The contribution of aerial photography and field survey to the study of urbanization in the Potenza valley (Picenum)

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The Potenza Valley Survey

Systematic survey work has been conducted since 2000 in the central Italian region of Marche.[1] This multi-disciplinary, geoarchaeological project, organised by the University of Ghent, aims to study changes in the landscape and occupation patterns in the period *c*.1000 B.C.–A.D. 1000 throughout the Potenza river valley[2] (fig. 1). The intensive survey of the valley embraces full aerial photographic coverage of 400 sq km between the Apennines and the Adriatic and systematic fieldwalking in three carefully-selected sample areas in which we also assess the differentiation of landscape types and their influence on human settlement systems.[3] These landscapes comprise, amongst others, the narrow valleys of the Apennines, the wood-
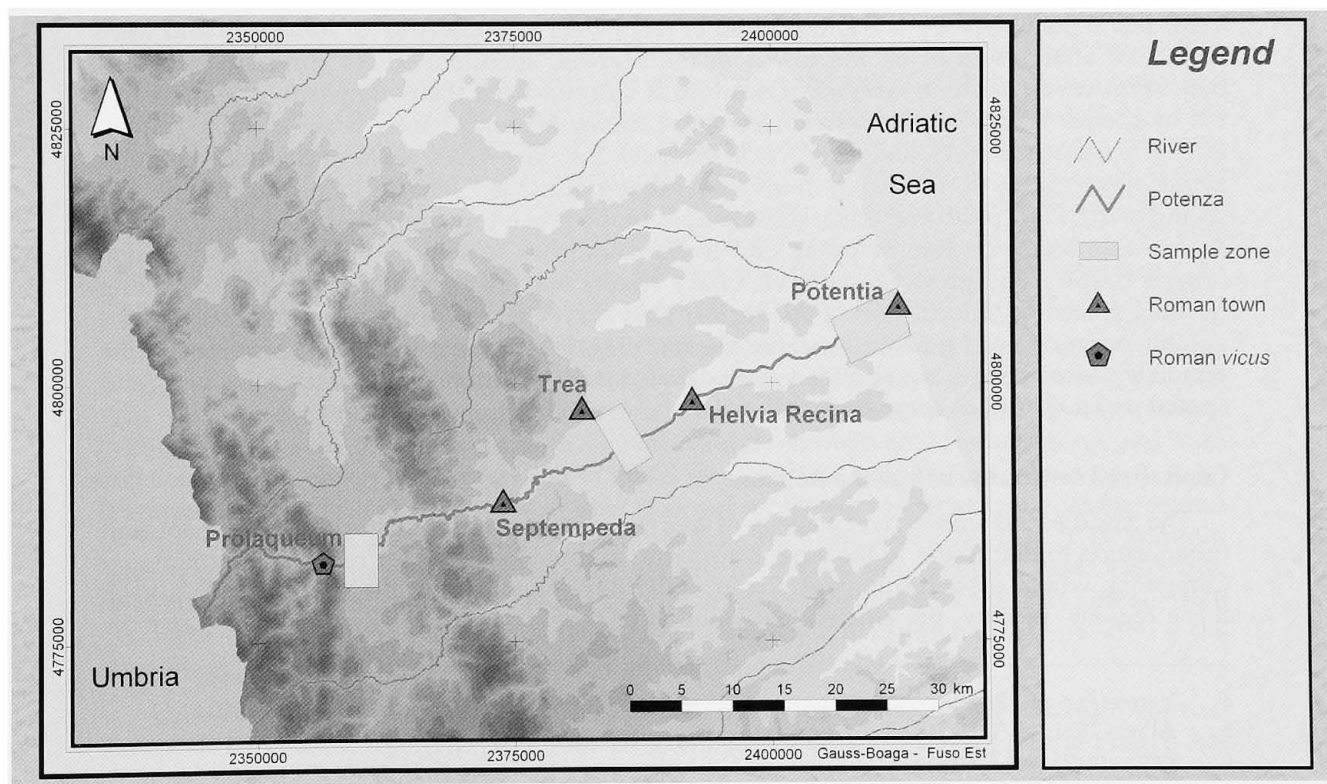

Fig. 1. Localization of Roman towns and areas of systematic field survey by the Potenza Valley Survey team.

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1   According to Augustus's division of Italy, the modern Marche falls within *Regio V (Picenum)* and *Regio VI (Umbria et Ager Gallicus)*, a division which is based on the border in the 4th c. B.C. between the Italic Picentes and the Gallic Senones, located in the area between Musone and Chienti (Deplace 1993, 1).

2   The Potenza valley lay almost completely in the N part of *Regio V (Picenum)*; only its upper valley (where our first sample zone is located) was part of *Regio VI (Umbria)*.

3   Vermeulen, De Dapper *et al.* 2003.

lands and higher grasslands of the mountains, small intermediate basins, the undulating rich agricultural land of the middle valley, and the lower slopes and widening coastal plain near the mouth of the river. At this point the Potenza river lies c.15 km south of the dominating promontory of Monte Conero near Ancona. Throughout our period the Potenza valley was an important corridor for political, economic and cultural contacts between the Adriatic and Tyrrhenian sides of the peninsula.

The objectives of the project and preliminary field results have been published in *BABesch*.[4] Here we will present some of the more striking results relating to the evolution of concentrated human settlement towards an urban society with greater social complexity, and to the subsequent breakdown of this urban pattern.

The field methodology was designed with the focus on urbanization particularly in mind. The three sample zones chosen for intensive and systematic fieldwalking (each between 10 and 25 sq km) were located in light of supposed or known major settlements along the Potenza corridor (fig. 1). From protohistory, with a series of hilltop sites, to Roman times, with at least 4 towns in the valley, these areas are those most likely to demonstrate the evolution of social complexity and the effects of political and cultural change on settlement. In addition to systematic line-walking in order to map and study all possible forms of (especially rural) settlement in the three zones, research has begun to focus on the Roman town sites in the valley. The four sites with an urban character for most of their Roman history are Potentia, Helvia Ricina, Trea, and Septempeda. By late antiquity all of them were 'unsuccessful' in some way and were then, like almost half of all the towns in the Marche, abandoned.[5] As almost no modern habitation covers these towns and agriculture is still practiced there, they can be easily studied by means of non-destructive archaeological survey methods,[6] such as aerial photography, intensive surface surveys, and geophysical prospections.[7] Since 2000 we have conducted regular aerial photography in the valley from a low-flying airplane.[8] Intense flying during the dry spring of 2003 has produced remarkable images of the urban topography of Potentia, Trea and Ricina. Although the fine mapping and interpretation of structures visible on the oblique images is still in progress,[9] some preliminary results may be presented here. These striking results induced us to focus part of our regular field survey on the urban sites in question and a specific programme of grid-walking was planned. This is necessary not only to help control the remotely sensed images but also for a more detailed study of chronology, functional zoning, and spatial development at these centres.[10]

Centralized settlement before the Romans

The middle and upper river valleys of Marche saw a different history of settlement and urbanization to that found in the more prosperous and politically active regions of Latium and Campania, where urbanization was already fully developed during the 2nd c. B.C. thanks to those regions' fertility, the efficient exploitation of farmland through new methods, and the

4   Vermeulen and Boullart 2001; Vermeulen, Monsieur and Boullart 2002; Vermeulen *et al.* 2003.
5   Alfieri 1981; id. 1985.
6   Pasquinucci and Trément 2000.
7   For other efforts to refine the techniques of survey on classical towns, see Bintliff *et al.* 2001 for Tanagra (Boeotia) and Keay, Millett *et al.* 2000 for Falerii Novi.
8   This was the work of the first-named author in collaboration with Jacques Semey.
9   For the complicated process of rectification/restitution and the mapping of oblique views taken in a hilly landscape, a combination of special software and control from the ground is being used. This work is done by the second-named author within an original GIS environment developed for the project. The software used is Airphoto 3.x, a programme designed by I. Scollar and specifically developed to rectify archaeological images made with hand-held uncalibrated cameras: Scollar 2002, 167.
10   The pottery collected has not yet been fully studied. So far only the site of Potentia has been covered by systematic fieldwork. We intend to add geophysical prospection in the near future.

wealth acquired by the local élites through their involvement in Rome's expansion. It resulted there in the construction of urban public buildings financed from municipal resources or individual benefactions. By the 1st c. B.C. many of those towns were engaged in rivalries, itself a stimulus for further urbanization. In much of Picenum, with the exception of parts of the coast where Rome's colonial involvement may be seen during the 3rd and 2nd c. B.C., the situation was quite different. Picenum is a land of rugged mountains, the destination of transhumant flocks and their shepherds, and of hills cut by small but fertile plains, which were best exploited by small-scale nucleated settlements which control visually their surroundings. These settlements are known as *vici* or *pagi*, the central places of rural districts. They were the centres of administration, the home for members of the free peasantry, who also occupied small dispersed sites nearby, and the focus of the ambition of local élites. Also important were rural sanctuaries which acted as regional cult centres, although not many are yet known.

Because few élite and concentrated settlements or other settlement structures are known so far, most of our knowledge about the Piceni culture in the Marche comes from burial sites, some of which give indications of élite concentration in certain areas favoured by good agricultural land, dominating hilltops, river-crossings, and so forth.[11] Our field surveys and re-assessment of older finds is beginning to produce some insights into the protohistoric settlement in the area before the start of a slow Romanization.[12] It appears that the evolution towards social complexity and some weak form of proto-urbanization had its roots in the later Bronze Age. Several hilltop sites dispersed along the valley became the focus of settlement at least from the 12th c. B.C. In the course of the Iron Age, these sites, now more and more dominated by élite groups of Piceni society, remained crucial for control over the valley, and we cannot exclude a certain topographic continuity for many of these hilltop sites down into the later Iron Age. Our fieldwork has demonstrated the importance of these relatively small hilltop sites, such as Monte Primo near Camerino, Monte Pitino near San Severino Marche, and above all Monte Franco at Pollenza. Although at different altitudes and differing in extent and general appearance, they have in common the search for a defensible setting and a good location for controlling movement in the Potenza plain. As centres for élite power they seem to have had long lives, and they were used for hierarchical control over a partly concentrated population.

The position of the site of Monte Primo in the upper valley and the character of the finds suggested to scholars[13] that this was essentially a cult place, its original location being on the very top of Monte Primo. Its selection for a sanctuary destination was not arbitrary since Monte Primo dominates the narrow passage of the Potenza river through an Apennine gorge and is an excellent spot to observe the migration of birds, an important religious activity in early Italy. It seems also to have been the site of at least seasonal settlement at the transition of the Bronze to the Iron Ages. Its particular assets seem to have been the attractiveness of its summer grazing-grounds for pastoral activities and its value to an emerging élite as a control element. Its rôle as a settlement centre is suggested by the intricate system of earthworks surrounding this large (*c.*4 ha) site.[14] Further fieldwork and excavation is needed to narrow down the chronology and character of this important hilltop occupation site.

Monte Pitino and Monte Franco in the middle Potenza valley have long been known from their rich Early Iron Age (9th-7th c.) burial grounds.[15] Our survey near Monte Franco has obtained new data on the long life and particular richness of the inhabited zones in the Later Iron Age (6th-3rd c.), immediately preceding the first Roman influences.[16] The discovery of an

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11   Vermeulen 2002.
12   The pre-Roman settlement patterns in the Potenza valley are the subject of a Ph.D. thesis by C. Boullart; see also Boullart 2003.
13   Bonomi Ponzi 1992, 210.
14   Vermeulen and Boullart 2001; Bonomi Ponzi 1992.
15   See, e.g., Lollini 1976.
16   Vermeulen, Monsieur and Boullart 2002.

Fig. 2. Oblique view of the protohistoric hill site of Montarice near the mouth of the Potenza. The photograph (April 2003) shows crop-marks of a circuit wall around the plateau and of different phases of houses, pits and other traces of settlement.

intensively occupied area near the E flanks of the promontory underscores this, with fine regional wares and a good selection of imports from S Italy and the Aegean world. These hill sites evidently continued to play an important rôle in the newly-established exchange patterns with Greek merchants along the coasts. From the 6th c. onwards, the rôle of the Greek emporion at Numana and progressive cultural contacts via the Adriatic seem to have accelerated a process which would ultimately transform Piceni society. Although this did not lead to a rapid urbanized development until the coming of the Romans, it was probably a factor of some importance in the development of socially more complex structures.

These kinds of developments should be best visible near the coast at the mouth of the Potenza. Our surveys of 2002 and 2003 showed that in protohistoric times the hills bordering the valley and those almost touching the coast attracted settlement. At Monte dei Priori near Potenza Picena, on the south, possibly there was only a smaller Bronze Age occupation. To the north, on the high plateau (c.4.2 ha) of Montarice (Porto Recanati), fieldwalking and aerial photography has revealed the existence of an important Late Bronze and Iron Age centre just north of the modern mouth of the river. The site of Montarice was first studied from the air, revealing the soil marks of the extension of settlement all across the plateau. Crop-marks indicate a huge number of settlement structures in several phases, especially the traces of enclosure walls and ditches which accentuate the natural defenses of the site. The latest photographs, taken during the drought of April/May 2003, even suggest an organised aspect to this imposing site. We see clearly several aligned and/or grouped houses, and other structures like pits and
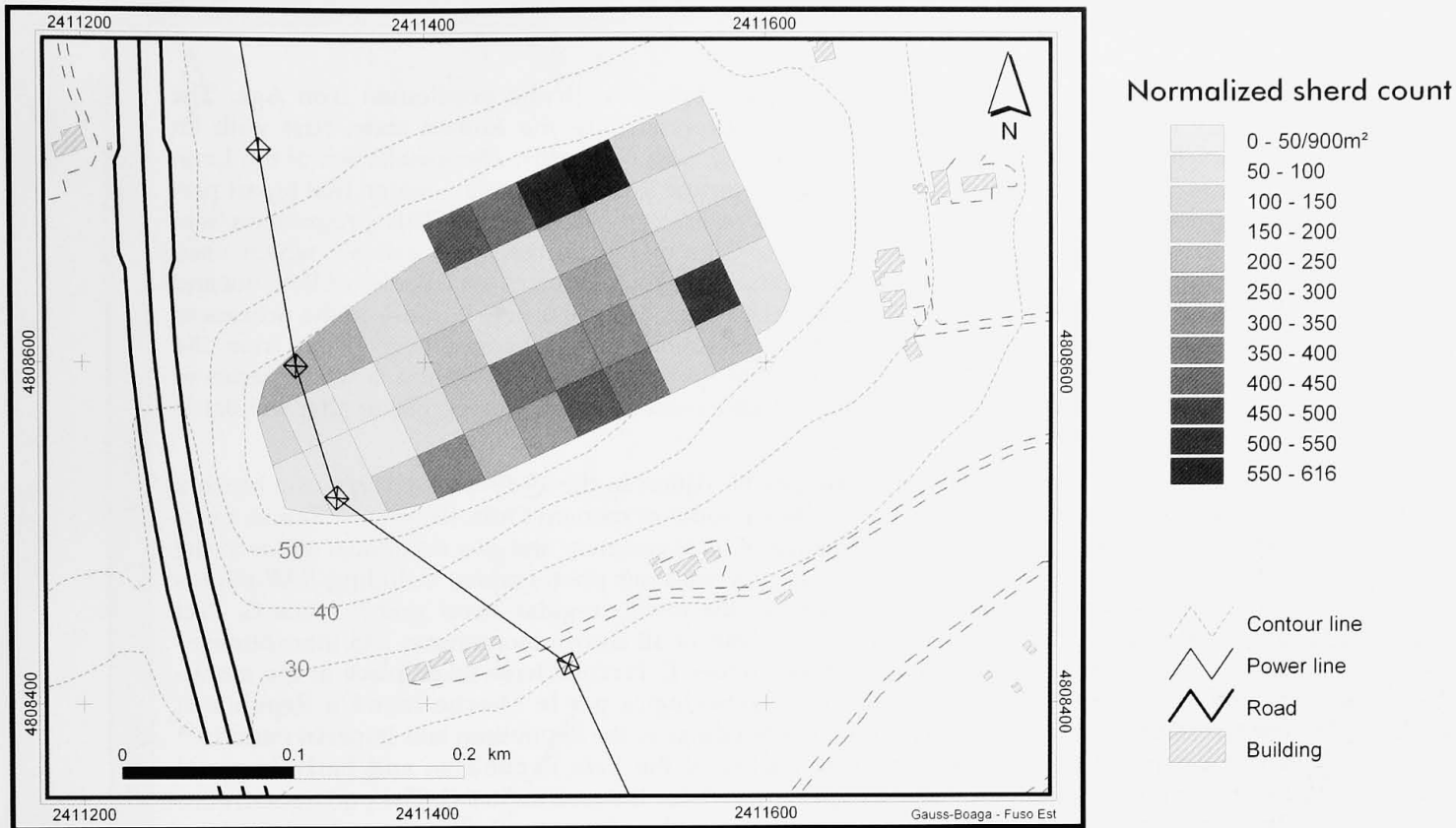
Fig. 3. Results of a systematic grid survey (September 2002) on the site of Montarice: total sherd density.

possible cisterns (fig. 2). In September 2002 we made a detailed surface survey of Montarice (fig. 3), which revealed the presence in the ploughed fields of great numbers of protohistoric coarse wares, Piceni buccheroide wares, imported S Adriatic ceramics, and even Greek pottery. Although still under study, the high density of pottery finds and the first information on the chronology supports the idea of a long and almost continuous occupation of the hill from the Middle Bronze Age into the Late Iron Age and even into the Early Roman period. The quality of the wares, especially of the Greek black glazed and black- and red-figured pottery, and of the S Adriatic imports, including Daunian and Messapian, point to the presence of Piceni élites who probably controlled maritime shipping and contacts with Numana and other commercial centres along the coast. The site fits into the pattern of a connection between river mouths and adjacent protohistoric settlements on hills, as seen elsewhere on the Middle Adriatic coast and doubtless connected with the commercial routes of Greek merchants.[17] This pre-urban hillsite also had a rôle to play in the control over the entrance to the river valley and the flow of goods to inland sites and ultimately to the Tyrrhenian region. But there are no clear indications that this relatively small site was eventually turned into a real urban centre; we are lacking indications of a central square or important public buildings.

Roman urbanization in the coastal area: Potentia

Rome's military campaigns of 269-268 B.C. in the Adriatic region profoundly changed the fate of the Picene and partly Celtic and Umbrian populations living in what is now Marche. The slow but profound Romanization process that followed brought major changes in the social and economic tissue of the society, including the real introduction of urbanization and at least a partial re-organization of the countryside. The immediate consequences of the Roman victory were drastic: parts of the territory were confiscated and groups of Piceni were deported to S

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17   Luni 1992; Baldelli 2001.

Italy, yet this did not bring about a complete breach with the pre-Roman Iron Age. The majority of the population was quickly incorporated into the Roman state, first with an incomplete citizenship, then from 241 or 233/232 with full rights. The installation of the Latin colony at Firmum in 264 was a major stimulus for the Romanization of a region that (apart perhaps from the centre at Asculum) knew no real urbanized society.[18] This progression was interrupted in the later 3rd c. by the incursions of the Carthaginian armies, which used Picenum as a base for attacks on the Roman state. The foundation of the colonies of Potentia and Auximum in the first half of the 2nd c. B.C., however, brought a new impulse to the process of Romanization. In the lower Potenza valley, the Roman impact became very visible from 184 onwards. With the foundation of the colony of Roman citizens at Potentia, a whole series of foundations of maritime colonies on the Adriatic coast, which had begun soon after the Battle of Sentinum, was concluded.

The town of Potentia was first located by N. Alfieri in the 1940s on the ridge of a beach a few hundred meters south of the river, directly south of modern Porto Recanati.[19] Rescue excavations in the 1960s and 1970s revealed parts of its N cemetery and of a residential sector in the NE corner of town.[20] U. Moscatelli's study of vertical air photographs, including RAF photos from World War II, revealed many traces of the town's regular street grid,[21] while G. Paci produced a bibliographical synthesis and analysis of all known monuments and inscriptions.[22] Since the mid-1980s, small-scale excavations under E. Percossi have taken place in the monumental town centre. The Soprintendenza Archeologica per le Marche found a Republican temple[23] surrounded by a portico, and other buildings of the Republican and Imperial periods.[24] The excavations have revealed a great vitality of the Late Republican and Early Imperial town, not greatly affected by an earthquake which hit the area in 56 B.C. The portico surrounding the temple (the probable *capitolium*), a *macellum* lying to the north, and a luxurious building to the east all show that the town was further monumentalized under Augustus. It continued to flourish under Trajan and the Antonines, but declined in the 3rd c. In the late 3rd and 4th c. the central area was re-organized and most finds (including the coins series) point to a flourishing period until the beginning of the 5th c., when decline clearly set in. The latest finds belong to the 7th c. but the exact character of the occupation in the town at this period is unclear.

Our remote-sensing work contributes further to knowledge of the Late Republican colony. Although the site is crossed by the wide coast road and railway, two modern houses cover part of the ancient town, and grass vegetation diminishes archaeological visibility from the air, the conditions remain quite good for aerial photography, and since 2000 regular flying, especially in the spring and early autumn, has produced about 300 oblique aerial images, many of them containing new infomation. Soil-marks in ploughed soil on photographs taken in late September and early October has helped to show the geomorphological situation, such as the town's location on a narrow ancient beach ridge, parallel with and some distance inland of the present coastline. This beach ridge is cut to the south by what can now be identified as the main Roman riverbed.[25] Detailed mapping of the ancient coastal plain, with augering and geo-electrical measuring being conducted by M. De Dapper, should help elucidate the immediate surroundings of Potentia during its long history.[26] It should also clarify the precise rôle of river

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18   See, e.g., Alfieri 1977; Moscatelli 1985; Paci 1991; Delplace 1993, 24.
19   Alfieri 1947 and 1970.
20   Mercando *et al.* 1974; Mercando 1979.
21   Moscatelli 1987.
22   Paci 1995; id. 2002.
23   It is probably the *aesis Iovis* mentioned by Livy 41.27.
24   Percossi Serenelli 1990, 1995 and ed. 2001.
25   The present positoin of the Potenza river, more than 1 km north of its Roman paleo-channel, is the result of recent and post-mediaeval human interference with its course: Alfieri 1947.
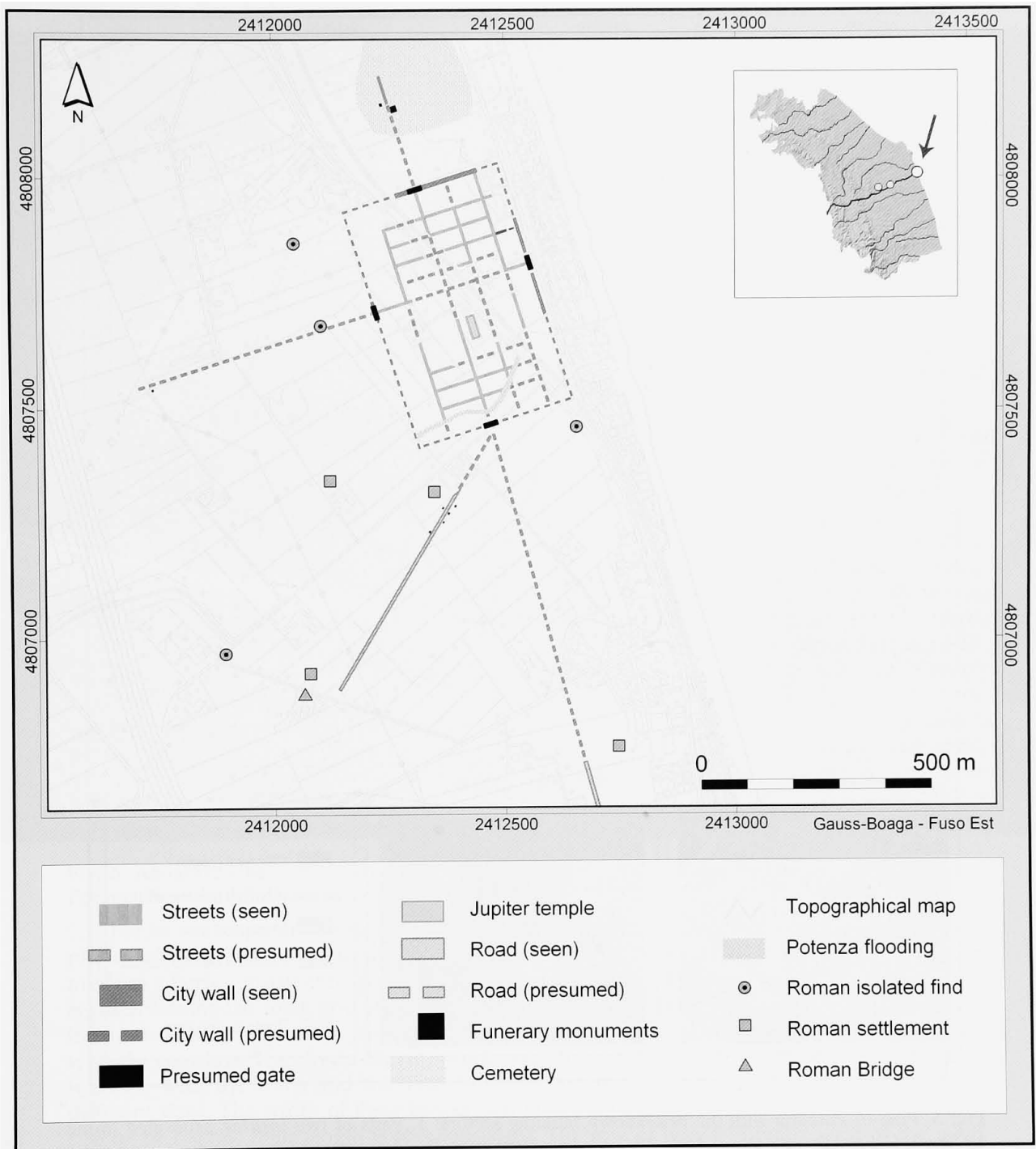26   Vermeulen *et al.* 2003; Vermeulen, Verhoeven and Semey forthcoming.

Fig. 4. Plan of Roman Potentia and its immediate surroundings, based on aerial photography, systematic survey, and earlier excavations.

floods, alluvial activity, and sea-level changes during the gradual abandonment of the town in late antiquity.

Soil-marks and many good crop-marks observed in fields of grain during the spring have helped to locate the street network and town walls. Although the older vertical photographs already revealed much of the regular town plan,[27] many new elements can be added, and older ones corrected or seen in more detail. Most of the streets are distinguished by straight and clear

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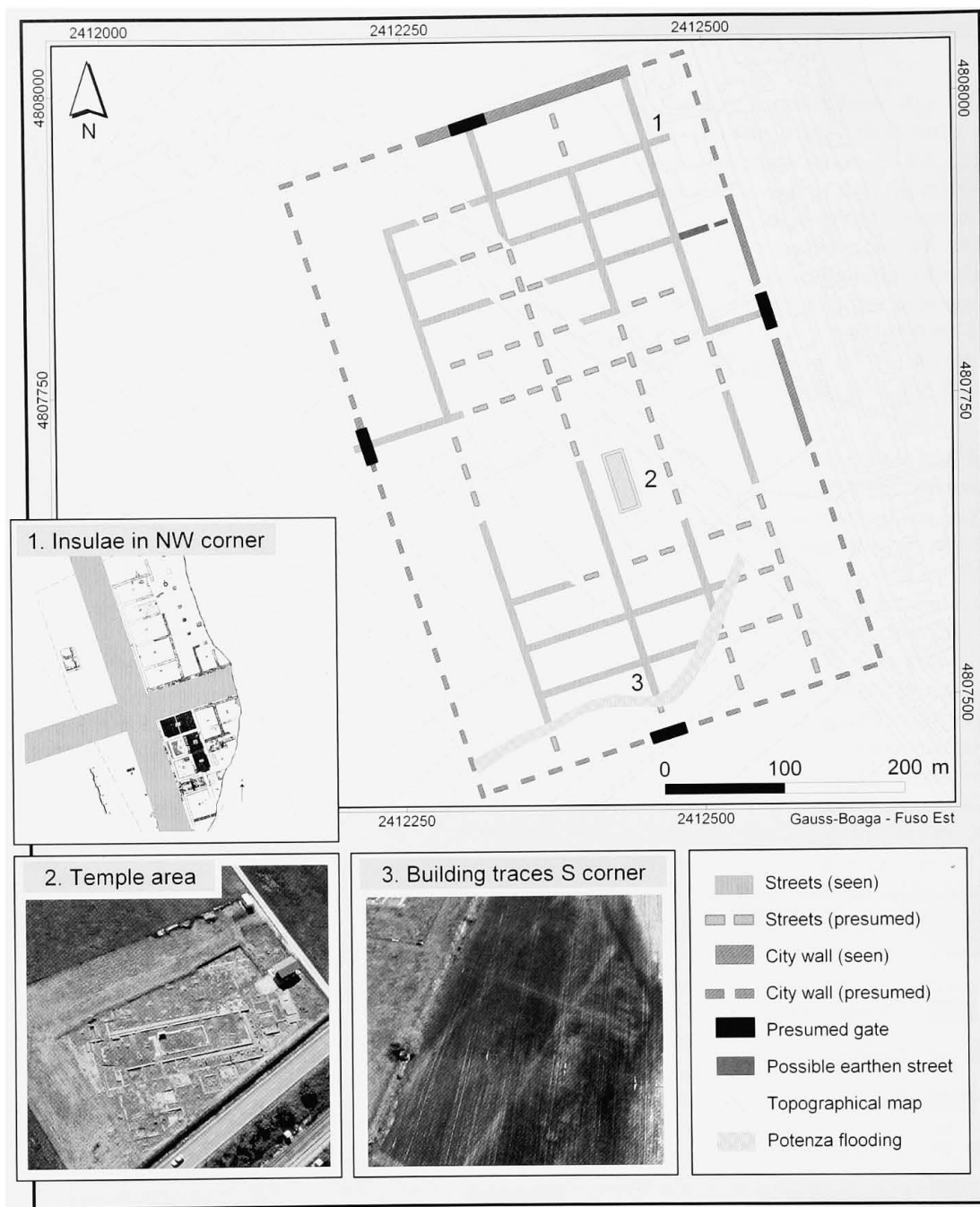27　Moscatelli 1987; see also Percossi Serenelli ed. 2001.

Fig. 5. Plan of Potentia with the best-known building sectors: 1. Parts of two *insulae* excavated in the 1970s; 2. Central temple sector currently under excavation; 3. Buildings seen in crop-marks during aerial reconnaissance (2003).

pale linear features which probably mark stone-covered surfaces with average width of *c*.5 m. In the E part of the town, one street line is somewhat wider and bordered on one side by a thin darker colour, itself lined on both sides by a thin pale trace which is probably a shallow ditch or sewer. We also see here the crop-mark of a street with a darker colouring, lined on both sides by a thin pale trace; this may be an unmetalled street lined by rows of stones. The town wall is suggested by a wider pale crop-mark *c*.8 m wide, probably the trace of the destroyed enclosure. In the centre of the N and S short sides of the town's enclosure we can distinguish wider crop-marks which probably indicate the positions of the N and S gates.[28]

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28   However, the area of the S gate is much disturbed by post-Roman flooding of the Potenza river.

Fig. 6. Aerial reconnaissance (2003) offers a clear view of the streets and circuit wall of the N part of Potentia. Note the differences in width and nature of the traces of streets.

Thanks to computer rectification of these oblique photographs, and with the help of Air-photo software and GIS analysis incorporating vertical images and existing map data, we can produce a fairly consistent map of the town's grid (figs. 4-5).[29] The present data suggests a quite regular, rectangular town grid of 15 x 10 *actus*, that is, *c*.525 x 350 m, or almost 18.4 ha, measured inside the walls.[30] The town is oriented NNW–SSE along a longitudinal axis which is parallel with the coastline. The streets (fig. 6), which according to Livy (41.27) were laid out in 174 B.C. together with the walls and the Temple of Jupiter, divide the urban space into *insulae* of different sizes. The width of these blocks (not incorporating the streets) is fairly consistent, at *c*.35 m, or 1 *actus*; their length is less consistent. The row of *insulae* directly west of the main *cardo* seems to be strictly modulated, since these blocks have an inner length of 2.5 *actus* (*c*.87 m). The other *insulae* have more varying lengths, with an average around 1.75 *actus* (*c*.61 m).[31] It is difficult to calculate the exact number of *insulae* since it is not certain if the peripheral

29 The map presented here is adapted to the most recent data available and differs slightly from an earlier version presented at Vermeulen *et al.* 2003.

30 If we include the walls in the town's surface the figure is 19.1 ha. It is noteworthy that this size is almost identical to that (19.3 ha) presumed for the Adriatic colony of Pisaurum (Pesaro), founded in the same year as Potentia (Somella 1988, 81).

31 This system is close to that proposed for the Republican colony of Sena Gallica further north on the Adriatic coast (Dall'Aglio *et al.* 1991, 154); there the blocks are longitudinal (70 x 35 m, or 2 x 1 *actus*) and oriented E–W.

areas inside and next to the walls were all at first subdivided into blocks. If we do not count this peripheral space, which may have been built up only in a later phase, then a maximum of 33 *insulae* was designed.[32]

The main *cardo* runs more or less centrally between the N and S gates. It was probably crossed near the centre by the main *decumanus*, the trace of which is still difficult to detect on the air photographs and which probably connected gates on the east and west, although the existence of a marine gate remains uncertain. The precise location and configuration of the forum is also obscure: one would expect it to lie directly southeast of the crossing of the two main streets but this area now lies beneath the modern coast road and railway. Further, excavations of the temple area have shown that directly north of the temple, on its axis, stood a *macellum*, which makes the location of the forum square in that zone rather unlikely.[33] The forum then was perhaps not centrally placed,[34] and a position south of the south-facing *capitolium* may be more appropriate. In this way, a position that was central to the S half of the town, towards the coast road (which determined the longitudinal axis of the town's plan) would be entirely acceptable.[35] Overall, the position and layout of the town reflects that of typical maritime colonies along the Tyrrhenian coast, built as bridgeheads for land and sea routes and tied to the coast road (the Via Aurelia Vetus built in 241 B.C.);[36] a similar system will have functioned along the Adriatic coast during the early phase of Roman colonization.

Our aerial survey has not yet produced much evidence about the buildings and houses of the town. Fragments of structures are visible on several images. Often we see parts of structures neatly aligned to the street grid, especially near the E and S edges of the town. Near the S gate we can distinguish parts of a major complex (possibly baths) with rectangular and curvilinear rooms and probably some well-preserved floors, as is indicated by rectangular colourations in the crops (fig. 5.3).[37] Pits and other irregular structures can be recognized in various places, evidence of intensive occupation. Geophysical survey is planned to improve the identification of buildings and assist with an estimate of the density of occupation. Each new colonist family received 6 *iugera* to cultivate,[38] and this colony was certainly more populated than most small *coloniae maritimae*, which normally had just 300 settlers. A likely figure for the Republican inhabitants would be between 2000 and 3000, comparable roughly to the Republican colonies of Parma and Mutina.[39]

In 2002 we began intensive systematic field-walking in and around the site of the town. The areas currently used as arable land were subdivided into regular units,[40] and large samples of ceramics, building materials and other artefacts were collected (fig. 7).[41] The first distribution maps showing artefact density in and around the presumed centre already reveal differences in the density of occupation in different sectors. Their chronological and functional significance will be analysed further after all the pottery has been studied. In general, the town's chronolo-

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32 This would be a maximum number since the forum and possibly other public spaces could have taken up more than one *insula*.

33 Percossi Serenelli ed. 2001.

34 But this is not uncommon in Republican town planning: cf. Castagnoli 1971, Ruoff-Kaänänen 1978, Sommella 1988 and Coarelli 1988.

35 A good parallel would be the contemporary town of Volsinii (Sommella 1988, 70). There blocks based on the *actus*, with sides of 4, 3, 1.5 and 1 *actus*, were used, and the Republican Forum was positioned centrally in one part of town in relationship to the Via Cassia.

36 Coarelli 1988.

37 These remains were disturbed by post-Roman river flooding which removed part of the S fringes of the Roman town.

38 Paci 1999.

39 Paci 1999

40 Generally we used blocks of *c*.40 x 40 m, but in 2003 in the W part of town we changed to blocks of *c*.19 x 19 m.
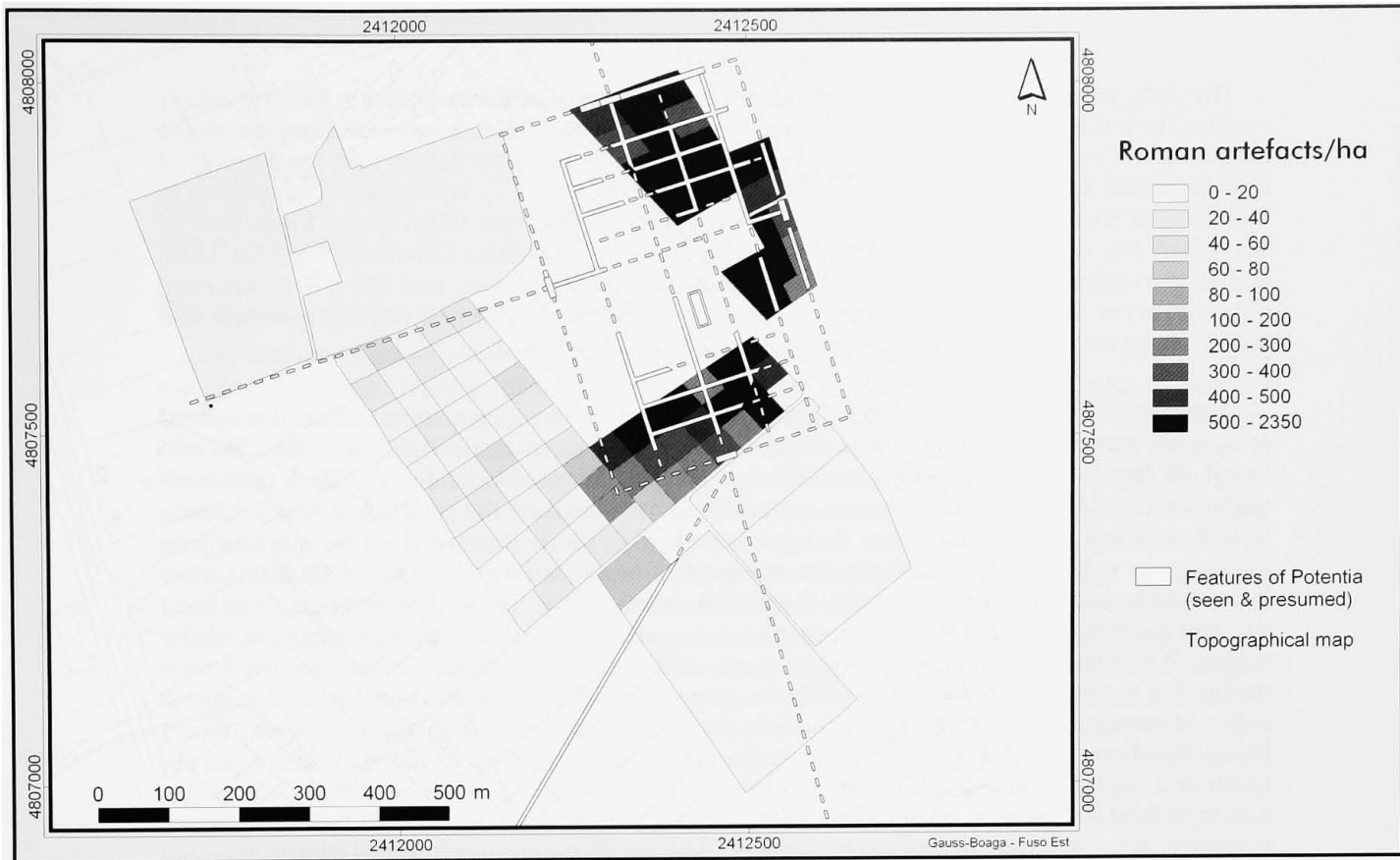
41 Vermeulen *et al.* 2003.

Fig. 7. Results of a systematic grid survey (September 2002) on and near the town of Potentia.

gical span, from the early 2nd c. B.C. to the early 7th c. A.D., was confirmed.[42] Several tracts of the street grid were confirmed on the ground, mostly as clear concentrations of river pebbles. The survey also located precisely the N and S gates in the circuit wall, both built mostly of regular limestone blocks.

Survey of the surrounding arable fields added knowledge of the town's suburban and rural hinterland (fig. 4). Directly to the north of the town, a possible extramural settlement could be distinguished, bordering the Roman coast road. Further north, according to the remote sensing, this road was lined with at least two funerary monuments, and we found clear surface indications of them in the form of many fragments of worked limestone blocks. Subsequent excavations by the Soprintendenza per le Marche has now confirmed the existence of at least 6 Imperial funerary monuments lining the coast road to the north.[43] Excavations in the 1960s and 1970s had already indicated that this extends to the east as a large cemetery of the 2nd-4th c.[44]

A Roman road was detected in 2000 on our aerial photographs leaving the presumed S gate to run in a southwesterly direction towards a Roman bridge at Casa dell'Arco.[45] The images show that it is bordered by at least 5 funerary monuments, of which we have now found clear surface indications: fragments of marble and limestone blocks and of fine Early Imperial pottery. Directly north of this road, which may have linked Potentia with Pausulae and Urbs Salvia, we located several extramural settlement areas. Finally, along the Roman coast road leading south, which we identified from air photographs in 2002, we have traced a few suburban settlements.

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42   Monsieur, Verreycke and Boullart 2003.
43   We thank E. Percossi for this information.
44   Mercando *et al.* 1974.
45   Lilli 1999.

The data gathered so far indicates that from its beginnings in the early 2nd c. B.C. the colony evolved to become a fully developed urban centre. Its political and economic impact at the mouth of the valley must have drawn the pre-existing Picene population into the process of Romanization, as local élites transferred their power base from the nearby hill of Montarice to the Potenza river plain. Our discovery of several Late Republican villas in the hinterland of the colony fits well with this picture of shifting power and economic transition.[46] Yet the Latin and Roman colonies erected on this coast between 289 (Hadria, Sena) and 184 B.C. (Pisaurum, Potentia) were rather artificial urban creations of Rome's political and military machine and did not have an immediate impact on the deeper territories inland.

Apart from these Roman 'islands' and their respective territories, focussed on the coastal area, there was probably little visible change in the rest of Picenum until the 1st c. B.C. Yet as a result of the *Lex Flaminia de agro Gallico e Piceno viritim dividundo* of 232, a major re-organization of this region was begun, probably accompanied by the creation of new administrative, political and social centres (but not necessarily cities). A network of new inland *prefecturae* was established to fulfil the Roman need of organisation. These are difficult to trace but would become the core of further urbanization in the region. The end of the Social War in 90 B.C. was a strong impetus for administrative re-organization and deeper Romanization of the region. Widespread urbanization of major parts of Picenum and the *ager Gallicus* occurred only during the second half of the 1st c. when the sytem of *praefecturae* was abolished and a whole series of *municipia* — real towns with their own territory and administration — was developed. Roads were further developed, including branches connecting to the via Flaminia in the north and central Marche, and to the via Salaria in the south. Also important was the assignation of land to the veterans of Caesar and Antony and later Augustus within the territories of *municipia*, and the foundation of new colonies at Ancona, Firmum, Asculum and Falerio.[47]

The inland part of the Potenza valley was not immune to these general developments. Up until the beginning of the 1st c. B.C. towns were not of major importance. But when the Italian allies of Rome acquired citizenship as a result of the Social War, the élites in many parts of the peninsula began to turn their attention to Rome and to political competition. In Picenum during the first half of the 1st c. B.C. this will have caused a gradual decline of the *vicus*-based system and led to some (proto-)urban developments. It is in this period that we see the gradual rise of three towns in the valley, the *municipia* of Septempeda and Trea in the middle valley, and Helvia Ricina in the lower plain.[48] Septempeda (and perhaps also Trea) was already a *vicus* in the Piceni system, while Helvia Ricina, on the left bank of the river near an important crossing, may have been a relocation to a better site where full advantage could be taken of the economic possibilities by road and water.

Under the Second Triumvirate (43-33 B.C.) new territories in Picenum were assigned to Romans. Mentioned in the so-called *Liber Coloniarum* are Potentia, Helvia Ricina, Trea and Septempeda in the Potenza valley, along with the nearby inland centres of Pausulae and Tolentinum (on the Chienti river) and Urbs Salvia (on the Fiastra). This gave a new impulse to urbanization in the region. The process was further strengthened under Augustus, who sought to create a systematic organisation of rural Italy and shifted the attention of local élites from the former *vici* towards the *municipia*, where they could compete for office and prestige. The élites began to build in the newly created *municipia*, and by the early 1st c. A.D. the Piceni *municipia* were beginning to acquire the facilities which their counterparts in Latium and Campania had long possessed, such as theatres, temples and baths. The growing wealth of the local élite and

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46   Vermeulen and Verdonck, forthcoming.
47   Paci 1991 and 1999; Delplace 1993, 60-68.
48   We do not consider the sites of Prolaquaeum and Dubios in the upper valley to be fully-developed urban centres but merely roadside stations or *vici* on the branch of the via Flaminia as it follows part of the Potenza corridor towards Ancona.

gradual growth of the towns of the Potenza valley was responsible for a prospering of municipal life in the 1st c. A.D.[49] that included markets and exchange.

Systematic aerial photography combined with fieldwork since 2000 has shed much new light on two of these inland towns, Helvia Ricina and Trea. New topographic information is also available for Septempeda.[50]

The inland *municipium* of Helvia Ricina

The Roman town of Helvia Ricina lies in the lower Potenza valley, some 15 km from the mouth of the river. Only a theatre is fully visible above ground today. Although there have been some earlier investigations, almost nothing was known about its general layout and organization until the start of our project.[51] The ruins were well preserved until Late Mediaeval times and early antiquarian studies have been well synthesized by N. Alfieri (1937). The findspots suggest that the town should be located on the left bank of the river, in an area today partly occupied by the small roadside agglomeration of Villa Potenza and partly used as arable land. This location marks the junction of the crossing of the river (probably navigable to here in antiquity[52]) with a crossroads of the via Salaria Gallica (which connected Urbs Salvia with Aesis) and an offshoot of the via Flaminia which ran along the Potenza corridor to Potentia, where it joined the coast road. Small-scale rescue digs in several parts of the town suggest that the site was occupied quite extensively from the later 2nd c. B.C.[53] A segment of a street running SW–NE, lined with shops, was found near the modern Septempedana road which runs parallel with the river.[54] Most of the urban evidence belongs between the 1st c. B.C. and the 4th c. A.D. Helvia Ricina became a *municipium* from the mid-1st c. B.C. when the first colonists, veterans of the Civil Wars, were settled here. It flourished under Augustus and Tiberius to judge by a series of funerary monuments and inscriptions which probably derive from a cemetery on the SW side,[55] the construction of an aqueduct,[56] and the largest theatre in Picenum.[57] In the 2nd c. much public building was done and squares and streets were re-metalled.[58] Traces of a baths complex near the theatre[59] and parts of houses with mosaic floors[60] are also dated to the 2nd c. But as early as the first half of the 2nd c. the municipal finances seem to decline when a *curator rei publicae Riciniensium* was installed. Under Septimius Severus, the town became a colony with the name Helvia Recina Pertinax, in honour of Septimius's predecessor, and plans were made to restructure the town, but unfinished sculptures seem to indicate that the plans were never completed.[61] Only some structures with mosaic pavements found in the SW part of town certainly belong to the 4th c. The area of the street with shops mentioned above was occupied until the 4th c. but two graves found above them indicate a late-antique reduction of the

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49 For a good synthesis on the situation in the Marche, see Paci 1991; see also Moscatelli 1985.

50 The discoveries made at Septempeda (San Severino Marche) still need to be verified in the field and will be presented on a future occasion.

51 For recent summaries of archaeological finds, see Capodaglio and Cipolletta 1996 and Percossi Serenelli 1989.

52 There is written evidence that this was certainly the case in Late Mediaeval times: Alfieri 1937; Cecchi 1968, 177.

53 Percossi Serenelli 1989, 65; Moscatelli 1985, 85.

54 Mercando 1971b.

55 Mercando, Bachielli and Paci 1984; Percossi Serenelli 1989, 85-86; Capodaglio and Cipolletta 1996, 26-32. The cemetery was used at least until the 3rd c. A.D.

56 Cecchi 1968, 178.

57 It was excavated in the 1970s and 1980s by the Soprintendenza per le Marche, when its chronology and plan were established: Percossi Serenelli 1989.

58 Capodaglio and Cipolletta 1996, 9.

59 Mercando 1977-80.

60 Mercando 1971a, 1971b, 1977-80; Percossi Serenelli 1989.
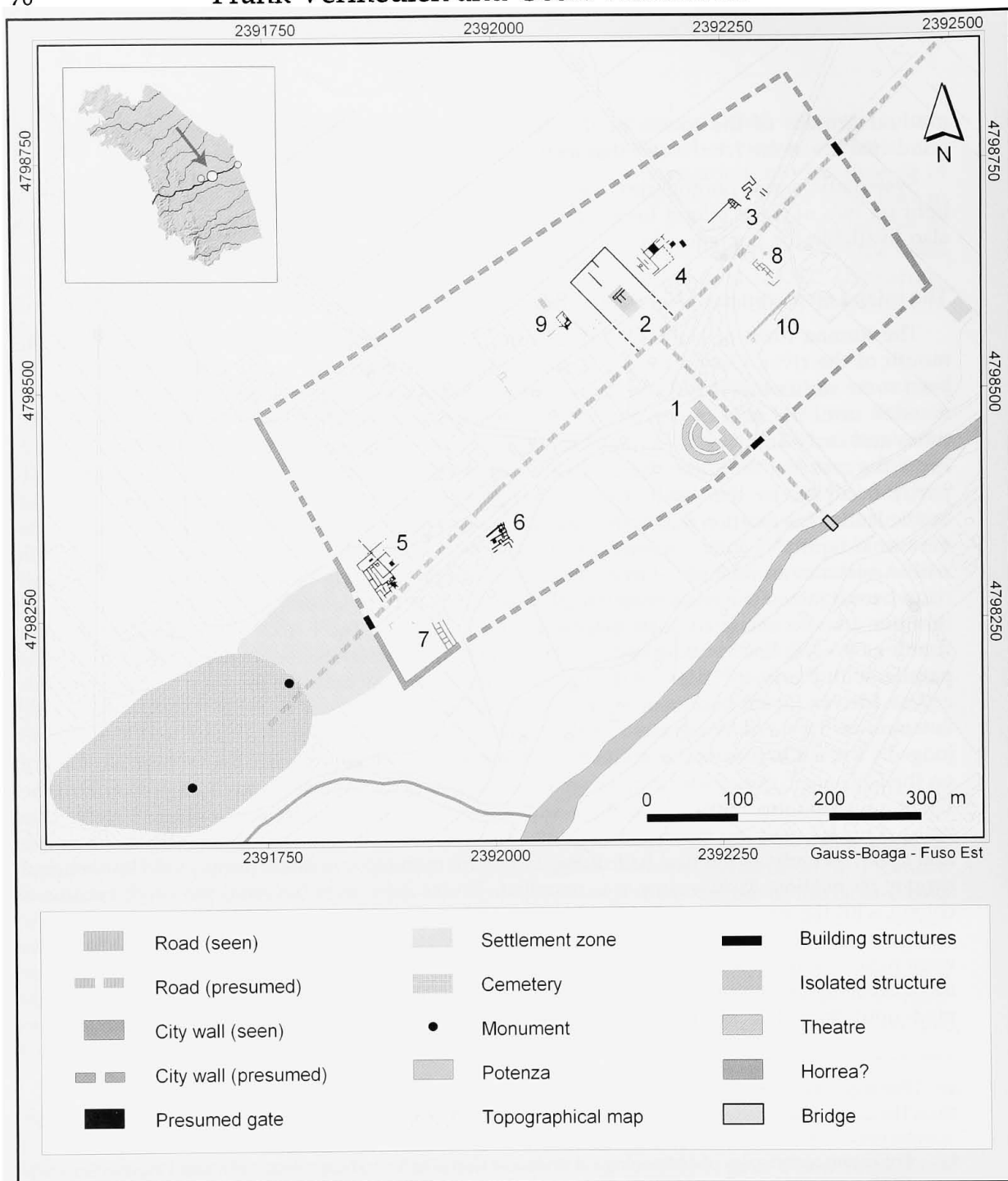
61 Capodaglio and Cipolletta 1996, 11.

Fig. 8. First tentative plan of Helvia Ricina, based on information from aerial photography, field checks, and earlier excavations and discoveries. Major structures observed during aerial reconnaissance: 1. Theatre; 2. Temple; 3.-6. *Domus*; 7.-8. *Horrea* or *tabernae*?; 9. Monumental building with cistern; 10. Street and adjoining structures.

occupied area. The town may have suffered from invasions of the 5th and 6th, with the remaining population seeking new abodes in the hills to the east and west.

Our first campaign of aerial photography produced no results at all, but the work done in the spring of 2003, followed up by surface sampling of artefact scatters, has greatly changed the picture[62] and we can now put forward many new elements regarding the town's topographic situation, overall layout and wall circuit, and can also propose functions for several public and

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62   Vermeulen, Verhoeven and Semey, forthcoming.

Fig. 9. Aerial photograph (April 2003) of crop-marks in the central and E part of Ricina, showing traces of the main temple (2), a *domus* with mosaic floors (4), and a building with a cistern (9).

private buildings newly discovered from the air (fig. 8). The comparison of the oblique air photographs with the results of survey on arable land show that the town was certainly located on the river's left bank. Pale crop-marks (*c*.5 m wide) noticed in several fields suggest the line of a town wall, although its position is still hypothetical in some areas. It seems to delimit a fairly regular and quite flat, almost rectangular area of *c*.22 ha between the floor of the valley and a subsidiary brook which formerly flowed more or less parallel to the river.[63] On the ground we could trace the line of the wall by a slight difference in elevation and by the occurrence of gravel and fragments of limestone building materials. Its position can be plotted quite well near the S and E corners but it remains rather uncertain in the N and W areas. Part of the S wall was probably removed by river erosion and fairly recent human intervention, including gravel exploitation.[64]

The valley road from Trea to Potentia crossed roughly the centre of the town from southwest to northeast and served as its main *decumanus*. It is now almost completely covered by modern

63   The crop-marks of this former meandering brook are visible on the air photographs. Systematic coring to reconstruct the ancient landscape is planned for 2004 by a team of geomorphologists under M. De Dapper.

64   Moscatelli (1985, 90) already observed that the Roman town could have been partly eroded by the river, the Roman course of which could, according to him, have been situated further south than the modern Potenza channel.

Fig. 10. Aerial photograph (April 2003) of crop-marks in the W part of Ricina, showing traces of houses along the main street (5-6) , a possible commercial complex (7) and the city wall (x). Note the clear traces of post-Roman flooding at lower right.

housing and roads but excavations in the 1960s revealed a row of Late Republican shops along its N side.[65] We cannot yet see definite *insulae* on the air photographs but some short linear crop-marks in the E part of the town suggest a system of several fairly regular streets parallel or perpendicular to this *decumanus*. One main NW–SE axis (now covered by the Villa Potenza agglomeration) could have connected to the Roman bridge over the Potenza which earlier observations located a few meters upstream from the present bridge.[66] This street, if confirmed by further fieldwork, could have linked the main *decumanus* with the Roman bridge, passing directly in front of and parallel with the stage building of the theatre.[67]

We can now propose that the forum was located near the intersection of the N–S axis with the main *decumanus*. Although a major part of the ancient town is built over by the houses and streets of Villa Potenza, several large buildings can be distinguished in the crops of the arable fields north of the central area. One of them is a temple precinct (fig. 9), as is clear from its typical plan, some above-ground remains of walls in *opus testaceum*, and some diagnostic surface finds including marble and cornice fragments with fine decoration, all pointing to an Early Imperial date. The plan suggests a rectangular building (at least 18 x 33 m) oriented NW–SE and placed almost centrally within a precinct (*c*.55 x 90 m or more). This was probably the main

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65   Mercando 1971b.
66   Cecchi 1968, 150.
67   This suggestion was already made by Moscatelli 1985, 90.

Fig. 11. Detailed view of (a group of) buildings in the W part of Ricina, showing indications of (hypocaust?) floors and possibly an aqueduct. On the left, behind the modern building, a pale linear trace indicates the presence of the town walls.

temple (Capitolium?[68]) of Helvia Ricina, perpendicular to the main *decumanus* and possibly bordering a forum square on its south.[69]

Other traces of buildings may be seen in the fields near the temple or along the main E–W street. Directly northeast of the temple is a large building with a complex array of rooms possibly surrounding an atrium and a peristyle; it could be a large *domus*. Several of the rooms have tessellated or tiled floors, as can be judged from intense surface scatters of these materials in locations that correspond to pale rectangular crop-marks. Much fine pottery (terra sigillata and ARS) of Imperial date and painted stucco support the interpretation. To the southeast of the temple at least two separate buildings are indicated by some standing walls in *opus testaceum*, as well as by corresponding crop-marks. One of the standing features is a large (12 x 5.35 m) cistern, which may point to a nearby public facility or a baths complex which needed to

68 Epigraphic dedications to Augustus, Jupiter and Mercury are known from the town (Cecchi 1968), so its dedication to Augustus or Jupiter is plausible.

69 The location of this temple and the theatre close to the forum would not be unusual: the arrangement in the *municipium* of Suasa is very similar: Dall'Agio *et al.* 1991.

store and use large quantities of water. The thick surface scatter of materials in this central sector of the town points mainly to the Imperial period, although some Republican and late-antique sherds were also found.

More crop-marks were found in the SW part of the intramural area, relating to building associated with the main *decumanus*. Two concentrations of buildings with a complex arrangement of rooms (figs. 9-10) could again belong to large *domus*. The dense surface scatter points to their long life and several phases in the architecture. In one, a hypocaust floor and traces of an aqueduct point to the presence of baths (fig. 11). In addition to Late Republican and Early Imperial finds, the 4th-5th c. are well represented, with a number of ARS imports. Close to the city wall on the S side are some linear crop-marks which could belong to a commercial building (fig. 10): the row of similar rectangular rooms, flanked by a corridor or portico, suggests a set of *tabernae* or possibly a *horreum*. The presence of many *dolia* and amphora sherds at this location close to the edge of the town and to the (ancient) bed of the Potenza river may support the latter interpretation.

Finally, there are signs of habitation outside the walls. Directly southwest of the town, outside the presumed location of the SW gate[70] and alongside the road to Trea, a small settlement lies between the walls and a Roman cemetery.[71] Where the main road exits from the NE side of the town we noted crop-marks which, together with a wide scatter of Roman material, point to an extramural settlement. It is quite possible that other extramural zones existed, for example near the bridge and even on the opposite side of the river, but the modern village prevents a proper evaluation. In general, the surface finds from the town somewhat under-represent the Late Republican period, but Late Roman finds are plentiful, pointing to occupation at least into the 5th c.

Trea in the middle Potenza valley

The town of Trea lies in the middle valley of the Potenza, *c*.30 km from the Adriatic. In this hilly landscape (*c*.250-350 m asl) the valley here narrows at two hill spurs, occupied respectively by the mediaeval town centres of Treia and Pollenza. On the S side the river is dominated by the conspicuous promontory of Monte Franco. There are important protohistoric settlements in this zone, known mostly from their cemeteries[72] and now from our survey (see above). On a prominent plateau 1 km northwest of modern Treia is the Roman *municipium Trea*, lying in the countryside near the convento of SS. Crocifisso (fig. 12). The only visible remains are a small section of the town walls connected to the W gate (partly incorporated into an abandoned farmhouse).

According to the *Itinerarium Antonini*, the town was located on the *via Flaminia per Picenum Anconam*, a diverticulum from the main road, passing through Septempeda and Trea towards Auximum and Ancona. Many finds have been made here since the 16th c.[73] The first major excavations in the late 18th c. determined the town's exact location and revealed parts of its walls, a basilica (noted only generally somewhere in the W part of the town), and a sanctuary with possible baths beneath the cloisters of SS. Crocifisso.[74] Since the 1970s the University of Macerata has engaged in more intensive research, with surveys and topographic studies by Moscatelli based upon vertical air photographs[75] and with excavations conducted by Fabrini in

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70 Moscatelli 1988 presumed the existence of a gate in this sector, based on toponymic evidence.
71 The cemetery was found earlier: Percossi Serenelli 1989, 85-86. In our recent fieldwork we located the base of a funerary monument hidden in the bank of the modern road to Septempedana.
72 Lollini 1958, 204-5; Lollini 1976.
73 For a recent summary see Marengo 2000; see also Bejor 1977, Moscatelli 1988; Fabrini 1990, 111-19.
74 Percossi Serenelli ed. 2000.
75 Moscatelli 1985 and 1988, based in part on earlier observations by Benigni and Bejor.
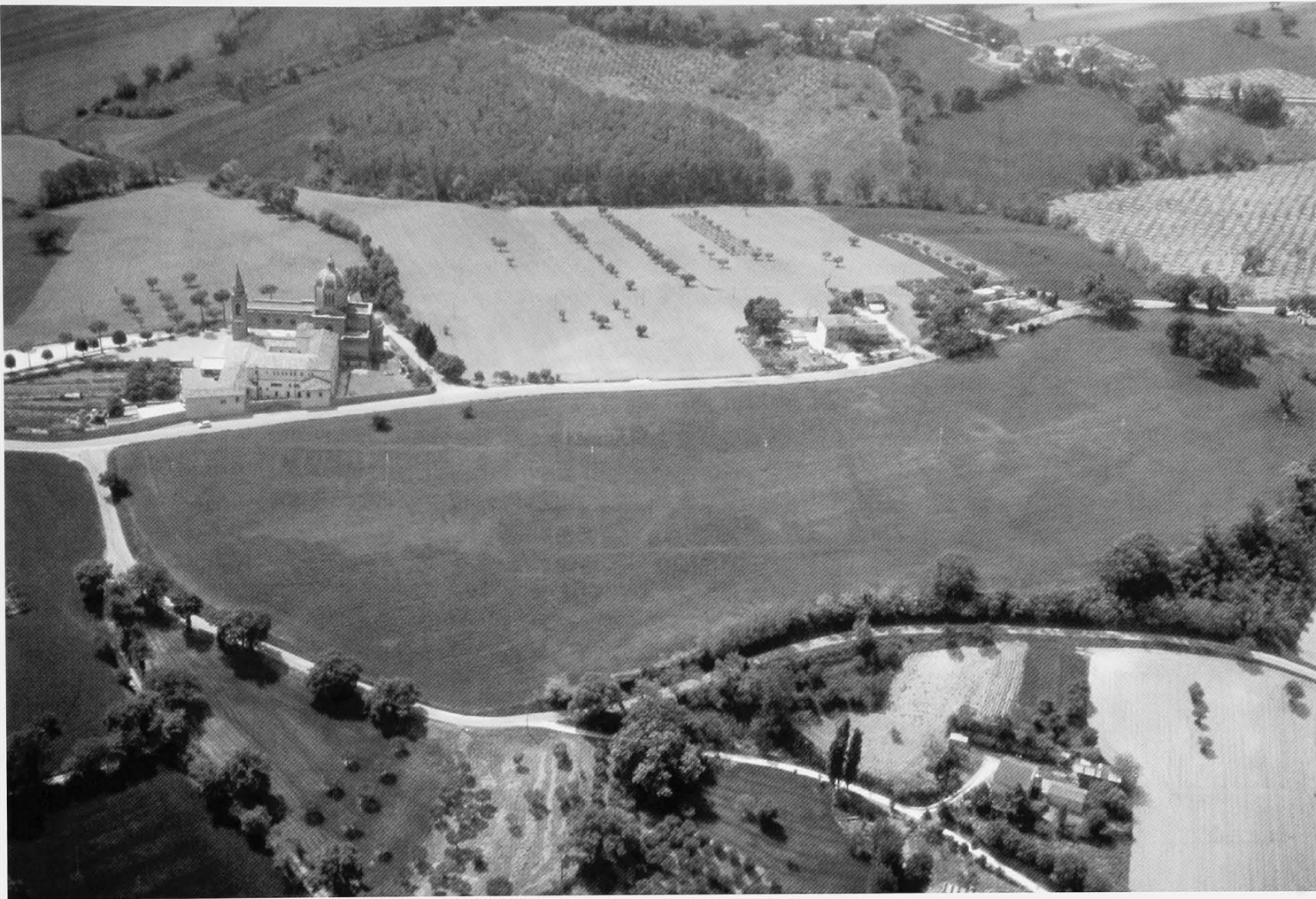
Fig. 12. General view from the north of the former urban area of Trea. Note the location of SS. Crocifisso and the well-preserved configuration of the N part of the Roman circuit wall.

the convent in the E part of the town (1985-88).[76] This work provided evidence for parts of the urban layout, the location of the town wall, and a 2nd-c. sanctuary to Egyptian gods on the site of the later monastery.

The origins of the site remain unclear. Its position on an elevated plateau could suggest that it had been a pre-Roman centre, possibly then chosen by the Romans for one of the controlling *praefecturae*. It became a *municipium* shortly after 49 B.C.[77] and its circuit wall, built in a quasi-reticulate technique with blocks of whitish local limestone, may have been erected around that time.[78] According to the *Liber Coloniarum*, the territory of Trea was centuriated under the Second Triumvirate, an intervention which has left its trace in the Potenza plain southwest of the town.[79] Many funerary monuments, statues and inscriptions now displayed in the museum indicate that the town flourished particularly from Augustus to Antoninus Pius.[80]

76　Fabrini 1990. The excavations showed that the base of a Roman temple had been re-used for the construction of the church tower, and that several rooms having the same orientation as the later monastery contained mosaic floors and a system of channels leading to a series of basins and cisterns. Egyptian statuary relating to the cult of Isis and Serapis was also found here (Capriotti Vittozi 1999).

77　Paci 1999.

78　Dates proposed for the wall construction range from the first (Moscatelli 1985) to the second (Percossi Serenelli ed. 2000, 75) half of the 1st c. B.C.

79　Moscatelli 1985.
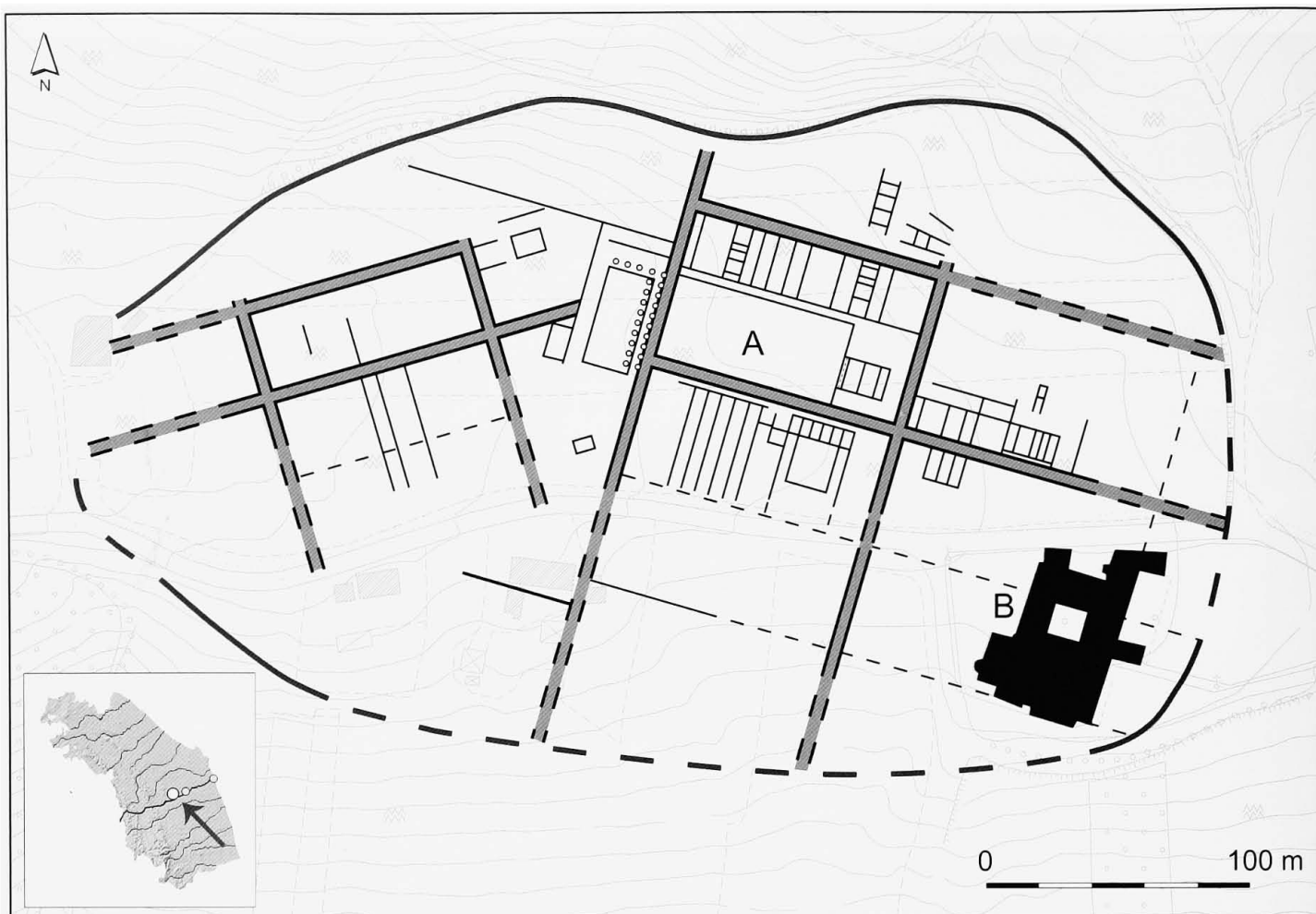
80　Marengo 2000; Percossi Serenelli ed. 2000, 74-105.

Fig. 13. A tentative reconstruction of the urban topography of Trea, with position of the town walls (as seen and as presumed), the urban grid (two distinct phases), the forum (A), and the sanctuary of SS. Crocifisso (B). This sketch, based entirely on the results of oblique aerial photography, is not fully restituted since ground measurements are awaited.

Its later phases are less well documented. The latest epigraphic evidence dates to the 4th c.,[81] but ARS pottery, African lamps, and coins prove 5th-6th c. habitation; a coin of Phocas (602-10) is the latest piece.[82] The 7th c. remains obscure, although an ornamental bronze object and a possible grave of that period suggest some continuity. The site of SS. Crocefisso is documented only from the mid-12th c. but many Early Mediaeval *spolia* are used in the later church. It is likely that the original town site became deserted sometime around 1000 when the population probably moved towards the easily defensible hill of Montecchio (later to be called Treia).

Despite the recent research at the site, information on the extent and organization of the Roman town remained very limited, nor did our systematic survey in 2001 in the E part of the town's territory[83] or our first campaigns of aerial photography add much in this regard. But several flights in 2002 and 2003 over the site of the town delivered spectacular results regarding the urban topography. Many traces of buildings and streets were visible in the grain crops and are now under intensive study. They revolutionize our knowledge of this *municipium*, altering some of the earlier hypotheses. Our first preliminary interpretation of the crop-marks (fig. 13) indicates the location of parts of the circuit wall, the near-complete pattern of streets delineating several *insulae*, the forum and surrounding public buildings, and several other

81   Marengo 2000.
82   Fabrini 1990.
83   Our survey complemented the excellent survey done by Moscatelli in the W part of the territory and
      published in the *Forma Italiae* series (id. 1988).

urban structures. Almost 70% of the town's infrastructure will be able to be mapped in detail when a series of control points on the ground have been measured. Systematic sampling of some surface material in ploughed fields in September 2003 has procured additional information, and from this we can offer a first synthesis of Trea's urban infrastructure.

The town wall delimiting the main urban area has an irregular oval shape, which agrees well with the general topographic configuration of the hilly plateau which determined the choice of location. On its long N and short W and E sides the trace of the wall is more or less preserved in low earthworks next to modern roads. Parts of the long southern limits, on the edge of the small valley of the rio Palazzolo, are seen as distinct crop-marks on some of the oblique photographs. We confirmed the wall traces on the surface in 2003 as linear zones, *c*.6 m wide, of concentrations of white limestone rubble and pinkish mortar. The total area enclosed by the town wall was probably only *c*.10 ha, smaller than that proposed by Bejor and Moscatelli, although this does not exclude the possibility of extramural habitation areas, particularly on the E and W sides.

The main *decumanus*, marked by the pale crop-mark *c*.6 m wide of a probably paved street, cut the town into two halves. It entered the town by the W gate, near the surviving remains of a tower complex built in *opus quasi-reticulatum*. After *c*.150 m this road bends markedly towards the east-southeast before continuing in a straight line towards the probable location of the E gate. Its prolongation to the southeast, parallel with the Palazzolo brook, probably brought it into the Potenza plain where it would have joined the valley road towards Potentia at the small roadside settlement or *vicus* beneath modern Villa Potenza. This angle in the main road resulted in two different orientations for the town and its streets (fig. 13). The smaller W part of town corresponds with the highest part of the plateau, over 300 m asl. In this area the crop-marks were more confusing, suggesting several phases of urban development, but it is still possible to observe a series of narrower streets parallel with and perpendicular to the main E–W axis. These streets seem to define several regular *insulae*. Traces of several buildings are visible, most of which may be domestic. Surface survey tended to support this, revealing several zones with mosaic floors and much pottery. It was this sector of town that produced most of the Republican-period surface finds, which could suggest that this highest sector, which was also the source of the Palazzolo brook,[84] was the site of the earliest settlement. This area also produced more Late Roman finds, including 4th-5th c. ARS potttery.

The larger E sector of town provided more detailed information. The aerial photographs show a whole series of buildings and public areas, as well as several streets laid out in an orderly fashion (fig. 14). The streets with an average width of *c*.4 m define a regular grid of *insulae* with their long axis parallel with the main *decumanus*. By combining the crop-marks on our oblique photographs with earlier information, including vertical aerial photographs[85] and the known structures under SS. Crocefisso,[86] we can propose 8 rectangular *insulae* with dimensions of 3 x 1 *actus* (*c*.105 x 35 m). The shape and dimensions of additional *insulae* on the periphery are conditioned by the circuit wall.

One full *insula*, almost central in the town and directly north of the main *decumanus*, is clearly the forum. It is an open rectangular square (the pale crop-marks suggest some kind of paving), bordered on 3 sides (N, W and S) by porticoes. In the centre of its E side is a rectangular building measuring *c*.20 x 10 m. Its position and the large concentration of marble *crustae* found in this spot suggest its identification as a temple such as a *capitolium* or temple of the imperial cult. The podium is subdivided with a frontal stairway, a deep *pronaos*, and a *cella* with internal support for the statue of the god.[87] On the S and N sides of the forum are porticoes bor-

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84 The ready availability of fresh water could be an argument for the location of the first settlement.
85 Moscatelli (1988) saw a few linear traces in the S part of the city, in line with the present church.
86 Fabrini 1990. The orientation of this convent and church within the ancient street grid is noteworthy.
87 Trea has yielded epigraphic evidence for the cults of Minerva, Victoria, Domina, Serapis and Isis, and the emperor: Marengo 2000.
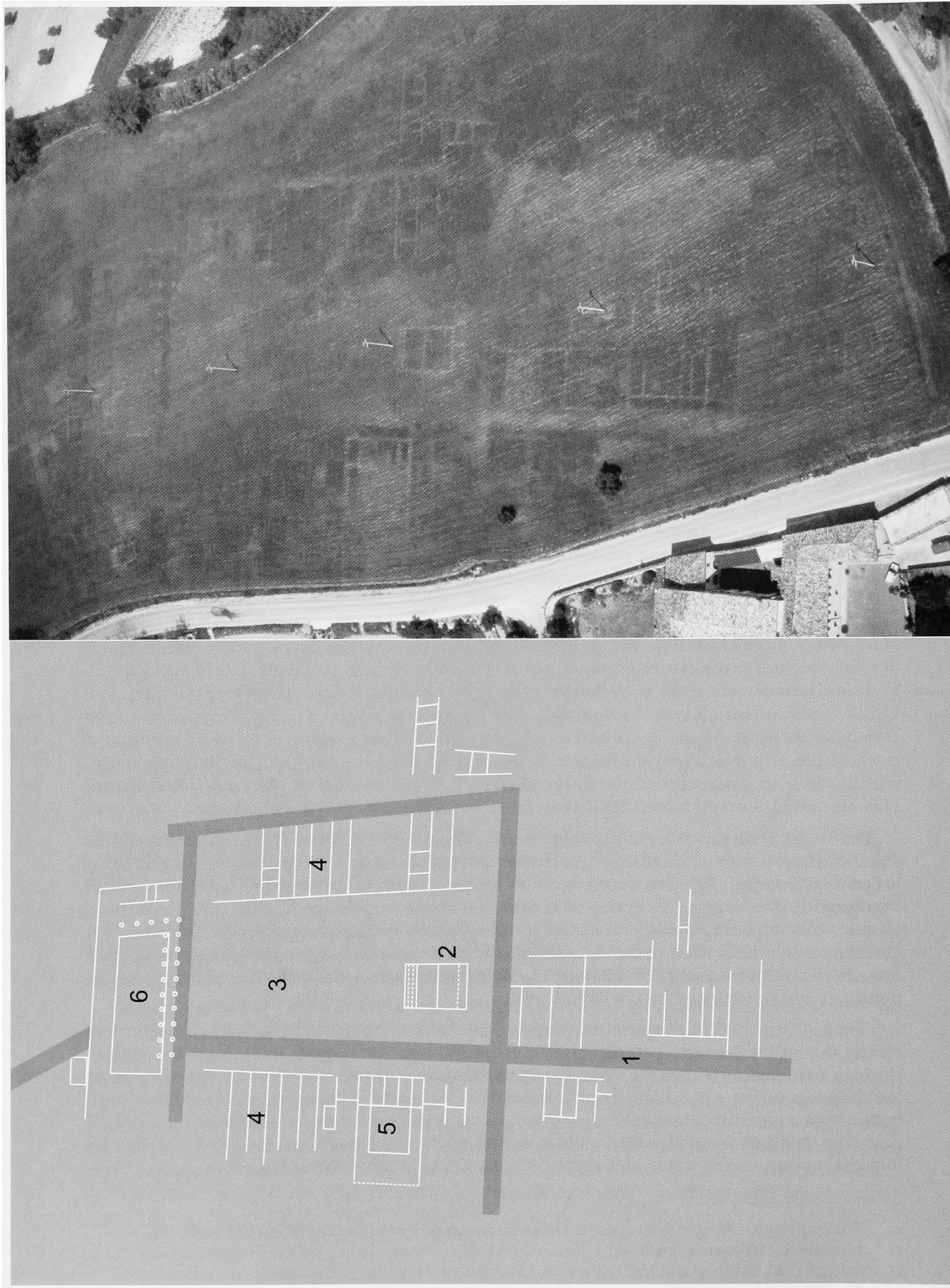
Fig. 14. Oblique aerial view (April 2003) of the regularly organised east-central zone of Trea. The transcript of the crop-marks (not yet fully restituted) shows the presence of: 1. Main *decumanus*; 2. Temple; 3. Forum square; 4. *Tabernae*; 5. *Macellum?* 6. Basilica.

dering rows of narrow rectangular buildings, clearly shops or *tabernae,* which have their short sides towards the piazza. A larger and more complex building in the SE corner could well be a *macellum;* it probably has several rooms centred around a paved courtyard, and is oriented towards the piazza, its short N side measuring at least *c.*25 m. On the W side the forum is bordered by the long side of a large rectangular building (*c.*35 x 20 m), clearly planned with it. This building seems to be lined on its other sides by a series of shops. Its identification as a basilica is suggested not only by its form and location but also by the many fragments of marble building materials (*crustae, opus sectile*) found on the surface. The spatial arrangement of the whole area displays the typical aspects of a planned forum with dominating temple, basilica on the opposite side, and rows of shops and a market behind porticoes lined with columns. There is a resemblance with several Early Imperial fora in Italy, such as the mid-1st c. A.D. forum in Brescia. Firm dating evidence is not yet available, but it would seem likely that this regular central and E part of the town was built under Augustus or his immediate successors.

At some distance from the forum and along the main *decumanus,* several other buildings oriented according to the grid are visible in crop-marks. The surface scatters of mosaic tesserae, *tubuli,* painted stucco, and fine pottery and the multi-room plans of some of the buildings point to extended *domus,* although for a few structures a public function (e.g., baths) or simpler *tabernae* should be considered. In the NE sector of town, where there are less pronounced crop-marks, fragments of slag may point to artisanal activity. The pottery and other surface finds do not yet point to a pre-Roman settlement at Trea, but the Late Republican finds are frequent enough to suggest significant occupation by the 1st c. B.C. The greatest number of finds relate to the 1st-2nd c., but occupation certainly lasted until the 5th or early 6th c.[88]

Conclusions

The project still has much work ahead of it, including geomorphological work and analysis of the pottery, but the main outlines of the development of urbanization in this region are already becoming clear. During much of the Piceni Iron Age (9th to early 3rd c. B.C.) there is a pattern of grouped settlement controlling large areas. Nucleated settlement sites such as Montarice and Monte Franco provide insight into the topographic features of concentrated élite habitation. This pre-Roman system of relatively compact, defended hilltop settlements probably existed in many other valleys of the hilly Marche region but is now hidden beneath modern hilltop towns. They had a good potential to control movement in the plain and along the coast. Most of these defended villages seem to have had antecedents in the Late Bronze Age, and at least some were probably occupied almost continuously until their first contacts with Rome in the 4th-3rd c. B.C.

The transitional 3rd and early 2nd c. B.C. is still less clear in the archaeological record. The Roman military victory over Picenum, completed in 268, had far-reaching consequences only for the particular maritime areas selected as colonies. Following the incursion of the Carthaginian armies which used Picenum as a base for attacks on Rome, the foundation of the colonies of Potentia and Auxinum in the first half of the 2nd c. B.C. gave a new impulse to the process of Romanization. At first functioning as Roman 'islands' in a very conservative landscape, they became fully developed urban centres. The coastal colony located at Potentia at the mouth of the river, exemplifying thereby the changed political and economic realities, displays the features of a small new foundation, with a regular plan, circuit walls, and public centre. Its proximity to the former population centre on the hill of Montarice, controlled by a local élite, probably helped the coastal Piceni make the transition to the new reality.

In the interior probably not much had changed yet. That only came with the second phase of Roman urbanization in the early 1st c. B.C. after the Social War. In the inner Potenza corridor

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population centres developed near the valley bottom, dominating the settlement pattern of the 1st c. B.C. These new centres probably grew up in or close to occupation sites of the Piceni élite but so far we have not been able to document direct continuity on the sites that developed into typical Roman towns. The three interior Potenza towns of Septempeda, Trea and Ricina all show a similar system of urban layout which may be characterized as 'road-towns' because of their position on a main E–W road which acts as the town's main *decumanus*. At Septempeda and Ricina this is the road along the valley to the coastal town of Potentia; at Trea it is a road leading off that valley road. The three towns are all walled and their intramural buildings of the Early Imperial period include a multitude of public and commercial structures (temple, theatre, basilica, market, baths, *tabernae*) arranged along the *decumanus* or its adjacent forum. Their relative compactness and orientation around a main transport corridor matches the centres of the Piceni *vicus/pagus* system: they act as modest habitations centres controlling the flow of goods and ideas along the valley while also providing services for the surrounding rural population.

The success of these towns in the Early Imperial centuries is clear but we cannot yet assess in detail what happened to the urban network in late antiquity. Invasions and economic and demographic decline, interrupted by short periods of re-organisation, seem to have caused a gradual abandonment of urban centres and of large tracts of the countryside and habitations there.[89] Yet some form of concentrated occupation of the towns continued until the early 6th c. The Gothic wars of 535-553 probably dealt a serious blow to the occupation system, bringing about a drastic contraction of the rural and urban population and a quicker abandonment of settlement in the valley, and this process will have become irreversible when the Lombards invaded central Italy and the Potenza valley was abandoned by the Lombards as a main E-W communication route. Finally the Roman towns were abandoned in favour of fortified centres on the hilltops, although small nuclei of impoverished structures, often made of wood and clay and often built against the remains of Roman walls or buildings, survived inside the former habitation zones, concentrated especially near places of Christian cult. But these kinds of structures are hard to detect by survey or in small-scale excavations. In short, the Roman phase of organized urbanization, firmly linked to a permanent network of roads, was a limited one: in this region the natural occupation pattern was one of strategically-placed fortified villages, controlling the movement of peoples and goods. When the Roman world collapsed, we see a gradual return to smaller fortified settlements on the hill crests, making full use of the natural assets of the landscape of the central Marche.

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