lower floors have traditionally been used for storage and stabling, the upper floors for living and domestic work.

In the late sixth and fifth centuries BC, when Etruscan power expanded north of the Apennines into the Po valley, the city of Marzabotto was established as a new centre to a carefully planned design (fig. 58). Streets of regular widths were laid out at right-angles to form housing blocks of c.165 m in length, with a sanctuary area on rising ground to the northwest.<sup>28</sup> The religious complex included a series of square temples and altars (see figure 79, chapter 7). Each housing block contained seven or eight houses built as separate units within them (fig. 59 (above)). The houses were rectangular, with a series of small rooms laid out round a central courtyard. Rainfall from the roofs was collected in drainage channels between the houses and then guided by secondary channels through a perforated slab into stone-lined cisterns at the centre of each courtyard. Other drainage channels along the sides of the houses connected with street drains laid out at a careful gradient to take rainwater and effluent from the settlement to the river Reno below.

25 Ward-Perkins, 1959

26 Stefani, 1922

27 Canocchi, 1980

28 Mansuelli, 1972; Sassatelli, 1989

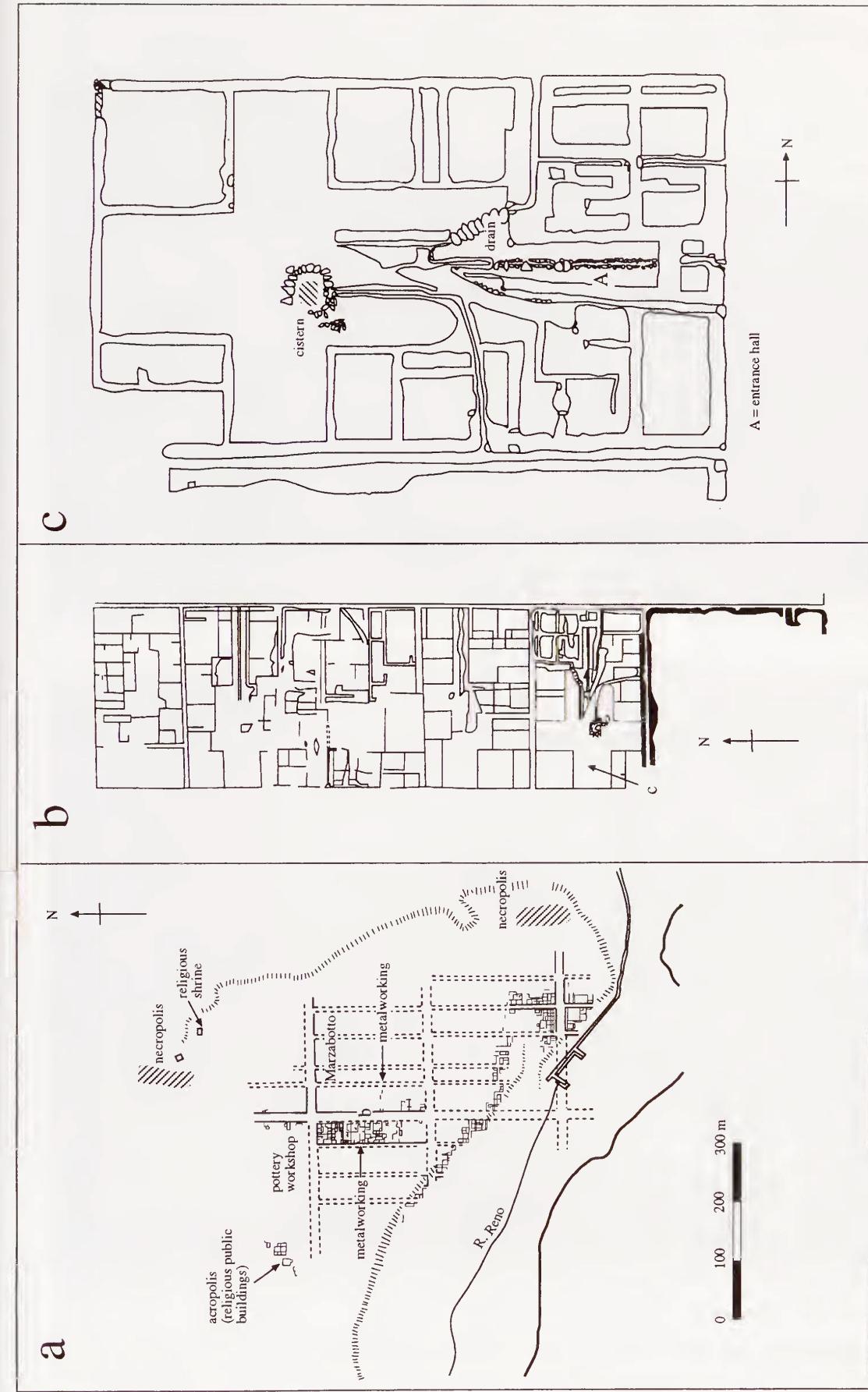


Figure 58 The fifth century BC city of Marzabotto, showing (a) its overall structure, (b) the ground-plan of one of the insulae, and (c) one of the houses within this insula. (After Sassatelli, 1989)

The city plan shows well the urban Mediterranean penchant both for grouping together workshop areas of similar trades (metalworking, for example) and for placing cemetery areas outside the walls and gates of the settlement (fig. 59 (below)). This type of regular street plan, which probably originated through contact with the Greeks of Sicily and southern Italy, is also very noticeable in some of the larger necropolises further south, especially at Orvieto (Crocifisso del Tufo) and Caere (Banditaccia).

The other well known Etruscan planned settlement in the Po valley was the Adriatic port of Spina.<sup>29</sup> Founded in the later sixth century BC, the port was laid out on an orthogonal grid plan still visible in air photographs today. Much of the communication system consisted of navigable canals connected to the sea as well as normal streets. Organic remains are well preserved because of the waterlogged conditions of the site: the houses were built on the drier higher ground, on platforms of timber and brushwood, with timber frames, wattle and daub walls and thatch roofs.

### **The smaller centres**

Like the cities, most Etruscan minor centres were situated in positions of great natural strength, defended by stout walls. In the case of some promontory locations, the protection of the site from attack was further strengthened by a ditch across the promontory neck. The cemeteries were located outside the walls, cut into the flanks of the main hill or on neighbouring hills. Information about the internal organization of the medium-sized and minor centres is derived mostly from the Swedish excavations of San Giovenale and Acquarossa in southern Etruria.<sup>30</sup> The site at Murlo to the south of Siena, which began to be investigated in 1966 and is still under excavation, is particularly important as an early example of non-funerary architecture and planning on a monumental scale. The Etruscan names of the three sites are unknown.

### *San Giovenale and Acquarossa*

Both sites (fig. 60) lie in the interior of southern Etruria, and so may not necessarily be typical of the minor centres that were within the

29 Alfieri, 1979

30 Wikander and Roos, 1986

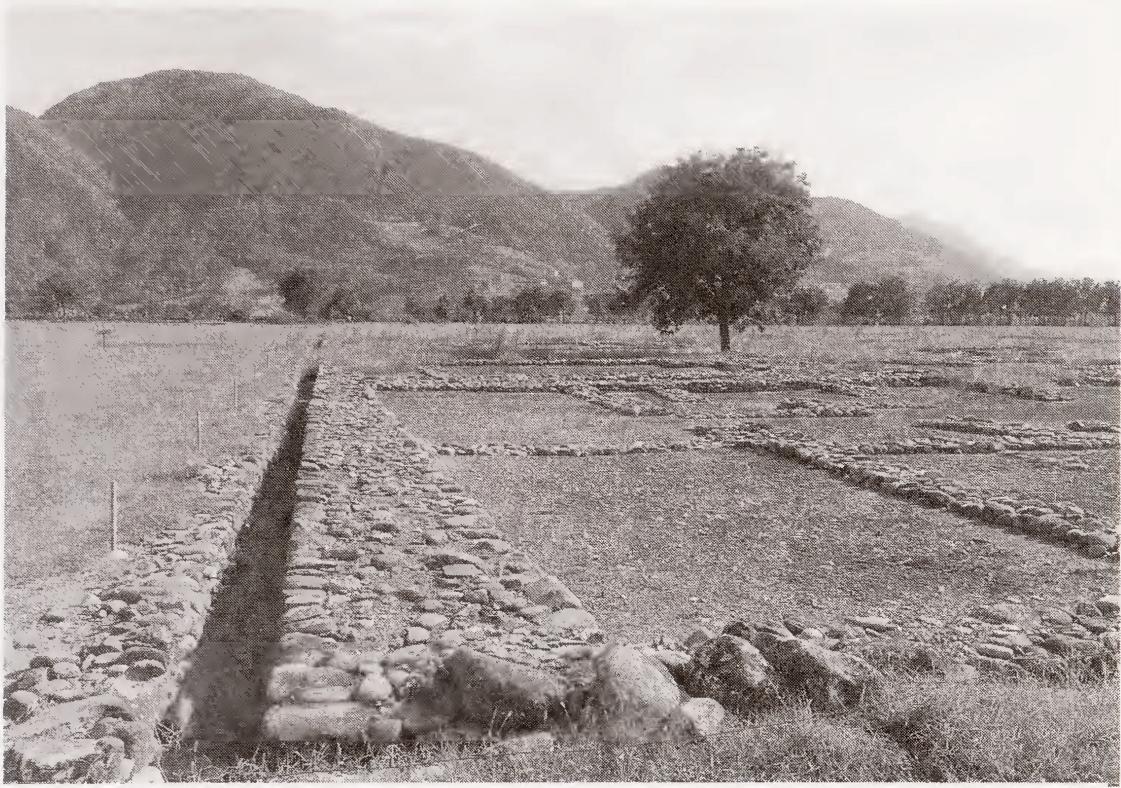


Figure 59 Marzabotto. Above: footings of a housing block. Below: eastern necropolis, with town gate in the background. (Photographs: T. Rasmussen)

San Giovenale

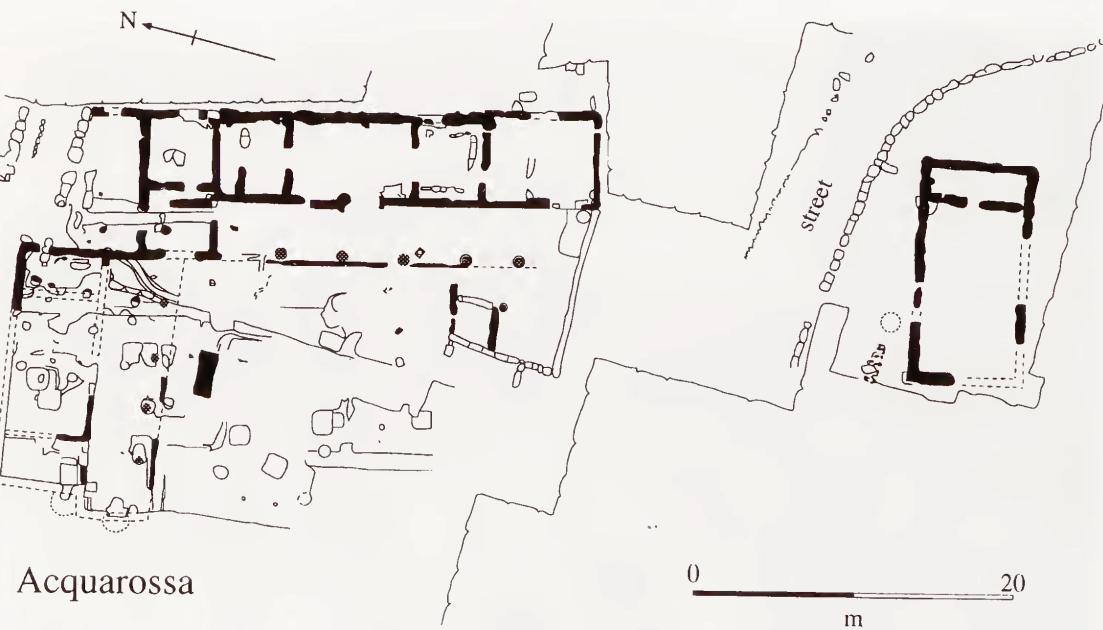


Figure 60 *Plans of structures at Sàn Giovenale (above) and Acquarossa (below). (After Colonna, 1986)*

political spheres of influence of the major cities. San Giovenale is situated on the eastern side of the Tolfa mountains and was the site of a Villanovan village of oval huts. The Etruscan settlement that succeeded this measured about 3.5 ha and consisted of a cluster of dwellings rather like those of Veii, with their foundations cut into the bedrock and their superstructures built of large ashlar *tufo* blocks which were found preserved to a metre or more.<sup>31</sup> The houses were two-roomed with pitched roofs of terracotta tiles, separated from one another by alleys. One of the houses had a low bench made of river cobbles running along three walls of the main room like the *triclinium* of a Roman dining room; others were identified as storage facilities from the presence of *dolia*, large clay jars. Rainwater was drained from the habitation area by channels and collected in cisterns as at Marzabotto. During the course of the fourth century BC, the eastern end of the acropolis area was enclosed by a substantial defensive wall of ashlar blocks.

Acquarossa, 6 km north of Viterbo, flourished during the seventh and sixth centuries BC. The site covered a maximum area of 23 ha, with a population estimated at about 5000.<sup>32</sup> The settlement seems to have developed in an irregular fashion without a preconceived plan. It was built on a plateau of about 1 km<sup>2</sup> with steep sides. In the northwestern part of the hill, a road some 7 m wide brought the visitor up from the valley into a public space demarcated by two monumental buildings at right-angles to each other, each consisting of a series of rooms fronted by a portico. These structures were elaborately decorated with terracotta antefixes and facing slabs showing images borrowed from Greek mythology, such as the labours of Herakles, as well as scenes of feasting and banqueting.<sup>33</sup> This part of the site is assumed to have been its politico-religious centre.

About twenty houses have been uncovered elsewhere on the acropolis, laid out in irregular groups, built of *pisé* (mud) or wattle and daub on stone footings. The more common version measures about 10 × 5 m, with two or three rooms usually entered from the side. Some of these plans are strikingly reminiscent of contemporary chamber tombs, especially the type that features three inner chambers facing onto a transverse hall, as exemplified by the Tomb of the Greek Vases at Caere. Fragments of domestic pottery, cooking stands, clay spindle whorls and loom weights indicate that the

31 Boëthius, 1978; Hanell, 1962

32 Östenberg, 1975; Wikander and Roos, 1986

33 Wikander, 1981, 1988

houses were used for a variety of craft activities as well as living and sleeping. Other buildings were used for storing food and equipment and stabling animals, the intervening courtyards no doubt being the focal area for much of the life of each household. In the central part of the settlement, presumably reserved for the richer people, were a few larger houses distinguished from the others by the addition of an extra room and a portico. Both types of houses had foundations cut into bedrock, walls of sun-dried mud-brick or wattle and daub on stone block foundations, and tile roofs. The wealthiest houses had revetments decorated with griffins or rosettes and similarly elaborate terracotta cornices.<sup>34</sup> Many of the houses, like the temples, were modified during use, confirming the impression of piecemeal development.

### Murlo

The principal building excavated at Murlo was at its grandest in the first half of the sixth century, when its hub was a complex of rooms with *pisé* and mud-brick walls arranged around a courtyard in a 60 m square and with an interior wooden colonnade on three sides (fig. 61). But this was only a replacement for a similar, though smaller, construction that had burned down at the end of the previous century, the remains of which were found under the west and south flanks (seen in the solid lines of fig. 61). Especially arresting are the terracotta revetments and roofing systems of both phases. To the later phase belong life-size *akroteria* (roof sculptures) of standing and seated human figures, of which two wear ‘cowboy’ hats; these were placed along the ridge-pole of the northern flank, which was probably two storeys high, and were flanked by figures of animals and monsters.<sup>35</sup> Also of this phase are the four series of moulded plaques that possibly adorned the wooden architraves above the colonnades (fig. 62a–d). But the earlier (Orientalizing) building can boast architectural terracottas of almost equal sophistication, including elaborate figurative openwork or ‘cut-out’ *akroteria*.

Despite the widely held and persuasive view that the standard tiling system for a ridge roof, along with its optional decorations, was a concept imported from Greece, the early date of the installation at Murlo (the second half of the seventh century) has given

34 Wikander, 1993

35 For the building complex: Phillips, 1993; Nielsen and Phillips, 1985. For the statue *akroteria*: Edlund-Berry, 1992

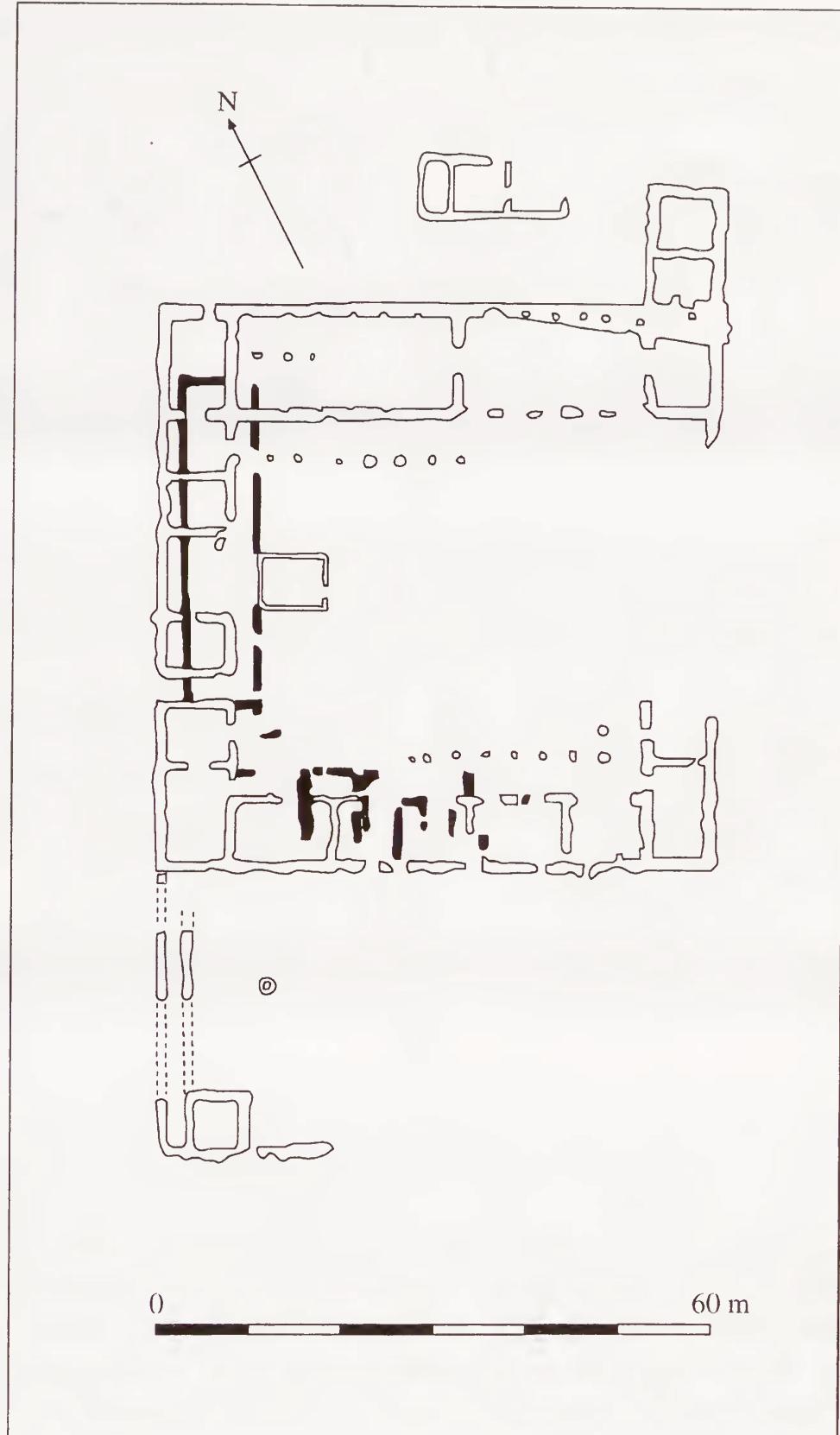
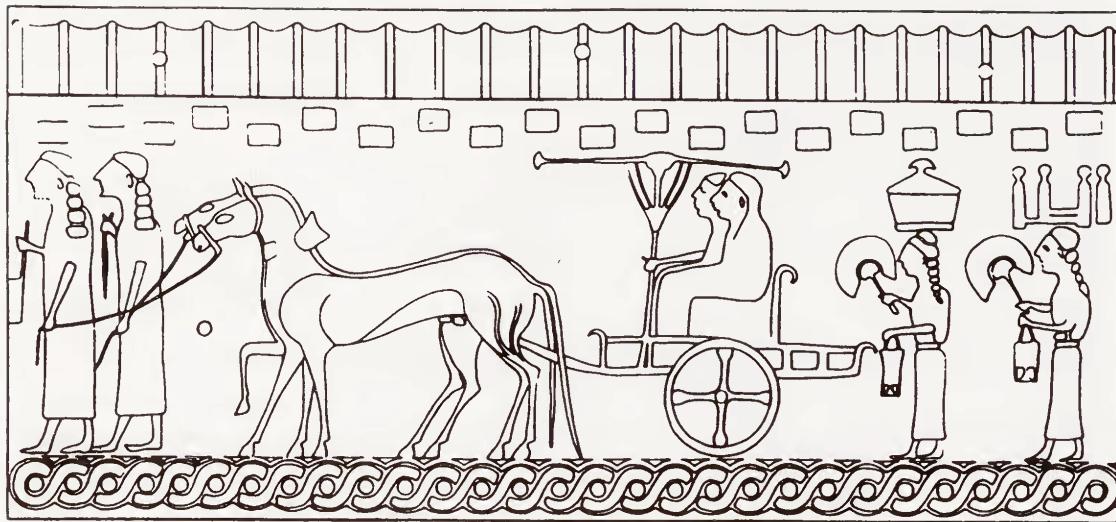
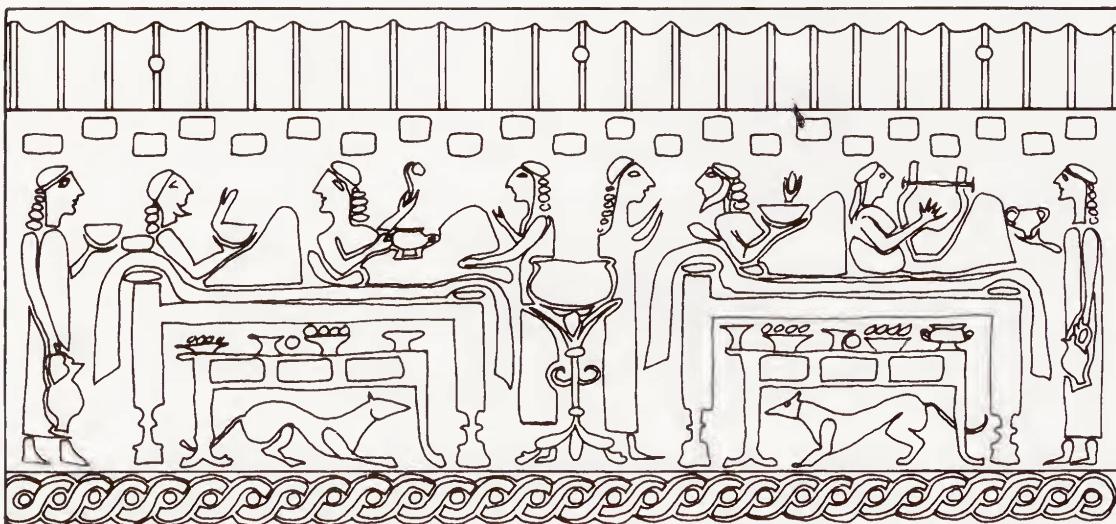


Figure 61 Plan of Murlo, Poggio Civitate: the building of the Orientalizing period is shown in black, under the archaic-period structure. (After Stopponi, 1985a)



(a)



(c)

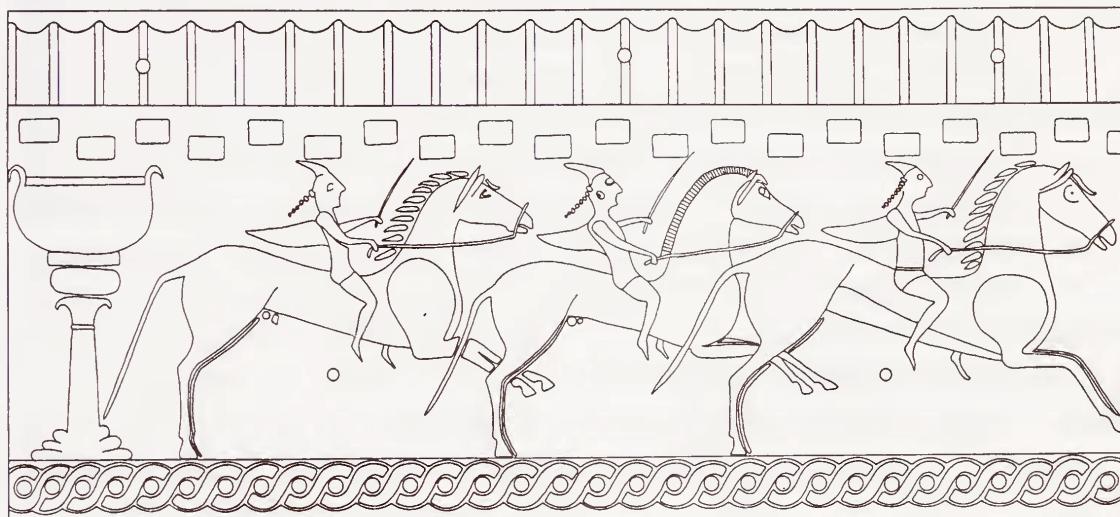
rise to the argument<sup>36</sup> that the system may have been developed from native traditions such as are visible in the 'hut urns' of the Early Iron Age (see figure 27, chapter 2). However, although the treatment of the ridge-beam – supporting cut-out *akroteria* in the seventh century<sup>37</sup> and full-scale statues in the sixth – clearly does follow local inspiration and traditions, the basic elements of the tiled roof are still very likely to be a principle learned from the

36 Ridgway and Ridgway, 1994

37 Rystedt, 1983



(b)



(d)

*Figure 62 Murlo: terracotta relief plaques from the sixth-century building.  
 ((a) After Gantz, 1974: fig. 1 (b) After Gantz, 1971: fig. 1 (c) After Small,  
 1971: fig. 1 (d) After Root, 1973: fig. 1)*

Greeks. At Murlo, the terracotta work was done on the spot, for in the immediate vicinity was a building nearly 50 m in length that was in part used as a tilery: stacks of unfired tiles were found here *in situ*, along with decorative terracotta elements.<sup>38</sup>

The conflagration that consumed the Orientalizing complex is thought to have been accidental (the workshop building also burned

down at about the same time). It was so sudden that many of the portable objects within it were left there, including vast quantities of pottery for use in eating and drinking: more than 400 plates, sets of elaborate *bucchero* cups, imported Greek vessels, as well as large storage jars set into the floor. There is much luxury evident, which must have considerable bearing on the function of the site. Italian archaeologists have tended to see it in terms of a residence for a local ruler, and one can 'read' the terracotta plaques to conform with such a view without too much difficulty (fig. 62): his family arrives at the palace on wheeled transport (fig. 62a: note the status symbol of the sunshade), they sit in state on elaborate thrones (fig. 62b), they recline at banquet (fig. 62c). In the early years of excavation, the site was interpreted as a sanctuary pure and simple, in which case the big human statues can be viewed as gods rather than members and ancestors of a ruling family. Kyle Phillips, who excavated the site, came to the opinion that it was a meeting place for an alliance or league of local settlements, a political and religious centre of a kind known in Latium and in Greece. It seems to have posed a threat to neighbouring states, for in the second half of the sixth century it was deliberately destroyed and levelled (by Chiusi flexing its muscles?) and the terracotta statues carefully hidden away, along with whatever power they were thought to possess.

All this is basically informed speculation. Murlo is the one site so far known that is on a par with the opulence of the Orientalizing tombs, but so much background, so much detail, is at present lost to us. One of the small finds was a fragmentary ivory lion with the name Avil incised on it. Who was this: a local leader, a worshipper from a village in the hills, the resident caretaker of the centre . . . ?

Montetosto, a sanctuary site outside Caere built in about 525 BC, seems to have been a version of the Murlo building.<sup>39</sup> The site selected was 4 km from the city on the road to Pyrgi near an enormous burial mound of the Orientalizing period. The structure measured about 55 m on each side, with two major wings of rooms on the northern and southern sides built of massive squared blocks of *tufo*. The principal entrance seems to have been through a vestibule on the western side. Like the other Etruscan religious buildings, its roof and façade were lavishly decorated with terracottas.

39 Colonna, 1985: 192–6

### Ports

Ports also seem to have been laid out carefully. One example is Regisvilla, the port of Vulci founded about 525 BC.<sup>40</sup> A settlement was laid out with a grid plan within a rectangular area of about 20 ha enclosed within a defensive wall. The principal street of the settlement running down to the sea was some 2.5 m wide, well surfaced with stone blocks and carefully drained. The houses seem to have been much like those of Marzabotto. The main one that has been excavated measured some 20 × 16 m, the long axis laid out at right-angles to the street to which there was access from two of the front rooms (fig. 63). There was a central empty space which, if (as was probably the case) it was open to the sky, would have provided the house with an atrium-like focus exactly like the classic Pompeian house.

Gravisca, modern Porto Clementino, the port of Tarquinia founded in the early sixth century BC, seems to have been laid out much like Regisvilla, with a grid plan of streets, private houses backing onto these, and a separate sanctuary area.<sup>41</sup> Pyrgi, the principal port of Caere, was another planned settlement, probably founded in the seventh century BC. It was connected to Caere by a monumental road 13 km long, flanked by tumuli. The port was enclosed by a defensive wall, with access to it from the Caere road through an impressive gateway that brought the visitor before two splendidly adorned temples. It was between these temples that the sensational discovery was made in 1964 of three gold plaques inscribed with Etruscan and Phoenician texts (see p. 89).

### Rural settlements

Very few small rural Etruscan sites have been excavated, but a consistent picture of their construction and layout is emerging from those that have. The best example is that of Podere Tartuchino, one of the surface sites discovered by the Albegna survey.<sup>42</sup> The surface remains in the ploughsoil consisted of a dense scatter of roof tiles and building stone over an area of some 300 m<sup>2</sup>. Excavation discovered the stone footings of a suite of rooms on one side of a court-

40 Colonna, 1986: 462

41 Torelli and Boitani, 1971

42 Perkins and Attolini, 1992

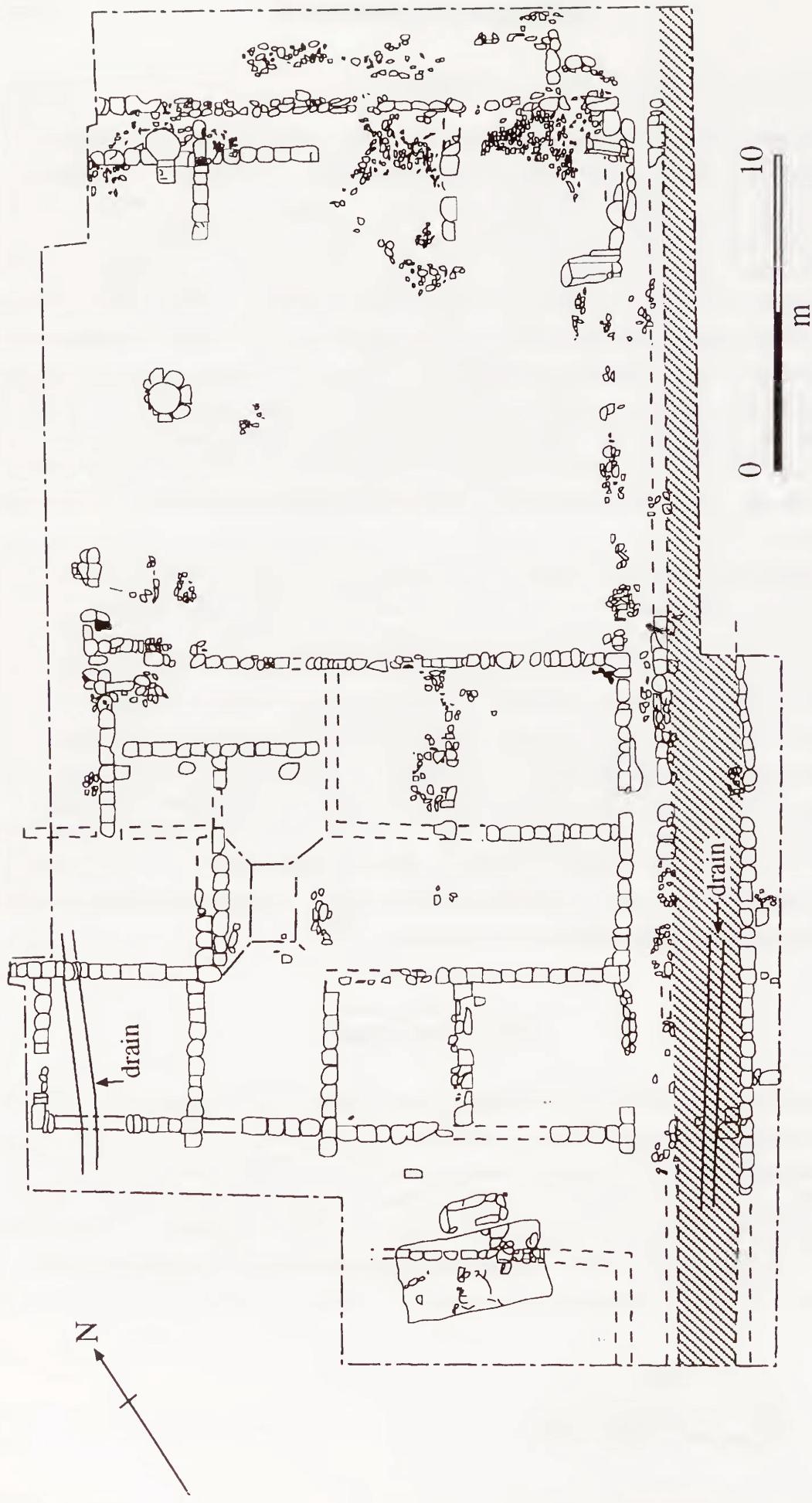


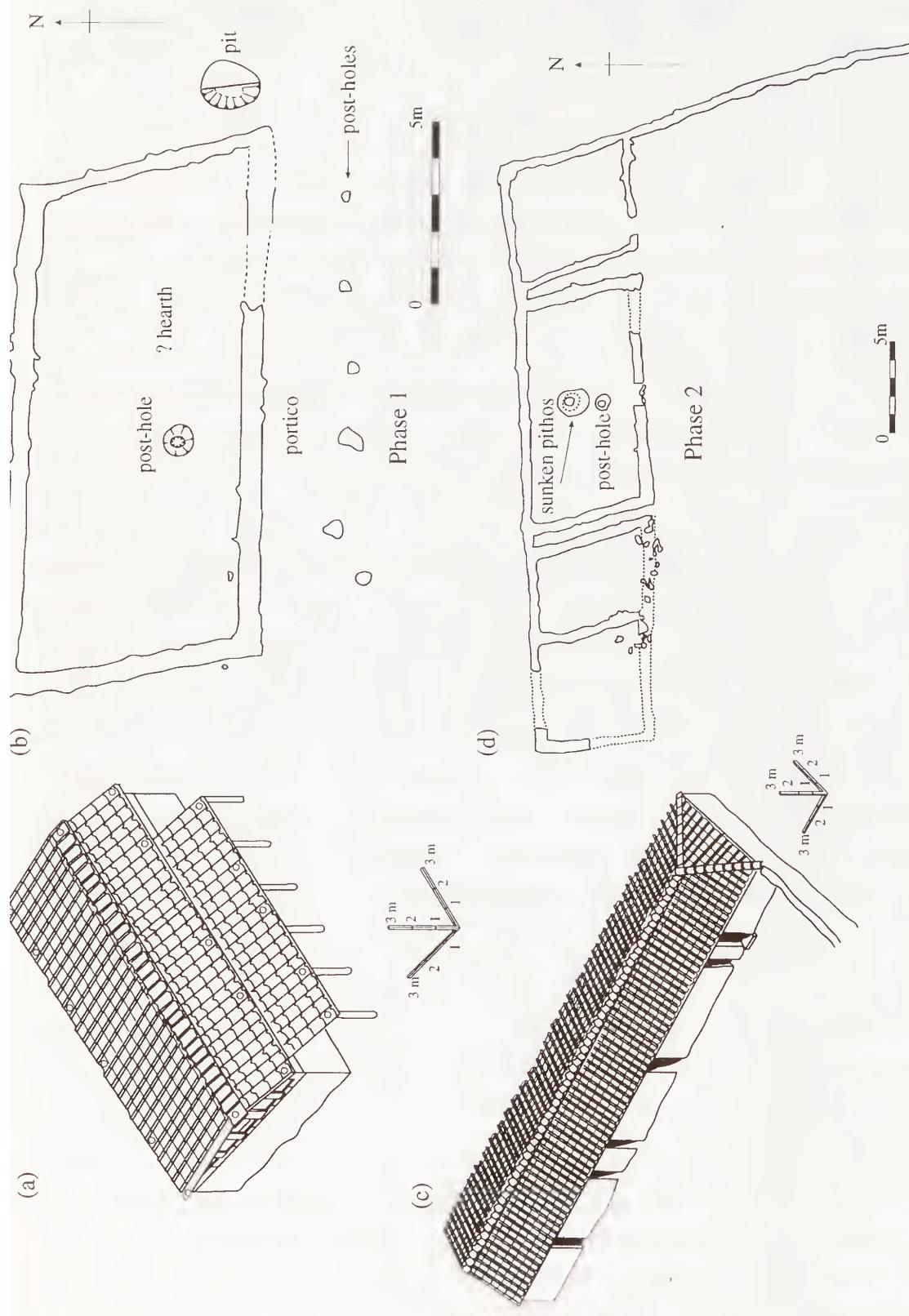
Figure 63 Houses at the Etruscan port of Regisvilla. (After Colonna, 1986)

yard, the enclosure wall attached to it standing almost a metre high; there was probably another range of buildings on the other side, downslope, but this part of the site had been destroyed by deep ploughing and erosion (fig. 64). The internal floors were made of gravel and clay, the lower walls of the building were constructed of unshaped stone blocks bound with clean clay, the upper walls were probably built at least in part of mud-brick or *pisé* (on the evidence of lumps of burnt clay found in the rubble) and the roofs were of fired clay tiles. Partition walls were probably of timber and/or *pisé*.

During the occupation of the site, from the late sixth to the early fourth centuries BC, the building underwent two distinct phases of design. On the evidence of changing arrangements of post-holes indicating where timbers supported the superstructure, it was enlarged and strengthened, the latter probably because of the instability of the location. In the first phase, there was an asymmetrical roof and a wooden portico overlooking the courtyard. In the second phase, the floor area was doubled, the building was strengthened with thicker stone walls, three rooms were added, two narrow corridors were created on either side of the central room and the structure was capped with a symmetrical ridged roof. Rainwater was drained off the courtyard by a system of channels. Artefactual and biological remains (discussed in the next chapter) make it clear that the site was a working farm, the size of the rooms indicating that it was occupied by a single family in the first phase and by an extended family of perhaps three generations in the second phase.

Recent studies have shown how the elaborate town houses of rich Roman families were divided rather formally into public and private, major and minor spaces, with a person's place in society (different age and sex groups, slaves, guests and so on) controlling their access to one space or another.<sup>43</sup> There was none of this at Podere Tartuchino. Heating, cooking and eating took place in the central room, industrial tasks and sleeping probably in the adjacent rooms. The rooms all opened onto the courtyard, which must also have been a focal point of the family's life. The general impression is that the life of an Etruscan farming family was lived without much personal privacy.

Podere Tartuchino is the first Etruscan farm to have been excavated on a scale and to a standard that allow its design and function to be reconstructed in some detail. Parts of similar structures have now been found at a number of other rural sites. A rescue excavation at Montereggi, north of Fiesole, for example, found traces of a small



*Figure 64* Podere Tartuchino farm: (a) and (b) plan and reconstruction of Phase I building; (c) and (d) plan and reconstruction of Phase II building. (After Perkins and Attolini, 1992)

rectangular building with drystone walls of roughly shaped sandstone blocks, the rooms being grouped round a courtyard of beaten earth, channels across it guiding water to a central cistern.<sup>44</sup> The material culture – fragments of coarse pottery, storage amphorae, loom weights, grindstones and the like – indicates a small agricultural building, though decorated terracottas are evidence that ritual activities intermeshed with the domestic life of the community, much as a future excavation of a modern Tuscan farm would find crucifixes amidst the secular agricultural debris. The farm was probably established in the sixth century, though occupation continued for many centuries.

Evidence for an even more modest structure was found when we excavated one of the small Etruscan sites found in our Tuscania survey.<sup>45</sup> We chose one of the few Etruscan sites we thought had not been destroyed by deep ploughing, on a terrace overlooking the Marta valley, 2 km south of the Etruscan town, midway between two important cemeteries. The excavations revealed a simple cottage-like structure with stone footings, walls of *tufo* blocks and *pisé* and a tiled roof, used from the sixth to the second centuries BC. Artefacts and structural details show that a variety of agricultural processes were going on in and around the building (see chapter 6), yet, as at Montereggi, there are also indications that the secular life of the household took place within religious bounds.

Podere Tartuchino was a medium-sized surface scatter, whereas the Tuscania farm was found below a surface scatter measuring about 50 × 50 m. The occurrence of very small surface sites in the Tuscania and Montarrenti surveys, with surface remains only a few metres across, suggests that the bottom of the Etruscan settlement hierarchy probably consisted of very small structures such as cottages, hovels and huts, none of which has yet been investigated by excavation. Whether or not all the larger surface sites represent substantial farms like Podere Tartuchino, or small villages or hamlets formed of clusters of houses, must also remain an unanswerable question until a representative collection has been excavated. Unfortunately this task gets harder each year with the continuing damage to the archaeological record caused by modern mechanized ploughing, particularly that part of it consisting of small unprepossessing collections of domestic pottery and tile fragments in the ploughsoil.

In addition to the farms at lower elevations that have been mapped by the surveys of the plough zone, it is difficult to believe that

44 Berti et al., 1985

45 Grant et al., 1992

the hills and mountains of Etruria were not also dotted with small settlements, cottages and temporary camps of the kind built by farmers, shepherds and charcoal-burners in the Apennines in recent times.<sup>46</sup> Again, we know almost nothing of these, though Monte Bibele, a small hilltop 30 km southeast of Bologna, may well be fairly typical: excavations found a terrace of small one-roomed cottages cut back into the bedrock, with post-hole settings indicating a second floor.<sup>47</sup> Each house had a small hearth at one end of the main room. As in the major and minor sites described earlier, water was carefully drained away from the house by surface channels and some of it was collected in storage cisterns.

### Communications

Our knowledge of the Etruscan road system is based partly on extrapolation from the quite sophisticated technology of road construction and drainage demonstrated on Etruscan urban sites, described in preceding sections, and partly on traces that survive in the countryside.<sup>48</sup> The deep gorges common throughout the dissected volcanic landscape of southern Etruria present formidable problems of communication: tracks have to be angled down across the cliff faces and the streams below have to be bridged or forded. There are many traces of ancient road cuttings through the *tufo* in this part of Etruria. Some, like the Valle la Fata track near Veii, preserve the routes of what must have been trackways for pedestrians or mules; Villanovan tombs along its route are a clear indication of its antiquity.<sup>49</sup> Presumably there was a system of such trackways connecting settlements like Sorgenti della Nova with its neighbours in Villanovan times.<sup>50</sup>

With the development of the Etruscan city states and the economic system that accompanied this process, these trackways were augmented by routeways capable of taking the two- and four-wheeled vehicles that the Etruscans used. One of the most photographed examples is a road leading off from the Banditaccia cemetery, where the parallel grooves of wheeled carts are still well preserved; figure 65 shows a similarly impressive example near Tuscania. Most

46 Barker and Grant, 1991

47 Vitali, 1988

48 Boitani et al., 1985b; Quilici, 1985

49 Ward-Perkins, 1961

50 Potter, 1979

such cuttings are extremely difficult to date – a celebrated exception is a cutting near Corchiano with the Etruscan name of its maker carved into the wall: Larth Vel Arnies.<sup>51</sup> The rest can only be dated by association with adjacent archaeological monuments. However, on the evidence of such associations, it seems clear that a system of substantial roads was engineered across southern Etruria connecting the cities and minor settlements during the seventh and sixth centuries BC, parallel with the appearance of imported goods and the remains of wheeled vehicles (or models of such) in the richest Etruscan tombs.<sup>52</sup> Detailed fieldwork suggests that a city like Caere was at the centre of a comprehensive network of roads radiating out into the surrounding countryside.<sup>53</sup>

Etruscan road engineering is extremely impressive. One of the cuttings made for the road that linked Nepi with Falerii Veteres was 200 m long and 15 m deep.<sup>54</sup> As figure 65 shows, the fact that *tufo* is easy to cut means that it is also very liable to wear and tear from traffic. Instead of undertaking the huge labour of importing slabs of harder stone to surface these roads, the Etruscans seem to have re-cut and levelled stretches as they deteriorated – there are examples of side ledges and steps from earlier surfaces that show this. Many streams must simply have been forded, others crossed using primitive plank bridges. More elaborate bridges must have been built, but very few of them survive: one example is near San Giovanale, where two massive bridge supports of *tufo* blocks were constructed on either side of the Pietrisco stream; the span between the two is 20 m, and piles of blocks in the river bed suggest that the bridge must have been a substantial construction of wooden beams on stone pillars.<sup>55</sup> Water was also canalized by aqueduct – yet another feature of Roman civil engineering that had its origins in Etruscan times.

As the description of well planned ports earlier in this chapter has implied, Etruscan boat technology was also extremely well developed. The Tyrrhenian coast allowed easy communication along the length of Etruria, and the navigable lower stretches of the major rivers like the Tiber and Arno also facilitated the movement of people and goods into the interior. The Etruscans' skills as sailors were fundamental to the development and maintenance of their economic systems.<sup>56</sup>

51 CIE 8379

52 Hemphill, 1975; Potter, 1979: 82

53 Nardi, 1985: 165

54 Frederiksen and Ward-Perkins, 1957

55 Hanell, 1962: 304–6

56 *Commercio Etrusco Arcaico*, 1983; Cristofani, 1983a

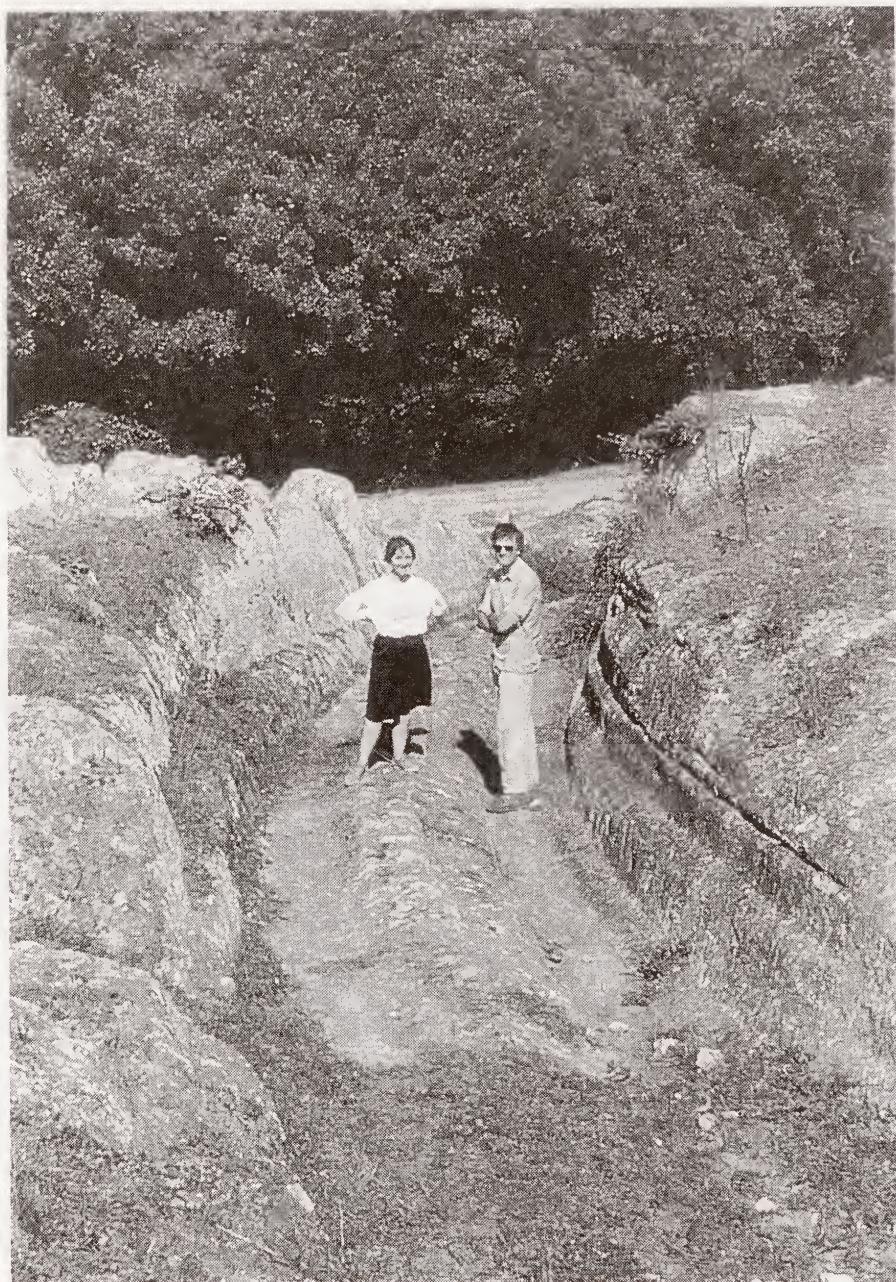


Figure 65 An Etruscan road near Tuscania. (Photograph: G. Barker)

### Landscapes of power

It is one thing to describe the cultural landscape of the Etruscans in terms of the physical appearance of their settlements and cemeteries, roads and bridges, but quite another to reconstruct how these components articulated with one another as a political landscape. Boundaries are rarely neat and absolute between adjacent communities – even the people living on either side of Hadrian's

Wall in Roman Britain were linked by many social and economic ties. Etruscan communities must have been variously linked or divided by ties of ethnicity, ideology and clientship. Political control must have operated in terms of the control of land, of the population living in it and of the resources they produced, as well as in terms of military coercion. The territories of Etruscan cities cannot have been the one-dimensional constructs they sometimes appear from archaeologists' maps.

However, archaeologists have tried several approaches in trying to measure the territories that may have been controlled by the major cities. One of these has been to 'read back' the boundaries that can be reconstructed from comments made by Roman authors,<sup>57</sup> but the dangers of applying boundaries that may have operated in one period to another several centuries earlier are obvious. Another has been to model the maximum size of potential territories in a theoretical way by drawing 'Thiessen polygons' round the cities:<sup>58</sup> the technique simply involves placing boundaries on the map midway between one centre and its neighbour, at right-angles to a line drawn between them. As figure 66 shows, there is quite considerable regularity in the territories that are created in this way.

One weakness of Thiessen polygons is that they only model the maximum spaces that would have 'belonged' to each city if all the land was controlled or owned. Another is that they have to assume that all the centres were of equal importance and the land divided up equally between them, but we know that the power of different centres waxed and waned. Stoddart<sup>59</sup> has attempted to overcome these problems in weighting the calculations mathematically to take account of the projected size and influence of centres. The application of the technique indicated that there were probably highly competitive boundaries between the major centres of coastal Etruria, natural boundaries like rivers and watersheds being particularly important. Such boundaries were often 'reinforced' in a ritual sense (as in the case of the Greek city states) by the placing of sanctuaries beside them.<sup>60</sup> The political control of the major cities probably extended directly to the minor centres – Tuscania, for example, is assumed to have been within the greater political territory of Tarquinia for much of its history.

57 Pallottino, 1937a

58 di Gennaro, 1988; Potter, 1991b

59 Stoddart, 1988, 1990

60 Zifferero, 1993

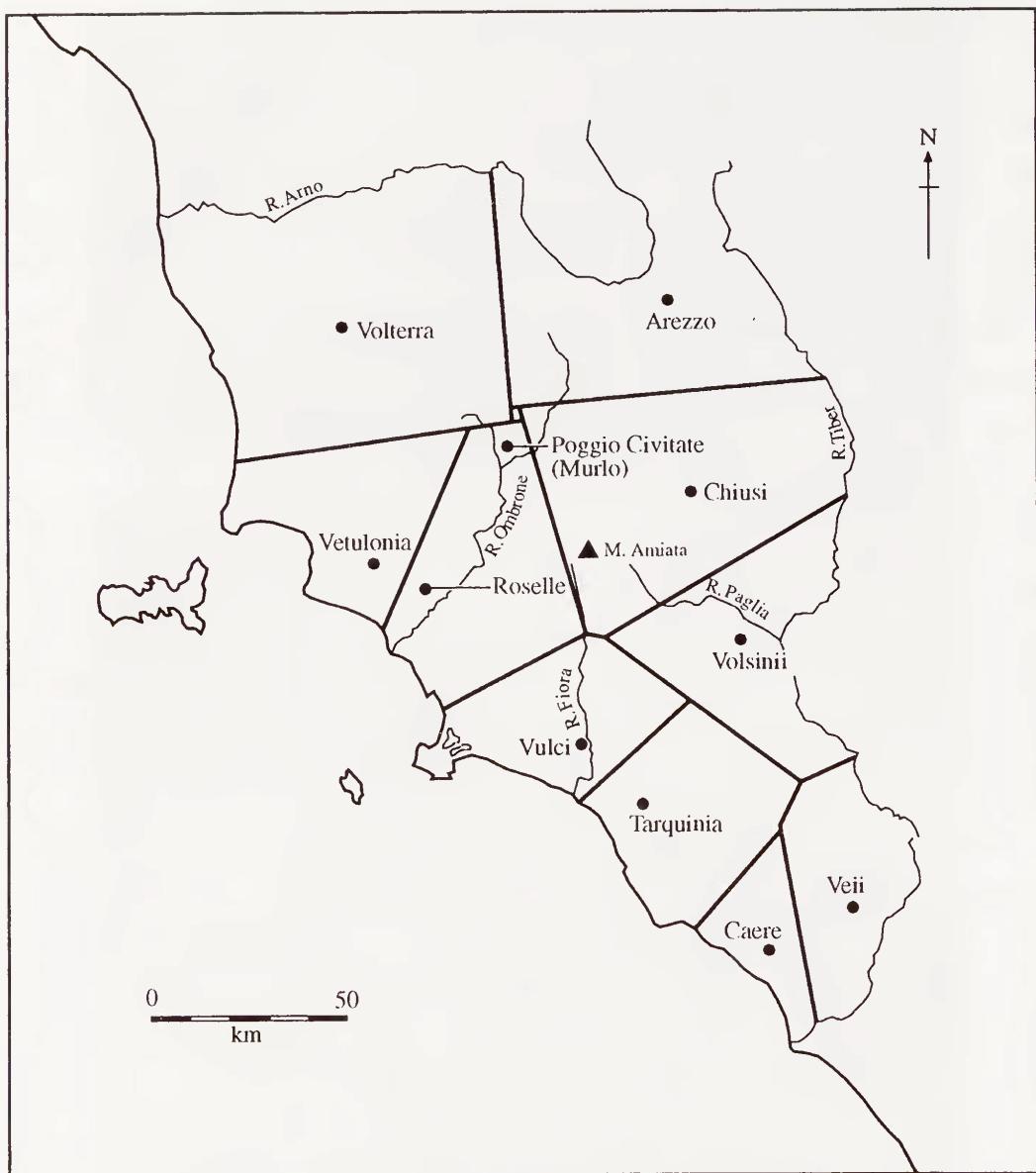


Figure 66 Postulated territories of the major Etruscan cities. (After di Gennaro, 1988; Edlund-Berry, 1991; Potter, 1991b)

Inland, however, it seems likely that the political authority of these centres faded away to leave buffer areas in which minor centres were able to develop more or less independently. Acquarossa was probably such a settlement, together with Bisenzio on Lake Bolsena, Marsiliana in the Albegna valley, and Murlo. In the sixth century, however, the major centres extended their territorial authority, and all these sites declined or were destroyed. Given Murlo's location central to the territories of the major centres of Volterra, Arezzo, Chiusi, Roselle and Vetulonia (fig. 66), and the evidence for its ritual status, Edlund-Berry argued that the site might have operated

as a neutral meeting place for the confederation of these cities, under divine protection, until the confederation was abolished when Chiusi changed its political affiliation to the Tarquin dynasty at the end of the sixth century BC.<sup>61</sup> The development of the monumental complex at Acquarossa suggests that its importance for ritual activities may have been important in the survival of this site, too, in terms of its relations with its more powerful neighbours, though ultimately it met the same fate as Murlo.

Territorial relationships have mostly been studied at the level of the cities and minor centres, and there are many suggestions that the relationships of relative power detected in settlement networks were paralleled in clientship systems linking the aristocracies that dwelt in them. In the same way, it is likely that similar relationships linked local aristocracies not just with the lower-order populations that lived in the same settlements but also with the rural population. Certainly the parallels between the domestic and burial hierarchies around Tuscania described earlier suggest strongly that the rural population here was socially stratified in defined levels of lower status relative to the town's aristocracy. The potential complexity of these relationships has best been studied in the Albegna valley by Perkins, arguing from the distributions of different sizes and kinds of surface site found by the survey in the different parts of the valley (fig. 53).<sup>62</sup>

The area around Cosa on the coast contained several large villages as well as farms. This area was within the territorial control of Vulci, and Perkins suggested that there were clientship links between Vulci's aristocracy and leading families in the villages, the *principes* of the urban *gens* protecting a *familia* which was in part made up of the rural population, with further client links downwards to the scattered population outside the villages. In the lower Albegna valley, marked social stratification in the cemeteries is not paralleled in the settlement record, which is dominated by small scattered settlements, suggesting that power resided with local individuals or families. In the middle valley, a well defined settlement hierarchy contrasts with large communal cemeteries: the region's social networking is interpreted as transitional between the coastal system dominated by urban families and the lower valley system of rural territorial groups. The upper valley has much less evidence for marked stratification in either the settlement or burial archaeology,

61 Edlund-Berry, 1991

62 Perkins, 1991, 2000

suggesting fairly autonomous communities probably living fairly close to subsistence.

This is a pioneering study and extremely speculative, but it provides a powerful argument for the potential information to be gleaned from modern systematic surveys of Etruscan regional settlement systems. The study of the total settlement record mapped by this kind of approach, from Doganella to the most remote farm, particularly when (as currently in the case of the Tuscania and Albegna data) enhanced by computerized analysis using Geographical Information Systems and combined with the excavation of representative rural sites like Podere Tartuchino, holds the key to an entirely new understanding of the Etruscan political landscape.