Dacia

Landscape, colonisation and romanisation

Ioana A. Oltean

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Dacia examines the way the Roman conquest and organisation of the central core of the province of Dacia impacted on the native settlement pattern and society. It analyses Roman-native interaction from a landscape perspective focusing on the core territory of both Iron Age and Roman Dacia. This includes the royal Dacian heartland (the Orastie Mountains) and its surrounding lowlands, which later belonged to the hinterlands of Ulpia Traiana Sarmizegetusa and Apulum, the two most important Roman towns in the province of Dacia.

Oltean considers the nature and distribution of settlements of various types and functions in the pre-Roman and Roman periods, the human impact on the local landscape and the changes which occurred as a result of Roman occupation. The study also provides a methodological framework for further analysis of the landscape and of the evolution of the settlement pattern, which can be extended throughout the province of Dacia and into neighbouring areas. The result is a detailed consideration of previous theories of native settlement patterns and the impact of Roman colonisation. *Dacia* offers fresh insight into the province of Dacia and the nature of Romanisation and Roman-native interaction.

Ioana A. Oltean is a Post-doctoral Research Fellow at the University of Glasgow.

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Ioana Adina Oltean
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1 Introduction

1.1 The state of research on Roman Dacia

One reason for Dacia being somewhat special for Roman studies is its rather short life within the empire, spanning the second and most of the third century AD, covering the period when the Roman Principate experienced both the peak of its power as well as the onset of decay. Conquered for strategic as well as political reasons by Trajan in the age of the greatest territorial extent and power of the empire, it was abandoned later in the third century AD because of political infighting affecting the empire at its core and the subsequent failure to control the *limes* areas. The second and the early third centuries AD are generally accepted as the epitome of Roman imperial rule, which continues to serve as a model in various comparisons. In addition, by the end of the first century AD the empire had refined its approach to conquest and further organisation of new provinces. Consequently, studying the implementation and impact of Roman administration in Dacia provides a unique insight into the pattern of conquest and occupation of provincial territory at the height of Rome's power.

One of the great expressions of Roman power in conquered territories is the impact on the natural and cultural landscape. As argued elsewhere (Oltean 2004), the current orthodoxy concerning the impact of Roman occupation on Dacia (Figure 1.1), the implementation of Roman rule and the development of the provincial landscape is based on a few, seemingly, generally accepted points. First, the Roman conquest is seen as a dramatic event, involving massive colonisation. Several literary sources describe the process; among them Cassius Dio (LXVIII 14, 4), who refers to Trajan's policy of colonisation with specific reference to urbanisation; and Eutropius (VIII 6, 2), who mentions significant colonisation from all around the Roman world and, indeed, a high Roman citizen-presence in Dacia 'to occupy its lands and cities' at the beginning of Hadrian's reign, as a result of a deliberate Trajanic policy to redress the depopulation of Dacia resulting from the long war against Decebalus. These examples suggest that the phenomenon was important enough to have come to the attention of ancient historians (for the most recent discussion see Ruscu (2004)) and, at least superficially, a number

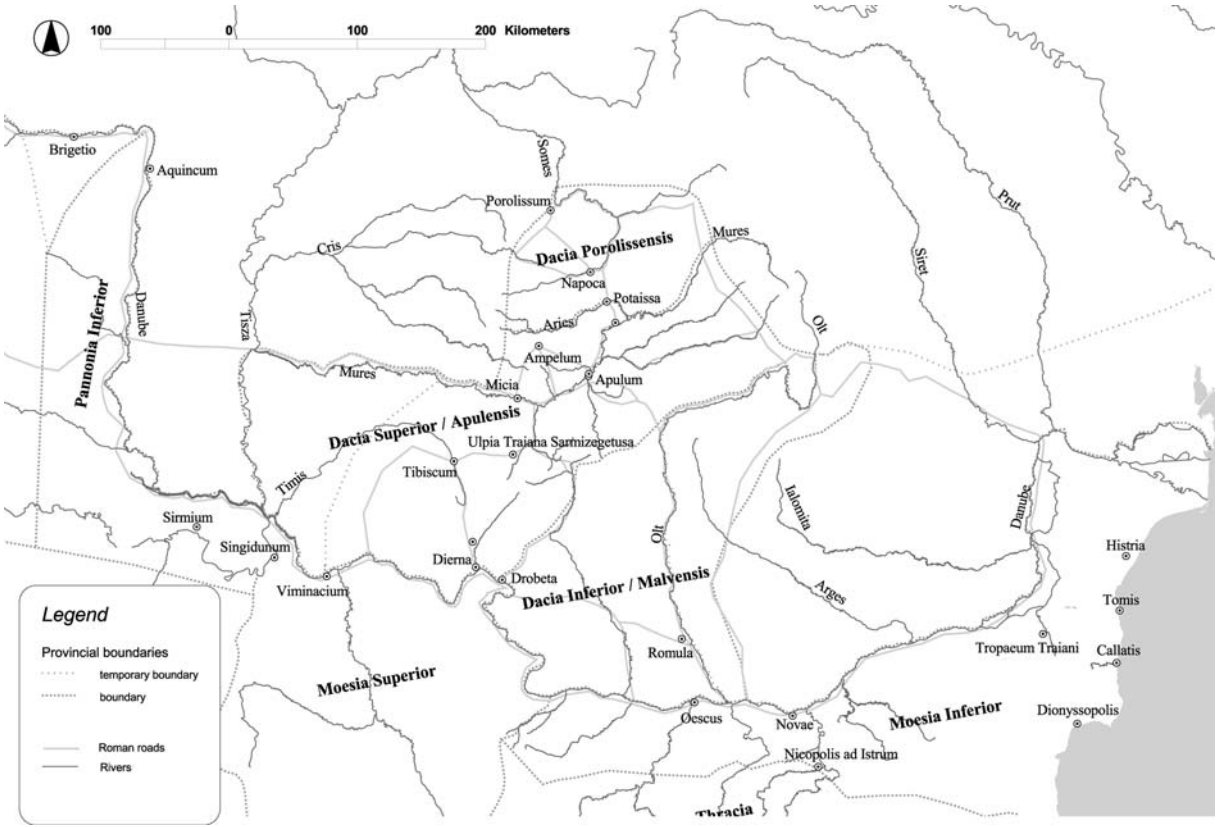

Figure 1.1 Map of Dacia and neighbouring provinces.

of archaeological discoveries appear to support these records. Another leitmotif throughout modern literature is that the native Dacian population was moved from their hillforts and settled in the lower areas, which were easier for the Roman army to keep under control; indeed, the archaeological evidence for a violent destruction of the major Dacian hillforts (which do not seem to continue to be in use during the Roman period) has been interpreted as occurring within the chronological context of the conquest (Glodariu 1993, 15). Furthermore, it is generally asserted that the Roman policy of colonisation was rather brutal, with the authorities depriving the natives of their lands for town foundations, for colonists and veteran's land holdings that established villa estates, for army needs and for imperial estates (Protase 1968, 510). Finally (and somewhat surprisingly given the above theories), it is widely believed that the natives lived in harmony with the colonists and romanised themselves during the two centuries of Roman occupation, and that together these two groups continued to settle these lands after the Roman administration and military forces left Dacia at the end of third century AD (see Protase 1980, 228–52).

But before analysing the archaeological basis of this theory in more detail, it is necessary to review the current state of archaeological research and archaeological landscape in Dacia. Despite the efforts made during the twentieth century, archaeological research has tended to concentrate on military (e.g. Gudea 1997) and urban sites, the latter restricted predominantly to sites with proven municipal or colonial status. A number of them attracted interest from antiquarian and early academic research, but after the cessation of excavations at *Sarmizegetusa Ulpia* in 1938 and until that work recommenced in 1973, the archaeology of Roman towns in Dacia was limited to occasional excavations at *Romula* and some rescue work at *Apulum*, *Drobeta* and *Napoca*. In the meantime, modern development destroyed the sites of the *municipia* at *Dierna* (1968–1969) and *Ampelum* (1985–1986) without appropriate rescue work being undertaken and published. Research has been re-launched and intensified, particularly in the last two decades, with a number of research projects targeting a number of objectives at *Sarmizegetusa Ulpia*, *Apulum*, *Napoca* and *Tibiscum*, some of them involving collaborations with French, German and British archaeologists (Diaconescu 2004b). However, a significant number of sites which, as far as we are aware, did not achieve municipal status, but which are accepted elsewhere as having at least a semi-urban function (e.g. Burnham and Wacher 1990) have been somehow neglected; only a few military *vici*, for example, have been subject to any excavation (e.g. *Tibiscum*, Casei, *Porolissum*, *Micia*).

Rural settlements have been approached only sporadically and with a low priority. The first decades of the twentieth century saw the beginning of the consideration of rural settlements, with excavations at several villa sites, many of them extant at that time, such as Manerau in 1912, Apahida and Garbou in 1913 (see Mitrofan 1973, 127–50, with full bibliography for the first publication of these early excavations). A second period of revival of interest

was noted in the 1950s and 1960s, though for political reasons linked to the agenda of the communist regime. Excavations were conducted on villages (*vici*) or the cemeteries belonging to them (e.g. Obreja, Soporu de Campie, Bratei, Cristesti, Micasasa – see Protase 1998; Protase 1980, 38–85 with bibliography; Husar and Man 1998; Mitrofan 1999). Similarly, several villa sites were also researched, such as Hobita, Deva, Santamaria Orlea, Aiud, Cincis, Chinteni (Floca 1953; Floca and Valea 1965; Winkler *et al*. 1968; Popa 1972; Mitrofan 1973, 1974, 1976; Alicu 1994, 1998).

In recent decades, efforts have been made to record all archaeological sites within the territory, improving the older data with new information obtained through field walking. Unfortunately, an ambitious project to produce a general archaeological gazetteer of Romania was never completed, though in some cases it resulted in the publication of regional gazetteers of several counties or geographical areas. For most of the discoveries, however, the information is scattered in studies at various levels of comprehensiveness published in various Romanian archaeological periodicals. Despite its bad reviews (Daicoviciu 1969), Tudor's book *Orase, tirguri si sate in Dacia Romana* (1968) used to be the largest collection of published information on Roman settlements in Dacia that specialists could rely upon. But now after more than 30 years, the information needs to be updated, and the same applies to the *Tabula Imperii Romani* (L-34, Budapest and L-35, Bucharest) whose information continues to be used by the editors of historical atlases (e.g Talbert 2000). This will hopefully be redressed in the future, through the efforts of the Institute for Cultural Memory in Bucharest (cIMeC) to create a large database of the archaeological sites of Romania accessible on the Internet to scholars internationally, through a European Union funded project (http://archweb.cimec.ro).

1.2 Biases and limitations of current research

As noted above, the immediately recognisable bias in academic research on Roman Dacia is the imbalanced focus on military and urban sites that have attracted the limited number of specialists and the funds available (Alicu 1998, 127–8). Without being a problem particularly related to Romanian or even to Roman archaeology generally, this alone is a significant bias induced in the archaeological evidence. Yet in the archaeology of Roman Dacia, there are numerous biases that apply not only to the quantity, but to the quality of current information and, since one bias can be a direct consequence of another, the end result is that the theories generated from the data cannot be other than ill-founded.

1.2.1 The influence of history and politics on archaeological research

Until now, archaeological research in Romania has been subservient to established historical theories generated by literary sources. This attitude is deeply

rooted in concepts of the past held by modern individuals, among them were professional scholars. Although the ultimate goal of archaeological research is naturally directed towards explaining historical evolution and phenomena, the visible tendency over the past century has been to rely primarily on the existing literary sources, despite the fact that their inherent biases could potentially be reduced by reference to the totality of the evidence. A general problem in the study of the Roman Empire is that archaeological evidence has been considered only when it supported the historians' arguments, rather than attempting to build a theory based on both sources of evidence. The danger is that in such a situation, the literary sources alone tend to generate the conclusion. More recent comprehensive studies have tried to address this issue. This situation might be explained sometimes by the paucity of archaeological information that still applies to some extent in Dacia. Unfortunately, even where that evidence is available, other factors distort its consideration and the resulting conclusions.

There is nothing new in the recognition of the importance that historical models have for political discourse in general, but for a long time in Romania history itself was entirely subordinated to politics. As a result, various subjects of archaeological research were approached and funded only when and if they were seen to serve political fashion trends. After the Second World War, politics became more intrusively and, indeed, aggressively involved in different aspects of research as with life in general. Above all, the way of thinking and writing history had to be Marxist (based on the theory of historical materialism) and no other approach was perceived as 'suitable'. Ever since 1947, and especially in the 1950s and 1960s during Gheorgiu-Dej rule, the key role of historical research was to feed the discourse of communist theories regarding the social classes' antagonisms and the rejection of western imperialism. In this context, research at the major Roman sites, including *Ulpia Traiana Sarmizegetusa*, the provincial capital, ceased to be financed (Diaconescu 2004b, 88), and both funds and personnel were re-directed to undertake research on native settlements of pre-Roman, Roman or post-Roman date. But, despite the benefit of re-directing research towards sites poorly approached before, the conclusions of the research had to fit the general theory of the oppression experienced by the native masses under the imperialist occupation. This idea, born in the middle of the industrial era, had to be sustained by history and archaeology and proven to have existed for a long time, along with social antagonisms. The Roman conquest and occupation of Dacia was described as a negative event, not only in relation to the treatment applied to the natives, but also because of the introduction into the conquered territory of a socio-economic system based on slaves and the exploitation of the lower classes (Constantinescu *et al.* 1970, 53). According to these scholars, who were projecting ideas usually connected with the concept of modern nations into the context of an ancient society, the natives lost their liberty as a people and their properties in favour of their Roman conquerors. The opinion expressed by Macrea (1969, 457)

was that 'the Roman conquest brought for Dacia not just economic, social and cultural progress, but also an entire cortege of suffering, pillage and unmerciful exploitation for the slaves and the lowest strata, all inherent to an antagonistic society based on slave exploitation' (my translation). Similarly, the authors of '*Inscriptiile Daciei Romane*' (Russu 1975, 22) wrote in their historical introduction: 'The Roman occupation brought […] real progress in modes of organisation, material and spiritual culture, technology and production, and in the way of life; but it was at the same time a regime of pillage and rough exploitation of the lower, working classes of society and especially of the masses of native subjugated inhabitants and workers, expropriated in their own country' (my translation).

The other main political and historical theme was the concern to produce historical arguments to support the political claims over Transylvania entertained by, on the one side, Romanian and, on the other, Austro-Hungarian, then Hungarian political circles. Dacia and its inheritance has been a central theme in defining national identities of the modern era in the area and it is the subject of a long-term debate in Romanian and Hungarian historiography (the Romanian point of view is mainly summarised in Daicoviciu *et al.* (1963), while the Hungarian thesis is presented most recently by Vékony 2000). During the communist years, the subject was particularly in fashion in the 1970s–1980s, during the rule of N. Ceausescu, when communist propaganda in Romania gained a strong nationalist message. Within this context, one of the main concerns of Romanian historians was to bring forward arguments for the rapid and durable romanisation of the natives in Dacia as a major element in the context of the 'theory of Dacian–Roman continuity'. This thesis was developed over the past three centuries mainly as a response to the corresponding Hungarian propaganda which attempts to sustain its political position towards Transylvania and to prove that the territory was devoid of any population on the arrival of the Hungarian tribes. It is argued that the Romanians emerged in the region through a massive movement of population from south of the Danube later on, because the Dacians had disappeared as a result of the wars of AD 101–102 and AD 105–106 and the Romans had withdrawn all the population in the third century AD . Therefore, Romanian scholars focused on disproving this thesis, bringing forward arguments to support the romanisation of the native Dacians under Roman rule and the continuity of life in Transylvania from prehistory to the Middle Ages.

The currently accepted theories on the Roman conquest and rule of Dacia and, most of all, on the romanisation process, had to be fitted in accordingly, in spite of several flagrant contradictions that I wish to address briefly here. The archaeological evidence so far attests the presence of colonising elements in both urban and rural contexts. But if in the urban and military sites funerary, epigraphic and other types of evidence seems to indicate quite a large population with an origin other than indigenous (see also Ciongradi 2004a and b), the current level of archaeological data for the rural areas of Roman Dacia makes

it impossible at this point to assert a similar percentage of colonised elements there. The destruction of the Dacian hillforts and the population movement have been accepted with little if any surprise, given the huge effort made by the Romans to conquer these sites. But on a closer examination, current theories on the nature of the conquest and the treatment applied to the natives are in blatant contradiction. One of them suggests that the natives lived on the tops of mountains and were forced to settle in the fertile lowlands, while another states that the Romans came and took the fertile lands for their own properties and forced the natives to move away or work on their properties as cheap labour. Unfortunately, it is often forgotten that the sole reason for the existence of the hillforts is as elite sites and the purpose of their location is strategic and status-related. Accordingly, after the military defeat and the introduction of Roman rule, there was no longer a reason for such sites to exist. The extrapolation of this model of hillfort destruction to the entirety of the Dacian settlement pattern not only pushes this interpretation to an unsubstantiated extreme, but also would have been a questionable policy decision on the part of the Romans. The idea that the Roman colonists deprived all the natives of their lands does not sit well with the benefits of a rapid and durable romanisation through close and peaceful relationships between all the inhabitants of the new province, whether natives or colonists, civilians or soldiers. If true, the resulting attitude of the Dacians towards their conquerors is likely to have been resistance to acculturation, rather than receptiveness. It certainly does not take into consideration other factors – cultural or economic, for example – which must have influenced attitudes and the whole process needs a more refined and detailed interpretation.

Therefore, it is no surprise that the theory has been challenged in the 1990s not just by the Hungarian colleagues, but also by some Romanian scholars, especially archaeologists. It is not my intention here to analyse this polemic in more detail, but to show that it has influenced the perception even of the existing evidence and in the end it has distorted the general view of Roman Dacia in terms of conquest, colonisation, administration and, indeed, romanisation. The eventual reaction of some Romanian archaeologists to this theory is an attempt to evaluate the existing archaeological evidence at its true value, without dismissing the elements that might offer a different picture than the one desired by political discourse. It would be wrong to accept any form of political interference in either archaeological or historical practice any longer. The political attempts to influence interpretations of the past usually reflect a failure to find solutions to present issues (a distracting factor from real political issues). Moreover, adding a supplementary bias to those that currently apply to archaeological research would distort our perception of the past even more.

1.2.2 Archaeological information: reliability and accessibility

Reliable archaeological evidence is surprisingly limited. This statement might sound odd given the amount of data recorded so far for Roman Dacia,

but unfortunately for the most part the information provides only the general location of archaeological discoveries. Many efforts have been made to identify and systematically research the archaeological sites of Transylvania in the twentieth century and in some cases even earlier, especially through non-systematic field walking and excavations at various scales. Both *Tabula Imperii Romani* L-34 (Budapest) and L-35 (Bucharest), along with Tudor's book *Orase, tirguri si sate in Dacia Romana* (1968) and the several county archaeological gazetteers, refer to a significant number of sites. But the vast majority of these sites have somewhat stereotypical descriptions, most of the time mentioning the ubiquitous ceramic fragments and/or construction materials, when, in fact, these stereotypes relate to the methods of collection, interpretation and, indeed, evaluation of the data for the whole territory. In addition, there is still a lack of systematic coverage of the territory and no unitary method of recording. Only some 10 per cent of reported sites have been the subject of more extensive excavation projects; the remaining 90 per cent are just indicated by finds (artefacts or building materials scattered on the ground surface). There are no site plans available for most of them, because of a failure to apply modern techniques of site prospection and because of restrictions on access to maps. As a result, however, the size and significance of these sites has not been fully appreciated and several categories of sites characteristic of a landscape are still overlooked. This could be the potential explanation, for instance, for the fact that no Iron Age or Roman land-use systems have been yet documented in Dacia.

But even the information available is extremely difficult to consider and evaluate as a whole in the absence of an accessible national system of record of archaeological sites**.** Dealing with a type of information that is, by its nature, accumulated over a long period of time, naturally brings problems of storage and accessibility of data. In Romania, the system of publication of the results is not very helpful in terms of access. *Tabula Imperii Romani* L-34 and L-35, and Tudor (1968) are now well out of date. Until a database containing archaeological reports made since 1983 became available online, along with a basic map distribution (http://www.cimec.ro/scripts/mapserv.exe?map=/mapserver/mapserver_ro.map&mode=browse), more recent discoveries were accessed primarily through sporadic, random publication in various Romanian periodicals. The material might have been addressed in a few cases in more general studies, which aim to collect the data discovered over a wider area, usually in terms of historical geography, chronology or specific categories of sites (e.g. Wollmann 1996 for mining and quarrying; Popa 1987 for Tara Hategului). There are also few cases of modern regional archaeological gazetteers (e.g. Alba County – Moga and Ciugudean 1995).

There are no regularly updated archaeological databases. The latest published collection of Roman rural settlement in Dacia (Popa 2002), even without providing much data analysis, is a useful gazetteer collected over a long time. But, given the lack of databases available, it was deemed to be incomplete, with sites, for example the marble quarry and settlement at

Bucova, being left out. The recent efforts to complete a general archaeological database (by cIMeC – p. 4) are extremely important and the value of such action has been proved already by the availability of information online under the format of a searchable database from excavations from the years 1983–1997, 1999 and 2000. The use of the Internet for information, as well as the availability of digital data to support computerised quantitative and settlement pattern analysis, will provide a valuable support for future research. Unfortunately, even this latest attempt to preserve archaeological information does not include the precise geographical locations of the sites, continuing to use location descriptions by place-names, which have already proved to be inadequate.

1.2.3 The problems pertaining to site location

The experience of the last 100 years shows the importance of the accurate transmission of information in the context of successive changes in archaeological methodological requirements or even in the territorial administration system and place-names. The failure to locate archaeological sites by their geographical co-ordinates and reliance on place-names produces significant difficulties in attempting to locate some sites that have been previously reported. This occurs especially with place-names of very local significance within the area of a particular village, for example, which are not in use anymore, nor traceable through archive maps or documents. As a direct consequence of this failure to locate archaeological sites precisely, some of them are very imprecisely located when referred to by various authors.

This confusion persists even in the most recent publications. For example, N. Gudea in his study on the Roman military camps in Dacia (1997, 101–2) locates the Roman fort of Cigmau (*Germisara*) and its civilian settlement approximately one kilometre to the N of its true position (Hanson and Oltean 2002, 114). Unfortunately, this error persists and has the potential to bias later studies in that area. The process of alteration of information is traceable for example in Benea's (2000) article on military *vici* from Dacia. Acknowledging the difficulty of access to information, she tried to assemble all the data available for civilian settlements outside Roman auxiliary forts in Dacia, and thus produce a useful tool for both Romanian and international archaeologists. Unfortunately a typing error misplaced the location of the building complexes known from rescue excavations at Vetel (*Micia*) published by Marghitan (1970a) by some 250 metres to the east. These examples highlight the difficulty of assembling data, especially for those sites where an overall site plan has not been produced, and the importance of such plans for the subsequent production of accurate archaeological maps of larger territories to support landscape studies and settlement pattern analysis.

1.2.4 Excavation methodology

The excavation methods applied to the Roman sites of Dacia over the last century have varied. As shown by Condurachi and Daicoviciu 'after the second world war [. . .], the distinctive features of Romanian archaeological method were the absolute priority it gave to stratigraphy and its preference for the exhaustive excavation of large sites to the maximum extent that the circumstances permitted' (1971, 20). Unfortunately these principles were not applied to Roman sites until much later. This fact is well illustrated by the list that they give of sites where modern methods had been applied by the date of their publication, which contains not a single Roman example, and can be further confirmed by consulting other excavation reports.

Thus, for some of the excavations, especially of villa sites, the published results give little indication of construction phases. This is most unusual, especially since repairs or changes of plan within buildings, or even changes of use of buildings, are frequently recorded in civilian archaeological contexts elsewhere. At Hobita, despite the fact that it is so far the only example of a villa site to have the whole enclosed area delimited and its internal arrangements defined, there is no indication of any phases of construction or repair (Floca 1953). Published excavation reports rarely express any concern about their failure to identify earlier phases of archaeological complexes. In the case of at least two civilian buildings (no. 1 and no. 3) in the *vicus* excavated by Marghitan at *Micia* some 30 years ago (1970a), earlier timber phases were revealed by excavation. Despite the fact that there were other indications, such as the existence of artefacts, including construction materials (tiles), within the filling layers under the floors, these discoveries occurred only incidentally while the excavators were trying to reach the deepest level of the stone wall foundations when the earlier construction trenches for the timber walls intersected their trenches. However, the excavators made no attempt to establish the extent and layout of these features, to consider variations of plan or internal space division from one phase to another, or to make a study of the quantitative and qualitative or stylistic evolution of the different categories of finds. Excavations such as these have, therefore, produced incomplete site plans where chronological developments are now impossible to pursue. Similarly, in complexes where the stone phase went through successive transformations or repairs, these are apparent neither in the reports nor in the site plans, if available. This issue will be considered in more depth later, when dealing with specific classes of site, but it is worth stating for the moment that in such cases the interpretation of the internal arrangements is almost impossible to establish accurately.

1.2.5 Archaeological prospection and Dacia

'Excavation is still synonymous with archaeology in many countries' (Bewley and Raczkowski 2002b, 3) and that has been very much the case in Romania

until very recently. Although excavation gives the most precise and detailed information about archaeological sites, not every site can be excavated and the high costs involved or the amount of time necessary to complete and publish an excavation are only part of the reason. The main problem with excavation as a research method is that, by its nature, it damages the site itself in the process and the areas affected by excavation will no longer represent an intact testimony of the past. Moreover, excavation standards evolve over time, and even top standards at one moment in time will be considered insufficient or inappropriate in the future. The modern approach to archaeological heritage conservation is focused on non-invasive methods of research, and most archaeological sites tend to be excavated only when they are endangered by development. Within this context, modern methods of archaeological prospection have developed as a necessity, both for understanding and monitoring archaeological sites, but also for prior evaluation of the site and its potential as accurately as possible. Most importantly, they offer (aerial photography in particular) the possibility of providing better understanding of sites from a landscape perspective, and indicating the way that human settlements interacted with the natural landscape and with each other.

Traditional field walking, that is the recovery of artefacts brought to the surface during ploughing, is the only method of archaeological prospection which has been applied historically in the study of Roman Dacia (p. 4). Unfortunately, in its application no attention has been given to the unitary planning of the field coverage or to systematic data collection and analysis. More recently, the *Apulum* Hinterland Project international team has started systematic field walking in the vicinity of Alba Iulia in collaboration with the University of Alba Iulia. Field walking alone can locate a site, provide some indication of its extent and, from interpretation of finds, evaluate its chronology. But even at its best, field walking can give only limited clues as to the nature of the site. What can make the difference in settlement pattern analyses is understanding the site's full extent and morphology. This would allow differentiation between, for example, an individual homestead (farm) and a nucleated settlement. In the case of individual homesteads, the layout of the internal buildings, their individual plan or the building techniques can distinguish between a villa site and a native farm.

Geophysical survey has only recently started to be applied in Dacia. The usual lack of funds, trained specialists or surveying equipment probably constitute the main reasons for this, as for aerial reconnaissance. As in the case of excavations, the first attempts at geophysical survey have focused on urban and military sites. Some attempts at geophysical surveying combining magnetometry and resistivity have been made at a number of sites (e.g. *Porolissum*, Scurtu 1997; Cigmău http://www.cimec.ro/mapserver/asp_script/cronica/detaliu.asp?k=1205 visited 6 December 2006). At *Apulum*, more extensive areas in the *colonia* and the *municipium* were recently subjected to geophysical survey by

the international team operating in *Apulum* and its hinterland (Haynes *et al*. forthcoming) and extended into the territory around the Roman conurbation with surveys at a number of villa sites (e.g. Oarda-Sesul Orzii http://www.cimec.ro/mapserver/asp_script/cronica/detaliu.asp?k=3182 visited 6 December 2006). However, geophysical survey, whether utilising magnetometry, resistivity or ground penetrating radar, is by its nature largely confined to the limits of individual sites. Despite its recognised value in recording details of site layout, it offers only limited opportunities to evaluate the site from a landscape perspective and consider other possible adjacent features that might be related.

The aerial view gives human perception a broader perspective. Archaeological sites can be recognised even when their degree of preservation is very poor, whether still visible to some extent on the ground surface or even totally buried. For more than 60 years it has been proved on numerous occasions that, given suitable soil conditions, buried archaeological features can be recognised from the air as cropmarks (Wilson 2000, 16–23; Bewley 2002). This has made aerial reconnaissance extremely valuable, especially for the identification of previously unknown archaeological features. Furthermore, a trained interpreter can acquire considerable information about a site, both in terms of its morphology and its probable date, through analogies with similar sites whose chronology has been established by other methods (Wilson 2000, 65–7, 84–7). In addition, the speed of coverage and consequently of analysis of even large territories is significantly higher than through field walking, or indeed geophysical methods. Both these characteristics make aerial photography the preferred method of archaeological prospection in Europe, especially for landscape research and management. These advantages have determined the initiation of programmes involving aerial reconnaissance to acquire new imagery and evaluation of available images from aerial photographic archives in several countries of Europe at a national scale and on a permanent basis (see Bewley and Raczkowski 2002b, Figure 1). Most recently, satellite, multi- and hyper-spectral imagery, or airborne scanning techniques have been addressed too in an attempt to widen the coverage and address the geographical biases in aerial reconnaissance.

Probably the first aerial survey and photography of an archaeological site in Romania was taken as early as March 1918, when Carl Schuchhardt took aerial photographs of the late Roman and Bzyantine frontier walls in Dobrudja. Despite the fact that these photographs remained unpublished until 1954 (Crawford 1954, 208 and Plate VI), Schuchhardt used them to correct his own published map of the wall. Unfortunately, this remained very much the only example of its kind for a long time. The only aerial photographic survey programmes over the following decades were made for military reasons during the World Wars and the Cold War, or for civilian mapping purpose, and access to the aerial photographic archives for archaeologists in Romania still remains extremely limited.

There have been a few attempts to make use of the available aerial photographic information in archaeological studies and in the occasional publication of sites, but without a clearly structured method of approach. Unfortunately, in all of these cases the information available was insufficiently exploited because of the limited training and expertise of these pioneers, who were either archaeologists with very little or no experience in mapping or photo-interpretation, or cartographers with photo-interpretation experience but without archaeological expertise. A group of cartographers from the Cartographic Institute in Bucharest published short articles utilising principles of photo-interpretation to identify possible archaeological sites on vertical photographs at Sanislau (Satu Mare) and Dersida (Salaj) in north-western Romania, or at Sarighiol de Deal, Satu Nou and Isaccea along the Danube in the south-eastern Romania (Rada *et al*. 1989; Rada and Cochina 1984; Rada *et al.* 1986). They provide interpretation and some limited mapping of the archaeological features, unfortunately not always correct; nevertheless, their attempt to identify previously unknown archaeological sites is notable. I.O.M. Bogdan-Cataniciu (1981) is one of the very few archaeologists who gained some access to the Romanian archives. In her study of the Roman defences of Dacia (Bogdan-Cataniciu 1981), she published some examples of extant forts and fortlets visible on vertical photographs. But, as was the case with the material published by the Bucharest cartographic team, the quality of the reproductions or in some cases even of the original photographs is so poor that the reader must rely for the most part on the interpretations provided by the author. Far better quality of image reproduction is evident in Stefan's (1986) overview of known archaeological sites from the air, some of his photographs being provided with transcription sketches, but this work has been very poorly publicised in Romania. Archaeologists have used aerial photographs sporadically to illustrate lectures (e.g. C. Craciun mentioned in Ardevan 1998, 76), publications of sites (e.g. Tamba 1997, Plate 8; Alicu 1998, Plate 3) or more frequently, to illustrate exhibitions.

In Romania, for years, flying for archaeological purpose has been constrained not only by the lack of financial resources to sustain aerial reconnaissance programmes, or a shortage of specialists experienced in the interpretation of aerial photographs, but mainly by legal difficulties created by the restrictions on civilian air traffic in force during the Communist years (see Braasch 2002; Oltean 2002; Hanson and Oltean 2002, 2003). As a result, all the flight initiatives were no more than sporadic. Stefan's temporary collaboration with existing cartographic institutions failed to create a stronger impact on the real implementation of a similar system on a national scale. Only since the 1990s could E. Pescaru undertake occasional limited flights photographing known sites in Hunedoara County from the air for illustration purposes, using a helicopter as an aerial platform. Less-fortunate enthusiasts, such as V. Barbuta, were constrained by lack of funds to making photographs using kites as aerial platforms (Figure 1.2),

Figure 1.2 Low-altitude photograph from a kite of a Roman building visible as a negative cropmark, north of Alba Iulia (V. Barbuta).

with some success especially for the identification of the temple of *Liber Pater* at *Apulum* (information Dr A. Diaconescu).

Unfortunately, even the limited interest in the aerial photographic evidence so far has been almost entirely restricted to sites already identified through other means or to extant features, easily detectable on the ground. This reduced greatly the potential of aerial photography as a prospection method. Cropmark methodology was effectively ignored. Indeed, until the last decade, Central and Eastern Europe was thought not to be sufficiently responsive to crop mark formation because of the heavy, alluvial topsoil that covers the arable regions, combined with a less contrasting deeper geological background (Bradford 1957, 15 and 23). Moreover, the recognition of crop marks would have been more difficult from archive vertical imagery. Apart from the variable quality of the photographs and their scale, such data is likely to be of more limited archaeological value because the images were obtained originally for purposes other than archaeology and the very specific conditions necessary to record many archaeological features may not have been in force. In 1998, the University of Glasgow started a program of systematic aerial reconnaissance in western Transylvania undertaken by Prof. W.S. Hanson, funded by the Leverhulme Trust and subsequently by the British Academy (Figure 1.3). The work was undertaken in co-operation with the National Museum of Transylvania in Cluj, the Museum of Dacian and Roman Civilisations in Deva and the University of Alba Iulia. The purpose of the project was to establish the parameters for the application

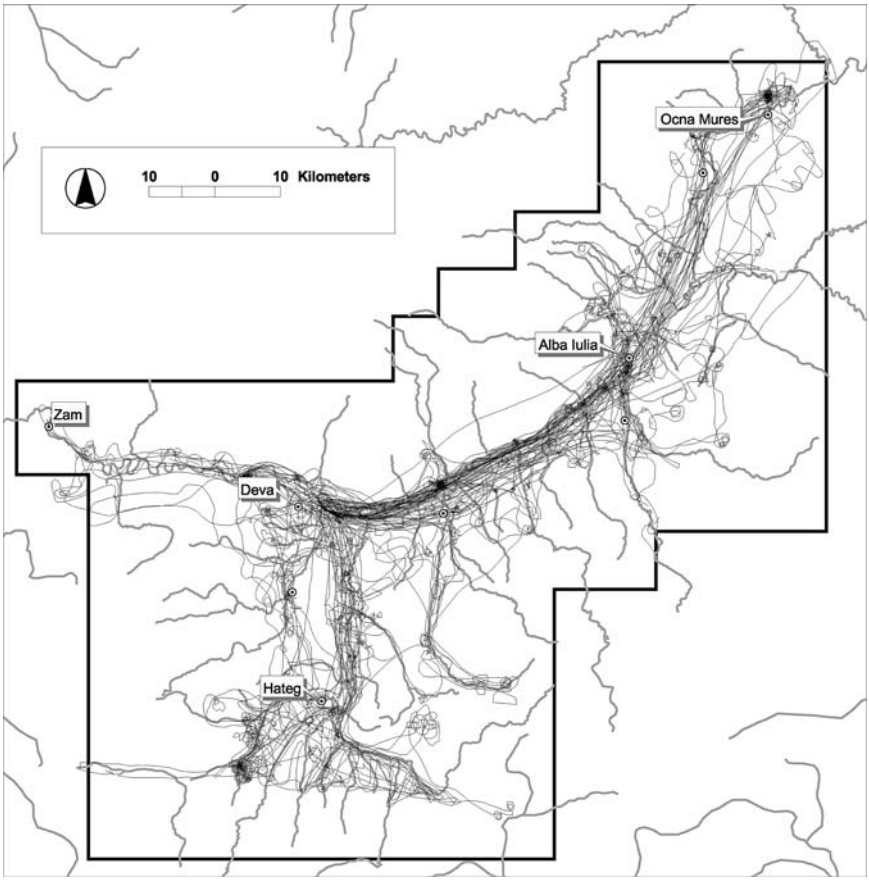

Figure 1.3 Flight track logs in the study area (1998–2004).

of aerial reconnaissance in the different environmental, soil and agricultural conditions pertaining in Romania and also to increase understanding of the history and development of the landscape of the area, particularly from later prehistory to the immediate post-Roman period. The geographical focus of the project was south-western Transylvania, particularly the middle Mures river valley and the plain of Hateg (Tara Hategului) to the south, which lies at the heart of both the Iron Age kingdom and the subsequent Roman province of Dacia. This project has established the first relational database of aerial archaeological sites of different dates in Romania and has provided valuable information for this monograph (pp. 20–21).

However, it is generally recognised that the best archaeological results are obtained through a combination of these various methods of survey: aerial,

geophysical and traditional. Hopefully, future financing will finally allow such a programme.

1.3 Aims and approaches: landscape and romanisation

The relevance of ancient landscape studies to finding the answer to general, theoretical or even more focused issues of the ancient world has been broadly recognised. Data interpretation has always pre-supposed assessment of the spatial distribution of similar sites, but understanding of the general patterns or, indeed, unique features revealed by the sites needed to be considered from a broader perspective. Landscape means more than physical space, as defined by 'the relationship between humans and their environment, [. . .] society and space' (Cosgrove 1985, 46). The physical space accommodating human actions suffers a continuous evolution. From an environmentalist view, this would be regarded as a process of degradation resulting from a cumulative effect of to some extent natural, but mostly human-generated erosion (Delano-Smith 1996). Amongst all species, humans have been the most successful in using the natural habitat, whether as optimal foragers or as economic men (Ingold 2000, 38). Moreover, humans have adapted that habitat to create the landscape, using its resources and transforming it according to their necessities. From this point of view, the landscape bears the marks of the humans that have inhabited it through time, reflecting their needs and way of life, or their level of technological knowledge. Introducing his 'dwelling perspective', Ingold (1993, 52) remarks that 'landscape is constituted as an enduring record of – and testimony to – the lives and works of past generations who have dwelt within it and in so doing, have left there something of themselves'. The natural environment has brought into the equation factors such as topography and climate, the availability of resources for life (either beneath the earth or on its surface, as local flora and fauna) or, indeed, the defensive potential of particular locations. To this, humans have added their own leading mindset, needs and technological resources, knowledge, social regulations and politics, which have impacted on the use and, therefore, re-shaping of the landscape. In this way, the evolution of the landscape is able to tell its story, that of the cultural evolution of human communities through time.

The approaches presented above define the landscape as a product of the subjective transformation by man of the objective reality of space. But, the interaction between humans and the environment eventually resulted in a transformation of both. This process would have left significant traces, identifiable by modern archaeological methods. However, the number of humans that were accommodated within the landscape at each moment in time would have determined the amount of physical space affected. Analysing the traces left should indicate more than just the ecological impact of past human activity; it will reveal clues as to the size of that group, or even of the way they carried out their transforming activities.

Going beyond the physical boundaries of each site, the study of settlement patterns is far from being solely a mapping or locational process. It involves analysing the spatial and functional relationships of contemporary sites within particular cultures (Knapp 1997, 5), not solely in a strict economic sense, but also in political, social, religious or cultural terms (Knapp and Ashmore 1999; van Dommelen 1999). The evolution of landscapes offers a different understanding of those ancient Mediterranean civilisations that were largely town-based, such as those of Greece and Rome, both in their Mediterranean heartland (Shipley 1996, 8) and beyond (e.g. Dark and Dark 1997). But apart from the obvious effect of revealing what provincial settlements would have looked like, the study of the settlement pattern within Roman provinces can address more general issues. The decision to settle and use a particular space has been taken by people, in groups or as individuals, in direct relation to their interests. Consequently, by studying the resulting impact of their action on the landscape, one should be able to tell whether the original effort involved was made by several individuals or by an organised group following a certain policy. Therefore, the nature of the colonisation process can be analysed from the way the new Roman-type settlements emerged within the provincial territory and their effect on the previous native pattern. According to the current orthodoxy, after the Roman conquest Dacia experienced the first large influx of populations from outside its cultural boundaries, a phenomenon described by ancient historians and re-enforced by the epigraphic evidence. These newcomers, mostly from other parts of the Roman world rather than Rome itself, whether granted Roman citizenship or not, had to be accommodated within Dacian territory, as did the manifestations of the new legal and administrative system and the military. The native settlers simply had to comply with the situation.

Subject of debate for decades, the approach to romanisation has been marked by several successive theoretical trends (materialism, colonialism, post-colonialism), all trying to find a satisfactory explanation for what it is an extremely complex socio-cultural phenomenon. Traditionally, the two parties involved, the natives and their conquerors, have been presented as facing each other from different, sometimes even conflicting or antagonistic positions, reflecting modern political (national) thought on ancient societies. But romanisation stubbornly gives still inexplicably different, even contradictory pictures, not just when subjected to different theoretical approaches, but also when seen from different corners of the Roman Empire. Indeed, one of the main questions in defining romanisation as a process, whether the Romans romanised the provinces (e.g. Garnsey and Whittaker 1978) or, on the contrary, the natives romanised themselves (e.g. Millett 1990), if answered at all, finds different responses. On the one hand, this makes a global understanding of the process very difficult and, therefore, research on romanisation has tended to remain at a level of local studies. On the other, it has resulted in extreme attitudes and sometimes its nature or very existence has been challenged, either in particular regions (e.g. Africa – see

Bénabou 1976; Dacia – e.g. Vékony 2000) or as a concept (e.g. Hingley 1996; Barrett 1997). Considerable, but so far unconvincing effort has been spent, therefore, on finding alternative labels (e.g. Webster 2001) to better describe what was essentially a phenomenon of change, occurring as a result of Roman occupation of new territories. Woolf (1995) rejects ideas like conflict, competition or interaction in relation to this subject and advances a new interpretative framework, with the creation of a new imperial culture as a structured system of differences replacing both previous cultures (Roman and native), its spread comparable with the growth of an organism that metabolises matter. A similar approach to romanisation as 'a largely conscious process by which sections of the indigenous population sought to emulate Roman culture, at least in the form in which they experienced it, motivated by the need to establish their own social status and directly assisted by the Roman authorities' was earlier employed by Hanson (1994) in his own interpretation of the phenomenon in a British context, though positioning it at one extreme of the process of cultural interaction and mutual change which occurs whenever two different cultures come into sustained contact. This latter understanding of romanisation combines best the theoretical and empirical approaches to the subject and is the one that has been employed throughout this study.

Roman rule affected the native population, as well as the whole landscape in the conquered territories. The emergence of Roman-type towns, the broad diversification of the range and function of settlements, and the particular way of organising space probably had a more significant impact on the pre-existing system than any other previous changes during prehistory. Comparison with other provinces of the empire can reveal particular aspects of this process of change, as well as indicating the real scale of the whole process within the territory. By combining archaeological and historical information, with information regarding the natural landscape, it is possible to understand better the general evolution of the landscape and the human impact upon it, both in the pre-Roman and Roman periods. In such a context, it should be possible to distinguish from a more realistic standpoint, given the amount of data available, exactly what constitutes the general pattern and what can be considered unusual; to identify evolutionary patterns; and to consider the occurrence of special cases and their possible causes.

The purpose of my research is to redress some of the bias that hinders current interpretations of how Dacia became Roman. The nature of current research on rural Roman Dacia described above significantly biases the evidence for any such analysis of the economic and social life of the province. Since it has not been recognised before, this bias raises serious doubts about the validity of currently accepted theories about the development of this landscape. The potential density of human settlement in the period has not been fully appreciated and the typology of rural sites might not be complete. Accordingly, the native pre-Roman component in the life of the province

has probably been misinterpreted. All these issues affect the evaluation of the Roman impact on the conquered territory and the nature of the romanisation process in Dacia. The study is centred on the effects of the Roman occupation on the indigenous settlement pattern and land-use. From an interpretative point of view, there are several questions to be addressed. In what way did the Roman conquest affect the native landscape? What were the mechanisms behind the choice of settlement location and which of the factors influencing decisions are predominant in the case of different types of settlements in Roman Dacia? Can we detect the evidence to support the idea of a state-directed policy of settlement emergence and pattern in the case of Roman Dacia, as has recently been suggested, or is the impact of the Roman colonists the product of multiple small-scale individual strategies? Did the conquest result in any perceptible resistance phenomena amongst the natives? Finally, how did the process of romanisation develop in Dacia? Approaching these questions will offer the opportunity to address a number of current debates and assumptions: whether archaeological evidence bears out the literary references to depopulation, whether much of the hinterland of *Sarmizegetusa* was unoccupied in the pre-Roman period, or whether land was parcelled out and given to the colonists. The understanding of the real Roman impact, military and civilian, and of the true nature of the social relationship established between the conquerors and natives will ultimately lead to a better understanding of romanisation in Dacia.

The present study does not cover the whole of Dacia, but focuses on the area within the territory surrounded by the Carpathian Mountains which was the geographical core of both pre-Roman and Roman Dacia. It includes the colonial settlement and provincial capital at Sarmizegetusa (*Colonia Ulpia Traiana Sarmizegetusa*) (Figure 1.4) along with its hinterland in the area of Hateg (Tara Hategului) and the Strei River valley, extending further along the whole middle Mures River valley, beyond the colony and legionary base at Alba Iulia (*Apulum*) (Figure 1.5). The choice of looking in particular at the lowlands of Tara Hategului and mid-Mures valley, though including those parts of their surrounding uplands that define them and are structurally related (Figure 2.1), is deliberate. More extensive upland areas taken into consideration are the Orastie Mountains, as the core of Iron Age kingdom of Dacia (Figure 1.6), and the Roman iron-mining district from the Poiana Rusca Mountains (included in the study in order to balance the pre-Roman focus of iron extraction in the Orastie Mountains). But on the basis of its scale and exclusive focus on mining, the most extensive mining area of Roman Dacia (the gold-mining district from the Apuseni Mountains, located to the north of the mid-Mures valley) can be considered a highly specialised landscape in its own right; not readily comparable with either the lowlands or the uplands included here, it was deliberately excluded in order to eliminate potential bias.

Given that the traditional approach is so much out of date, especially when it comes to rural sites, the analytical perspective focuses on the evolution

Figure 1.4 *Ulpia Traiana Sarmizegetusa* – general view of the Roman town and modern village from the east, with the Iron Gates of Transylvania in the background.

of the settlement pattern within the landscape. The quantity and quality of information available on particular sites is hardly satisfactory, and the problems in accessing it have made this endeavour extremely difficult. As many as 60 per cent of the archaeological sites considered here are merely accidental discoveries, mainly in the form of artefacts, or their mode of discovery is not mentioned in publication; a further 10 per cent come from antiquarian reports. Some 17 per cent have been subject to excavation at varying scales and a further 8 per cent have been reported through field walking, although many cannot be accurately located.

In addition, new information has recently become available through modern methods of archaeological prospection, particularly aerial reconnaissance which has been shown to provide some of the best results for landscape studies (e.g. Palmer 1984; Stoertz 1997). My research makes primary use of photographic information produced by the Glasgow University aerial reconnaissance programme in western Transylvania, which covered the same area (Figure 1.3). The nature of the local soils, mainly alluvial clays, which are heavier and retain moisture better than sandy soils, favours the formation of negative cropmarks indicating the

Figure 1.5 *Apulum* – general view from the south of the site of the *Colonia Aurelia*, now the Partos suburb of Alba Iulia; the eastern, northern and the early western sides of the enclosure are visible on the edges of the modern occupation.

presence of buried roads, ramparts or stone buildings common on sites of Roman date (Hanson and Oltean 2003; Hanson 2005b; Oltean and Hanson forthcoming c). Unfortunately, positive cropmarks representing ditches, pits, drains or sunken-houses common to agricultural villages and pre-Roman settlements are less frequently revealed. This means that the recovery of native-type settlements by aerial photography has been significantly reduced, creating a potential bias that needs to be taken into consideration. In addition, as demonstrated at *Micia* (Oltean *et al.* 2005) this bias in the data provided by aerial reconnaissance means that the cropmark evidence reflects the stone phases of construction at the settlements, for only in the very best conditions are the slight traces of the construction trenches of timber buildings visible as positive cropmarks. In addition, only rarely can cropmarks indicate different phases in stone constructions on the basis of differences in alignment and overlapping features (e.g. Cigmau, Oarda, probably Razboieni – see Chapter 5). Given these problems, only some 5 per cent of the sites considered here represent new or augmented discoveries from the air, but the qualitative balance of the different sets of data is effectively reversed.

Figure 1.6 General view of the Gradistea Muncelului hill, the site of the Dacian capital, *Sarmizegetusa Regia*.

In order to produce general conclusions, all the information has been brought together into a coherent system to facilitate both area-wide and detailed on-site analysis, and permit its evaluation as a whole. In parallel, the evidence that formed the fragile basis of previous theories has been reviewed in order to see how much of what is currently asserted is, indeed, based on fact and how much which started merely as hypothesis ended up as accepted fact. Large amounts of published data, collated from various reports of occasional field walking, the existing gazetteers, excavation reports and other publications, not only from the twentieth century, but also of earlier date, was integrated with the new data provided from aerial reconnaissance. This was augmented with archaeological and landscape transformation information contained in a number of archived representations of the area. The *Tabula Peutingeriana* offers a unique account of settlement evidence from Dacia that has previously been considered, but the correlation with archaeological evidence and especially with the location of these sites has provided the overall analysis with additional grounds for interpretation of the functions of these sites and their place within the landscape. Several sheets of the 1:28,800 Austrian cadastral survey of Transylvania (1870–1875) contained valuable archaeological information (Figures 1.7–1.9) that was integrated with other data. But apart from direct information on archaeological sites,

Figure 1.7 Remains of Roman sites as represented on the 1870–1875 Austrian cadastral map of Transylvania: *colonia Sarmizegetusa* and its surroundings (The Austrian State Archives, Vienna).

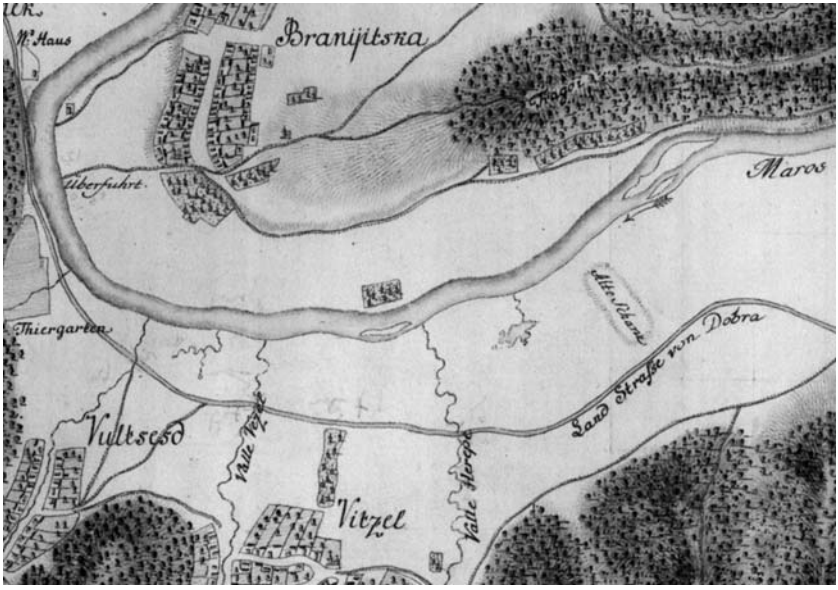

Figure 1.8 The auxiliary fort at *Micia* as represented on the 1870–1875 Austrian cadastral map of Transylvania (The Austrian State Archives, Vienna).

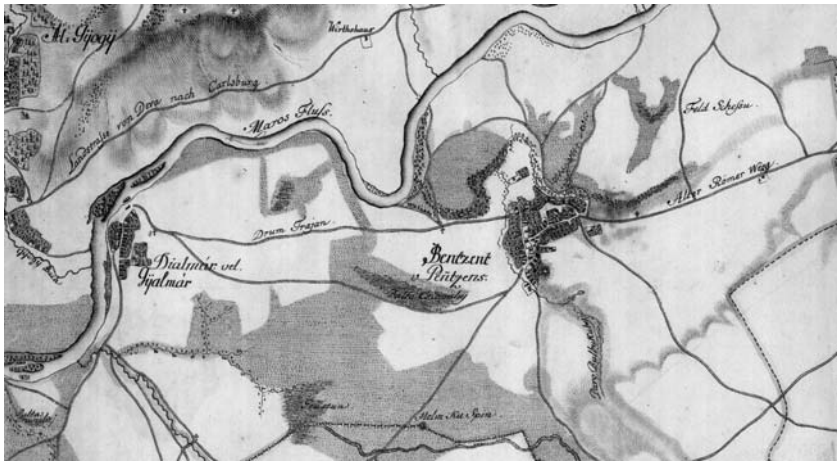

Figure 1.9 Line of the Roman road along the Mures from the river crossing near Gelmar, towards Sibot (The Austrian State Archives, Vienna).

archive mapping along with early aerial imagery provide information on the evolution of the landscape prior to extensive modern development. Therefore, various editions of modern maps were compared with the latest editions available. Unfortunately, Romanian archived aerial photographs could not be consulted, but a limited set of high-altitude aerial photographs from the Second World War covering areas in the north-eastern part of Tara Hategului and along the Mures valley around Simeria and Teius could be located in the Aerial Reconaissance Archive in Keele University. In addition, first-generation satellite imagery (CORONA) declassified by the United States in 1995 was utilised along the Mures valley between Zam and Tartaria. All this historical mapping and imagery offered the opportunity to evaluate the landscape before it was affected by the later development. Finally, the last set of archived data utilised is very recent (27 March 2003) and consists of large resolution QuickBird satellite imagery for areas around Alba Iulia and Aiud, freely available on the Internet through Google Earth; although of limited coverage, it has made an important contribution in documenting the landscape at its current stage of development in a different season than that normally employed for aerial reconnaissance (June to July) and in assisting the process of transcription and mapping of oblique aerial photographs.

This book offers first a description of the natural environment of western Transylvania, its topographic setting, climate, resources and environmental changes from late antiquity to modern times (Chapter 2), followed by a concise but comprehensive historical framework of the Dacian area and its conquest and organisation as a province by Rome (Chapter 3). The real subject of the book is the people living in the study area and the

transformation of the landscape. The framework is that of a profoundly *social* and *active* landscape. Society created this landscape for its own convenience and this is expressed through the types of settlement, the choice of their location and in the way main activities were carried out therein: work and use of available resources, worship and death, networking and administration. In presenting the overall picture of settlement and land-use in central Dacia during pre-Roman and Roman times, Chapters 4 and 5 are intended to mirror each other. The aim of this parallel presentation is to offer the reader the opportunity to better understand and form an opinion on the similarities and the differences, and the pattern of continuity and disruption visible in the dataset presented. Finally, Chapter 6 discusses in detail the way in which the Roman conquest affected the native landscape following the transformations in the settlement hierarchy, typology and choice of settlement location, and the specific impact of the Roman army on the creation of this new landscape. It will try to give an answer to some of the preliminary questions raised above and offer an alternative interpretative scheme for the way the process of romanisation developed in Dacia.

2 The Dacian heartland

2.1 Physical geography: geomorphology, topography and geology

Modern Romania is located in Eastern Europe, to the north of the Balkan Peninsula and west of the Black Sea. With an even distribution of mountains, hills and plains and a rich network of watercourses, the geography of Romania is largely structured around the south-eastern end of the Carpathian Mountains (a branch of the Alpine–Himalayan Mountains). The curving line of the mountains imposes a concentric layout to the general geography of the country and outside the mountains the sub-Carpathian hills and the plains spread out in steps. Inside, however, the mountains enclose a large area of hills, tableland and alluvial plains, called Transylvania. The name itself first occurs in early medieval Hungarian chronicles of the eleventh century written in Latin (Anonymus, Simon de Keza) as the land 'beyond the forests' (*trans silvae*) (Pop 1997, 5–7) that once covered much of the Carpathians. Transylvania can be understood as a space enclosed by the mountains. This topographic characteristic has determined various interpretations of the advantages that the area has offered to human settlement throughout history. Opinions vary from 'citadel' to 'meeting point', apparently in contradiction, but it is exactly the particularity of its topographic and geographical setting that makes both interpretations equally true.

The Carpathians surrounding Transylvania were formed in the post-Mezo-Cretaceous and are characterised by medium and low altitudes, which average 1,000 metres, with valleys of around 500 metres in depth. These mountains are very fragmented, both longitudinally and transversally, by numerous depressions and river valleys, making them easier to cross from one side to another. Some of the mountains are of younger, volcanic origin, but most of them were created by the folding movements that happened at the end of Pliocene and the beginning of the Quaternary period (Gherasimov 1960, I, 197). Affected by these movements, Transylvania first slowly sank and was in-filled by marine and continental deposits of up to 4,000 metres in thickness and was transformed into a large plain. Later on, rising movements at the beginning of the Quaternary transformed most of it into a hilly region defined by the piedmonts and internal sub-Carpathian Hills located at the

contact area with the mountains and the Transylvanian Tableland in the middle (Gherasimov 1960, I, 197). The water from the interior drained away through the main river valleys, though some of the 'gulfs' located at the contact area with the mountains remained under water until much later (Morariu *et al.* 1966, 27), when they became depressions such as Tara Hategului.

The western side of Transylvania (Figure 2.1) includes the mid-Mures valley between Ocna Mures – Razboieni to the north and Zam-Savarsin to the west, and the whole Strei River valley and the Hateg depression to the south. The area is surrounded by higher grounds rising gradually on both sides of the valleys as terraced sides of the internal sub-Carpathian Hills and the Western and Meridional Carpathians to the west and south, and the Transylvanian Tableland to the east. This gives an amphitheatre-like appearance to the whole area, centred along the valleys of Mures and Strei.

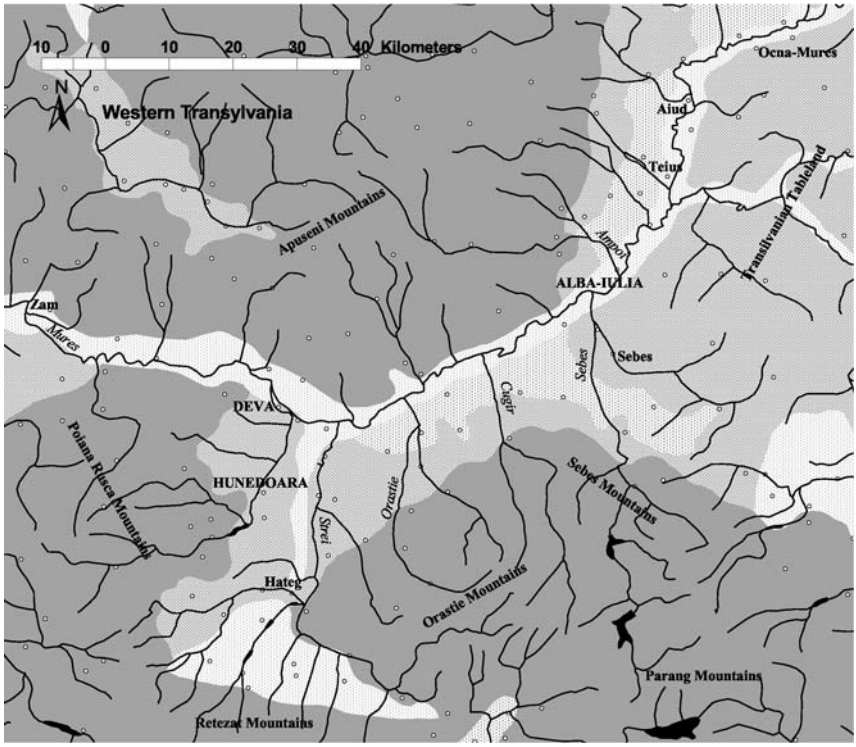

Figure 2.1 Map of the main topographical features and the location of modern settlements mentioned in text.

The outer branches of the Apuseni Mountains border the Mures valley on its northern and north-western side. These mountains are of low altitude, ranging between 800 and 1,200 metres (Metaliferi and Trascau Mountains; Gheorghiu 2001, 2) and 400–600 metres (Zarand Mountains; Morariu *et al.* 1966, 25). With a particular mosaic of various rocks – sandstone, limestone and volcanic rocks, such as dacite, andesite and basalt – the Metaliferi Mountains are best known, as their name implies, for their metal ores, particularly gold (Floca 1957, 16). To the south the Poiana Rusca Mountains are delimited by the Apuseni Mountains and the Retezat Mountains, by the Mures Defile and by the *passage obligée* of the Iron Gate of Transylvania (Gherasimov 1960, I, 218). With a geology of metamorphic schists (Floca 1957, 15), they have extremely rich resources of iron around Hunedoara and copper and andesite in the vicinity of Deva. The Retezat Mountains (2,518 metres) are amongst the highest in Romania. Also formed by schists and micaceous schists (Gherasimov 1960, I, 212), with only limited amounts of limestone in some of the valleys, their upper sides were strongly shaped by glaciers, whose remains can still be seen as multiple glacier lakes and numerous sources of deep and steep glacier valleys (sometimes more than 1,000 metres in depth) with watercourses that descend in steps towards the lowlands (Gheorghiu 2001, 3). The Sureanu Mountains (also called 'Sebes' or 'Orastie' Mountains) are lower than the Retezat (2,130 at Virful lui Patru). Their upper parts are fairly level on different steps without much fragmentation. With a higher centre (1,600–1,800 metres), their outer limits to the north in Transylvania reach only 900–1,100 metres (Gheorghiu 2001, 3). Their flattened appearance is even more evident at their western end, which extends into a large elevated platform (the Luncanilor Platform). Located at the south-western end, at the point of contact with the Hateg Depression, is a large carstic zone (Ohaba Ponor-Banita) that was formed on a base of Jurassic limestones with many caves, dolines, canyons and sub-terranean rivers (Gherasimov 1960, I, 216).

The geological background of the Transylvanian Tableland is represented by clays, marls and sand, with limestone and volcanic intrusions. The eastern half, where the aspect is of high hills and plateaux fragmented by river valleys, is of higher altitude than the western side and in some places reaches even 600–700 metres in height (Morariu *et al.* 1966, 32). The south-western area (also called the Secaselor Tableland) is an area of monocline sloping and small depressions, along with areas of ongoing erosion, while the hills further north along the Mures River (450–500 metres) have broad arches and terraces along the river valleys (Gherasimov 1960, 230–1).

Hills with smooth slopes regularly dissected by watercourses, grouped around river terraces and valleys are also located at the point of contact between the mountains and the alluvial plain. The hills bordering the mountains have a general aspect of multiple piedmontaneous steps and river terraces. To the south of the Metaliferi Mountains, the narrow area between

the mountains and the Mures River is occupied by hills mainly made of slate, but volcanic stone (augite–andesite) is found localised at Uroi, north of Simeria, and around Deva (Floca 1957, 16). Large quantities of alluvium resulting from denudations created by uplifting movements of the mountains during the Pliocene and Quaternary were transported into the valleys creating piedmontaneous plains in the southern and eastern side of the Hateg Depression and in the hills from Orastie to Sebes (Gherasimov 1960, 212). The depression around Hateg (Tara Hategului) is in fact a piedmont plain with fan-shaped terraces and cones of alluvium arranged in three concentric steps, and with dense watercourses.

The plains occupy a relatively limited area. All of them are alluvial in origin and were developed along the Mures and its main tributaries, the Aries, Tarnava (with the Tarnava Mare and Tarnava Mica), Ampoi, Sebes and Strei (with Rau Mare and Galbena). Other tributaries, like the Cugir, Orastie, Geoagiu or Cerna, have produced smaller impacts in terms of topography and outflow. Many other watercourses in the area are nothing more than streams. The river Mures originated in the eastern Carpathians and, with its length of 880 kilometres and outflow average of 70 cubic metres per second (Floca 1957, 20), is regarded as the most important tributary of the Tisa River (Morariu *et al.* 1966, 46). Its course is generally oriented E–W, though its medial segment follows the contact line between the internal sub-Carpathian Hills of the western Carpathians and the Transylvanian Tableland. The Mures is a very active river; its alluvial deposits have created a large fertile valley up to 8 kilometres wide. The general appearance of the valleys formed by its tributaries is of corridors of variable width that increase in their lower courses immediately after they exit the mountains. They make an important contribution both to the general outflow of the Mures and to the quantity of alluvium it carries, so that the plain of the Mures is generally wider at its confluence with tributaries, providing space for agriculture and human settlement. The tributaries are also responsible for the changes of direction of the main course of the river and enforced the creation of multiple meanders (Figure 2.2). The meadow land along the Mures, Strei, lower Sebes, Cerna and Orastie valleys, and the mid- and lower valley of the Ampoi, sometimes come under threat of flooding (Gheorghiu 2001, 5). Along the valleys fairly parallel terraces were developed, usually from six to seven in number, but up to eight at the contact zone with the hills and tablelands; they generally have a horizontal aspect (Gherasimov 1960 I, Table 1), but around the Tarnave region and in the area between Sebes-Vintu de Jos and Deva their slight downward sloping increases the level of erosion.

In the plains the soil cover is composed of alluvial soils, alluvial protosoils and chernosem, in some places still retaining salt deposits from the draining of the sea long ago. The soil of the mountain, hill and tableland regions is mainly represented by a large variety of forest soils affected by erosion (podsolisation) to various degrees. There are also

Figure 2.2 River meanders in the Strei valley near Calan.

areas of chernosem, developed above clays and marls along the lower Sebes valley and to the south of the Mures valley between Sebes and Simeria, in the vicinity of Alba Iulia and Teius and around Razboieni and Deva, which also correspond with the confluence zones of the main tributaries (Aries, Tarnava, Sebes, Strei). Not surprisingly, these particular areas are also known to be the most productive in terms of cereal cultivation.

From several points of view, the study area does not constitute a unitary space. What gives it unity, however, are the communication and access possibilities, which are always important for human settlement. The Mures valley was the main communication route between Transylvania and the western (Pannonian) plain. The river valley provides a convenient passageway beyond the Western Carpathians through the Mures Defile, a series of short defiles and small basins with larger terraces. But this is not the only passage option. The Strei River, apart from being one of the most important tributaries with a fertile alluvial plain in its lower valley, provides a convenient connection with Tara Hategului to the south. This in turn provides an important nodal point, connected to the plains south of the Carpathians through the Jiu River valley, and to Banat to the west through the Iron Gate of Transylvania. This further emphasises the importance of this area in terms of the emergence of settlement and continued occupation throughout the history of Transylvania.

2.2 Climate

The climate of the region is of temperate–continental type and reflects that of Central and Eastern Europe generally. Small variations and local characteristics, such as topography, wind, rainfall, or indeed, solar radiation patterns define a number of microclimatic zones. In Romania cool and damp air from the Atlantic meets opposing dry air masses coming from the east, which are hot in the summer and cold in the winter. Polar air from the north in the winter or warm air from the Mediterranean area in the summer are also occasionally present. The mountains around Transylvania behave like a barrier to these extreme phenomena and ensure a more constant microclimate within the enclosed space. They generally stop both the cool, damp masses of air from the west, or the cold and strong, sometimes stormy winds from the east and create slightly better conditions for agriculture and settlement in the western half of Transylvania whose lowland benefits from higher temperatures (annual average temperature at Alba Iulia of 9.5°C, with milder winters) and has lower relative humidity value and rainfall averages (under 600 millimetres at Alba Iulia) (Gherasimov 1960, I, 317–18; Morariu *et al*. 1966, 39–40). However, the variation in both temperature and rainfall values during the year is significant. In the winter there are some 100–150 days with temperatures below 0°C and occasionally this can drop as low as –28–30°C, while rising to +38–40°C in the summer. During the year the highest rainfall values are recorded in June (85–110 millimetres) and the lowest in February (below 35 millimetres). Though not continuously, snow is a usual presence during winter for an average of some 50 days each year between late November and early December and end of March (Gherasimov 1960, I, 310). In the mountains, however, the snow cover can last as long as 100–200 days each year. The Hateg Depression behaves in climatic terms much like a mountain depression sometimes with up to seven cold months during the year (from October to April) and with higher rainfall than on the Mures valley (700 millimetres per annum – Grumazescu 1975, 119). Unlike the Mures Valley, with its greater exposure to the circulation of air masses, the Hateg area is isolated by the surrounding mountains and hills and only its western half is influenced by warm air currents from the west penetrating the mountains through the Iron Gate of Transylvania. This difference has little relevance in terms of human settlement, though it does affects the agricultural pattern and local economy and has resulted in arable farming being predominant in the west, while the eastern half remains predominantly under pasture.

2.3 Environmental change

To what extent does the modern landscape described above reflects the picture two millennia ago? Natural soil erosion in most areas is low to moderate (in the hills in the Strei Valley, Tara Hategului, the hills south

of the Mures valley and in the Secaselor Tableland), though higher in the mountains and in the hilly area to the north of Alba Iulia (see Gherasimov 1960 I, Table 2 and Annex XXII). It is caused mostly by the rainfall regime and is usually higher on the steeper slopes of the mountains or hills when the natural terraces are slightly diverging and where high quantities of rain water or melted snow can result in the creation of torrents or landslides. The meadowlands along the river valleys are regarded as threatened by flooding and this has been taken to reinforce the traditional view of settlement pattern evolution which simplistically excludes the lowlands as main inhabited areas in the past (e.g. Gheorghiu 2001, 5). Indeed, the main river valleys have experienced a lot of movement (see pp. 29–30) and in some cases this has resulted in significant changes of local topography, as in the case of Alba Iulia where it impacted on the emergence of the Roman town of *Apulum* and the whole Roman settlement pattern there (Diaconescu and Piso 1993, 70). Wind erosion is minimal especially in the lowlands, which are protected by the surrounding mountains. Volcanic activity in the Western Carpathians would have ceased long before the appearance of early humans but earthquakes can still occur with some frequency given the location of a seismic area in the outer south-eastern corner of the Carpathian Mountains. However, seismic activity monitored in modern times proved to have a greater effect in the outer-Carpathian regions than in Transylvania, and there are no written accounts of major cataclysms of this sort within late Dacian and Roman times there. Major climatic changes generally occur over long time-periods in a cyclic succession of general warmth followed by colder periods. Minor changes within shorter periods of time can also influence geographic regions in a significant manner. Within the study area there is little evidence for such changes that would have significantly affected human settlement. In general, archaeological studies seem to consider the climate of late antiquity as colder and wetter than the modern pattern (Glodariu *et al.* 1996, 10; Gheorghiu 2001, 6). Pliny the Younger (*Panegyricum* 12.1) refers to ice bridging over the Danube in his description of Trajan's preparation for war against the Dacians, a phenomenon that produced serious problems for the Roman defence of the Moesian Danube *limes*, facilitating barbarian attacks south of the river. Indeed the phenomenon is regarded by some as not an uncommon occurrence given that Dacian attacks during Domitian's reign some 15 years earlier were taking place in similar climatic conditions (see discussion in Southern 1997, 95) and also the Dacian raid in 10 BC (Florus *Bellum Dacicum* II.28.18; Bennett 1997, 86). The strategic problem created was serious enough and, therefore, frequent enough for Trajan to consider an alternative, more efficient *limes* using the Carpathians as natural boundary (Bennett 1997). However, the freezing-over of rivers also occurs in the modern climate, though less in the case of Danube. Unfortunately, when considering the significance of such evidence, less attention has been given to the impact of industrialisation and pollution on the Danube, as the different chemical composition of the Danube waters now may have

lowered their freezing temperature. Moreover, the presence of vine cultivation in pre-Roman and Roman times would not allow for much colder average temperatures than the present ones. In some examples of Roman buildings in Dacia, as for instance at *Sarmizegetusa Ulpia*, the early rainwater drains have been replaced in their later phases by much larger ones. That could be interpreted as an indication of an increase in rainfall, but could also simply reflect better and more solid constructions. Some indication of more severe water-logging at *Sarmizegetusa Ulpia* at some date after the Roman period may be suggested by a network of drainage channels on the site of the forum which reutilised collapsed materials including architectural fragments from earlier public monuments. Further environmental studies would provide more data which might help to clarify this issue. Until then, it seems likely that the general environmental conditions faced by the Romans on their occupation of Transylvania were not dissimilar to those experienced in rural Romania today.

2.4 Flora fauna and land-use

Below 250 metres altitude the surviving wild vegetation is of steppe, occurred as a secondary effect of deforestation (Morariu *et al.* 1966, 57), and pastures mixed with marshland vegetation, such as reed and bulrush, while the most common types of tree are acacia, poplar, alder and willow. Between 250 and 700 metres altitude the forest vegetation is represented largely by oak, turkey oak, sycamore–maple, ash, elm, maple, linden, lilac, wild apple, pear and cherry (Floca 1957, 26–30). There are also bushes of corneal, sweet briar/hip or herbs such as fescue (*Festuca vallesiaca* and *sulcata*), lettuce, geranium (*Geranium Robertianum*), common lungwort, marigold, moneywort and hawkweed (*Hieracium transsilvanicum*). At higher altitudes, between 700 and 1,000 metres, the wild vegetation is represented by beech, though in the Poiana Rusca or Sureanu–Orastie Mountains, the beech level can go as high as 1,400 metres. At 700 metres it is usually mixed with oak, while higher up at 800 metres the beech forests also include fir, hornbeam, sycamore–maple, ash, elm and, towards its upper limit, spruce fir. These forests are mixed with bushes of blackberries, raspberries, corneal, hazel tree, or herbs like bedstraw, toothwort (*Dentaria bulbifera*), asarabacca, *pulmonaria montana* (*rubra*), blueberry bushes, wood sorrel, broadleaf enchanter's nightshade, herb paris and lupine (*Alium ursinum*). The altitudes between 1,000 and 1,700 metres are occupied by coniferous trees (fir/pine and spruce fir) mixed with beech only at their lower levels. Varieties of moss, wood sorrel, hawkweed, groundsel (*Senecio Fuchsii*) fern (*Atyrium filix-femina* and *filix-mas*), lily of the valley, blueberry bushes and blackcurrant are also present. Above 1,700 metres the vegetation is a mixture of small trees and bushes (small pine, small juniper) with grasses (gramineae), green alder, rhododendron and blueberry bushes. On the highest areas the only plants are the rich, alpine grasses in pastures, blueberry bushes and edelweiss.

The current land use in the lowlands is focused on arable cultivation, though cultivated small fields can be found at high altitudes in the mountains (up to 1,000–1,400 metres in the Sureanu Mountains – Gheorghiu 2001, 3; and up to 1,200–1,300 in the Apuseni Mountains – Morariu *et al.* 1966, 24), though only as subsistence production (Figure 2.3). The preponderance of arable land in the fertile alluvial plains, however, changes gradually towards orchards and vineyards and further on to pastures at higher altitudes. The topographic and climatic characteristics of the river valleys allow arable cultivation not only on the lower terraces, but also on the large, flat or slightly sloping higher terraces. The cultivated plants are mainly cereals. The fields of corn/maize, wheat, rye, barley and oats cover some 78 per cent of the arable areas. About 18 per cent of the arable land is occupied by

Figure 2.3 General view over the Luncanilor Platform in the Orastie Mountains showing small, subsistence-based cultivated fields interspersed with habitation, orchards and pastures. Numerous small platforms/terraces of various dates are also visible in the pasture.

crops of potatoes, sugar beet, tobacco, hemp, sunflower and other cultivated plants that are used for feeding animals. Vegetables (other than potatoes) are currently cultivated only on 4 per cent of the area. Steeper slopes with good sun exposure are occupied by orchards. Fruit trees are common in hilly areas and even in the mountain areas at lower altitudes, producing plums, apples, pears, cherries, sour cherries, apricots, peaches and walnuts (Floca 1957, 46–7; Morariu *et al*. 1966, 53). Vineyards are present in limited areas where good exposure to the sun is enforced by mild climatic conditions, such as in the area around Aiud and Alba Iulia (see Floca 1957, 46).

The modern wild fauna in the plains is represented by hares, rodents, sparrows, swallows and nightingales. In the oak tree belt weasels, badgers, grouse, pheasants, partridges, quails and ducks are to be found, along with boars, wolves, foxes, deer and martens which extend their habitat into the beech forests. There are also deer and roe deer, stags and buffaloes, while in the coniferous belt there are bears, chamois/ibex, stags, lynx (Retezat Mountains), grouse, woodpeckers and vultures, but also falcons, merlins and goshawks. The rivers, ponds and lakes are populated by many species of fish, such as barbell, sheat fish, carp or trout (Floca 1957, 26–32). Thus, the area still sustains a considerable range of wild animals. Animal husbandry is one of the principal economic foci in the area, facilitated by the presence of extensive pastures. The animals farmed are cattle and domesticated buffaloes, horses, pigs (in the Hateg area and Strei valley there is a local, black breed), sheep (the main animal especially in the mountain areas) and goats, birds (hen, turkeys, ducks, geese) and bees (Floca 1957, 45–9).

A number of species listed above constitute medieval or modern additions to the local flora and fauna, but most are likely to have been present in Roman times. Confirmatory evidence of ancient fauna has been revealed in a few studies of bone remains from archaeological sites of prehistoric and Roman date (e.g. El Susi 1996; Gudea and Gudea 1999, 2000). Roman evidence comes from *Apulum* and from the settlement around the fort at *Porolissum* further north and reveals mainly the consumption of cattle, pig and sheep/goat and the presence of dogs and horses. A number of domesticated animals, like cattle, horses, mules, sheep, pigs, goats, are present in artistic representations on Trajan's Column in Rome or the *Tropaeum Traiani* from Adamclisi (Macrea 1969, 297; Lepper and Frere, 1988). Other scenes on the latter and on other monuments of Roman date attest that oxen and horses were used for traction (Macrea 1969, 297; MacKendrick 1975, 99 and Plate 4.26). Also, words for animals (domesticated and wild) or connected with animal husbandry have been transmitted to modern Romanian (such as *manz*-foal, colt; *viezure*-badger, *branza*-cheese, *zer*-whey) from Dacian, indicating their prehistoric origins, while most of the names of traditional domesticated animals are of Latin origin. Lambs and piglets were available on the Dacian market as proved by a 'shopping list' inscribed on the *pagina posterior* of a wax tablet (IDR 1, no. 46 = TabCerD XVI = CIL III, 933, XV) discovered in 1855 inside the Sf. Ecaterina mine at *Alburnus Maior*

(Rosia Montana). Interpretation is more difficult, however, with representation of wild animals. A boar and a stag are represented in scene CXLIX of Trajan's Column (Lepper and Frere 1988, 181 and Plate CIX) and it appears that the wolf was quite an important martial symbol among the Dacian warrior elite (Vékony 2000, 84). Dacian art reveals only a few clues about local fauna (dog/wolf, bull, snake, horse, feline) as the ornamental motifs on painted ceramics are too stylised and the animals are, without exception, fantastic representations (Florea 1998, 206–32). The representation of a bull/ox (Romanian 'bour') on the 'parade shield' from Piatra Rosie in Orastie Mountains is interpreted as an expression of local artistic taste, though the presence of feline and vegetal motifs is interpreted as an indication of the Mediterranean origin of the artist (Glodariu *et al.* 1996, 196–8). Birds seem to be less represented in artistic scenes, though on Dacian painted ceramics from the Orastie Mountains birds are more easily identified as species living near water or predators (Florea 1998, 230).

A study conducted in the early 1970s on plant evidence from Dacian sites (citadels) located within and outside the study area revealed the presence of some 45 varieties of cultivated plants of plants (Nandris 1981). A more recent study on Dacian settlement in the mid-Mures valley by Gheorghiu (2001) lists plant evidence for wheat (*Triticum vulgare*, *Triticum compactum*, *Triticum aestivum*, *Triticum dicoccum*, *Triticum monococcum*), rye (*Secale cereale*), millet (*Panicum* sp.), *Galium tricorne* and *spurium*, *Lolium sp*., barley (*Hordeum vulgare*), *Ornithogalum pyramidale*, lentils (*Lens culinare*), mustard (*Sinapis alba*, *arvensis* and *dinecta*), rape seeds (*Brassica*), poppy (*Papaverum somniferum*), garlic (*Allium sativum*), *Chenopodium album*, *Setaria viridis*, *Setaria Italica*, *Polygonum persicaria*, *convolvulus* and *aviculare*, *Rumex acetosa*, *Vicia hirsuta* and *Agrostemma githago* for human and animal consumption (Gheorghiu 2001, 165–6). Nandris (1981) concludes that a diet high in cereals, especially wheat varieties, was preferred, while virtually the only legume present was *Vicia faba* (pea). There is little evidence for fruits, as only traces of *Pyrus malus* were discovered within the samples, though vine cultivation is attested from other sources, notably Burebista's ban on vine cultivation for the moral improvement of Dacian male society (Strabo, *Geog.* VII.3.5; VII.3.11). *Camelina sativa* (gold-of-pleasure) found in samples from *Sarmizegetusa Regia* was possibly used for lighting (Nandris 1981, 234–5). It is unfortunate that both Nandris (1981) and Gheorghiu (2001) failed to consider similar evidence from other types of Dacian settlements in order to check whether their evidence represented the general character of the diet of Dacian society, or only the upper social segment that was the normal occupant of this type of site. The use of cereals in the diet is evident also from discovery of millstones and storage pits, presumed to be for grain, and other features of similar type were a frequent feature of prehistoric settlement. Some names of plants of Dacian origin have also been transmitted into modern Romanian (e.g. *mazare*-peas; *strugure*-grape; see Russu 1967, 1970). The wax tablet 'shopping list' mentioned above includes onion and

salad leaves, along with white bread, vinegar and salt. Pedanios Dioskorides in his list of plants used for their curative properties gives several Dacian names for plants, such as elderberry, blackberry, camomile, valerian, thyme and others (Nandris 1981, 234–5; Vékony 2000, 80–3). Other evidence also supports the presence and use of certain (though unknown) varieties of mushrooms, as proved by the episode of the Dacian ambassador sent to Rome with a letter written on a mushroom (scene VII on Trajan's Column – see Lepper and Frere 1988, 59 and Plate X, which identifies the type as potentially a variety of *polyphorus* or *bolettus*). Trees and use of local timber are frequently represented in scenes on Trajan's Column, along with representations of cereal fields harvested by the army during the second Dacian war (MacKendrick 1975, 88–9 and Plate 4.15) though precise determination of the species is difficult given the failure of the artist to represent details exactly and the concern for aesthetics rather than accuracy. Unfortunately, only the archaeological evidence from sites in the area can be considered as direct evidence. Linguistic, artistic and literary sources provide only indirect proof. In terms of artistic evidence, it is generally recognised that the presence of some ornamental motifs can be influenced by the origin of the artist, by fashion, or the express preference of the client, and so the frequent occurrence of the funerary lion alone would not constitute proof of their physical presence in Western Transylvania. The artist of Trajan's Column most probably had never visited Transylvania, and his depiction would be based on written and possibly oral accounts of the direct participants (Lepper and Frere 1988, 114). In similar vein, the fact that some relevant Romanian words have a Dacian origin does not necessarily constitute proof of the presence of those items in the ancient geographical landscape of the study area itself, but it does increase the probability, especially if the species attested are found in the modern landscape.

If natural factors affected little the landscape over time, human exploitation and use produced some significant transformations. They range from the creation of drainage systems to artificial lakes and quarrying at various scales for materials ranging from gold to clay, to the creation of huge sterile deposits around industrial centres such as Hunedoara, Calan, Deva and Mintia. Although the large majority of soils in the area are of forest type, the forests now cover only the mountains and higher hills, as in the lowlands they have been cleared for agriculture. This is not just a modern phenomenon, as extensive deforestation has a long history (Apolzan 1987, 44–8). In the modern era, however, a planned policy of reforestation was introduced, especially at high altitudes, but generally on steeper slopes under erosion threat. The state policy of intensive agriculture later in the twentieth century involved converting marshland to agriculture which saw the infilling of marshes and the building of extensive drainage systems. All these changed the local topography forever and make it difficult to provide a precise evaluation of ancient land-use. The traditional view takes little if any account of landscape changes over time and seems to assume that conditions were more

or less similar to modern ones (Gheorghiu 2001), with limited acknowledgement of the changes imposed by development in the Industrial Era. The river valleys and the lower terraces are assumed to have been intensely cultivated in the past as today, and the extension of arable in places up to 1,400 metres would seem to prove economic exploitation of the highlands which can indeed be traced back into the middle ages. However, the exact extent of cultivated land is not known and, despite further estimations concerning land-use later in this book, further studies are needed to clarify this issue. The soil structure demonstrates massive forest coverage at some point in time and this view is supported by the frequent presence of trees (oak, conifers, poplars) on Trajan's Column (Lepper and Frere 1988). The timber would have been extensively exploited even in Dacian and Roman times, as demonstrated by the large numbers of tools, civilian and military construction techniques, scenes on Trajan's Column and epigraphic evidence of *collegia* for woodworkers. But cultivated fields would have been widespread in the area since soil and climate data along with historic tradition indicate that it was the most fertile in Transylvania. Given the importance of animal husbandry attested through other sources (pp. 35–36), we also have to assume a great extent of pasture. Straw, or perhaps hay stacks represented on the Trajan's Column (Lepper and Frere 1988, 65) are no different from the ones frequently seen in the modern landscape. Inscriptions mentioning *conductores pascui* (or *pascui et salinarum*) attest not just presence, but imposition of certain control over pastoral farming in Roman Dacia (Macrea 1969, 298; CIL III, 1363, 1209).

But no matter how fertile the land, it was the sub-soil resources of Transylvania which were by far the most desired by her Roman conquerors. Consisting mostly of rich metal ores, but also of salt and stone, these have been exploited from prehistory to modern times. Iron metallurgy spread under the influence of the Celts and reached high levels of technology and production in the classic phase of evolution of the Dacian civilisation (Iaroslavschi 1997). The most important mineral resources of all were the rich sources of gold located in the Metaliferi Mountains. Associated with the gold ores were silver and lead. Information on mining concerns mostly Roman exploitation. However, the Dacians were exploiting the gold and silver and had accumulated large quantities, as the Romans transported to Rome some 1,65,500 kilograms of gold and more than twice this quantity in silver after the Dacian wars (Glodariu *et al.* 1996, 192). The episode is also depicted on Trajan's Column. Archaeological finds include few Dacian gold artefacts other than the golden coins *κοϛων* and it seems that silver was preferred for jewellery in the late pre-Roman period (Glodariu *et al.* 1996, 192).

Given the geological structure that allows variation of the concentration of metal within the native stone, exploitation utilised various methods, ranging from washing gold particles from alluvium and surface mining to gallery exploitation (Wollmann 1996, 103). Calculations of productivity

revealed figures of some 1.3 tons of gold extracted in 165 years of Roman occupation (Wollmann 1996, 126). The main areas of ancient exploitation were identified around Baita on the upper valley of Crisul Alb the Ruda-Brad area, Bucium-Corabia (north of *Ampelum*-Zlatna), *Alburnus Maior*-Rosia Montana, Baia de Aries area. Another gold exploitation area was located at Pianu de Sus, extracting the metal content of alluvium coming from the Sureanu Mountains. Copper was exploited west of Deva (Wollmann 1996, 149 and Plate LXXXIII).

The main centre of iron exploitation in Roman times, which has continued in the modern era, was located in the Poiana Rusca Mountains (Wollmann 1996, 232–4) around Hunedoara (Teliucu Inferior, Ghelari, Plotca, Hunedoara). However, there are iron resources located in the Sureanu Mountains for some of which there is proof of Dacian exploitation, such as at Batrana from which ores have been discovered near reduction kilns at *Sarmizegetusa Regia*. Other iron sources are located at Dealul Negru, Steaua Mare, between Valea Mlacii and Valea Provatului, on the hills to the north-west and south-west of the Strei, Rudele, Federi, between Sipca stream and Bosorod valley and at Dosul Vartoapelor – Sub-Cununi (Gheorghiu 2001, 3–4 and 183–6).

The most important salt exploitation on the Mid-Mures valley is located at *Salinae*-Ocna Mures, though another possible example could be located near Deva. Even lacking explicit evidence of exploitation, the identification of salt deposits in conjunction with the presence epigraphically attested at *Micia* of a *conductor salinarum* (CIL III, 1363 = IDR III/3, 119) is suggestive. Important ancient salt exploitations in Dacia were located elsewhere at *Potaissa*-Turda and Ocna Sibiului (Wollmann 1996, 240–9).

The varied geology of the area offered sources of both volcanic and sedimentary stone quarried in late antiquity. The volcanic rock was mainly andesite of 'Uroi type' available in two colours, which could be found at *Petris*-Uroi and in several quarries in the area around Deva (Wollmann 1996, 257; Hanson and Oltean 2000). This was used for architectural purposes and for millstones. Amongst the sedimentary-detritic rocks we find quartzitic sandstone (outside *Ampelum*-Zlatna), calcareous sandstone and Tortonian sandstone (Sard), carbonatic sandstone (in area Deva-*Micia*), metamorphous limestone (at Bucova which was the main marble source of Transylvania until 1884), Tortonian limestone (Ighiu, Apoldul de Sus, Miercurea Sibiului) and Eolithic limestone (near *Sarmizegetusa Ulpia*) (Wollmann 1996, 259–67). The hills near Magura Calanului, Santamaria de Piatra and Deva have been quarried since Dacian times for limestone and andesite, respectively; stones that were used by the Dacians (especially the limestone from Magura Calanului) for building the hill forts and other constructions in the *Sarmizegetusa Regia* area, and Capalna (Glodariu *et al*. 1996, 220–2).

In summary, the evidence collated above demonstrates that the arable land, the metal (especially gold) and other natural resources (water, forests, stone, salt), and the geographical/topographical setting favourable for both communication and defence were further enhanced by one of the best

climatic regimes in the area. Thus, the natural conditions within the study area presented all the advantages of setting, climate and resources needed to attract human settlement and, given these natural advantages, it is not surprising that it became the core territory of the Dacian kingdom and of the later Roman province.

3 The historical setting

The western half of the Transylvanian plateau has been recognised as the core of the territory occupied by the Romans in AD 106 (Figure 1.1). However, it is only in later prehistoric times that this territory and its population came to the attention of the ancient classical world.

3.1 The late Iron Age of Dacia in Roman knowledge (or *Getai athanatizontes* in *interpretatio Romana*)

Before coming to the attention of Latin writers, the barbarians from the north side of the Danube and from Dobrogea were first mentioned in ancient Greek classical texts. Strabo (I.2.1) declares that '[Alexander the Great] has brought to our knowledge [. . .] towards the north of Europe, all the area until the Istros (Danube); the Romans have made known [. . .] the places beyond the Istros as far as the river Tyras (Dniester)'. This fact is unsurprising, since the Greek cities established colonies on the Black Sea coast of Dobrogea (*Histria*, *Tomis* and *Callatis*) from the sixth century BC that quickly became involved in the economic system of *Magna Graecia*. Accordingly, Dacia was better known to the ancient world and from a much earlier date than, for instance, Britain. The main classical texts which refer to the antiquity of Romania have been usefully collected by Iliescu *et al.* (1964), though many more have been omitted (Dana and Ruscu 2001, 223).

The interest of both Greek and Roman writers in the native populations from the territories to the north of the Danube and the Dobrogea range from political events and figures covered in histories, to literary and scientific matters (e.g. geographical, ethnographic, anthropological). The earliest references are brief: Hecataeus (*Europa*, FR 170–2) mentions the tribes of the *Crobydae* and the *Trixae* and Sophocles (*Triptolem*, FR 547) mentions a local king, Charnabon, as a typical anti-hero. It is likely that they were based on a tradition about the people from the Lower Danube already existing within Greek knowledge (Petre 2004, 21–9). A comprehensive description of the natives in the immediate vicinity of the Greek colonies along the Black Sea coast was made by Herodotus (IV.93–6; V.3–10) in the context of their unsuccessful opposition to the incursion to the north of Black Sea of the

Persian king, Darius. Very popular with later writers, his account establishes an ethnic Getic stereotype, extracted from stereotypes applied to the *Barbares* in general and to the Thracians among them.

It is not unusual for ancient writers to refer in the first instance to the natives from the zone of immediate contact just beyond the territories under Greek and later Roman control as an obvious focus of specific interest and of available information. This is a serious bias that has been addressed by modern interpreters of ancient texts and which substantially affects the objectivity of such sources in assessing barbarian societies outside the geographical limits of the classical world. This could perhaps explain the obvious bias in geographical coverage of the area inhabited by the Dacians when compared to that of the Getae, who inhabited the south-eastern territories and the outer-Carpathian regions, and were, therefore, located closer to the Greek colonies on the Black Sea and the line of the Danube. Over time, the coverage of historical accounts extends gradually towards the Dacian area, the intra-Carpathian region and the north-west. A further bias in the quality of information is also detectable. While some authors such as Herodotus, Ovid, Crito, Balbus and others had travelled to the area and collected their information locally, others used exclusively second-hand information mainly from the works of other authors, and possible alterations must be taken into account. However, even the information from those authors who travelled in the region is sometimes only second-hand. Herodotus admits, for example, that the information about the Getae in his work has been collected from Greek inhabitants of the colonies on the Black Sea (IV.93–6; V.3–10). Finally, these accounts were produced exclusively by authors other than the Dacians or the Getae themselves. Therefore, even when the authors, unlike Ovid (*Met.* 10.220–43), did not have an obvious personal agenda to bias their account, they reflect only an interpretation of the 'barbarians', their lifestyle, habits, religion and so on, through the eyes of the Greeks or Romans, and most of the time based on external manifestations.

With the exception of an account by Quintus Curtius dated to 339 BC of a *rex Histrianorum* repelling an invasion of their country by the Scythian leader Ateas, and consequent authority of Macedonia's king Philip II over North Dobrogea (Condurachi and Daicoviciu 1971, 96), the first appearance of the native population of Dacia in Roman historical accounts is related to the political, diplomatic, legal and ideological context of the late Republic. The expansion of Roman political and military interest in the Balkans during the second century BC included contacts with the Southern Thracians soon after the organisation of Macedonia as a Roman province, and gradually extended to the north, to the Danube and beyond. The governors of Macedonia had to deal with the 'plundering expeditions of the neighbouring peoples' including Getic and Dacian tribes (Lica 2000, 38–42). Dacians appear mentioned among Balkan populations in their confrontation with Rome when Minucius Rufus claims victory against the Scordisci and the Dacians in 109 BC (Frontinus *Strat.* 2.4.3), and later on in the first century BC,

especially the campaigns under C. Scribonius Curio (76/75–73/72 BC) and M. Terentius Varo Lucullus (73/72–7l BC) (Florus *Epit.* 1.39.6; Eutropius 6.2.2; Rufius Festus *Brev.* 7; Eusebius-Hieronymus 152–23 *Helm*), or the action of C. Antonius Hybrida in 52–61 BC (Livy *Per.* 103; Cassius Dio 38.0.1–3). Each of them tried to secure the area outside their province (i.e. Macedonia) by eliminating random attacks on Roman territory or, during the Mithridatic wars, the potential source of mercenary recruitment for their adversaries. The military defeats were meant to place negotiations with the Thracians on favourable ground in order to transform the local dynasts into partners of Roman foreign policy through treaties under the legal system of *socii*, both personal and of the Roman people (Lica 2000, 42–60).

The interest in the presence of the native tribes on the Lower Danube reaches a significant point when Burebista brought all the barbarian tribes over a huge territory between the middle Danube (Slovakia), northern Carpathians, Dniester River, Black Sea and the Balkan Mountains under his authority. The chronology is still under debate (see discussion in Lica 2000, 65–7), though we can locate it with certainty at the middle of the first century BC when Rome was dealing with the power of Caesar and the Civil Wars. The main sources of information are Strabo (V.1.6; VII.3.11–13) and Dio Chrysostom (taken up by Cassiodorus and Jordanes) backed up by the inscription containing the decree in honour of Akornion of *Dionysopolis* (Syll.II 762 = IGB I^2 13). These, along with other indirect mentions in Caesar, Pompeius Trogus (*Prol.* 33) Appian (*Rom. Hist. Iliria* 13.36), Cassius Dio (*Rom. Hist.* LI.22.6) and various inscriptions from the Greek cities of the Black Sea, show that Burebista was perceived as a powerful dynast at the borders of the empire, important enough to play a role not just within the boundaries of his kingdom but also in the political games of Rome (e.g. a last-hour ally of Pompey before the battle of *Pharsalus* and a planned target for reprisals by Caesar – see Lica 2000, 71–92). After the death of Burebista and dispersion of his territory the Dacians and the Getae appear constantly in classical written accounts: for example Vergil (*Georg.* II.495–7), Horace (*Satires* II.6.51–3; *Odes* III.18.8 and *Scol. Pseudo-Acro*, III.8.17–24), *Scriptores Latinae Minorae* (*Consolatio ad Liviam* 387–8), Seneca (*Nat. Hist.* 9), Lucan (*Phar.* II.52–4) Pliny the Elder (*Nat. Hist.* IV.12.80), Flavius Josephus (*Bel. Iud.* VII.4.3), Frontinus (*Strat.* IV I.10.4; IV II.4.3) Martial (*Epig.* V.3.1–6; VI.76.5–6), Plutarch (*Caes.* 58; *Ant.* 63), Tacitus (*Agricola* 41.1; *Germ.* 1.1; *Hist.* III.46.2 and IV.54.1), Suetonius (*Vita Caes. Aug.* XXI.2; *Tib.* XLI.1; *Dom.* VI.1), Florus (*Epit. Bel. Dac.* II.28.18), Appian (*Rom. Hist. Iliria* 13.36), Lucian (*Icaromenip.* 16) and Philostratus (VII.3.1). They show that the Dacians and the Getic populations were a fairly frequently present in the political and strategic issues of Rome, taking active part in the events centrally by supporting their own political candidates, or involved in local fights on the *limes* with the neighbouring barbarians and frequently attacking the borders of the Empire. However, within the context of the political struggle for power in the late Republic, and of the expansion of Rome's

power to the north of Balkan Mountains and organisation of the Danubian border of the Empire both in military and diplomatic terms, such concern is unsurprising.

It is obvious, given that they frequently figure in political concerns in Rome, that there would have been a keen interest to establish who those people were. At first sight there seems to be a substantial amount of information in ancient writings regarding the Dacians, their ethnicity, tribes and boundaries. Yet, they seem burdened by confusion and stereotype inherited from earlier Greek literature which often mislead modern interpretations. Bennett (1997, 85), echoing others, considers the Dacian and Getic people to have had a strong sense of national identity in the barbarian world. Given the fact that twice prior to the Roman conquest they managed to unify under a single rule, this interpretation was not seen as out of place. However, since modern issues of national identity cannot be applied in the specific context of antiquity, it is less clear what exactly was implied by this notion at that time. There is, for example, a recurrent inconsistency in the literary sources regarding their ethnic name. Most Romanian commentators agree that the Greek sources use the name 'Getae', while the Latin ones seem to prefer the name 'Dacians' (Stefan 1964, XIII). Yet some Latin authors also name them Getae and some of them even made a distinction between the two (Pliny the Elder IV.12.80; Lucanus *Phar*. II.52–4). Under the circumstances it is safer to accept the location-related explanation provided by Strabo (*Geog*. VII.3.12–13):

> They used to call Danubius the upper part of the river and the one between the springs (source) until the cataracts. These regions were in the main part under the power of the Dacians. The lower part, until the Pontus (i.e. the Black Sea) – along which the Getae live – they call it Istros.

Further on, he continues:

> There has been a different division of the territory, dating since the earliest times: because ones are being called [by authors] Dacians, and the others Getae. The Getae are those spread towards the Pontus and East, and the Dacians [*are*] those who settle the opposite area, towards Germany and the source of the Istros.

Similarly, Seneca (*Phedra* 165–70) links the Getae to a plains landscape, while Statius (*Silvae* I.1.7 and III.3.169) places the Dacians in an upland landscape. This fits with placing the Dacians in the Carpathians and Transylvania and the Getae in the outer-Carpathian area and on both sides of the Danube. Finally, both Strabo and Pliny the Elder state that both groups spoke the same language (Strabo *Geog*. VII.3.13; Pliny the Elder *Nat. Hist.* IV.12.80), which solves the ethnic confusion.

Since the very first detailed account by Herodotus they are acknowledged as belonging to the Thracian tribes (Herodotus IV.93, V.3–4, V.6; Strabo VII.3.2) as their northern/Danubian component, distinguishable from the other Thracians by particularities of customs and religion. As far as one can tell based on the little remaining evidence, their language would have been very similar to those spoken by the other Thracians and belonged to the 'satem' group of the Indo-European languages. The differences from the Southern Thracians or from the neighbouring Scythians were probably faint, as several authors make confusions of identification with either one or the other. Physically, the Dacians and the Getae had similar characteristics to other barbarians around them (Thracians, Celts, Scythians). Following a general stereotype of the septentrionic barbarian established very early in the Classical world by the Greeks (Petre 2004) contrasting them to the civilised Greeks, they are generally described as taller, their skin whiter and with less hair with straight, light-coloured (red?) hair and blue eyes (Aristotle *Animal. Gen.* V.3; Galen, *De Temp*. II.5–6; *Clement of Alexandria* VII.4; Porphyrius 28). While some authors describe a paradise of wisdom, simplicity of life, social organisation and customs (i.e. Flavius Josephus XVIII.15; Strabo VII.3.3–5), others note illiteracy, spiritual poverty, violence and excesses (of behaviour, mentality or even environment) (i.e. Herodotus IV, 95–6; Claudius Aelianus V.III.6; Origenes I.16; Seneca *De Provid.* IV.14; Florus *Epit. Bellum Dacicum* II.28.18; Pliny the Younger *Paneg*, 12.2).

The written sources picture a patriarchal society with differentiated social categories, where warfare seems to be placed in higher regard than peaceful ways of living. In the post-Republican writings the most relevant difference defining the northern Thracian tribes from the southern ones seems to be related to their warlike lifestyle, as being much greater (*andreiotatoi kai dikaiotatoi*) than the rest of the Thracians (Herodotus IV.93) to the extent of it being chosen by Lucian of Samosata as their most defining feature (Lucian *Icaromenip.* 16). This should not necessarily lead to a perception of excessive savageness or cruelty, characteristics which seem to have stood out more in the case of other Thracians or ethnic groups in the area than for the Dacians and Getae (e.g. the Scordisci – Florus, *Bellum. Thracicum* I.39.3). The other most preferred characteristic feature and by far the longest-lived tradition, preceding Herodotus and even Sophocles, is that of *Getai athanatizontes* (Petre 2004, 58–60), their belief in their capacity to make themselves immortal through ritual practices as promised to the initiated by their greatest deified prophet, Zamolxis (or Zalmoxis) (Herodotus IV.95–6; Strabo VII.3.5). This ability for self-made immortality and a general greater emphasis on the after-life shapes deeply the existing body of information regarding their religious theory and practice. It would have largely nourished their high motivation in battle along with their significantly different attitude towards life and death, facing birth events with sadness and death with great joy (noted by several authors to be characteristic of the Getae and Dacians, though also of a few other Thracian tribes).

An extensive reference to the native tribes and places in Dacia can be found in the ninth *tabula* of Europe of Ptolemy's *Geographia* (III, 8.1–4), along with a short description of their geographical location, where there is a list of 15 tribes and a further list of *civitates*. According to Ptolemy, the northernmost tribes starting from the West were the *Anarti*, the *Teurisci* and the *Coertoboci* (Costoboci). To the south of them were the *Predasense* (Predavensi), the *Rhatacense* and the *Caucoense* (*Cauci*). South of them were located the *Biephi*, the *Buredeense* (*Buri*), the *Cotense* (*Cotinii*) and in a next row the *Albocense*, the *Potulatense* and the *Sense*, while the southernmost were the *Saldense*, the *Ciaginsi* and the *Piephigi*. This is the most comprehensive account regarding tribal divisions in Dacia, though there are previous brief mentions of tribes and tribal leaders on the left and right banks of the Danube, or even in Transylvania, to be added to the list, as for example, the *Trixae*, *Crobydae* (Hecat. *Europe*, FR 170–2) and *Appuli* (*Script. Lat Minorae* in *Consolatio ad Liviam* 387–8). Unfortunately, the territory occupied by these tribes is highly approximated on Ptolemy's map, which gives little chance of precisely locating their territories and boundaries. The same applies to the names themselves, most of which are derived from place names that can also be found in his account (III.8.4). *Appuli* might have settled the area around the Dacian *Apoulon* (probably at Piatra Craivii near Roman *Apulum* – modern Alba Iulia) and constitute the only tribe that can be located with certainty within the study area in the mid-Mures valley. The ancient texts are often confused over geographical locations in relation to the barbarians north of the Danube, though this seems to be not infrequent for *Barbaricum* in general. In the case of Dacia, the tribal names listed by Ptolemy include mostly names similar to those from the list of *civitates* and very few others. One possible interpretation is that this might indicate the existence of mostly territorial tribes at that date with only a few survivals of traditional tribes in the period around the date of the Roman conquest. The other possibility, however, is suggested elsewhere in *Barbaricum* by Wells (2001, 31–2) who underlines the temporal and structural flexibility of the tribal divisions as described by the Roman narrators, and observes that 'rather than being long-term social or political entities that had developed during late prehistoric times, these tribes probably represented divisions between groups that had formed in response to the Roman incursions.'

The issue of the extent of Dacian territory is equally difficult to evaluate based on written accounts. These are often too brief or lack the necessary depth of information and analysis in order to constitute a precise account. However, the information they supply can be approached from two very different points of view. Burebista acquired power over a huge territory in the area to the north of the Balkan Mountains extending from Slovakia to the Dnister River, including the Greek towns on the western coast of the Black Sea from *Olbia* to *Apollonia*. However, it would be wrong to assume that all this territory, or even that the whole list of tribes from Ptolemy's account of Dacia, would have contained exclusively the Dacians and the

Getae. The ancient sources are quite specific about the fact that Burebista, after ensuring his authority within the Getic territory, went on to defeat the Celtic tribes living in the area to the west of the Carpathians and in the Pannonian Plains. Archaeology has revealed that the Celtic tribes had originally spread east as far as Transylvania before being assimilated by the Dacians, and the list of tribes given by Ptolemy mentions also Celtic tribes such as the *Teuriscii* (*Teuriskoi*) or the *Anarti* (*Anartoi*). In the east, the Getic tribes were mixed mainly with the Bastarnae Sarmathians. Finally, the regions between Danube and Balkan Mountains were inhabited by the Southern Thracian tribes. At a later date the Romans occupied the whole territory on the right bank of the Lower Danube and established their boundary on the river. The process ended with the conquest of Dobrogea by M. Licinius Crassus in AD 28. At the same time during the reign of Tiberius, around AD 20, the Iazygae Sarmatians were granted permission by Rome to settle the Tisa plain, with the role of a buffer between the Dacians and the Pannonian populations (Tacitus, *Hist.* 3.46.3). Therefore, and taking into account the explanations given by Strabo (*Geog.* VII.3.12–13), a more realistic estimation is that the Dacians settled in the left bank of the Middle Danube valley in the Tisa Plains (until the arrival of the Iazyges) and Transylvania, while the Getae lived on both sides of the Lower Danube and the south and east sides of the Carpathians.

Unsurprising again is the concern of Roman literature for the identification of political leadership in Dacia and for its basis and nature. From the very beginning, mention of political leaders in classical texts appears restricted to the southern areas in the immediate vicinity of the Greek towns on the Black sea coast and the Danube. All the classical accounts prior to the first century BC show that these power centres of the natives on the Danube were mainly tribal centres on local scale. The rise of Burebista brought into consideration the concept of power at a very different scale. First of all, he succeeded in extending his authority over a huge territory. But unlike his predecessors, the Getic leader is depicted as having a different status than any of his known predecessors. His position was brought about by the more careful control over the territory and its subjects, but especially by religious recognition ensured by association with Dekaineos, the great priest, as the second man in power (Strabo VII.3.5; VII.3.11). Certain formulations in an epigraphic decree (Syll.II 762 = IGB I^2 13) dated to 48 BC in honour of Akornion of *Dionysopolis*, who was sent as ambassador of Burebista to Pompey, claim the title of 'king of kings' for Burebista and the king's 'first and greatest friend' for Akornion, both in use within the Hellenistic kingdoms of the Balkans and Near East. This has led to exaggerated attempts in modern interpretations to argue for the appearance under Burebista of institutional organisations and for an administrative framework specific to the Hellenistic kingdoms (see discussion in Lica 2000, 82, Footnote 96). These formulations should be regarded only as an *interpretatio graeca* by Akornion or by his dedicants. Nevertheless, the political power of Burebista is undeniable and

on a far greater scale than that of any other leader before. This is clearly apparent from the categorical manner in which he imposed his control over the Greek towns from the western Pontic area and in the way he conducts his diplomatic relationship with Rome during the conflict between Caesar and Pompey, when he joins the latter as a last-minute ally (Lica 2000, 62–92; Ruscu 2002, 295–307). Yet Ruscu (2002, 295–307) denies Burebista a clear political program in his actions against the Greek towns and states that his real political basis and the key to his success was the military force under his command which made any Greek resistance inadequate. In this case, it is unlikely that Burebista established a kingdom – as an organised state – and this lends weight to the interpretation of the political and territorial unit under his authority as no more than an exceptionally large tribal union, with a more advanced basis of the leader's political power. The chronology of his reign in relation to the dating of political events described by Strabo is considered by most historians to be between the early 1980s and late 1940s BC, though the debate on the precise dating is unresolved (see Lica 2000, 65–73). It seems he also had at least one capital at (*Z*)*argedava*, but its location is not precisely confirmed. It is thought to have been in the Siret valley (Barbosi?), though the beginning of hillfort monumentality in the Orastie Mountains area seems to have similar dating. There is more certainty in locating the religious focus, the holy mountain *Kogaionon*, in the Orastie Mountains.

Long before Burebista, Herodotus (V.3) points out the lack of unity amongst the Thracians and the impossibility for them to come together under a unique ruler or confederation, though in his view, had they been united, this would make them the most powerful nation in the known world. What change of social mentality made it possible for the Getae and the Dacians to unify the Thracian tribes over all this huge territory under a single power? According to Strabo (*Geog.* VII.3.11) the high priest, Dekaineos, was also the main counsellor of the king. As a spiritual leader, he reformed the religion through a more 'institutionalised' facade concentrated around *Kogaionon*, stress on temperance in life, obedience and austerity (e.g. measures for the eradication of vine cultivation, vegetarianism) in pursuit of that immortality after death promised by Zamolxis. His main political task, however, was to make the people obedient to the newly centralised political authority. The provision of conflicts against any opponents, whether neighbouring barbarians or Greek colonists, along with the material benefit resulting from associated pillage, or stipends regulated through treaties, even if Burebista did not always keep to them, surely would have kept the other tribal leaders and their armies around him.

The power of the Getae did not last. Failing to implement the idea of unity in the political mentality of the multi-ethnic society he ruled, this led to the death of Burebista (possibly as a result of a political plot against him). After his death his dominion broke into four, and later into five parts under different *reguli* (Strabo VII.3.11). Names of such minor kings occur in the literary sources from the end of the first century BC, and through the

Julio-Claudian and the Flavian periods when the Dacians and the Getae were constantly being mentioned. The ancient sources mention several Dacian dynasts (between 44 and 31 BC – see Lica 2000, 100): Koson(?), Cotiso and Dicomes. The first name is problematic, since the only indication of his existence is the mysterious KOΣON gold coins that have been found in large quantities in Transylvania and attributed, according to some numismatists, to the monetary issues of Brutus. Others prefer to identify the character with king Cotiso. We are informed of Cotiso by Horace (*Carm.* 3.8.17–I8), Florus (2.28.18–19*)* and Suetonius (*Aug.* 21.1 – for AD 12). However, it seems more likely that he was another dynast of a later date than Koson. Koson had relations with Brutus, offering him troops who would have been paid with the staters bearing his name (KOΣON) (Lica 2000, 104–5). Also, according to Plutarch (*Ant.* 63.3–4), a Dicomes king of the Getae promised Antonius to come to his aid with a large force, thus confirming his *floruit* around 31 BC. As for Rholes, Dapyx and Zyraxes, these dynasts are mentioned by Cassius Dio and they all seem to fit into the period 31–27 BC (Lica 2000, 93–120).

The important fact for the present study, however, as well as for the general historical development of the late Iron Age, was that the Dacian state of Transylvania continued in existence with its centre in the Orastie mountains. Dekaineos, the high priest and no. 2 of Burebista's dominion, is the one who takes over power after the death of the king (Condurachi and Daicoviciu 1971, 99). Iordanes writes, referring to Dio Chrysostomos, that Comosicus was the first to perform the roles of high priest and king simultaneously, which means that Dekaineos probably kept his title of high priest and did not adopt that of king despite the later extension of his authority into the political arena. Probably his authority extended to only a small area, perhaps not larger than the seat of government and the religious core in the mountains of Orastie and most likely the ore-mining areas. Later, and perhaps following the kings Koson and Cotiso, Comosicus probably began his reign during the campaign of M. Vinicius and ruled until 29 AD (Lica 2000, 128). The idea of the Dacian kingdom preserved within the Orastie Mountains is implied by the survival of a dynastic list, though possible incomplete: Koson(?), Cotiso, Comosicus, Scorylo (or Coryllus, as Jordanes calls him in his Getica) (AD 29–69), Duras and Diurpaneus-Decebalus (Lica 2000, 188). The four or five political entities resulting from the dissolution of Burebista's 'empire' continued to be separate entities of no more than local significance probably up to Scorylo's time. Unfortunately, the existing data is insufficient to know whether or not the religious connotations of political power were maintained personally by the other kings in this list, apart from Dekaineos and Comosicus. However, the pre-emptive position of the leaders of the Orastie kingdom that would have been nourished largely by religion is confirmed by the fact that it is one of these leaders who probably undertook the re-unification of the territories still unoccupied by the Romans or by the Iazyges.

Diurpaneus-Decebalus appears as the king of the whole of Dacia. The information about his reign is largely focused on the wars against the Romans and appears in Tacitus (who mentions Diurpaneus), Jordanes and Cassius Dio, though Martial, Crito, and others offer some information. The sources are not explicit about the territorial extent of his kingdom, but on the basis of archaeological evidence (hillfort distribution – see Glodariu 1983) combined with the demographic and political evolutions along the Danube as presented earlier, it is currently assumed that the territory under his authority roughly corresponded with the area of modern Romania, with the exception of Dobrogea which was already a part of Lower Moesia. The position of political no. 2 in this regime was occupied by Vezinas, a reminder of the political duo of Burebista-Dekaineos, though in the case of Vezinas we do not know whether he was also the high priest (Cassius Dio, LXVII.10.2). However, in comparison to Burebista's dominion, that of Decebalus appears to be better organised, centralised and more ethnically homogeneous. A clear distinction was introduced between the warrior elite (*pileati*) on the one hand and the administration and the economic elite (*tarabostes*) on the other (Crito *Get.* 5. (2) *Suidas*). His royal council included *pileati* and *comati* (freemen) altogether (as probably that of Scorylo) (Frontinus *Strat.* I.10.4). Also, the possible break up of the traditional tribe as an administrative unit and promotion of the territorial units from Ptolemy's list (p. 46) could have happened within the latest phase of the Dacian kingdom, during the reign of Decebalus.

From the data presented so far it is clear that the Daco-Getae were in constant and frequent interaction with the Romans throughout the late pre-Roman period. But the nature of their relationship with Rome is another topic where the literary sources present an incomplete image of reality since they present exclusively the Roman point of view. Romanian traditional historiography has tried to analyse the relationship from a Dacian-focused perspective, but its failure to consider the Roman juridical framework with which these relations had to comply has resulted in great distortion of the resultant interpretations. This point has been made also by Lica (2000) who most recently attempted to evaluate the political and diplomatic aspects of the relationship from a Roman perspective.

Both the Dacians and the Getae were perceived as a threat by the Empire, largely after they reached the line of the Danube through conquest, though a threat of no more than a local significance. Because of their frequent raiding expeditions into Roman territories, provincial or central leaders planned and undertook reprisals against them. Caesar is reported to have planned expeditions against the Parthians and the Dacians just before his death in 44 BC. His plan came no doubt as a response to Burebista's rallying of tribes under his authority and to his tendencies to enlarge his politico-diplomatic involvement into the larger scene (through his diplomatic action towards Pompey, p. 43). The period between Burebista's death and the accession of Decebalus was marked by much fighting between Dacians and Romans.

Roman perception of the Dacians and the Getae as a constant danger to their possessions along the Lower Danube continued after the death of Burebista and the division of his *arche* between his heirs. Antonius received the military command that he used to start his civil war actions pleading in front of the Senate for counter-action against a 'Getic danger', though this might have been significantly exaggerated for political purposes (Lica 2000, 97). Octavian was also planning on setting out against the Dacians in 35–33 BC (Strabo 7.5.2, and Appian *Illyr.* 22.65; 23.67). A few years later, Licinius Crassus, the governor of Moesia defeated Cotiso and in 27 BC he finalised the conquest of Dobrogea, adding it to Moesia (Cassius Dio 51.23–7; Livy *Per.* 134; Florus 2.26.l3–16). In 10 BC a new Dacian winter attack on Pannonia is mentioned by Cassius Dio (54.36.2), followed by another one somewhere south of the Danube in AD 6 (Cassius Dio 55.30.4), to which the Roman response was the expedition of Sex. Aelius Catus (Strabo 7.3.10). It was followed by the removal of 50,000 Getae south of the Danube (Condurachi and Daicoviciu 1971, 99). A third attack followed towards the end of Octavian's reign (Orosius, 6.22, possibly in AD 12). During Tiberius' reign a new Getic attack (AD 15) is mentioned in Ovid (*Ex ponto* 4.9.76–80 under L. Pomponius Flaccus) followed by a Dacian attack during his last years (Suetonius *Tib.* 41.1). As a result, T. Plautius Silvanus Aelianus, governor of Moesia between AD 57–67, removed more than 100,000 Transdanubians – together with their wives, children and kings – across the river in order to pay the tribute (CIL XIV, 3608 = ILS, 986). In the winter of the year AD 70, Tacitus (*Hist.* 4.54.1) notes troubles from the barbarians, including Getae and Dacians. Finally, the last attacks on the lower Danube boundary took place during Domitian's reign and started with yet another winter attack in AD 86 involving a barbarian coalition, including Dacians along with Bastarnae, Roxolani and Iazyges. The governor C. Oppius Sabinus was killed and the forts along the Danube suffered significant damage, obliging Rome to organise a quick and powerful reply. Domitian established his headquarters at Naissus in Moesia and sent the *praefectus praetorio* Cornelius Fuscus on an expedition north of Danube against the Dacians under their new king, Decebalus. The action ended in disaster. The Romans lost the battle and a whole legion (the *V Alaudae*) with all its equipment, and Fuscus himself died in the battle. The Dacians were eventually defeated in AD 88 by Tettius Iulianus (Cassius Dio LXVII 6.1–6; 7.1–4; 10.1–3).

Often the Dacians and the Getae were diplomatic partners and played active parts in the political games of Rome, often as *amicii et socii*, possibly of Rome herself but usually of individual Roman leaders. For example, shortly before the battle of Pharsalus Burebista probably became an *amicus et socius populi Romani*, confirmed by Pompey's Senate (Lica 2000, 98). At Actium, according to Cassius Dio (50.6), Antonius had the Getae on his side under the authority of King Dikomes (*Plutarch Ant.* 63.3–4), while Octavian had the armies of Cotiso and his Dacians amongst his own supporters. Furthermore, Octavian planned the marriage of his daughter, Julia, to king

Cotiso to strengthen their alliance (Suetonius *Aug.* LXIII, 4.VI. and *Ant.* 7), and most probably Cotiso would have held the status of *amicus et socius* of the Roman people or of Octavian personally (Lica 2000, 117). The status of Koson, Dicomes, Cotiso and maybe Rholes remains uncertain. It is not clear whether they were *amici et socii populi Romani*, or only enjoyed personal relations with Brutus, Antonius and Octavian, respectively.

> As for the legal basis of these relations, it is well known that Rome, at that time, used to impose the *deditio* on her partners in international relations, even if there had been no military conflicts. This is why, in her relations with the *Getorum et Dacorum gentes*, Rome acted similarly: they were unable to invoke the treatment due to an equal partner (Lica 2000, 118).

The peace that concluded the wars conducted by Domitian's generals against Decebalus (86 and AD 88) was signed only a year later by the Dacian king through his ambassador and brother, Diegis (Martial *Epigrammata* V.3.1–6; Cassius Dio LXVII.7.1–4). Domitian's treaty with the Dacians provided them with significant financial and technical assistance.

How significant these treaties were, however, is expressed by Tacitus (*Hist.* 3.46.3): *Dacorum gens numquam fida* which indicates that they were never perceived by the Dacians and the Getae as more than momentary solutions and could be broken soon after circumstances changed. A particular and more involving aspect of the *deditio* was the handing of hostages to the Romans (usually members of kings families – women and children). This practice might have started as early as 71 BC with M. Terentius Varro Lucullus and continued later under Octavianus Augustus and throughout the first century AD. A possible exception to this practice may have occurred in the peace agreement from AD 89 when Domitian may have had to pay for hostages (Cassius Dio 67.7.4), but soon after in 102 and indeed in AD 106 Dacian hostages were sent to Rome again (Pliny the Younger, *Panegyr.* 12.2; also, see discussion in Lica 2000, 253–6). In turn the presence in Dacia of individuals from the Roman Empire as merchants, craftsmen and runaways (slaves or freemen) has been accepted by literary sources. Significant amounts of Roman *denarii*, including locally minted copies, have been found on Dacian sites. The economic relations induced multiple influences through active exchange of goods and technologies, especially in the area of Orastie Mountains (Glodariu 1976; Florea 1998, 31).

To conclude, the image created by historical accounts of the Dacians prior to the Roman conquest is, despite certain stereotypes, very clear in several aspects of their civilisation. From the beginning they stood out among the barbarians through their warlike ways and uncommon religion and religious behaviour. Even if internal disputes were a normal occurrence, as in the case of other tribes and ethnic groups beyond the European boundaries of Greece and Rome, it was these characteristics that made them overcome disputes and

unite under Burebista and Decebalus. Concepts like god-supported royalty and, to some extent, even incipient state administration made their way into late Dacian society. But incapable like many others of respecting treaties with Rome or, earlier on, with the neighbouring Greek cities from the Black Sea, for some in their society war and religion was a way of life. A dangerous mixture even when they were divided, under a unique command this had the potential to become the power foreseen by Herodotus long before Rome decided to intervene and defeat them.

3.2 The Roman conquest and provincial organisation

The wars concluding with the conquest of Dacia and organisation of the Roman province have been intensively and extensively considered by Romanian and other scholars. The direct literary descriptions by Ti. Statilius Crito and by the emperor Trajan himself – both now lost – leave that of Cassius Dio as the most substantial account, along with the illustrative record of Trajan's Column in Rome. However, what seems at first sight to be a significant amount of information is in fact highly incomplete, corrupted and biased, but still gives important information about the context of the Roman conquest of Dacia. Unfortunately, archaeological research into the Dacian wars remains extremely poor and the reconstruction of the series of events that led to Dacia becoming a Roman province are still heavily reliant on ancient accounts.

There have been numerous opinions expressed as to the way in which the mechanism of expansion functioned in the Roman Empire (e.g. Hanson 2002). In the case of Dacia, even if other (political or financial) considerations would have been in force, the strategic circumstances alone seem conclusive enough to justify its invasion by the Romans. The frequent barbarian attacks on the borders of the Empire were usually dealt with successfully by the Romans because the great majority of them constituted singular events with only local significance. But the unification of *Barbaricum* could become catastrophic. Burebista had gathered no less than 200,000 warriors under his command. It was a formidable power, already perceived as threatening by Caesar. Fortunately for Rome, it lasted only until his death and it seems that the subsequent division continued until Scorylo's reign 100 years later. At *Actium* the Getae and the Dacians were divided in their diplomatic action in supporting different Roman parties (p. 51). Rholes had in fact requested Rome's assistance in his pursuit of power against his political opponents, even of his own ethnic origin, a pattern familiar in other frontier regions, such as Britain (e.g. Creighton 2000). Other barbarian tribes formerly under the authority of Burebista, such as the Bastarnae, are not mentioned as being allied to the Getae (Lica 2000, 126) and the conflict between the Dacians and the Pannonians noted by Tacitus (*Germania* 1, 1) is resolved by Rome by granting permission to the Iazyges Sarmatians to settle the plain of the Tisa river (in the 20s AD). However, Scorylo's unifying actions might already

have been perceived as dangerous and under the last king, Decebalus, despite the fact that now the Dacian army could gather only some 40,000 soldiers, it proved to be so. Furthermore, by now the administration had developed into a far better organised and centralised kingdom than it had been under Burebista, and his diplomatic contacts in *Barbaricum* were, if fluctuating in nature, nevertheless active and reached even remote regions such as Parthia (Pliny the Younger 74.1).

In Roman eyes it was clear that the situation on the Danubian *limes* was out of control. Domitian tried desperately to deal with the danger, but the outcome of his disastrous campaigns into Dacia in AD 86 and AD 88 pushed him to settle the situation through diplomacy at all costs. In fact, after his end as a tyrant one of the heaviest accusations against Domitian was the cost of bringing the Dacian kingdom into clientship through the peace treaty of AD 99, which provided financial and technical assistance for the Dacians against their enemies in the *Barbaricum* (Martial *Epigrammata* V. 3 1–6; Cassius Dio LXVII 7.1–4). To what extent the Dacians would have achieved the political maturity to keep to the terms of the treaty by that time or whether this would have been abandoned, yet again, at the nearest convenience, is hard to say. Trajan was of a different nature and opted for a different approach. The official history depicts the first of his wars against the Dacians in AD 101–2 as a punitive action directed towards getting a better diplomatic deal for Rome (Bennett 1997, 87). Nevertheless, other recent opinions have argued that a major factor in persuading Trajan to go to war against Dacia in 101 'lay in his own weaknesses rather than in Decebalus's growing strength, popularity and arrogance' (Lepper and Frere, 1988, 38–9). The Roman armies under his command crossed the Danube into the Dacian territory targeting directly the core area in the Orastie Mountains. They advanced quite deeply into the enemy territory before the first battle at *Tapae*, located by most people in the Iron Gates of Transylvania passage (Diaconescu 1997, 18–25). After a series of encounters with shifting outcomes in Dacia, but also in Lower Moesia near the future *Tropaeum Traiani* (Adamclisi), and with the Romans already inside the core of the kingdom in the Orastie Mountains, a peace agreement was reached. Decebalus was to destroy his fortresses and renounce all his political power against his neighbours and a στρατόπεδον (fortress/garrison) was installed at *Sarmizegetusa Regia* (Gradistea Muncelului) to watch over the agreement (see discussion in Diaconescu 1997, 25–6). There are no details on how this agreement worked in practice, but it is likely that it looked like an annexation *de facto* – even if not *de iure* – of the kingdom by Rome under the legionary legate Cn. Pinarius Aemilius Cicatricula Pompeius Longinus (Diaconescu 1997, 25). Indeed, Trajan commissioned his engineer, Apollodorus of Damascus, to build a bridge across the Danube at Drobeta, which seems to confirm his intentions towards Dacia. Trajan's second Dacian campaign in AD 105–6 was very specific in its aim of expansion and conquest, despite the fact that the literary sources blame Decebalus for failure to respect the peace agreement.

Apparently the ill feelings towards the occupation army came to a boil and Decebalus rebelled and took prisoner Longinus, who later committed suicide in captivity. Trajan returned to Dacia and advanced through the territory without much difficulty, rejecting all peace offers. Predictably, the strength of the Roman army crushed the Dacian opposition. The sources describe the desperate struggle to defend themselves by Dacians intended to mirror the strength and courage of the Roman army and of their emperor, their real subject of glorification. It is the desperation and stubbornness of Dacian resistance, illustrated in the siege and conquest of *Sarmizegetusa Regia* and the final suicide of the king Decebalus, that is used by modern commentators to explain the unbelievable treatment applied to the natives after the conquest, as described by the literary sources, including severe depopulation (5,00,000 prisoners mentioned in a few fragments of Crito's *Getica*) and deliberate ethnic cleansing (Bennett 1997, 101; see discussion in Ruscu 2004).

The territory of the Dacian kingdom was not occupied in its entirety by the Romans. Nor did the boundaries of the province remain constant over the two centuries of Roman occupation. Immediately after the wars of conquest, Trajan occupied the Transylvanian plateau along with most of the territory between the Carpathians and the Danube. However, the occupation took different forms for different parts of the Dacian territory. Some areas, such as eastern Oltenia, Muntenia and South Moldavia were added to the territory of Lower Moesia (i.e. the territories on the opposite bank of the Danube). The new province of Dacia, on the opposite bank of the river from Upper Moesia, was confined only to the core of the Dacian kingdom, that is Transylvania, along with its main routes of access from the north of the Danube through Banat and Western Oltenia. After Trajan's death Hadrian had to face a significant threat from the tribes outside Dacia and was forced to make substantial transformations involving the loss of the occupied territories in the south of Moldavia and of the whole plain of Muntenia. The territorial damage in Dacia was less extensive than in the East, where all Trajan's newly conquered territories had to be abandoned. The Roman territory remained confined within the limits of modern Transylvania, Banat and Oltenia. Lower Moesia returned to its original boundaries from before the conquest of the Dacian territories. Dacia itself, now named Upper Dacia (or Dacia Superior) remained within the limits of Trajan's vision of administration. Its defence were re-enforced by the creation of two small provinces with a purely military purpose: Lower Dacia (Dacia Inferior) (eastern Oltenia, the only territory formerly within the boundaries of Lower Moesia that was retained under occupation) and Dacia Porolissensis (north-western Transylvania). This territory remained under Roman occupation until the abandonment of the province in the second half of the third century AD (Piso 1993a; concerning the date of the abandonment, see Ruscu 2003, 221–31).

The occupation army of Dacia has been the subject of much debate. In 102 when his first war ended in Dacia, Trajan left one legion at *Sarmizegetusa Regia*. After the wars ended there were two legions in the area, the *XIII Gemina* based at *Apulum* and the *IV Flavia Felix* at *Berzobis*. A third possible legion involved was the *I Adiutrix*, but so far neither its precise location nor chronology of occupation in Dacia have been confirmed, or, indeed, whether it was present in full or just through vexillations (Piso 1993a, 7–8). The *IV Flavia Felix* was moved at a later date by Hadrian to *Singidunum* in Upper Moesia on the Danube, so the presence of only one legion seems to have looked sufficient for the rest of the first half of the second century AD. This proved to be wrong during the events of the Marcomanic Wars, when the *V Macedonica* had to be transferred permanently from *Troesmis* in Moesia Inferior to *Potaissa* in Dacia. The numerous auxiliary units attested in the Dacian provinces during the period of Roman occupation, mainly through epigraphic evidence, contributed to building the image of Roman Dacia as a heavily militarised province. Various military diplomas mention no less than 58 units, most of them coming into Dacia from the neighbouring provinces (the Moesias and the Pannonias), covering a complete range of troops: *alae* and *cohortes milliariae* and *quingenariae* as well as *numeri*, along with significant variation in their ethnic origin (Russu 1975, 142–51).

However, this does not mean that all these troops were stationed in Dacia at the same time and throughout the entire period of Roman occupation. Only limited estimations of their number within shorter chronological periods can be made. Unfortunately, as revealed by the most recent comprehensive study of more than a hundred sites (Gudea 1997), the chronology of the occupation of forts in Dacia has not been completely clarified on the basis of archaeological excavation and the main sources for the estimation remain the military diplomas. During the reign of Trajan the Dacian garrison is estimated to have included 28 auxiliary troops (Bennett 1997, 166), and a total number of 54 units are attested within the first 50 years of the second century AD (Russu 1975, 142–51). Based on archaeological evidence, some 34 forts are estimated to have been in use until the middle of the second century AD with certainty. Within the second half of the second century AD only some 30 sites in Dacia seem at this stage of the research to have been occupied (Gudea 1997). That this is a realistic estimation seems to be supported by the evidence provided by military diplomas issued within the second half of the second century AD. Out of the total of 58, only some 21 (possibly 31) auxiliary units are attested. It is worth noting though at this point that both types of evidence seem to reveal a reduction in the number of the auxiliary troops located in Dacia from the first half to the second half of the second century AD. Unfortunately the data allow us to appreciate just how inconclusive the situation is so far. The category of forts possibly occupied includes mainly those where a precise chronology of occupation has not been established. Very often this is where the chronology is based on morphological interpretation of the site as fitting sometime in the second

and third centuries AD. Some of them have had their occupation proved for the earlier or later period within the time-span of the two centuries and there was no basis on which to totally exclude the possibility of their use at other times in that period. Therefore, an increase in uncertainty is visible towards the third century AD and the analysis attempted here is likely to see changes in the light of future study of Roman forts in Dacia. At this moment, however, the reliable evidence is still sufficient to observe a decrease, rather than increase in the number of military units present in Dacia over time. The distribution map of these sites (Figure 6.3) shows that they tend to be located along the frontiers and, where their chronology is clear, some 20–30 kilometres apart, even along the *limites Alutanus* and *Transalutanus*, which allows each to cover an area of the *limes* some 10–15 kilometres in radius. By contrast, the density of forts on Hadrian's Wall, for instance, is greater, as they were located at distances of only some 8–10 kilometres.

Within the mid-Mures valley one legion was located at *Apulum* and auxiliary forts at Razboieni, Cigmau and *Micia*. As a result of excavation, their chronology is clear enough to reveal continuous use throughout the whole period of Roman occupation from Trajan to mid-late third century AD. Unfortunately, the evidence from a fourth fort now destroyed at Orastioara de Sus, 20 kilometres south of Cigmau, is insufficient to establish the chronology of its occupation, while a fifth at Ighiu is effectively unknown. *Micia* is the only fort located on the boundary. Along with the *Apulum* legion, the garrisons at Cigmau and Razboieni are positioned along the river valley and the line of the main road artery of the province. Their function was to control the inner territory, and in particular the routes of communication (terrestrial and riverine) of the province.

Because of its strategic and economic but also political importance (both in relation to its position in the *cursus honorum* and as a source of military power), Dacia was from the very beginning organised as an imperial province and remained so throughout the Roman occupation. During Trajan's reign Dacia was under the command of a governor with the rank of former consul backed up by two *legati legionis*, while all the finances (taxation and payments to the military) were handled by a financial *procurator*. Under the administrative scheme introduced by Hadrian, the Dacian territories were under the command of one governor of senatorial rank (former *praetor*) for Upper Dacia who was also the commander of the only legion left at *Apulum*, one financial *procurator* for Upper Dacia and two praesidial *procuratores* of ducenary rank, one each in Lower Dacia and Dacia Porolissensis. During (or soon after) the Marcomannic wars this scheme was modified again. Military and judicial administration was unified under the command of one governor (former consul) having two other senators (the *legati legionis*) as his subordinates and the province was called simply Dacia or *tres Daciae*. The previous boundaries remained only as the domains of the 3 financial *procuratores*, now named Dacia Porolissensis, Dacia Apulensis and Dacia

Malvensis (the latter as the former Upper and Lower Dacia, respectively) (Piso 1993a, 7–9, 30–41 and 82–5).

From the point of view of a study focused on the analysis of settlement pattern, the most important centres in Roman Dacia were the places where Roman state authority was exercised through its representatives. The issue of the provincial capital is one that has benefited from special attention. The foci of command were variable (Piso 1993a), linked to the location of the functionaries themselves, at least at the initial stage of organisation of the new province. From a military point of view, the most important centres would have been the legionary bases at *Apulum*, *Bersobis* and *Potaissa*. Only *Apulum* was in that position for the whole of the Roman occupation. Bersobis was a legionary base only until the death of Trajan and the legion *V Macedonica* was brought to *Potaissa* only during the Marcomannic Wars. Given the circumstances, *Apulum* would have become the military and judicial centre of the province with certainty from the time of Hadrian (possibly even earlier). The financial centre was at *Ulpia Traiana Sarmizegetusa* as the seat of the financial procurator is assumed, probably correctly, to have functioned in the same location since the very beginning. The locations of command of Dacia Porolissensis and of Lower Dacia are probably at *Napoca* (Cluj) and *Buridava* (Stolniceni), respectively (see argument and discussion in Piso 1993a, 39–40 and 90–1).

3.3 Conclusion

Within the larger Geto-Dacian region, the area of the mid-Mures Valley that is the subject of the present study develops into the core of leadership and power for both the late pre-Roman and Roman times. The scarcity of references in ancient texts provides little opportunity to follow the political and historical evolution of the area in the period prior to Burebista. The only mention of a Transylvanian dynast (Oroles) by Trogus Pompeius (*Phil.* XXXII.3.16) does not refer to the study area, but to eastern Transylvania, though archaeological sources have revealed the existence of power centres there before the first century BC (see Chapter 4). Although during Burebista's reign it is possible, according to literary sources, that his political capital was still located outside this area or even Transylvania, we can date the beginning of Dacian architectural monumentality expressed solely in the Orastie Mountains at the same time. Probably related to the location of the religious core there, the area continues to maintain an important role within the whole Dacian world after the death of Burebista. When Dekaineos takes over power in his capacity of high priest, despite the political fragmentation, religion gives a pre-emptive position to the political nucleus of Mures valley and Orastie Mountains. It is also significant that a more complete list of rulers has survived only for the Orastie Mountains power centre and that the re-unification from the first century AD begins in this area. That the area around Sarmizegetusa Regia was the centre of Decebalus'

kingdom at the time of the Roman conquest is made very clear by all accounts. Immediately following conquest, the first *colonia* of Dacia and the only *colonia deducta* (*Ulpia Traiana Sarmizegetusa*), was founded nearby in Tara Hategului. This town was the financial capital and the centre of the Imperial cult of the province. During the whole of the Roman period *Apulum* was a legionary base, seat of the governor and location of a Roman civilian conurbation which accedes to the highest rank. These sites were clearly the most important centres in Dacia as they concentrate the whole administrative, financial, political and military command of the Roman province. Given all these facts, no other region in Dacia would seem to offer better conditions for studying the impact of the Roman conquest and occupation on the native landscape as revealed by the settlement pattern in order to provide a better understanding of the nature of romanisation in Dacia.

4 Settlement and society in the late pre-Roman Iron Age

Historical sources give hints of a significant demographic development within the Daco-Getic area, but the pattern of occupation and settlement of the territory is still unclear in many respects. The existence of significant variations within the types of Dacian settlement is generally accepted and in the site-centred tradition great effort has been dedicated to producing typologies of Dacian settlement based on the existing evidence. The typology of settlements currently in wide use in Romanian archaeology (Glodariu 1983, 46–8, followed by the latest studies such as Gheorghiu 2001) excludes all hillforts, which are seen as purely military sites, and, although it takes into consideration other factors, it is clear that local topography is the determining element defining the five identified types of settlement: unenclosed villages and hamlets located along river valleys, on the upper terraces and at the bottom of the hills protected by steep slopes and dominant peaks (recognised to be the most numerous) (Type 1); promontory settlements (Type 2); settlements on islands (Type 3 – though these are less relevant here since none have been identified within the study area); and settlements from the uplands – whether of scattered (Type 4) or compact structure (Type 5). The study by Glodariu was focused primarily on analysis of the architecture rather than of the general settlement pattern, particularly of the higher status settlements which in general have been the focus of most research interest and, as a result, are best known. Yet, the value of his and especially Gheorghiu's work is that it recognises the importance of setting and topography for settlement location, even when availability of resources is seen only as a secondary concern, priority being given as a general rule to defence. Nonetheless, attributing purely military purpose to hillforts in general (or to stone towers) is an outdated approach. Most of them become foci of more extensive settlement outside and the distinction between hillforts and 'fortified settlements' is in most cases insufficient on the basis of the current level of information available. Excluding hillforts, along with the whole of the lowland settlement, makes this model incomplete.

Other typologies proposed by Nandris (1976, 732–3) and Lockyear (2004) are also incomplete or unsatisfactory. Nandris' typology (sites fortified with

murus dacicus[1] placed in strategic locations; domestic scattered settlements 'well dispersed among gardens and orchards, through partially cleared forest, along ridges or in valleys, or even on small platforms dug on the slopes'; upland dairying and herding sites; sanctuaries and ritual sites; industrial sites with metalworking and pottery activities) makes no mention of settlements located at low- and middle-range altitudes and does not fit the Dacian archaeological evidence other than in the Orastie Mountains. Lockyear (2004) applied a fundamental distinction between various types of settlements based on their defensive enclosure, covering undefended rural settlements (1) sites with non-*murus Dacicus* defences and fortresses (2) and, in a separate section, settlements in the Orastie Mountains and their associated sites (3) thus recognising the unique character of the Dacian occupation there. Indeed, since the area of Orastie Mountains seems to have been in many respects an exception within the Dacian landscape because it was developed to respond to exceptional activities, the extension of its typology to the rest of the territory would give a seriously distorted view of the Dacian settlement pattern. Nonetheless, it would also be wrong to ignore the settlements of the Orastie Mountains since they were derived from the more general Dacian settlement pattern, but just developed differently.

The presence of *murus Dacicus* enclosures and distinctive architecture as a means of identifying social status seems so far to have been the only preoccupation with settlement hierarchy. From the social point of view, however, it is important to deepen the analysis by considering settlements in direct relation to the occupants and their way of life, and to link the structure of the micro- (in-site) and macro- (landscape-scale) space to settlement function. The major problem with all the typologies presented above is that they all fail to employ a precise terminology, as 'settlement' is employed by Glodariu while 'site' is preferred by Nandris despite the fact that these terms are not synonymous. But even the term 'settlement' is ambiguous since it can cover a wide typological range. A crucial distinction needs to be made from the start based on the size of the community that needed to be accommodated by each type of site, between nucleated settlements (as sites that hosted several families of more or less equal position on a social macro-scale) and individual settlements (inhabited by one family with or without secondary members or associated individuals dependent on the

1 The so-called *murus Dacicus* is a special building technique consisting mainly of two revetments of ashlar blocks tied together by wooden crossbeams, the inner space infilled with stone rubble and earth. Special holes were dug transversely into the stones where these wooden beams were installed (see Glodariu 1983, Figure 12.2). The technique derives from that used in the Greek colonies on the Black Sea coast (Gheorghiu 2001, 132–41). The walls are usually about 2–3 metres (up to 4 metres, e.g. Luncani-Piatra Rosie) in width. As seen later in this chapter, as many as ten hillforts within the study area employed *murus dacicus* at least in part, but the technique was also used in the construction of terrace walls and tower-houses.

leading family). In addition, all of the attempted typologies are products of the site-focused traditional approach to research and as a result they fail to assess how the society as a whole and its diverse spheres of activity functioned within the landscape seen as a taskscape (Ingold 1993). The present analysis aims to explore these issues by addressing the social, economic, religious and administrative status and function of the sites, based on their layout along with their associated finds, but also on their setting both within the natural landscape and in relation to other sites.

4.1 Inhabiting the landscape

Traditionally, the most characteristic feature of the Iron Age settlement pattern in Continental Europe was considered to be the nucleated site, open at the beginning of the La Tene period and enclosed later (*oppida*); indeed, this site-focused attitude towards the archaeological evidence influenced even recent general studies (e.g. Cunliffe 1994; Wells 2001). Although, in fact, it has been observed before that there are very few large aggregated settlements and that many of the unenclosed Dacian settlements seem to have had a scattered layout, Dacia is considered to follow the same pattern of settlement. As a result, none of the typologies referred to above give any consideration to individual settlements. This characterisation provides a stark contrast to the British late Iron Age, for example, where aggregated (nucleated) settlements are apparently common only in south-eastern England, and the dominant type of settlement seems to be the smaller-scale enclosed farmstead (Haselgrove 1999, 2001).

However, wherever advanced field surveying techniques, especially aerial photography, or computerised methods of analysis have been applied, they have produced significant changes in perceptions of Iron Age settlement on the Continent. Already by the 1980s, Wightman (1985, 15–17) saw beyond the *oppida* and identified a more nuanced settlement pattern in Gallia Belgica, where small settlements of a few families constitute the norm, while small hillforts belonged to the social elite. The Gaulish farmstead, usually contained within a ditch system forming a double enclosure, with a ditch-lined entrance and sometimes fields and trackways has become familiar in the regional archaeological landscape since the introduction of aerial survey. In the same vein, recent landscape-focused studies have shown that the predominant 'rural'-agricultural form of settlement still seems to be the farmstead, with or without an enclosure, as for example in the l'Oise area in France (Gaudefroy *et al.* 2001). Aerial photographs show a widespread distribution in Continental Europe of enclosures of all dates, including the Iron Age, with morphological characteristics similar to those in Britain, as demonstrated by recent collaborative pan-European aerial archaeological projects (e.g. Oexle 1997). Although the present biases in British air survey is still, perhaps, to produce more morphological similarities between Britain and the continent in terms of open settlements.

Closer to the present study area on the middle Danube, the settlement pattern also used to be represented primarily by *oppida* (e.g. Velemszentvid, Szalacska, Pest), while other types of settlements have been largely supposed on the basis of the numerous cemeteries discovered, though without being precisely located (Trogmayer 1980). A recent field-survey programme in the Upper Tisa valley has identified 'thin sherd scatters' as small open settlements interpreted as hamlets or farmsteads recognised to be the norm there (http://ads.ahds.ac.uk/catalogue/resources.html?uppertisza_ba_2003 visited 6 December 2006). In this context, the apparent lack of such individual sites within the Dacian settlement pattern may be related to the traditional archaeological methods being applied. Even for known sites, non-systematic approaches to field walking and the excavation of limited areas stand little chance of indicating precisely the area occupied by a site, the presence or lack of an enclosure of some kind, the number of houses and ancillary structures or their layout within the site. Potential individual sites could, therefore, have failed to be recognised and some of the sporadic scatters of artefacts currently assessed as indicators of villages or hamlets may well represent individual homesteads/farms.

Assembling sufficient data to assess the nature and distribution of settlement in the mid-Mures valley and Tara Hategului in the late pre-Roman period is problematic. The way the identified sites have been reported varies a great deal, from those where extensive excavation projects have been in place or are ongoing, through those where excavation reports (interim or as monographs) have been produced, to those where vague reports of the accidental discovery of artefacts are the only indication of any archaeological significance. Moreover, the chronology of the reported sites is a problem and not all were necessarily contemporary. A broad date of 'Classic Dacian' is given to most sites, which is 'partly due to the unique problems facing Romanian coin data (p. 113), but is also due to a lack of quantified pottery studies and an insistence on dating archaeological phases to historical or pseudo-historical events such as the Dacian wars or the "creation of Burebista's state" ' (Lockyear 2004). The 'Classic Dacian' period normally refers to the last two centuries BC and the first century AD, but in numerous cases simply 'Dacian' or even 'La Tene' are considered to be a sufficient indication of the chronology in publications. A further tendency to establish site chronologies on artefactual evidence without reference to stratigraphy leaves the subsequent identifications open to question.

Some 146 settlements reported as La Tene/Dacian have been located in the area (Figure 4.1); in 72 other locations artefacts (mostly coins and hoards) have been discovered which give insufficient indication of a settlement there. The settlements have been interpreted as populated by communities of variable size from hamlets to villages, though in only a few settlements has evidence been produced of multiple houses and in most cases identification was based on artefactual evidence. For only 32 of them has any indication been provided of their extent even in the form of general comments, such

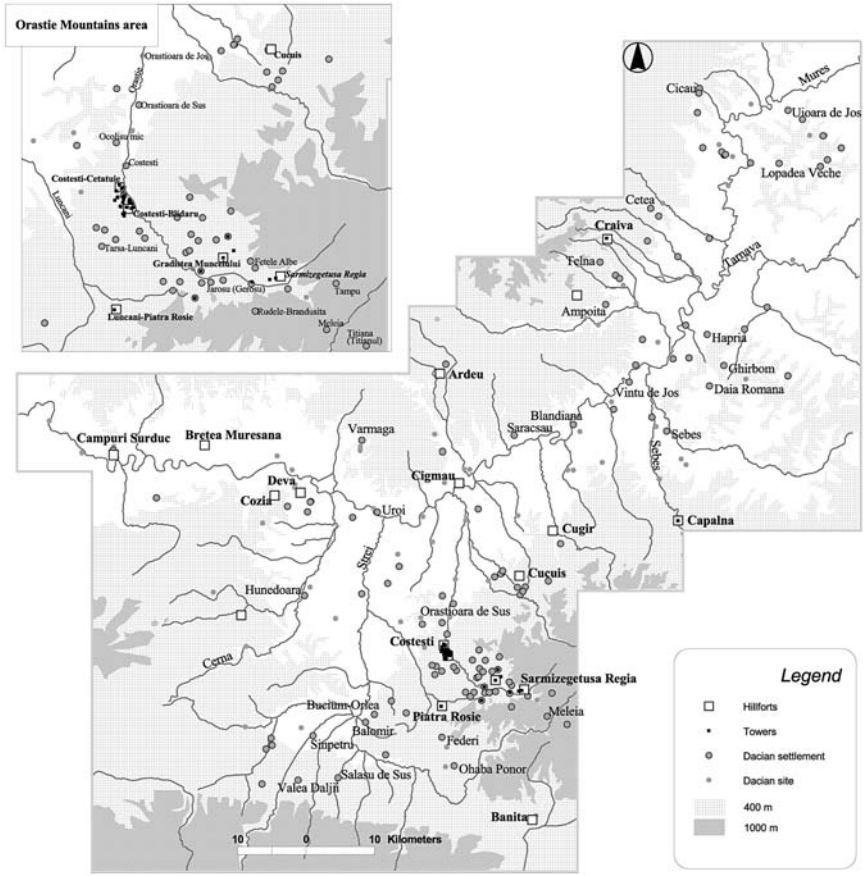

Figure 4.1 Distribution of pre-Roman settlement in central Dacia (the dense occupation along the Orastie Valley is shown in more detail).

as 'large' or 'small'. Some 10–12 of these sites could be considered of a size larger than an isolated farm, giving a total of 19 settlements deemed to have hosted larger communities, probably villages. Some 44–46 settlements could go into either category. On the basis of analogies with other areas in Iron Age Europe, such as Britain, Gaul and even Pannonia, these are more likely to represent individual homesteads than villages. On this basis, that would give no more than 20 aggregated settlements and some 80 individual settlements in the area in later prehistory. In cases such as Deva and Costesti, the larger settlements are in fact more scattered in nature, with individual homesteads spreading over a significant territory, and it is only their concentration in a particular area that supports their interpretation as a single settlement.

4.1.1 Villages

Villages are generally considered as the most common type within the Dacian settlement pattern. Nucleated settlements within the study area have been categorised, primarily according to the presence or absence of fortifications, into fortified settlements ('asezari fortificate') and open settlements ('asezari deschise'). The 'fortified settlements' have been distinguished from the hillforts by the fact that the fortified villages were inhabited by a larger community while the hillforts were interpreted as only for the use of a warlord with his garrison. But identifying such distinctions is in most cases problematic since research has been focused mainly on defences, and extensive excavation of the interior has been undertaken in extremely few cases in order to define internal structures. It is mostly the case that attempted definitions were based on the presence of *murus dacicus* enclosures. For example, the enclosed sites at Ardeu, Bretea Muresana (Figure 4.2) and at Cucuis (Golu hill) are all considered to be 'fortified villages' based on the few recovered internal characteristics and particularly on the lack of *murus Dacicus* enclosures, though this characteristic is largely confined to the Orastie Mountains. Moreover, most of the sites interpreted as hillforts

Figure 4.2 Aerial photograph showing the fortified site at Bretea Muresana largely destroyed by modern quarrying.

were centres of larger surrounding settlement, enough to justify their role as central places. For these reasons they are discussed in this chapter together.

It has already been appreciated that most of the villages were unenclosed (open) and their layout is considered to range from a nucleated (compact) to a scattered structure (Gheorghiu 2001, 91–3). Their distribution and architecture seem to be influenced by their location within the landscape. Accordingly, compact-layout settlements have been found in both the lowland and the upland regions, while scattered villages seem to have an upland distribution. Standard Dacian villages were made up of houses, ancillary buildings and additional structures. But the compact-layout villages at lower altitudes differ from those in the uplands. The lowland villages are agglomerations of pits and sunken houses. Glodariu (1983, 10–11) finds that there was a relationship between the geographical location and the depth of floor level in Dacian houses. Sunken floors (with all or most of the wall height below ground level, at depths exceeding 0.80–1 metre) and half-sunken floors (with half, or even most of the wall height built above ground level, the floor being only 0.20–0.50 metre deep) are by far the most common, largely characteristic of the plains and hills. They were usually rather small, averaging 3.50–4.50 by 3–3.50 metres. According to Glodariu (1983, 9–25) the chronological evolution of Dacian house types indicates a steady evolution towards raising the houses above the ground level from sunken to semi-sunken, and then to surface, post-hole structures. In the area between the houses numerous pits are located. Most commonly pits served for grain storage (as they had been in the area since early prehistory), also for clay extraction and dumping rubbish. These pits were large and quite distinctive in shape. Bucket-, funnel- or pear-shaped pits had diameters ranging from 0.80–1.25 metres at the surface and 1.30–2.50 metres at the bottom, and their depth ranging from 1 to 3 metres.

One such village was located at Sebes-Lancram immediately on the left side of river Sebes (Popa and Totoianu 2000; Ferencz and Ferencz 2001). A house and several pits excavated there among earlier similar features were dated to the first century BC. The house is a typical sunken house with its floor level 0.8–1 metre from the ancient ground level. Though partially damaged by soil erosion it probably had a rectangular plan and fairly large dimensions (some 6 metres in length). Wooden posts, a clay layer (floor?) and traces of burnt wood were recorded inside. Finds from the house and (mainly) pits consist of coarse hand-made pottery, including a large storage pot ('chiup') and two big jars, along with a 'Dacian mug' (Popa and Totoianu 2000, 55–6 and 78–2). However, among them were also found fragments of imported Greek pottery including two wheel-thrown black-polished pedestalled plates ('fructiere'), two kantharos-type vessels and a handle fragment of a red semi-fine imitation krater. Also, 'portable' heating installations have been documented inside the settlement (although of a slightly earlier date). A similar village of pits and sunken houses is supposed to have existed at Sebes-Podul Pripocului, just 3 kilometres away to the south-east on the left bank of the nearby

valley of the Secas river and another one might have existed much further north at Cicau-Saliste. However, in many of these villages only a few late Dacian features have been revealed and their identification as nucleated sites comes in the context of the earlier (Sebes-Lancram) or later (Cicau-Saliste) occupation and is based on analogy with better-known examples such as Slimnic (pre-Roman and Daco-Roman) or Obreja (Daco-Roman).

The village at Vintu de Jos lies only 50 metres away from the river Mures, 4 kilometres west of its confluence with the Sebes, on a naturally raised edge of the first terrace (Figures 5.10 and 5.11). The archaeological gazetteer reports the presence of scattered ceramic finds of multiple-period (Bronze Age, Dacian and Roman) in this location spread over a considerable area (Moga and Ciugudean 1995, 207), and based on this data Gheorghiu (2001) interpreted the settlement as a late Iron Age village. Recent aerial photographs of 2000 and 2003 revealed the plan of a settlement with sunken houses and storage pits, immediately adjacent to a Roman villa spread over an area of 14,800 square metres (Hanson and Oltean 2003; Oltean 2004; Oltean and Hanson forthcoming b). Although the features need not all be contemporary, the evidence is enough to offer the most complete plan of a nucleated late Iron Age village of the lowlands. Detailed examination of the photographs revealed some 142 pits and a ditch on a WNW–ESE alignment running through the middle of the site (124 metres long and a gap of 4.50 metres) (Figure 5.11). Previous comparative studies have indicated that reasonable interpretative estimations can be made based solely on the size and shape of the features (Doneus *et al.* 2002). At Vintu de Jos the size and shape of the identified pits is variable and at least 37 of them are sufficiently large to be interpreted as prehistoric houses on the basis of their shape, which seems to evolve from oval/circular towards rectangular and trapezoidal with rounded corners. With few variations they seem to be oriented on a NW–SE alignment. The morphology of the houses indicates the possibility of at least two independent phases of occupation which could be dated within the late Dacian and continuing into the Roman period. Indeed, excavations in 2005 revealed in two of the houses the presence of Dacian material (with a type of pottery assumed to end at the Roman conquest) mixed with Roman artefacts including brooches and figured pottery produced in the nearby centre at *Apulum* (http://www.cimec.ro/scripts/arh/cronica/detaliu.asp?k=3548 visited 6 December 2006). Multiple-date occupation does not occur solely at Vintu de Jos. While Sebes-Lancram was occupied at least in the mid- and late La Tene, Sebes-Podul Pripocului is a multi-period tell where the same location was occupied from early prehistory throughout the middle and late Dacian period and continued after the Roman occupation (Moga and Ciugudean 1995, 167). Finally, Cicau-Saliste also continued into the Roman period. Within the area partially investigated between 1969 and 1973 the village evolved from semi-sunken houses in its first phase to surface timber houses.

It is generally believed that the location of the houses within the settlement does not demonstrate adherence to any systematic rules. Glodariu (1983,

44–5) argues that at least concern for safety against intruders would have been a factor. This is based on the tendency of earlier features to be located towards the more secure parts of the settlement, such as in the vicinity of the hill-slope in open settlements in the narrow valleys, or towards the tip of the promontory in defended promontory-type settlements. However, the layout of the village at Vintu de Jos indicates a possible sub-division in small clusters of approximately seven houses, which may be confirmed by detailed dating of features by the ongoing excavation there.

Given its better survival over time linked to less intensive agricultural land use, Dacian settlement is much better documented in the uplands. Unlike the lowland settlements, the upland sites consist primarily of surface-built structures, serving as both houses and ancillary buildings. They were sometimes built on raised platforms and more often on anthropic terraces on the slopes of the mountains (Figure 4.3). A few settlements have been related to the presence of numerous terraces clustered together, which determined their interpretation as compact upland villages. The settlement on the Gradiste hill at Gradistea Muncelului (*Sarmizegetusa Regia* – discussed later with reference to the hillfort) is the largest in the Orastie Mountains. Its inhabited areas consist of a series of over 100 terraces each normally housing one homestead comprising the house and an ancillary building with a storage function for both tools and foodstuffs. The settlement from Fetele Albe north-west of

Figure 4.3 Aerial photograph of man-made platforms/terraces in the Gradistea Muncelului area, probably late Iron Age in date.

Gradiste Hill spread over 30 terraces. Excavations within uncovered several buildings constructed on five variable-sized terraces supported by stone walls (*murus Dacicus*) with occupation in two different phases. Further away to the north-west along the valley, the settlement at Fata Cetei consists of about 40–50 artificial terraces, some of them as long as 100–150 metres, but in the absence of more detailed research no other details are known. Early sources intimate the presence of an associated fortified site in the vicinity, but it has not yet been located. Gheorghiu (2001, 85) thinks a possible reason for the emergence of a large settlement in that location could be the presence of iron sources nearby. However, terracing is a widespread and long-lived tradition in the Orastie Mountains (Figure 2.3) and simply identifying terraces does not automatically indicate Dacian occupation there.

The houses were built on a circular/oval or rectangular/trapezoidal plan (Figure 4.4). The most basic houses are rectangular and single-roomed, with the walls supported by ground-fast wooden posts in often stone-packed post-holes, though a few examples (Gradistea Muncelului) had two or three rooms. The polygonal examples noted in the Orastie Mountains, where they were very popular (Glodariu 1983, 11), seem to be circular structures with a roof supported by a central post, their polygonal plan determined by the positioning of posts in the structure of the walls. At Fetele Albe, a typical compact upland village, those house plans that could be determined (for the later phases of occupation) seem to display the same circular shape with two or three concentric cells. The outer (most often the third) cell is normally interpreted as a partially open space (porch or outer porticus) as indicated by the discontinuous circle of stone wall and timber posts, contrasting with the solid continuous base of the timber walls of the inner room(s) (Gheorghiu 2001, 71–2). The open hearth was the main feature for heating and cooking purposes; in this settlement they tend to be located within the central room, which is often rectangular and provided with an apse. Most of the artefacts tend to be found in the second (middle) room and consist of various pots (many with ceramic lids – for cooking or for storage), along with tools, utensils, even imported goods (e.g. a bronze handle of a patera from the *officina* of Ansius Diodorus). The houses were accompanied by ancillary dwellings (as e.g. on terrace no. V), mostly 'granaries'. These timber and wattle structures were probably used to store grain in areas with harder geology where pits were impractical, along with large storage pots ('chiup') with conical-shaped bodies. The granaries at Fetele Albe were rectangular timber structures raised on stone slabs with gaps to provide air circulation underneath. There are numerous indications that the settlement was more complex and could have been of a wider importance within the settlement pattern. Communal facilities included a water supply network similar to the one present in the main settlement on the Gradiste hill; the provision of an open space that could be used for assemblies (terrace no. IV); and sanctuaries on two terraces supported with *murus Dacicus*. A pottery kiln with a holed grate demonstrates pottery production on site and finds, such as a deposit

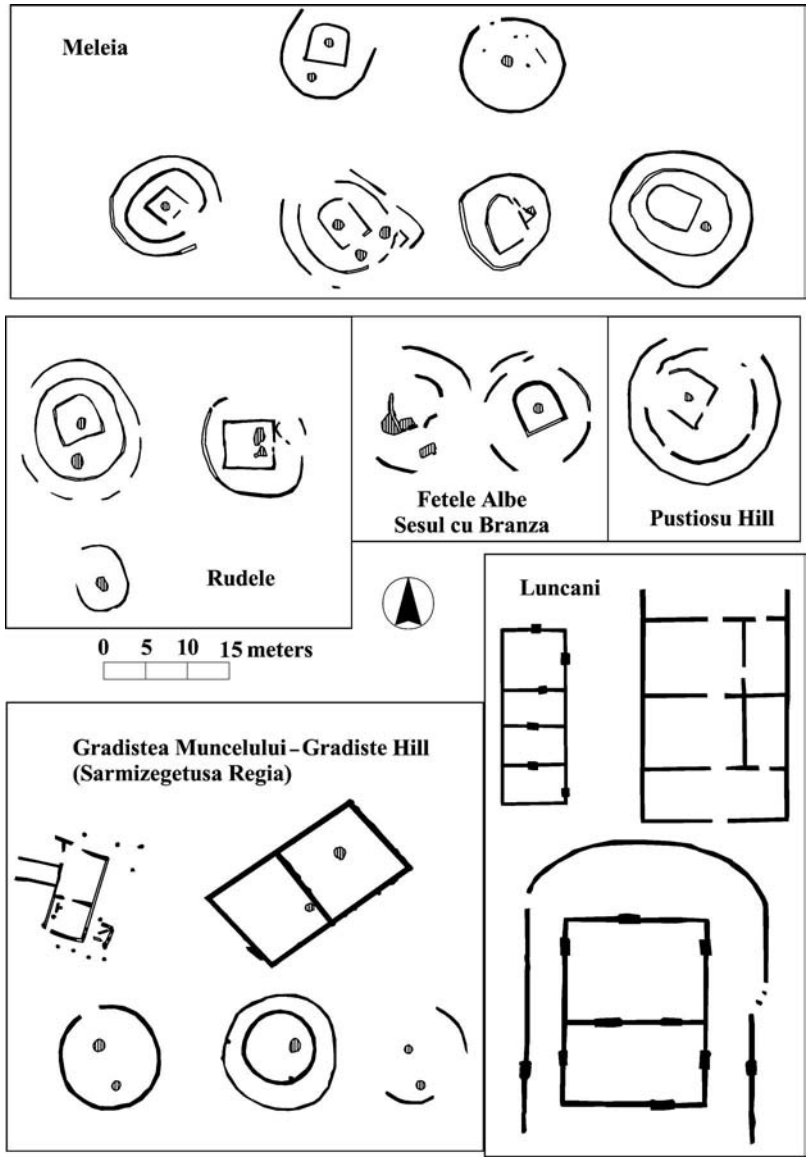

Figure 4.4 Dacian house plans in upland settlements.

of iron tools and both indigenous painted and imported pottery, add to the complex character and importance of the settlement at Fetele Albe which may have been similar in character to *Sarmizegetusa Regia*.

Outside the Orastie Mountains, a small agglomeration of houses was located at Cozia (Piatra Coziei hill**,** altitude 686 metres) west of Deva,

between the modern villages of Cozia and Herepeia. Traces of surface buildings accompanied by hearths were found on five man-made terraces facing south-east, but no other details of these structures were provided. The size of the settlement, as indicated by the number of terraces identified so far, is somewhat closer to some of the small clusters of occupation such as Rudele-Brandusita. The site was interpreted by Glodariu (1983, 95) as a fortification of exclusively strategic significance possibly because of its topographically remote and less accessible location, since no mention is made of any provision of an enclosure or defences. The usual finds (dated first century BC–first century AD) of hand-made and wheel-thrown Dacian pottery are accompanied by fine (including painted) pottery, iron tools (hooks) and weapons, fragments of millstone and parts from a bronze weighing scale, and seem to support an occupation of more permanent and civilian character. This is reinforced by the limited details provided of internal features and the overall structure. The finds clearly indicate the presence of something other than a small, lower-class community, but the lack of stone architecture (*murus Dacicus* enclosure or tower-houses) precludes interpretation of the site as a warrior elite residence. Similar types of luxury goods are present also in the settlement at Cetea, including painted pottery and imported goods (even amphorae, which are very rare in Transylvania), weapons and tools (including an anvil), which could indicate a settlement of equal significance to Piatra Coziei, though lacking the same topographic setting.

The andesite quarries located nearby (between Cozia and Deva) provided building material for the grandiose religious architecture at Gradistea Muncelului–Gradiste hill. Aerial reconnaissance has identified the extant remains of another settlement of yet unknown date at the foot of the andesite quarry located at Cozia just to the east of the modern village. Several small enclosures (one of them better defined on the lower plateau is rectangular in shape with dimensions of 5.40 by 4.20 metres) are visible (Figure 5.23), but the information is insufficient to support a late prehistoric/Dacian origin. A larger, circular feature of some 20 metres in diameter, however, is more reminiscent of Dacian structures described in this chapter. It occupies the upper part of a small mound, which is bordered by apparent stone slabs or blocks. In the interior at least one smaller rectangular platform is visible, which was levelled prior to construction. This feature would probably fit better in a different category as an individual homestead, but if the settlement also included some of the surrounding features, it could represent an aggregated settlement in the mountains.

More often, however, settlement showed less concern for agglomeration in both upland and lowland areas, which could indicate that scattered settlement was the predominant pattern in late pre-Roman times. The problem arises in defining the original extent of the communities. On Meleia, Rudele and Tampu hills in the Gradistea Muncelului area, a certain level of nucleation is apparent as several homesteads clustered together. Such clusters were located quite close together on the same mountain, which provides a reasonable

argument for considering their occupants as more likely to have had a greater sense of belonging to the same community. Meleia had 7–8 small terraces with apparent mounds or platforms, with usually 8–12 structures in each group, and a small plateau with 17. It was estimated that the whole settlement had as many as 37 individual buildings, although excavation has indicated that not all of them functioned at the same time. The terraces with traces of early occupation were abandoned and the settlement seems to have moved onto the larger plateau; also, two houses from the plateau were demolished and replaced by three others. Over time eight mounds have been excavated (see details on the history of research there in Lockyear 2004). The settlement on top of Rudele hill, south of Gradistea Muncelului, was divided into four small scattered clusters. In one of them at 'Brandusita' four of the five raised platforms (10–26 metres in diameter and 0.5–1.2 metres high) have been excavated. A site that so far has benefited from considerably less attention is on Tampu hill, also in the Gradistea Muncelului area (Glodariu *et al.* 1996, 155–6). It consists of two nuclei, one 200–250 metres to the east and the other 150–200 metres to the south-east of the lower of the two peaks of the hill. The first area of settlement is indicated only by sporadic traces, consisting of black coarse ceramics and charcoal. The second area is more visible as three to four platforms or mounds (15–20 metres in diameter and 1 metre in height), and trial excavation in one of them produced material of similar nature to that from the first area. The chronology of these settlements indicates a late pre-Roman occupation (first century BC to first century AD), ending in a few cases in abandonment (as on the terraces of Meleia). Some of them were burnt down, some still with quite a rich finds assemblage inside, perhaps indicative of a violent end (Gheorghiu 2001, 119). Traditionally, in Romanian archaeology a violent end of occupation connected to the Roman conquest is supposed for any example of a fired site of this period. But even though repeated fire episodes are attested in some cases, it is unlikely that they were all related solely to these military events, and the possibility of the short-lived reconstruction of the buildings between AD 102 and 105, which has been advanced on the basis of such arguments, needs to be re-addressed.

Excavations at both Meleia and Rudele, despite being not very extensive, produced more detailed data. With the exception of one rectangular building internally sub-divided into three cells found at Meleia on terrace VIII, the buildings had a circular, concentric layout (similar to buildings at *Sarmizegetusa Regia* or Fetele Albe), reaching up to 13–15 metres in diameter (Figure 4.4). With the third, semi-opened room present only in few cases, the second room occupies most of the inner area (Glodariu *et al.* 1996, 214–16). The roof is supposed to have been made of wooden shingles, although iron nails are a rare occurrence (only two of the structures at Meleia show clear evidence of iron building materials such as nails and hinges; Lockyear 2004). The floors were usually made of clay with one exception at Meleia where one of the houses had the flooring of the central cell in timber (Glodariu *et al.* 1996, 213–14). The possible function of the settlements and of their

buildings has raised many questions. The known data from Tampu hill is insufficient to provide the basis for a detailed interpretation of the site, but its layout seems to indicate that it was of a similar nature to that of Meleia and Rudele. Meleia was by far the richest site in finds, although the concentration was higher in the area of late occupation (another possible argument for the voluntary abandonment of the terraces). In the plateau settlement, the pottery evidence included several types of vessels, most of them for storage (of several dimensions) of solids, possibly cereals – wheat and millet – ('chiup', krater-type, jars, bowls), and liquids (jugs, mugs). A type of vessel without a bottom and surrounded by a wide 'collar'-ring at a third of its height, whose function is unknown, is specially mentioned. Meleia also had evidence of painted pottery coming from three houses on the plateau. Ceramic tools used in pottery production for polishing and spindles indicate some domestic craft production, while whetstones and millstones are among the tools used by the inhabitants. But the presence of iron slag in three of the excavated buildings, and of sledge hammers and tongs in one building, suggests metallurgical activity perhaps on a larger scale than just 'domestic'. Interestingly, a few weapons were also noted among the discoveries. At Rudele, the large quantities of pottery did not include painted pottery, but the presence of several polishing tools is perhaps an indicator of on-site pottery production, and the presence of iron slag might indicate also metallurgical activity. Other finds included a range of iron tools (sickle, file, tongs, hammer, chisel) (Glodariu *et al.* 1996, 214–16).

The finds evidence, especially for Meleia, is puzzling and does not fit with any of the interpretations offered so far. Because it is located at an altitude of over 1,300 metres, where modern settlement consists of only occasional seasonal (summer) accommodation for flocks and their shepherds, or hay fields, the expectation from the beginning was that the prehistoric settlement would have had a similar character and pattern (hence Daicoviciu's interpretation as 'stane' – see Lockyear 2004). The seasonal character of this occupation is still asserted, on the basis of a lack of evidence of hearths (in a few buildings) and of daub insulation of the walls, both considered a necessity for continuous occupation all year round (Glodariu 1983, 23–4). But the quantity and variety of finds in these settlements suggests a more permanent occupation. 'Portable' heating installations of the type documented in the settlement at Sebes-Lancram could have replaced the missing hearths, and alternative means of insulation for timber walls (e.g. skins, blankets) may also have been used. Alternatively, these particular buildings may simply have been used for storage. Pastoral farming being rejected on the basis of the finds evidence, especially of large quantities of pottery, including fine and even painted ware (Gheorghiu 2001, 107–9), the economy was re-interpreted as largely focused on a workshop-based iron production (Glodariu and Iaroslavschi 1979) using the natural iron ores found on Strambu hill (in the vicinity of Rudele), at Tampu, in the Petrosu river valley, or at Batrana, Mlacilor hill and Negru peak. This provides a bold contrast with Sanie's

(1995, 27) interpretation of some of the buildings (that from terrace II at Meleia and building three from Rudele) as sanctuaries based on the similarity of plan with early sanctuaries from Dacian sites. The general resemblance between this type of house and early buildings with a religious purpose is not surprising as the latter would probably have evolved as a special type from the former (Lockyear 2004). A commonplace of these theories is that they all support the view that the sites represent a specialised settlement of some sort, whether related to animal husbandry, iron production or, indeed, a religious purpose (monastic communities?). A so far unexplored argument against their being seasonal shepherd settlements is that no evidence of animal enclosures related to the houses has yet been found. Similarly, as Lockyear has already noted (2004, 51–5), their interpretation as iron working centres still leaves open questions as to 'why they were not situated actually at those deposits, and why no trace of furnaces has been found'. Therefore, since no single – function seems to fit the whole evidence, a multiple function for these nucleated upland sites seems more likely, and possibly none of the functions supposed so far is yet to be excluded.

Possible small clustered settlements have been identified in other locations in the same area. The remains of three Dacian homesteads together with large quantities of pottery, a fragment of a volcanic stone (tufa) millstone and a fragment of a limestone ashlar block have been found between the sources of the Rea and Vartoapelor streams (Gheorghiu 2001, 206). Also, an unspecified number of terraces were located on the slope of Pustiosu hill facing Gradistea stream (Gheorghiu 2005, 60). On one of them a small-scale excavation revealed a circular Dacian house with three concentric rooms (Figure 4.4). Finds were quite rich and consisted of various ceramic fragments and iron tools and construction fittings (e.g. nails). Nearby, on a plateau on the top of the hill, fragments of red large storage pots ('chiupuri') were discovered. On another hill, Gerosu, four similar terraces have been found with traces of occupation indicating a small cluster of similar homesteads, while Muncelului and Popii hills are covered at various points with the remains of scattered Dacian settlement (Gheorghiu 2001, 69–70). This type of habitat extended wider than the upland areas. At Orastioara de Jos – 'La Feregari', trial excavation on three circular raised platforms with dimensions ranging between 15.70 and 26 metres by 15.10 – 20 metres produced Dacian pottery, burnt daub and iron slag from a small group of Dacian homesteads with a range of economic activities that included also iron production of uncertain scale.

4.1.2 Individual homesteads (farms)

From all accounts of the villages presented above, the individual homesteads seem to have constituted the base of the Dacian settlement hierarchy. Until now only six settlements have been recognised as, or assumed to be, individual homesteads. To this number we could add with reasonable certainty a

further 13–15 settlements where, although the specific type of settlement has not been identified, a small area of occupation was noted. We do not know much about such examples, given the fact that their characteristics would make them extremely difficult to detect by the type of survey applied in the area, and that they are extremely exposed to destruction by later human activity. Therefore, identified examples tend to be located at higher altitudes where site survival is best. Whenever excavation has enabled the recovery of plans, it seems that the types of houses used were similar to those discovered in aggregated settlements, preserving the same dichotomy of sunken against surface-built architecture determined by the landscape. One example is at Gradistea Muncelului–Valea Rea, where a Dacian homestead and one ancillary building probably used for storage, both destroyed by fire, have been discovered on two artificial terraces. The artefactual evidence produced pottery of late date, along with iron nails and fittings used in construction, including parts of a door lock and its key. A Dacian house with evidence of daub construction, and a further similar example within a palisaded enclosure, have been partially excavated at Tarsa on Voineagul and Gerosul hills. The latter provided evidence for other constructions located at various distances outside the enclosure and, therefore, might belong to a small nucleated settlement (Gheorghiu 2001, 199). Another possible similar structure is supposed in the vicinity at Tarsa – 'Varful Strain'. Elsewhere, one homestead comprising a surface house provided with a hearth and two storage pits was discovered during modern road works at Ardeu. It was located outside the area supposedly enclosed on the Cetateaua Hill at a lower altitude and, until future research confirms traces of more extensive external settlement, it is safe to consider it as no more than an individual homestead. A late (La Tene III) Dacian house of unknown shape or size (at least 2 metres by 0.40 metre) from Saracsau was probably built of wattle and daub. Surprisingly for a presumed lower-status settlement, it had hidden under its floor eight brooches (four large and four small), one brooch pin, three necklaces, four bracelets and six finger rings of silver in a ceramic pot (Moga and Ciugudean 1995, 164). Finally, a Dacian sunken house with an inventory of Dacian and Celtic (?) ceramics, one glass bead and an iron arrowhead has been noted also at Vintu de Jos as a chance discovery without indications of a further settlement.

According to the typology proposed by Gheorghiu (2001) the settlements from the upland areas without a compact structure consisted of scattered isolated homesteads (farms). Such examples are to be found in the large area between Costesti and Gradistea Muncelului, Luncani, Gura Cutului and Cucuis. This type, consisting of very large areas occupied by scattered individual homesteads, is difficult to define other than as a mini-landscape. The predominance of scattered settlements in the uplands could be related to the better survival of the sites. The limits of these geographical areas are, at the moment, defined in relation to the location of sites within the boundaries of one modern settlement or another. But the distances between the different

points of discovery within these areas are variable, sometimes a few kilometres, and any ties binding the multiple individual entities (homesteads) into a community are impossible to define. It is safer, therefore, to consider these sites as individual farms and the identified areas as surviving examples of land use and settlement within the late Iron Age. Accordingly, other possible homesteads could be indicated in several other locations. At Orastioara de Sus-'Carpinis', in the vicinity of the Roman fort, a raised terrace or platform some 60 by 78 metres in extent, with evidence of burnt materials and Dacian pottery fragments, could have hosted such an individual farmstead, perhaps extending into the area of a neighbouring plateau (Gheorghiu 2001, 177). In the Gradistea Muncelului area at 'Curmatura Comarnicelului', two terraces are located near the top of the hill, covered in dense vegetation, with traces of settlement (towers or houses) (Gheorghiu 2001, 208). At Aninesului hill, two terraces with traces of Dacian occupation could testify to another settlement of this type (Gheorghiu 2001, 207). Other traces of one building were noted at Sub Cununi, while at Valea lui Brad the remains of a two-roomed timber construction with stone foundations were discovered, along with a large quantity of fragmentary pottery, especially large storage vessels, which seem to indicate an ancillary storage building of an individual homestead (Gheorghiu 2001, 191). Finally, at Cioaca cu Frasini remains of Dacian pottery and burnt layers could indicate another small domestic dwelling (Gheorghiu 2001, 206). Further homesteads might have been located in places with possible workshops, but without any indications of a larger settlement, such as at Balomir, Federi, Ohaba Ponor, Sinpetru, possibly Cetea and Gradistea Muncelului – Gura Tampului. Finally, two inhabited caves with Dacian material were discovered at Federi (Coasta Vacii and Gura Cocosului), but the character of occupation has not been established precisely. They are, however, more likely to have been inhabited by a smaller rather than a larger community, perhaps as seasonal or temporary shelters.

4.1.3 Tower-houses

Towers have traditionally been considered as parts of defensive systems (e.g. Glodariu *et al.* 1996; Gheorghiu 2005) and readers familiar with Dacian archaeology might be surprised to find them included here. However, in the very few cases where towers were located within hillforts, their potential as accommodation for the elite members of Dacian society (garrison commanders) has been fully recognised. While Blidaru, Capalna and probably Ardeu (Bodo and Ferencz 2004, 150) had one example, the hillfort at Costesti-Cetatuie had two (a case replicated elsewhere in Dacia only at Tilisca). Also, the tower-houses inside the hillfort at Costesti-Cetatuie (Figure 4.5) are the largest, one measuring 17.50 by 13.20 metres and the second 13.60 by 13 metres. The square tower-houses inside the hillfort at Costesti-Blidaru (Figure 4.6) and the one at Capalna were considerably smaller in dimension, 7.60 and 9.50 metres, respectively. The building

Figure 4.5 Aerial photograph of the hillfort at Costesti-Cetatuie.

Figure 4.6 Aerial photograph of the hillfort at Costesti-Blidaru.

technique of the known examples is unitary, with minor variations. Glodariu (1983, 27–9) estimates that they were all built in Hellenistic wall or *murus Dacicus* techniques up to a height of about 2 metres at which point the wall was probably continued in brick bonded with clay to a possible height of 5–6 metres. The use of *murus Dacicus* severely restrained the internal area of the lower level to 12.50 by 8.20 metres and 8.60 by 8 metres in the larger towers at Costesti-Cetatuie. Roofing was sometimes made of tiles (e.g. Costesti-Cetatuie), but more often wooden shingles (e.g. Capalna). Access to the upper storey was achieved by either external stone stairs, like in tower no. 1 at Costesti-Cetatuie, or perhaps by internal wooden stairs. However, no structural features have been discovered inside, whether from stairs or from posts, so it is thought that the upper end of the stone wall would have supported the flooring of the upper storey (e.g. at Capalna, where special holes to support the timbers were dug into the stones of the upper row). Excavation has revealed significant archaeological material in the lower room, which would have been used primarily for storage (Glodariu 1983, 27–9). The origin of these buildings is uncertain. So far they constitute the only type of building in pre-Roman Dacia provided with an upper storey one exception is the circular timber house from the civilian settlement at Gradistea Muncelului–Dealul Gradistii, famous for the discovery of a large storage vessel ('chiup') stamped around its rim with the name of the last king (p. 92), where the dimensions of the collapsed walls indicate the possibility of two storeys (Glodariu *et al.* 1996, 98–9; Gheorghiu 2005, Figure 34b).

Similar structures with stone walls (Hellenistic wall or *murus Dacicus*) have been located in the area around these hillfort sites, especially in the Orastie Mountains (primarily Costesti-Cetatuie and Costesti-Blidaru, at Luncani-Piatra Rosie, in the wide area around Gradistea Muncelului), but also elsewhere at Craiva-Piatra Craivii. Some are located only a short distance away, while others have been found in more remote locations. Their location in dominant positions, their special building technique and, no doubt, the general tendency to consider defense as a primary concern of the Dacians resulted in their previous interpretation as defensive structures (watchtowers). Most of them were subjected to surface survey only and, therefore, could not provide ultimate proof as to their character, but a few have been excavated (e.g. Costesti-'Poiana Pertii' and 'La Vami') and the results revealed sufficient morphological resemblance to hillfort tower-houses to argue in favour of a similar function. Much like the latter, the plan of these constructions is square or rectangular, with sides of some 8–15 metres. The construction technique is similar to that used for the tower-houses located within hillforts: a combination of a *murus Dacicus* base and ground floor and upper storey of timber (Costesti-Faeragu) or brick, with some evidence of plaster or daub. Minor architectural variations include the use of roof tiles instead of shingles and timber walls for the upper storey (Gheorghiu 2001, Figures 59.2, 59.3 and 60, 2005, 118). Furthermore, the examples of watchtowers found within hillforts are wooden four-posted, roofed structures very different from the

stone towers. Therefore, despite being described as elements of the defensive–surveillance system, three of the four towers identified by surface survey along the access route to the main settlement on Gradiste hill (one 800 metres from the bottom of the slope, a second a further 1,500 metres away and the third within the civil settlement itself, just 100 metres west of the 'Tau' area) are possible examples of this category of residential sites. Only the fourth timber-built example, located in the valley at the beginning of the path towards the settlement, is in any way analogous with the watchtowers from Capalna and Banita (p. 87).

One of the strongest arguments against a purely defensive purpose for the stone towers is that in a considerable number of cases there were adjacent structures indicating more extensive ancillary settlement. If the stone towers had a military role, such ancillary buildings would have proved a hindrance to effective defence and the presence of short-term, perhaps only occasional, garrisons would have been less conducive to the emergence of some kind of civilian settlement outside. Yet, most of the known examples show traces of external occupation, as for example, in the Costesti area at 'Ciocuta', 'Cetatuia Inalta', 'Poiana Popii', 'Poiana Pertii', 'Muchea Chisetoarei', 'Muchea lui Todirici', 'Platoul-', and 'Curmatura Faeragului' and also perhaps at 'Curmatura Tocaciului'. Further examples have been found in the area of Gradistea Muncelului, as on Gradiste hill itself (the tower near Tau which is effectively within the main settlement), Magureanului Hill, Aninesu-Garbovu confluence, Aninesul Hill 'Lunca Nastii' Cocos Hill and possibly at 'Varful lui Hulpe'. In some of these cases, the existence of an outer associated settlement is indicated by terracing works, as at Costesti – 'Muchea Chisetoarei' and 'Muchea lui Todirici' (Gheorghiu 2001, 65). Artefactual evidence, mainly pottery can also be present, along with daub or plaster, ash or burnt layers as at Costesti – 'Poiana Pertii' and at Gradistea Muncelului, specifically on Magureanului Hill, at Aninesu-Garbovu confluence and on the Aninesul Hill. At Costesti–'Cetatuia Inalta', traces of iron slag have been found associated with the remains of at least one tower, indicating metallurgical activity, possibly in a workshop of the first century BC–first century AD. At least one settlement around the tower at Costesti–Faeragu seems to have been quite elaborate, with the provision of an aqueduct supplying water through ceramic pipes and a road still preserved, but this could be the result of its proximity to the Costesti-Blidaru hillfort. That said, not all of the towers have produced evidence of external settlement. No traces have been discovered in the immediate vicinity of some towers attested in the Costesti area ('Poiana Chisetoarei', 'Paraul lui Todirici', 'Sesul Ciorii' and 'La Vami'), at Gradistea Muncelului (*Sarmizegetusa Regia*, for two out of the three mentioned and 'Fata Pustaiosului') and at Tarsa ('Terasa lui Mihu').

The placement of settlements on dominant positions in prehistory does not necessarily indicate exploitation of the defensive attributes of the topography. Simple display of social status is considered more and more to be the reason for such locations and for the architectural monumentality of hillforts

(e.g. Hamilton and Manley 2001). The same is accepted, for example, in the case of Scottish brochs or duns (Parker Pearson *et al.* 2001, 127); although geographically remote from Dacia, their importance for this study lies in their function as an architectural reflection of the social attitudes of the elite. A similar expression was argued by Trump (1991) for the Sardinian *nuraghi*. From this perspective, both the brochs or duns and the *nuraghi* provide a reasonable analogy for the Dacian tower-houses. The fact that in some cases brochs or duns form the nuclei for a surrounding village settlement provides a further analogy with the Dacian towers (Parker Pearson *et al.* 2001, 133). In the same vein, the use of the *murus Dacicus* itself is believed to be an indicator of social status (Lockyear 2004).

Putting these various factors together, the character of the towers is interpreted here as more likely to be residential than defensive, and they should be seen as elite houses with a certain degree of status display. It is clear that they constitute a type of settlement with higher social significance and more complex functions than the villages and the individual homesteads, superseded only by hillforts.

4.1.4 Fortified sites: hillforts and 'fortified settlements'

The fortified sites of late Iron Age date – hillforts and fortified villages – have traditionally benefited from most archaeological attention, since they are the most striking feature within Dacian archaeology, as they probably were within the pre-Roman settlement pattern. Unfortunately, they have usually been approached from an exclusively politico-strategic perspective to the detriment of analysis of their politico-administrative or economic functions as parts of a general settlement pattern (Glodariu 1983; Gheorghiu 2001). Since both the hillforts and the fortified villages are similar in size and location, the boundary between the two categories, admitted to be very faint, has previously been established in terms of their internal structure. Glodariu (1983, 50) defines the 'fortified settlement' as a type of fortification which permanently hosts the population of a village, while the hillfort/citadel is the fortification located in the vicinity of one or several villages, intended exclusively for the permanent use of a (political/military) leader and provided with a garrison. He identifies a third type of fortified site, also of exclusively military-strategic purpose, where the occupation was only temporary. On the basis of this scheme of interpretation, sites like *Sarmizegetusa Regia*, Varful lui Hulpe, Costesti-Cetatuie and -Blidaru, Luncani-Piatra Rosie (Figure 4.7) or Banita in the Orastie Mountains and elsewhere, Deva (Figure 4.8), Cugir (Figure 4.9), Capalna (Figure 4.10), Craiva and, according to Gheorghiu 2001, other possible examples at Govajdia and Remetea, along with fortified settlements (Cucuis, Bretea Muresana, Ardeu) and even some of the supposedly temporary fortifications of exclusively strategic purpose (Campuri Surduc-La Manastire; Cozia-Piatra Coziei). Unfortunately, the identification of sites within one category or another is not always convincing, as

Figure 4.7 Aerial photograph of the Piatra Rosie hill at Luncani; the small enclosure of the hillfort is located on the cleared top of the hill, while the larger enclosure lies under the trees.

either not enough research has been carried out, or the site survival (as a result of medieval/modern occupation or modern/ongoing damage through quarrying – see Ardeu-Cetateaua and Bretea Muresana) is not sufficient to support such a conclusion. For example, at Cugir (Figure 4.9) contradictory opinions have been expressed over the nature of the site, as military (Glodariu 1983, 96) or as a fortified settlement (*dava*) (Moga and Ciugudean 1995, 87–8). The nature of the houses, of the usual sunken or surface type, lends support to the latter identification and, had there not been evidence of rich burials to indicate the presence of the elite, probably this site would have been classified as a fortified settlement. Therefore, although architectural differences are undeniable, such definitive differentiation of site function on this basis seems excessive.

Similarly, although evidence of *murus Dacicus* enclosures indicates certain social status, this need not be an indicator for assessments of the character of site occupation (as temporary or permanent); nor, indeed, should the so-far documented 'partial enclosures' be more than just apparent. In the Hallstatt period ditches reach 9 metres in width (e.g. Subcetate), but most

Figure 4.8 Aerial photograph of the citadel hill at Deva.

Figure 4.9 Aerial photograph of the hillfort at Cugir.

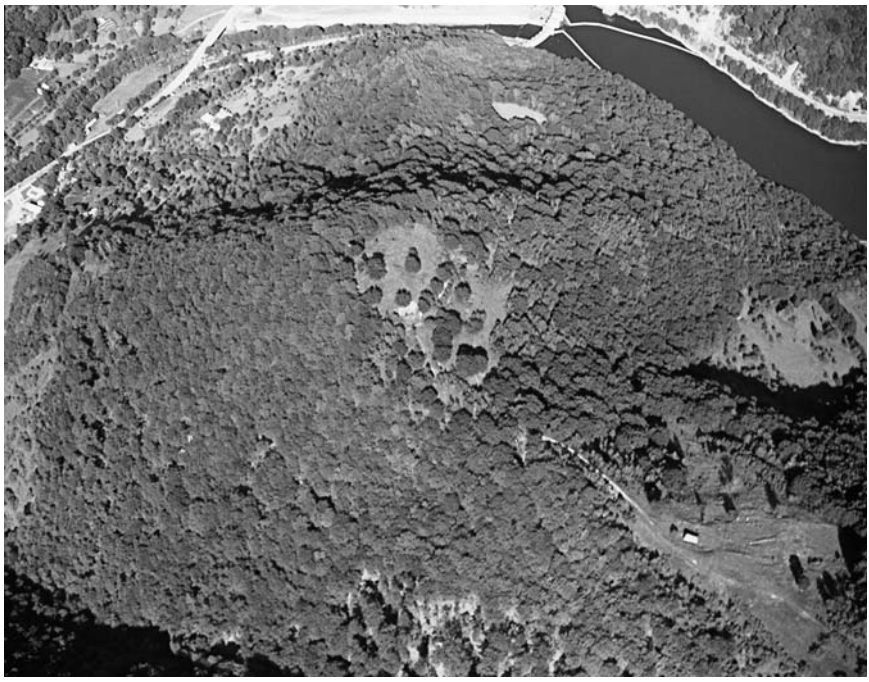

Figure 4.10 Near vertical aerial photograph of the hillfort at Capalna and its surroundings; the hillfort is located on the cleared and flattened top of the hill, with one tower visible in the centre of the photograph.

often they were between 3 and 6.5 metres, with a depth of up to 4 metres, enclosing large areas sometimes with a double rampart and ditch system e.g. Hunedoara (Figure 4.11) (Vasiliev 1995). In the La Tene period, the general size of ditches increases to 20–30 metres in width, with depths up to 7 metres (Glodariu 1983; Zanoci 1998). Stone walls appear only in the last phase of the Dacian kingdom before the Roman conquest, though not at all fortified sites (e.g. Cucuis, Campuri Surduc-'Cetateaua' and possibly Bretea Muresana – where the enclosure was supposedly destroyed by modern intervention, see Figure 4.2). In some cases it has been argued that enclosure or fortification was only partial, because the surviving rampart and ditch was used to restrict access only on the most accessible slope (promontory type fortifications). This system has been observed in the first phase at Costesti-Cetatuie, where the original promontory-type hillfort with earth rampart and ditch system on one side evolved into a contour hillfort (Figure 4.12). *Murus Dacicus* was partially introduced later following the inner part of the southern and south-eastern enclosure from the second phase. A similar chronological evolution might also be proposed at Capalna, where the rampart and ditch

Figure 4.11 Aerial photograph of the hillfort on the Sampetru hill, Hunedoara; the large enclosure dates to the Hallstatt period, but a smaller circular enclosure, visible towards one end (left), is perhaps related to the Dacian occupation of the site attested by artefactual discoveries.

was only partial (promontory type), but the walled enclosure ran all around the site, again following the contour line. Therefore, it is possible that sites like Cucuis, Campuri Surduc-Cetateaua or Cozia-Piatra Coziei had also been enclosed, perhaps with wooden palisades, and this leaves the discussion concerning partial or total enclosure of the Dacian fortified sites still to be clarified by further research.

To the known examples we can add a new site probably belonging to this category discovered through aerial reconnaissance located at Cigmau (Figure 4.13) at the eastern end of the Turiac (Cetate) plateau overlooking the river Mures. The site consists of an oval–circular enclosed area of 0.53 hectares (some 105 by 65 metres in diameter) delimited by a multiple rampart and ditch system some 26 metres wide. The ditches and ramparts are still surviving well on the eastern side and recorded as parchmarks and by geophysical survey on its western side (data made available through the Deva Museum). About two-thirds of the western area of the enclosure has been severely affected by the construction of a Roman fort. Its eastern ditch and rampart cut straight through the earlier complex and levelled the western ditches and ramparts of the Dacian enclosure, along with its entrance, which

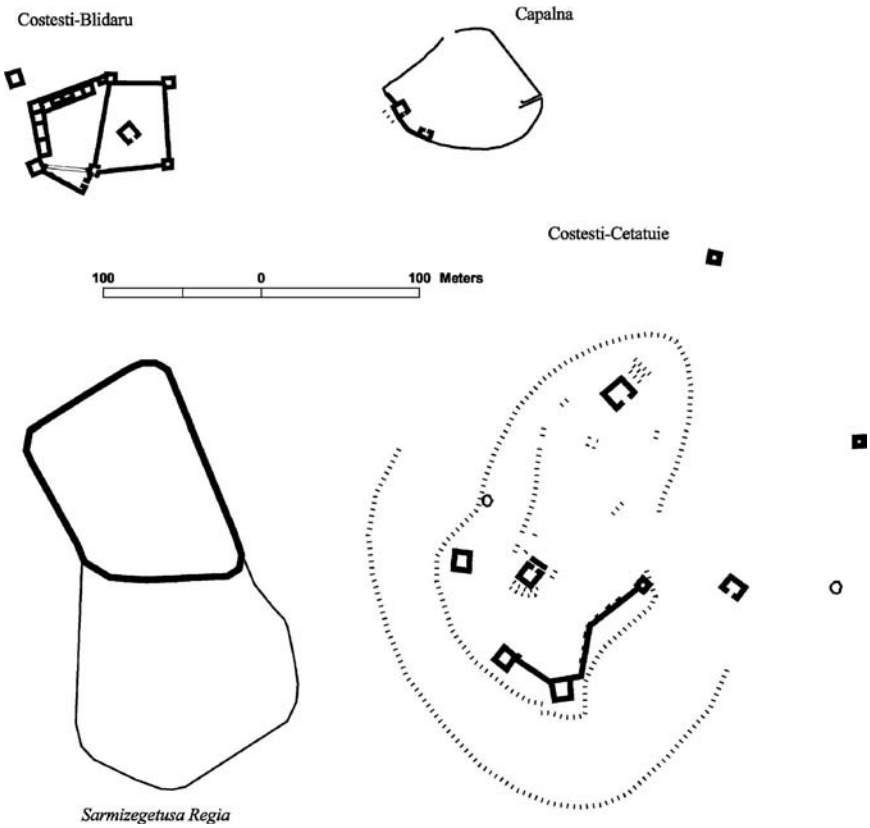

Figure 4.12 Comparative plans of hillforts indicating their layout, architecture and size (after Gheorghiu 2005; Figures 50, 52, 53 and 55).

was of a type similar to the earliest entrance of Costesti-Cetatuie hillfort (*au chicanne*). Unfortunately, none of the internal features of the hillfort were visible from the air. Its probable Dacian date is supported by the discovery of some Dacian ceramic fragments underneath the remains of the *principia* of the fort during excavations (information from A. and E. Pescaru), along with other previously reported discoveries from the area. Gheorghiu's gazetteer (2001, 28 and 37, under Cigmau and Geoagiu) mentions 'bronze household objects' and 'Iron Age coins' in this location, including both bronze and some 70–80 silver, without providing other details, although she does not exclude the possibility that one of the coins is Celtic (Biatec type). There is also an antiquarian reference to an undated – potentially Dacian – earthwork enclosure on the Turiac plateau, but this is more likely to refer to the Roman auxiliary fort, whose remains were probably far better preserved at that date.

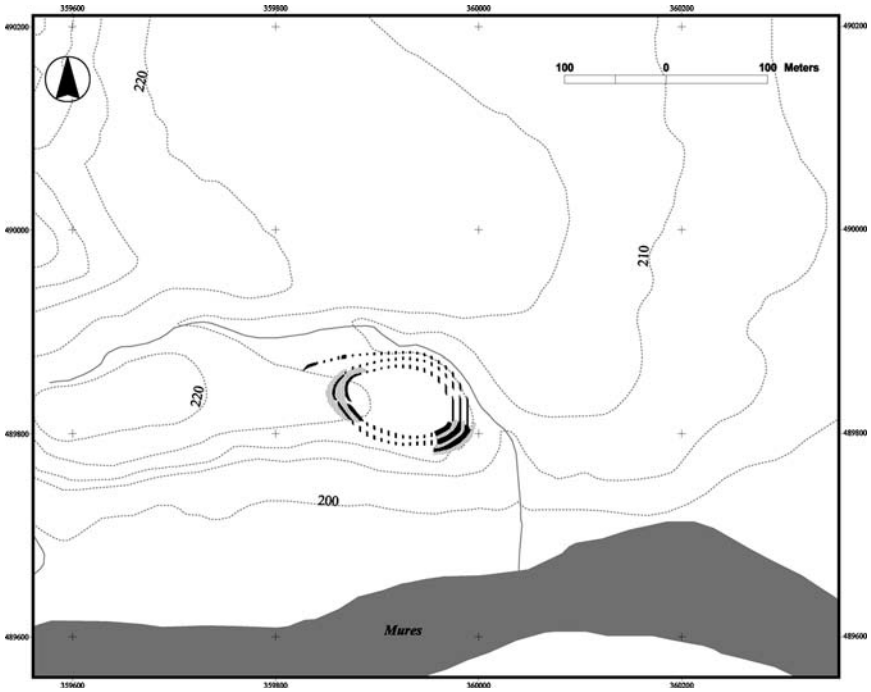

Figure 4.13 Plan of the Dacian hillfort at Cigmau.

The shape and size of hillforts are not always easy to define. Later use during the Middle Ages and early modern times has sometimes damaged the sites (e.g. Deva, Craiva). Whenever they survived, however, it is clear that plans and dimensions were variable. They are generally determined by the available topography, despite huge efforts to improve it through flattening and terracing the hilltops. Most of the time curvilinear arcs of walls just follow the line of the terrace (contour enclosures), delimiting more or less organic shapes (Costesti-Cetatuie, Capalna, *Sarmizegetusa Regia* – Figure 4.12). In a few cases, however (Costesti-Blidaru – Figure 4.12 – and Luncani-Piatra Rosie) the line of the walls is markedly rectilinear in between square–rectangular towers, and perhaps a similar tendency is revealed by the walls connecting three towers on the southern side of the Costesti-Cetatuie hillfort.

In most cases the stone walls enclosing hillforts were made using *murus Dacicus* (p. 61). Some hillforts use this technique exclusively (Costesti-Blidaru), but in most cases a combination of *murus Dacicus* and wall with stones set in clay is present (e.g. Costesti-Cetatuie, Capalna, Luncani-Piatra Rosie). Campuri Surduc-La Manastire and probably Ardeu are the only hillforts within the study area enclosed exclusively by stone walls set in clay. Unfortunately, at Deva the only hint of the presence of *murus Dacicus*

are some individual blocks of stone reused in later constructions. Gates through the enclosure wall have been found at Banita, in the late phase (second enclosure) of Costesti-Blidaru, and possibly at Campuri-Surduc. At Costesti-Cetatuie there was a gate through the rampart and palisade enclosure from the early phase. Another gate provided access through the later wall connecting towers I, II and III, immediately outside tower II to the east (Gheorghiu 2001, 57–9). At Capalna, the secondary entrance on the NW side has been made as a narrow corridor through two parallel walls, which was later blocked and used as dumping ground. Entrance through towers was used at Capalna, Luncani-Piatra Rosie and Costesti-Blidaru (in the first phase). Where details are specified, the opening for the gates is approximately 2.50 metres and, at least in the case of Costesti Blidaru (the later phase), is big enough to allow access of chariots or wagons (Gheorghiu 2001, 145). This may have been possible also through the gate of the rampart/palisade at Costesti and perhaps for the larger enclosure at Luncani-Piatra Rosie. Such access is unlikely through the first entrance into Costesti-Blidaru, however, as vehicles would have been obliged to make a 90° turn to the right and the inner space of the tower would not allow such manoeuvres. Similarly, the presence of stone steps would have made difficult vehicle access through the gate through one of the towers at Luncani-Piatra Rosie and at Banita.

The space enclosed is also variable, though considerably smaller than that of the early Iron Age hillforts (e.g. Hunedoara, Figure 4.11). The hillfort at Costesti-Cetatuie is the largest, with changes in the enclosed area over time from some 11 hectares to 4.8–4.02 hectares, but Gradistea Muncelului covered only some 1.2 hectares (subsequently enlarged by the Roman fort to 2.7 hectares), comparable in size only with the upper plateau at Costesti-Cetatuie (1.3 hectares); both Costesti-Blidaru and Capalna covered only some 0.5 hectares (Figure 4.12). In most of the cases the occupation layer inside hillforts has been damaged by later occupation or natural erosion. Excavation indicates that the inner space was used for a few amenities, such as stone and brick tower-houses (Capalna 1; Costesti-Cetatuie 2; Costesti-Blidaru 1; – pp. 76–78), surface timber constructions, either houses or barracks, and associated hearths. In addition, postholes of four-posted structures interpreted as watchtowers have been found at Banita and Costesti-Cetatuie, located towards the highest point of the hillforts, and such features probably existed also at Capalna and *Sarmizegetusa Regia*. Stone stairs have been discovered at Costesti in relation to tower-houses, while at Banita and Luncani-Piatra Rosie such stairs are associated with entrances. At Gradistea Muncelului no structures have been discovered in the area enclosed by walls, but they were present in the surrounding settlement in the sacred area. Stone towers were constructed on the line of the walls (at the corners at those hillforts with a geometric plan) and, as shown above, towers or tower-houses were located in the (sometimes immediate) vicinity. Storage areas with the remains of several large storage pots ('chiupuri') have been identified in

the north-western tower at Costesti-Blidaru (Figure 4.12). Several granaries have been discovered at Gradistea Muncelului, but all of them were located outside the enclosure (Glodariu *et al.* 1996, 100–1). Inside the fortified area at Cugir surface and sunken houses from third- to second century BC and from first century BC to first century AD were discovered, along with numerous storage pits with rich artefactual evidence of pottery, tools and jewellery (Moga and Ciugudean 1995, 87–8). Several surface houses were located at Ardeu and a bronze anvil indicates the presence of a jewellery workshop within the settlement. At the fortification from Cucuis (some 1.8 hectares in area) limited excavation has revealed faint traces of one timber construction, interpreted by the excavators as a barrack, with Dacian pottery of first century BC–first century AD, iron nails and two iron ploughshares (Gheorghiu 2005, 35).

Although the association of the fortified sites with variable traces of open settlement is frequent, and has determined their classification in this study some of them have no known associated open settlement in the vicinity. Campuri-Surduc (la Manastire) is a promontory fort originally thought to have been destroyed in the mid first century BC after the death of Burebista, but reinterpreted as destroyed in Trajan's wars. It does not seem to have any settlement in the vicinity other than another smaller enclosure of uncertain character on the neighbouring Cetateaua Hill. On the basis of their known enclosure dimensions (37 by 22 metres for La Manastire and 25 metres diameter for Cetateaua) they are likely to represent individual enclosed or fortified settlements (homesteads). At Bretea Muresana the lack of settlement traces nearby, is usually explained by its traditional interpretation as a 'fortified village' despite an equal lack of data on its internal layout. However, this assumption is contradicted by the situation at Ardeu, Cucuis or Cozia–'Piatra Coziei'. Cugir (Figure 4.9) is another example of a fortified site without known settlement in the immediate vicinity, but some Dacian traces have been located on the top of a hill at some distance away to the south-east, perhaps indicating a solitary homestead.

4.1.5 Proto-urbanism? Hillforts and their additional settlements

Most of the fortified sites in the area had settlements located more or less within the immediate vicinity (at Ardeu, Banita, Capalna, Craiva, Cucuis, Costesti, Deva, *Sarmizegetusa Regia*, Gradistea Muncelului-'Varful lui Hulpe') (Figure 4.1). These settlements vary a great deal from those where the remains are very scattered or limited to those where settlement traces are very extensive and elaborate, though to some extent at least this is likely to reflect the different levels of fieldwork undertaken. Sometimes remains are very scarce. At Ardeu – Cetateaua, for example, the only traces of occupation on the slope of the hill below the supposed area of the enclosure are provided by a Dacian surface house with two storage pits and a hearth discovered in rescue excavations (Gheorghiu 2001, 17). Even less is known about the settlements below the hillforts at Banita and at Capalna: two artificial terraces

with archaeological finds are mentioned at Banita (though it is estimated that the settlement was largely destroyed by the modern railway – see Glodariu 1983, 82), while at Capalna traces of supposedly isolated constructions were also identified in the valley along the Sebes river (Gheorghiu 2001, 25).

It is more difficult to decide on the character of settlement around the fortified sites at Craiva, Piatra Rosie, and Gradistea Muncelului-Varful lui Hulpe where so far only tower-houses are recorded in the immediate vicinity. Outside the fortification at Gradistea Muncelului-Varful lui Hulpe extensive ancient terracing with traces of occupation is attested. Two of the terraces seem to have been occupied by tower-houses, but the lack of systematic research on the site impedes other estimations. At Piatra Rosie the only known significant traces of settlement potentially associated with the citadel are a few towers incorporated within the larger enclosure. With the Dacian enclosure now disappeared due to medieval use of the site at Craiva, the presumed outer settlement there consisted of 11 man-made terraces supporting several tower-houses and sanctuaries clustered tightly around the fortification. The terraces and tower-houses made use of a local variety of *murus Dacicus*, but no mention is made of humbler, timber-built domestic structures (Moga and Ciugudean 1995, 83–4 with bibliography). The finds, consisting of pottery, including painted fragments, iron tools, jewellery, imported goods, coins (Republican denarii and Dacian coins), and a deposit of three swords, three spear heads and a buckle, all support the interpretation of the site as a late-Dacian elite community, supposedly Ptolemy's *Apoulon* (*Geographia*, *Tab. Eur. 9*).

By contrast, evidence of extensive settlement has been recovered in the vicinity of *Sarmizegetusa Regia*, Deva, Costesti and, to a smaller extent, Cucuis. In the last three cases, the settlement was scattered in character and spread over a very large area. The fourth (*Sarmizegetusa Regia*) was somewhat more compact in nature though extensive and elaborate in terms of existing amenities. A large inhabited landscape revealed by a 'cluster' of discoveries seems to have been located at and around the modern town of Deva (without traces of tower-houses). Little has survived of the Dacian hillfort on the Cetatii hill (Figure 4.8), but more substantial archaeological remains come from occupation in the vicinity. Traces of settlement have been discovered on lower terraces of the hill and at its foot (Marghitan 1970b in Lockyear 2004); also, across the modern town, to the south-west of Cetatii Hill, and most extensively near the Ceangai cemetery and on the eastern lower terraces of the Bejan Hill. At Costesti (Gheorghiu 2001, 65) a large number of significant discoveries has been recorded in multiple locations along and on both sides of the Gradistea/Orastie river (although mainly on its right side). They extend from the foot of both hills bearing the ruins of the two hillforts (Cetatuie and Blidaru) and downstream towards Ludestii de Sus, under the modern village – or in arable fields. Arguably the most important settlement has been located outside the hillfort at *Sarmizegetusa Regia* (Figure 1.6). It was divided into western and

eastern areas according to their location in relation to the hillfort (although much of the eastern area was occupied by sanctuaries and related amenities). The 'civilian' occupation covered over 100 artificial terraces of variable size and shape dug mostly into the southern slope of the hill (only a few terraces have been discovered on the northern side, towards its upper part and near the enclosure wall of the hillfort). Very few have been the subject of more detailed research. The terraces often appear in clusters scattered through the woods, rather than as a continuous spread (Lockyear 2004), which gives the site a scattered-layout appearance reminiscent of other sites, such as Deva or Costesti.

Inside these settlements several buildings and amenities have been identified. At Costesti, small-scale excavation revealed rectangular surface timber houses on raised earthen platforms, either as individual homesteads or grouped in clusters. One such house dated to the late first century AD has been unearthed at 'Laz' on a raised platform 16 metres in diameter. At *Sarmizegetusa Regia* most of the terraces seem to accommodate buildings of domestic character, often one house and one ancillary building ('granaries' used normally for storage of food and other items, such as tools) per terrace (Gheorghiu 2001, 75). As in other mountain settlements the houses were built as surface structures, varying in plan and size. Most of the buildings resemble the circular structures from Fetele Albe, Meleia or Rudele (pp. 71–74 and Figure 4.4), although one example of a one-roomed house (4.30 by 2.75 metres) of first century AD on the Terasa Mica had dimensions and a style very similar to the sunken-floored houses. It was provided with a hearth and three grain storage pits, one of which was located under the floor inside the house and the other two outside a short distance away. Also, a number of rectangular houses with up to three rooms were built in a similar technique.

At Costesti, most of the finds have come from surface surveying and chance discoveries, and were not related to specific archaeological contexts. They consist mainly of Dacian ceramics and burnt layers (whether from hearths or burnt timber buildings), also of bricks, roof tiles of Hellenistic type, ceramic water pipes and daub. Storage pots and burnt cereals (wheat and millet), fine pottery (including one imitating a bronze model), iron artefacts and several coins (two Dacian coins of Hunedoara type, one Greek drachm of *Dyrrachium* and one imitation) were also recovered (Gheorghiu 2001, 189). At *Sarmizegetusa Regia* finds are in general rich, particularly in those buildings which ended their life by fire, and included iron tools and fittings, a large variety of pottery, including Dacian painted ware decorated with geometric, floral and animal representations, coins and other various artefacts. Inside one building was found a 'medical kit' consisting of five small vessels, bronze tweezers, an iron knife and a plaque of 'volcanic ash' in a wooden box with an iron handle and bronze straps. Although preserved to a lesser degree, the traces of settlement at Deva still included Dacian pottery and animal bones, one millstone and two Greek (*Dyrrachium*) silver coins.

At all three settlements, traces of intensive industrial activity were detected. At *Sarmizegetusa Regia* several metallurgical workshops were identified, including one for minting imitations of Republican denarii, while other workshops for pottery and glass production or carpentry have been postulated on the basis of the presence of tools and end products. At Costesti, the remains of a Dacian pottery kiln and the probable presence of an iron workshop (identified on the basis of seven iron ingots associated with the usual Dacian pottery and remains of burnt wood and clay) discovered near Valea Stanisoarei (Gheorghiu 2001, 188) might indicate an 'industrial quarter'. Finally, at Deva a pottery kiln was discovered, dated to the second–first century BC (Marghitan 1970b; in Lockyear, 2004), while the andesite quarry on Bejan Hill provided large quantities of stone used in the monumental constructions at *Sarmizegetusa Regia* (Marza 1997; Lockyear 2004).

The data presented above indicates that the relationship between the hillfort and its additional settlement is symbiotic, by demonstrating each other's status and importance: the more important the hillfort and its occupants, the more elaborate its additional settlement. It is clear that *Sarmizegetusa Regia*, Deva and Costesti (and future research may add at least Craiva to this list) are the most elaborate central places in the area. Unfortunately, both the hillfort and the additional settlement at Deva have been largely wiped out by later occupation. However, the importance of the area in late pre-Roman times is confirmed by the wide spatial extent of the reported remains, but more importantly by the discovery in the vicinity of as many as six coin hoards grouping several thousand of Greek drachms (mainly of *Dyrrachium*, *Apollonia* and Illyricum), Roman Republican denarii and Dacian imitation coins in various assemblages (Gheorghiu 2001, 35–6) (Figure 4.14). At Costesti the very large settlement is the only one so far related to two (probably royal) hillforts with the largest cluster of tower houses located in the immediate vicinity (pp. 78–80). It looks like the hillforts were the centres of the Costesti landscape, surrounded in the immediate vicinity by several tower-houses, some with their own ancillary structures, and at greater distance away (mainly lower downstream and on the opposite side of the river) by a wide zone of scattered occupation. Finally, it is not the largely still unknown hillfort on the Gradiste Hill at Gradistea Muncelului (*Sarmizegetusa Regia*) that provides the basis of its interpretation as royal site, but a number of striking external features that single out the settlement. Several terraces in the eastern settlement in the immediate vicinity of the hillfort hosted a large *area sacra* with several sanctuaries and an open paved area supposedly for public meetings nearby (an *agora*? – Gheorghiu 2001, 76–9). Water management and monumental architecture provide some indication of the sophisticated level of technological development that had been attained. In addition, the great concentration of stored grain in granaries near the *area sacra*, with at least one of them containing significant quantities of wheat, millet and pulses, suggesting its use by a larger community (Gheorghiu 2001, 170–1), could perhaps indicate some institutional control

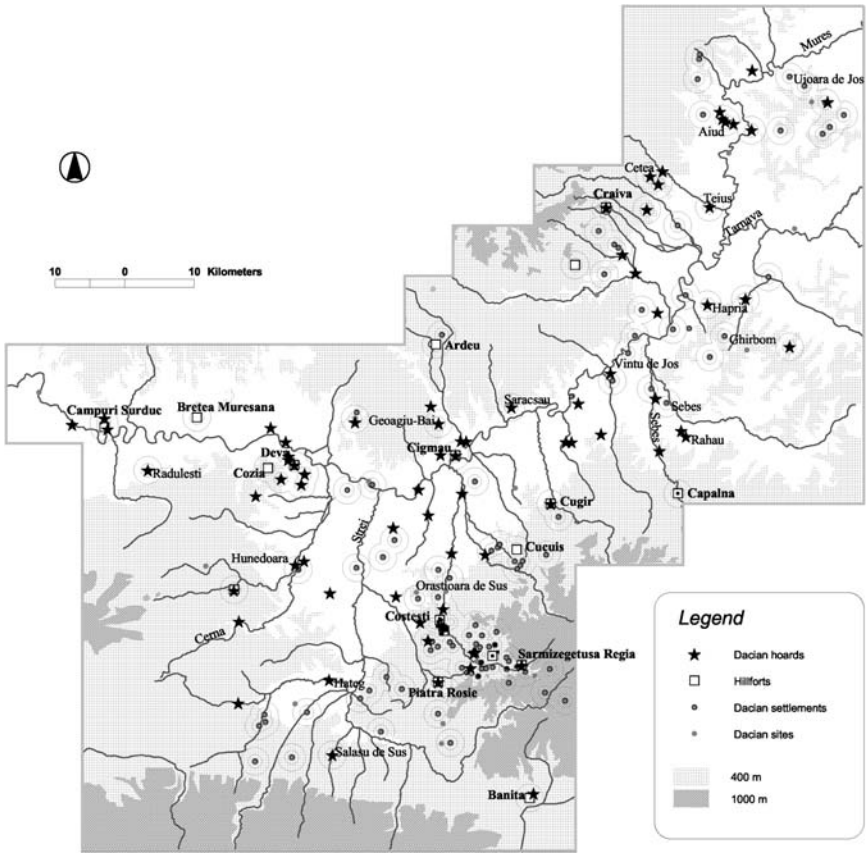

Figure 4.14 Distribution of Dacian hoards in relation to settlement locations (settlement buffers at 2 kilometres).

or administration of the food supply, even though individual grain storage was also documented. Finally, one large conical storage vessel (1.25 metres diameter and 0.7 metre in height), with its lip stamped four times with the words 'DECEBALVS PER SCORILO', provides a strong link between Gradistea Muncelului and the last Dacian king (Lockyear 2004).

4.2 Choosing settlement location

In the light of previous analyses, a striking feature of the settlement pattern in terms of location is that very few sites are to be found at lower altitudes (Figure 4.1). Gheorghiu (2001, 88–9) notes:

> Among the topographic locations of the middle Mures valley, the floodplains were systematically avoided by the Dacians when choosing a place

> to found a settlement. The situation is normal because there was the maximum danger of flooding. There were cases, a few of them it is true, when the boundary zone between the floodplains and lower terraces of the valley was preferred, probably out of the necessity to be close to the rich agricultural fields and to the river Mures, since this represented an important artery of transport for goods. Such are the settlements from Turdas, Vintu de Jos, Vurpar, Blandiana and Saracsau (author's translation).

This view is reminiscent of an early theory on the settlement pattern of the British Iron Age, dating from a period prior to the introduction of systematic modern surveying, and especially aerial photography. According to Fox (1933, 82) the lower zones of the Iron Age Britain were hopelessly damp 'where estuary or harbour was fringed with forest, the mudflats and beaches were deserted and no trackways led inland' and that these 'bad lands were crossed only when unavoidable, and by the narrowest gaps'. Since Fox's time, however, a series of new sites have been revealed in these lowlands, including some with a morphology closely related to the probable use of areas more exposed to flooding as pastures and for animal breeding (e.g. enclosures with funnel-entrances). When considering the location of the Dacian settlements identified so far in relation to modern land use, it is clear that only between a quarter and a third are located in areas that are currently affected by ploughing. It is, therefore, likely that the state of preservation of the sites and the archaeological survey methodology employed in the area has affected the level of site discovery and can be held responsible for the bias affecting traditionally accepted differences in the Iron Age settlement pattern between lowlands and upland areas in Transylvania, as in the Upper Tisa valley (http://ads.ahds.ac.uk/catalogue/resources.html?uppertisza_ba_2003 visited 6 December 2006) and elsewhere in Continental Europe (pp. 62–63). The discovery through aerial photography of the hillfort at Cigmau (Figure 4.13) clearly challenges traditional opinion concerning settlement location, particularly of hillforts, being confined to the higher altitudes (Gheorghiu 2001).

Nonetheless, there are at least two lowland areas with ideal climatic and topographic conditions for settlement and agriculture, but without any apparent settlement (see Figure 4.1). The first covers largely the middle section of the Strei valley and all its lower left side towards Deva, where only one possible settlement is attested in the Calan area. The second covers the southern side of the Mures between the Orastie and Pianu rivers, where no settlement traces have been recorded other than Orastie-Pemilor Hill and Vintu de Jos, although some settlements could be related to the possible extraction of gold at Pianu de Sus at the edge of the lowlands. That the areas were to some extent accessible and experiencing at least some elite control is indicated by the record of jewellery and coin discoveries, scattered or in hoards (Figure 4.14). Lack of settlement evidence so far does not support their use for winter grazing. If further survey validates the existing

gap, this might indicate that the areas continued to be forested until the Roman period when settlements are attested.

Thus, the distribution of settlement, as it is currently known, seems hardly normal. Examination of the distance between the settlements reveals a further discrepancy in settlement density. In the Orastie Mountains, numerous settlements cluster at distances of less than 1 kilometre from each other, while outside this area the settlements are scattered normally at 3–5 kilometres or more. Of course, map distances are increasingly misleading in representing relative distances on the ground in areas of very fragmented relief as in the mountains, but even bearing this in mind, one cannot help noticing the unusual density of habitat which is without precedent in any other Dacian area both within and outside the study area. If the situation is real and not artificially created by the bias of the current methods of survey, a possible explanation could be offered by the very late chronology of the sites, including *Sarmizegetusa Regia*, and would hint at political and religious factors for their emergence.

Moreover, despite the importance of the Mures as a communication and trade highway with the plains to the west throughout history, only 32 of the settlements are located within 5 kilometres from the river. Indeed, very few fortified sites are located so close to the Mures (Campuri-Surduc La Manastire and perhaps Cetateaua, Bretea Muresana, Cozia-Piatra Coziei, Deva and Cigmau) and, with one exception (Cigmau), they are all located in the Mures Corridor area. Deva was perhaps the single most important site (hillfort/citadel with extensive surrounding open settlement) in the immediate vicinity of the main river. Otherwise, water (natural springs, streams and minor rivers) was available everywhere within a reasonable distance and it did not act as a stress factor in relation to the distribution of settlement into the wider landscape. Whenever needed in the uplands, water installations such as cisterns (Costesti; *Sarmizegetusa Regia*) and channel networks (*Sarmizegetusa Regia*, Fetele Albe) were present.

The preferred location for fortified sites in prehistory was normally on hills or high promontories where natural topography allows minimum effort in building defences. Dacian hillforts develop this concept to the maximum, with their location on inaccessible hills deep in the mountains. The hillforts in the immediate vicinity of the Mures (Campuri-Surduc, Bretea Muresana, Deva, Cigmau) or those from the edge of the lowlands (Cucuis, Cugir Costesti-Cetatuie) are located at altitudes of 200–400 and 400–500 metres, respectively, while another group of sites although located deeper in the mountains, do not reach 800 metres (Capalna; Cozia; Costesti-Blidaru; Ardeu). There are hillforts going above this altitude, such as Luncani-Piatra Rosie (823 metres) and Banita (904 metres), but only *Sarmizegetusa Regia* and Craiva reach 1,000 metres. Construction in the mountains took significant effort. The builders went as far as flattening the top of the hill, if this was not naturally suitable for settlement (Glodariu 1983, 59–60; Zanoci 1998, 15–26), by cutting away topsoil and even solid rock and enlarging levelled

areas through terracing. At *Sarmizegetusa Regia*, the *murus Dacicus* enclosure walls of the hillfort followed the 1,000 metres contour line on a 3 metres wide levelled terrace cut into the bedrock. Inside the terrain was flattened over a small area only at its highest point in order perhaps to accommodate a wooden watchtower in a similar fashion to that at Capalna. Some level of hilltop flattening may have occurred in other hillforts, such as Costesti (Cetatuie and Blidaru) or Luncani-Piatra Rosie.

Wherever naturally flat terrain is rare, terracing is a necessity and, therefore, it occurs frequently within the upland Dacian landscape, especially in the Orastie mountains (Fata Cetei, Fetele Albe and *Sarmizegetusa Regia* being the most obvious examples) but also in other locations within the study area, such as at Ardeu-Cetateaua, Craiva-Piatra Craivii and Cozia-Piatra Coziei. Cases of terraces supported by *murus Dacicus* were identified at a number of other sites, in the open settlement at Fetele Albe-Sesul cu Branza, outside the possible enclosure at Craiva-Piatra Craivii and perhaps outside the hillfort at Gradistea Muncelului-Varful lui Hulpe, but mostly inside the fortifications (Costesti-Cetatuie, Capalna, Banita). With the exception of Fetele Albe, the use of stone walls supporting the terraces seems to occur when they had to support heavier structures such as stone sanctuaries or tower-houses. At *Sarmizegetusa Regia*, the terraces supporting sanctuaries were larger, with widths of 20–50 metres and lengths of up to 200 metres, and were supported by *murus Dacicus* walls up to 12–14 metres in height. At Craiva-Piatra Craivii most of the 11 terraces were supported not by *murus Dacicus*, but by similar-sized walls made of large quarry stones. Their construction implies the availability of a considerable effort and labour force, along with trained specialists in construction work.

The largest majority of terraces were, however, less elaborate in terms of dimensions and building effort. Few of them have been excavated and, therefore, the building technique is far from being fully clarified, although on current evidence they seem to have been constructed simply by digging into the slope and tipping the resultant earth down-slope (Lockyear 2004). How the terraces were supported in the absence of evidence of some form of revetment to prevent their further erosion has not been resolved. Their rudimentary technique meant perhaps that it would have taken less time and effort for their construction, but it is likely that the work was still done by male labour from the individual households which were to utilise them. All of the known examples seem to have served for constructions of various scales and functions, but most of the terraces hosted only one homestead (house and ancillary building). As yet, none seems to have been used for cultivation. Perhaps the concern for finding the best possible locations for the settlements is the reason why so many sites provide traces of habitation of other dates (multi-period, tell sites). Twenty-nine of the sites discussed in this chapter have traces of previous and/or later occupation from earlier prehistory to medieval or modern times, 14 in the uplands and 15 in the lowlands. The phenomenon occurs in the mountains especially in the case

of the hillforts, where site location was severely restricted by topography. At Craiva, occupation on the hilltop is attested for the late Neolithic – early Bronze Age (Cotofeni), late Bronze Age (Wietenberg) and Middle Ages; at Cugir for the Bronze Age and early Iron Age (Hallstatt); at Deva for the late Neolithic – early Bronze Age and most extensively during medieval and early modern times; at Cucuis for the early Bronze Age (Cotofeni), Hallstatt and Middle Ages; while at Ardeu-Cetateaua all the main prehistoric periods are illustrated by finds and occupation continues in post-Roman and medieval times. The trend is considered by Trohani (1994) as general for the Dacian area and has a much larger geographical spread. However, the characteristic is not restricted to the uplands. One new example of a multi-period site discovered in the lowlands through aerial photography is located to the west of the modern town at Simeria (Figure 4.15). About two to three pits indicate sunken houses and four to six others of smaller dimensions probably represented storage pits. However, the most striking feature – the partial curvilinear enclosure following the natural edge of the river terrace with one entrance – and its relationship with the other features is more difficult to interpret. It consists of ditches some 3 metres in width apparently linked to an internal palisaded enclosure. The finds discovered during a ground visit in 2002 included prehistoric pottery of various dates, including Dacian, along with some Roman and later sherds, but the site plan does not facilitate the identification of different phases of occupation.

Figure 4.15 Aerial photograph of a buried multi-period settlement at Simeria.

4.3 Working the landscape

4.3.1 Farming

Animal husbandry is another domain where archaeological investigation is at a very early stage. As detailed in Chapter 2, domesticated animals (cattle, horses, mules, sheep, pigs, goats) are present in artistic representations and several scenes attest that oxen and horses were used for traction (Macrea 1969, 297; MacKendrick 1975, 99 and Plate 4.26; Lepper and Frere 1988). Linguistic evidence also attests dairy production. Most excavated sites produce bone remains which is sufficient to support extensive animal husbandry, but in older excavations they were subject to little research and for the more recent (e.g. Ardeu-Cetatuie; Hunedoara) the results have not yet been published. Data collected mostly from outside the study area indicates a large predominance of cattle at most of the investigated sites (10), followed closely by pig (at four sites) and sheep/goat (at one site) (Gudea and Gudea 1999). Moreover, the study of the settlement pattern has not provided much convincing data concerning the way animal farming was undertaken. As shown earlier in this chapter, the interpretation of the buildings in the high-altitude settlement at Meleia as equivalent to the modern 'stane' (seasonal animal farms, consisting of an animal enclosure and a small building providing accommodation for the shepherds and a store for produce) was based solely on modern analogy and has subsequently been successfully challenged (Glodariu *et al.* 1996, 161). Tools like scissors for trimming wool (Fetele Albe, *Sarmizegetusa Regia*, Deva, Capalna, Costesti-Cetatuie), or hoes and scythes (Craiva, Costesti-Cetatuie, *Sarmizegetusa Regia*) and rakes (e.g. Capalna) for hay making were probably used in the farming process and have been found in settlements (Gheorghiu 2005, Figures 160, 163 and 164). Unfortunately, more important features such as the animal enclosures, which would provide a sufficiently convincing argument in support of animal husbandry at specific sites, are consistently lacking from all the sites identified so far in both the uplands and the lowlands.

Arable agriculture is recognised as making the highest contribution to the economy of Dacian settlements, even for those in the upper segment of the settlement hierarchy. As shown in Chapter 2, there is evidence for the presence of a number of plants in the late Iron Age used for food or other purposes. Within the study area, wheat, rye, millet, barley, lentil, pea, mustard, poppy and rape seeds, apple, garlic and spinach have all been identified, along with other plants used for feeding humans and animals. Cabbage, vine, elderberry, blackberry camomile, valerian and thyme might also have been present (see Chapter 2). *Camelina sativa* (gold-of-pleasure) seeds were burnt, perhaps for lighting (Nandris 1981, 234–5). The normal assumption is that the cereals and vegetables (pulses and cabbage) were cultivated species. The assumption in the case of cereals is supported by the representations

of fields being harvested by the army during the second Dacian war on the Trajan's Column (see Chapter 2). It is unclear whether the herbs and spices or the fruits (apple, elderberry and blackberry) were cultivated or just harvested from their natural habitat for human consumption. If vines were (still) present (see Chapter 2), they were probably cultivated.

Cereal cultivation is evident from more limited archaeological evidence, mainly consisting of the presence of specific cultivation and processing tools, along with storage facilities. Finds of agricultural tools give some indication of the practice of agriculture. Most of the tools have been found in assemblages which do not always contain exclusively agricultural tools, such as the deposit found south of Meleia on Strambu hill which contained two ploughshares, two sickles, two hoes and a scythe along with a sledge hammer, a pick, a boring tool, a chisel, a saw and a fork. In other cases their composition indicates that other activities were involved, such as stoneworking, woodworking or terracing, like the deposit discovered at Gradistea Muncelului-Valea Larga with six hoes, an adze and a chisel. More specifically agricultural, however, is the deposit of two ploughshares and seven iron sickles discovered at Capalna a short distance from the hillfort down in the valley (Moga and Ciugudean 1995, 67), while other sickles were found inside the hillfort. The reason for these deposits is unclear. The usual interpretation of those discovered away from settlements is that they represent intentional deposition due to threat during the Dacian wars (as in the latter example), although another possibility that has not yet been explored is of ritual deposition. Further ploughshares have been found, one at Alba Iulia (as a random discovery), one in the enclosed settlement at Cucuis (Gheorghiu 2001, 166) and another (possibly two) at Piatra Craivii (Lockyear 2004).

Grain storage pits were noted in lowland villages like Sebes Lancram and Podul Pripocului, Seusa, Orastie-Dealul Pemilor and Vintu de Jos, but also both inside (e.g. Cugir) and outside hillforts (e.g. Ardeu, *Sarmizegetusa Regia*). Other means of grain storage were present in the form of granaries (largely at *Sarmizegetusa Regia* and in the vicinity) containing large pots ('chiup') with conical bodies and narrow rims. This type of vessel has a very wide distribution in both upland and lowland areas and is found on any Dacian site. They were perhaps buried into the ground up to the level of the rim, as they were found in one of the towers in Costesti-Blidaru hillfort. Most of the identified granaries were rectangular timber constructions (e.g. *Sarmizegetusa Regia*, Meleia, Fetele Albe). Outside the hillfort at *Sarmizegetusa Regia*, on terrace IX just above the sacred area (Figure 4.16) and in the immediate vicinity (terraces VII A and B), large timber granaries have been identified which were extremely rich in burnt provisions (wheat, millet and peas) deposited in large storage vessels (Gheorghiu 2001, 171). In addition, some circular single-roomed buildings without evidence of hearths inside were also interpreted as primarily used for storage (e.g. Meleia). Finally, storage facilities were also present inside houses. As indicated by the finds distribution in excavated examples, the ground level of the tower-houses

Figure 4.16 Aerial photograph of the *area sacra* at *Sarmizegetusa Regia*.

within hillforts was used as storage space, while in the ordinary circular timber houses the storage areas were mostly in the outer rooms.

Many discoveries of millstones (a two-piece type, fairly similar to the Roman *meta-catillus*) at Cetea, Lopadea Veche, Radulesti, Deva and Meleia, or millstone fragments (Ursici, Cozia-Piatra Coziei and Gradistea Muncelului between Valea Rea and Valea Vartoapelor) are indicative of the extensive use of cereals in the diet. This lends further support to a similar conclusion by Nandris (1981) based on the study of flotation samples from various hillfort sites, which indicate a significant preference for wheat. Literary sources mention vegetarianism as one of the reforms introduced into the Dacian life-style by the religious reform of Dekaineos (see Chapter 3) and support Nandris' conclusions. But since his study is related exclusively to hillforts, it is not clear whether this was a general characteristic of the Dacian diet, or whether it characterises only the upper social segment. In some hillforts, there is evidence to indicate the presence of animals used for meat consumption, as for example at Ardeu-Cetateaua (see http://www.cimec.ro/scripts/arh/cronica/detaliu.asp?k=1871 visited 6 December 2006) and outside the study area (see Gudea and Gudea 1999), which might indicate that the area of Orastie Mountains was possibly the most affected by the religious reform (although some animal bones were discovered at Costesti in a funerary

context http://www.cimec.ro/scripts/arh/cronica/detaliu.asp?k=925 visited 6 December 2006).

Assembling the evidence and trying to understand the process of farming at a landscape level, however, brings some very puzzling results. Generally, it looks like the northern segment of the mid-Mures valley was far more intensively used for agricultural purposes than the southern part, also including the Strei valley and the Hateg area. Discoveries of agricultural tools and millstones come mainly from upland settlement contexts, whose surroundings were unsuitable for arable cultivation on more than a subsistence basis. Similarly, evidence for storage facilities shows greater capacity in the hillforts and upland settlement, in the form of granaries, pits and also storage vessels, than in the lowland villages. It was on this basis that the well-established interpretation of the agricultural process, whereby the population of the upland settlements (or those at the edge of the upland) cultivated the main river valleys, came to be established (Gheorghiu 2001). But these settlements were located at significant distances from the areas they were supposedly cultivating, in many cases at least 10 kilometres away, a distance which would have made daily access to the fields virtually impossible. This situation would pre-suppose the existence of seasonal accommodation in the lowlands for the spring and summer, which has not been identified so far. The use of 'seasonal' buildings (p. 73) and the principle of seasonality have been proposed also in relation to animal husbandry. Accepting the idea that both animal husbandry and cereal cultivation were undertaken on a seasonal basis would have significant repercussions for the way we interpret the settlement pattern and the nature of Dacian society as a whole. It would mean that a large mass of the population spent at least four months each year on the move, one part into the lowlands to cultivate the fields and the other high into the mountains with the animals for summer grazing, while for the remaining eight months they populated the settlements located somewhere at a high–mid altitude and kept themselves busy with other activities. Although there may have been limited transhumant animal farming practice (though no specific installations have been found), such a scenario seems unlikely for the economy in its entirety, and would require a very elaborate road and communication network, along with evidence for very large settlements in the upper-mid-altitude belt. Since none of these factors are present, the seasonal character of settlement at least for the lowland areas involved in cereal cultivation, if not impossible, seems highly unlikely.

Information on the nature of the territory outside the settlements and on the way cultivation fields were distributed in the landscape remains largely absent. In the uplands, some cultivation is supposed to have taken place on a subsistence basis, but neither of the identified terraces turned out to be for agricultural use (p. 93). In the lowlands, despite some success in identifying settlements by aerial reconnaissance, no traceable field systems of Iron Age date have been identified. A probable explanation is that fields, like settlements, were unenclosed, which makes them undetectable. Indeed,

a similar phenomenon is reported to have survived until late in traditional Romanian society in order to facilitate cattle grazing over the fields after harvest (Stahl 1986). Further aspects related to cereal cultivation, which still await an answer, are the location of the threshing facilities and the method of transportation of the produce to the upland settlements. One possibility was that the harvested cereals were transported using four-wheeled wagons (literary and artistically documented), but so far no indication of threshing activities (e.g. tools) have been found in the upland settlements. This suggests that threshing might have happened near(er) to the cultivated fields. In this case the storage pottery, which is to be found everywhere, or alternative packaging, perhaps of more perishable nature, might have served as appropriate containers for the transportation of grain.

It is to be expected, therefore, that a change of research focus from upland settlements to the lowlands will rapidly change the apparent statistical predominance of upland evidence of tools and storage illustrating agricultural practice. The evidence of storage facilities is a case in point. Storage pits have been documented in only five sites in the lowlands: Sebes-Lancram and Podul Pripocului, Seusa, Simeria and Vintu de Jos. The latter, however (which incidentally is also the site with the most complete plan so far) demonstrates quite extensive storage potential suggesting that the storage provision of the same-class settlements in the lowlands is currently underrepresented. Extrapolating from there, the whole current understanding of the agricultural process would seem to have been misinterpreted.

4.3.2 Exploiting the natural resources

Within pre-Roman Dacia, as well as in earlier and later periods, there is extensive evidence of human exploitation and use of the rich natural resources available in the study area, primarily metal and stone (Figure 4.17). The identification of the sources of extraction is more difficult, since any later activity has tended to destroy the traces of earlier quarrying or mining (Glodariu and Iaroslavschi 1979, 111) and only the periods of the largest extent of activity (as for instance the ancient Roman or modern Austrian periods) tend to be identifiable. The identification of such sites for pre-Roman times is, therefore, largely based on processing/refuse or artefactual evidence (tools) from the sites themselves or from associated settlements, along with limited thin-section stone analysis data (Lockyear 2004). Future chemical or geological analysis would shed more light on the identification of sources and the geographical areas supplied by them.

As far as is currently known, the sources for the stone architecture of the Orastie Mountains were located some distance away in the hills around Deva (andesite) and at Santamaria de Piatra in the Magura Calanului hill (Figure 4.18) (limestone), which involved surprisingly long distances for transport. The limestone near Calan was used even at Capalna, where the ashlar blocks were smaller, perhaps as a response to transport difficulties (Gheorghiu 2001, 124).

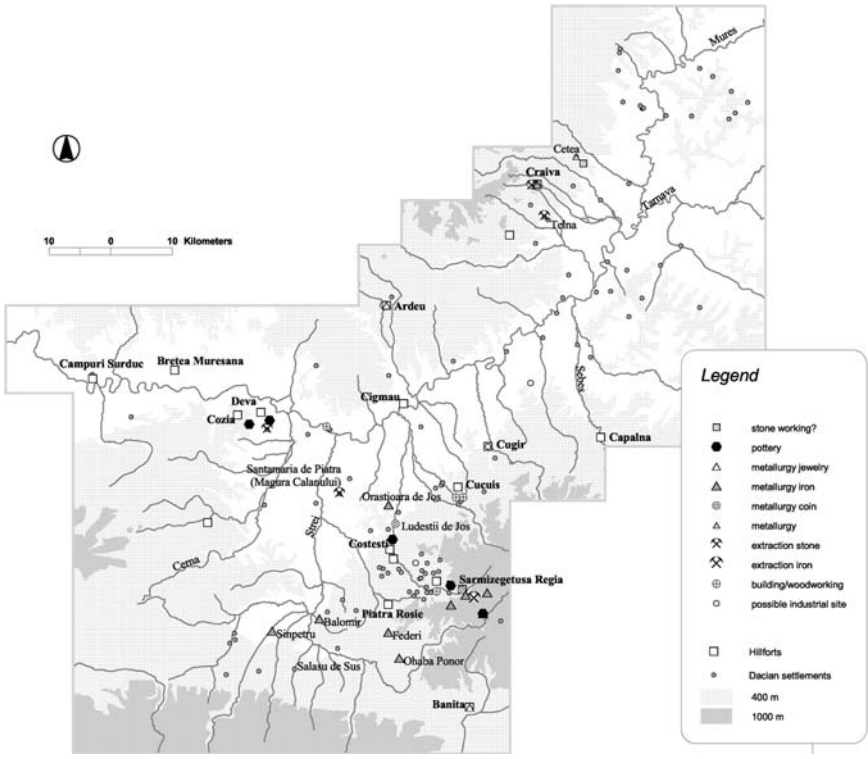

Figure 4.17 Distribution of pre-Roman industrial activity.

Another limestone quarry was located at Craiva in the vicinity of the hillfort at Piatra Craivii providing a much closer source. Other quarries possibly used in this period are at Uroi – Figure 5.26 (andesite) and Telna (limestone). The stone was probably worked at the quarries and then transported away, which is apparent at least for the limestone coming from Santamaria de Piatra and from Craiva (see Glodariu and Iaroslavschi 1979, 144). Large salt deposits were also available at Ocna Mures, where traces of its exploitation in the pre-Roman period might have disappeared.

The use of trees and wood in Dacia is frequently represented in scenes on Trajan's Column (see Chapter 2). Wood was used extensively in construction of, for example, four-posted structures (interpreted as watchtowers), the upper storeys of tower-houses, houses and ancillary buildings, sanctuaries and palisades. Wood was also used for a large variety of artefacts (Gheorghiu 2001, 193–4). A 'medical kit' discovered in the settlement at *Sarmizegetusa Regia* was probably stored in a small wooden box (Glodariu *et al.* 1996, 98). Yet, preserved remains of wood in waterlogged deposits are extremely rare. The wooden flooring of

Figure 4.18 Ancient limestone quarry along the southern side of Magura Calanului hill (I. Oltean).

the water cistern preserved in-situ along with the barrel and wooden pipe-supports from the water installation in the 'Tau' area of *Sarmizegetusa Regia* indicate the use of timbers of local coniferous species ('zada' and fir) (Gheorghiu 2001, 155–6). Recent environmental analysis from 'Tau' (http://www.cimec.ro/scripts/arh/cronica/detaliu.asp?k=1962 visited 6 December 2006) suggest that a different ancient coniferous tree ('larita') populated the hill at the time, but the source for 'zada' was probably not far away. In contrast, the cistern excavated at Costesti-Muchea Chisetoarei made extensive use of oak timbers, like one of the two water-collection basins from Costesti-Cetatuie (Glodariu 1983, 37). Since the levels of natural vegetation locate *Sarmizegetusa Regia* in the coniferous belt and Costesti in the oak belt, the above examples would seem to reflect the exploitation of locally available species.

A wide variety of tools related to woodworking have been found within the study area in deposits, stray finds or excavations (Figure 4.17). Axes of several types have been found in large numbers at *Sarmizegetusa Regia*, Luncani, Fetele Albe, Costesti-Cetatuie, Campuri-Surduc, Craiva and Capalna. Two types of double axes – are represented in discoveries from Capalna, Costesti-Cetatuie, Craiva, Cucuis, Luncani and Luncani-Piatra Rosie, *Sarmizegetusa Regia* and Fetele Albe. Other discoveries include: adzes of two types (Capalna, Costesti-Cetatuie, Luncani-Piatra Rosie, *Sarmizegetusa Regia*, Craiva), three types of saws (*Sarmizegetusa Regia*, Costesti-Cetatuie, Luncani-Piatra Rosie),

iron compasses (*Sarmizegetusa Regia* and Cetea) and three or four types of woodworking chisels (*Sarmizegetusa Regia*, Capalna, Craiva, Cucuis, Costesti-Cetatuie, Luncani-Piatra Rosie, Pustiosu hill, Strambu hill, Valea Larga and possibly at Costesti-Blidaru and Rudele). Two or possibly three imported spokeshaves from Herennius of Aquileia were found at *Sarmizegetusa Regia*, along with locally produced smaller examples. The list of tools finally includes drills (at Costesti-Blidaru, Costesti-Cetatuie, Craiva, Luncani-Piatra Rosie, *Sarmizegetusa Regia*, Strambu), planes from Luncani-Piatra Rosie and *Sarmizegetusa Regia*, one file from *Sarmizegetusa* (with bigger teeth than those used in iron working) and scrapers from Costesti-Cetatuie and *Sarmizegetusa*. No certain workshop has been identified archaeologically; architecturally, they need not have developed specific building plans and the tools which might provide the only specific artefactual evidence could also have existed in a regular household inventory. Much woodworking might have been carried out within households (as was probably the case with leather and textile production), but the amount to which wood was present in architecture, the quantity and variety of tools (locally produced and imported), nails and fittings would indicate the need for and the presence of skilled craftsmen within society. Indeed, someone more professionally involved in woodworking may perhaps have cared to acquire the tools of Aquileian manufacture discovered in an otherwise standard building at *Sarmizegetusa Regia*.

The exploitation and especially the production of iron have benefited from more attention, and a whole range of Dacian ironworking sites has been identified (Glodariu and Iaroslavschi 1979), from primary ore reduction facilities near extraction points to workshops within settlements dealing with secondary working of the iron ingots and the production of artefacts. The surviving evidence indicates significant use of the resources from the Orastie Mountains around Gradiste and beyond, but later (Roman or modern) exploitation of the extremely rich main ores of the region (Ghelari-Teliuc area in the Poiana Rusca Mountains) may have wiped out any trace of previous use. In the Gradistea Muncelului area, Batrana Hill was indicated as the source of the iron ores processed at *Sarmizegetusa Regia* in the eastern settlement, but most of the time the reduction was performed closer to the ore sources. On Tampu Hill slag fragments were accompanied by large iron ingots (approximately 40 kilograms in weight; 0.35–0.4 metre in diameter – indicating circular kilns with this inner diameter) and traces of burning, while the refuse from ore reduction found at 'Dosul Vartoapelor-Sub Cununi' was also supposedly connected to the exploitation of local resources. Other iron sources available at Strambu Hill near Rudele, on Pietrosu valley, Mlacilor Hill and Negru Hill, but also further away, at 'Drumul Dreptului' near the Cioclovina fortifications may have been exploited (Gheorghiu 2001, 183–5). Further traces of ore reduction were identified in Tara Hategului at Federi with a reduction kiln near Fetei and Robului hills (Popa 1987, 34) and at Balomiru, on the Cocozanilor stream, with remains of a furnace for iron

smelting and slag associated with Dacian pottery (Popa 1987, 33) while the large heaps of iron slag discovered on Blidaru Hill at Ohaba Ponor were probably associated with the activity of local kilns.

The metallurgical workshop at *Sarmizegetusa Regia* (p. 91) is the only known example with a combined function. It dealt with the whole production process, from ore reduction to end products for the market, in iron as well as bronze metallurgy. It had four circular kilns built in clay, which were probably used for iron ore reduction, while the four stone rectangular kilns were used for bronze metallurgy (Gheorghiu 2001, 184–5, 195). Only secondary working of iron ingots was carried out in other workshops at *Sarmizegetusa Regia* (on terrace VIII just above the sanctuaries) and at Caprareata, in the Godeanu valley. The small quantities of slag from Orastioara de Jos-La Feregari (Gheorghiu 2001, 56) within the open settlement at Costesti (Gheorghiu 2001, 67, 184) and from Sanpetru (Popa 1987, 36) are perhaps reminiscent of similar activities (Figure 4.17). Some of these workshops and certainly others across the area (in places where specific tools were found) would have also carried out repairs. Since the buildings themselves were no different than other houses within the settlements, workshops are regularly identified on the basis of associated artefacts (tools, unfinished products), such as at Banita and Craiva, refuse and/or kilns (Glodariu 1983). The tools were numerous, varied and adapted to different operations involved in the production process. Overall, two types of anvils; sledge hammers and hammers (five types); 10 types of tongs; files; iron accessories for bellows (sockets for the end part of which were more exposed to heat and bellows pipe cleaners); saws with triangular section; two types of chisels; three types of drifts; and four types of piercers were variously found at *Sarmizegetusa Regia* (terrace VIII and Caprareata), Fetele Albe, Meleia, Rudele, Piatra Rosie, Luncani, Costesti-Cetatuie, Cucuis, Capalna, Cozia, Craiva (Gheorghiu 2001, 186–9) and demonstrate the technological refinement of Dacian ironworking.

The exploitation of precious metals like gold and silver, and also of copper and tin or lead for producing bronze, remains strikingly ill-attested within the study area. It certainly took place, given the amount of artefactual evidence and the considerable availability in the landscape of these natural resources (see Chapter 2), not to mention the fabulous treasures described by literary sources, but later activity at the relevant sites has probably damaged earlier traces. Because it represents a special topic in its own right, the present study has deliberately excluded the Apuseni Mountains, where it is probable that such activity was carried out in pre-Roman times. Given the speed of organisation of the extraction process by the Romans immediately after the conquest, they must have taken under control primarily existing exploitations rather than identifying new sources for themselves (Glodariu and Iaroslavschi 1979, 110–11). Within the study area, surface exploitation of gold-bearing sand may have existed at Costesti (Glodariu and Iaroslavschi 1979, 143). Another was in operation at Pianu de Sus in the Roman period (Moga and

Ciugudean 1995, 145–6) and may also have been exploited before that. There are reports of a tumulus grave broadly dated to the 'Iron Age' located in a vineyard in the vicinity and other stray discoveries have been noted under Salistea-Cioara and Pianu de Jos. More importantly, two hoards demonstrate not just occupation, but also the accumulation of significant wealth in the region, probably related to the exploitation of gold resources. One contained 50 drachms of Apollonia Dyrrachium and of Thassos, discovered at Pianu de Sus during gold mining works in 1852. The other, dated to the first century BC, was discovered in 1821 between the villages of Salistea-Cioara and Pianu de Sus, and contained 64 silver objects, mainly jewellery (four bracelets, five appliqués, a 0.43 metre chain with nail-shaped pendants, a metal ring, six brooches, spirals, two torques and a button), along with a fragment of a *karnax*, and a fragmentary plaque 'primitively' decorated 'au repoussé' representing two human characters with warrior attributes.

Many bronze, silver or gold artefacts were produced locally, though so far this has been documented for end products through metal analysis only for artefacts from the princely grave at Cugir (Glodariu and Iaroslavschi 1979, 113, no. 19). In the large metallurgical workshop at *Sarmizegetusa Regia* mentioned earlier, four of the eight kilns were used for bronze reduction and artefacts production. The discovery of crucibles (some with traces of melted metal), numerous specific tools, moulds, unfinished or misshaped artefacts, or items to be used for repairs, also indicate bronze production at Banita, Capalna, Costesti-Cetatuie, Craiva (including evidence for silver working), Luncani-Piatra Rosie and Ardeu (Popa 1987, 34; Gheorghiu 2001, 17, 194–5) (Figure 4.17). The production of coins in Dacia (initially imitations of Greek models, especially of tetradrachms, later of Roman denarii) was extremely common and was stopped only by the Roman conquest, providing a further indication of the socio-political sophistication of Dacian society. The only known example of a mint was excavated at *Sarmizegetusa Regia* just outside the southern wall of the Dacian phase, overlapped by a subsequent reduction workshop and by the wall of the enlarged enclosure both of Roman date. According to the four coin dies found there, the Dacian workshop was used to mint imitations of Roman Republican (C. Cassius, 126 BC and C. Hosidius Geta 68 BC) and early imperial (Tiberius) denarii. Another coin minting die was found at Ludestii de Jos imitating a first century BC denarius with the legend C.MAR.CF (Gheorghiu 2001, 231). Particular to Dacian coinage is the gold 'koson' coin, with an eagle on its obverse and the legend KOΣΩN which, although still largely a mystery, is considered by some to be of local production. The quantities discovered, mainly as hoards in the Strei valley and *Sarmizegetusa Regia*, indicate the possibility that they constituted a royal accumulation of metal (Strei being interpreted as the ancient *Sargetia* river used by Decebalus to hide his treasure). As the discoveries indicate that silver was generally more widespread, royal monopoly on gold is a possible explanation of the extremely rare occurrence of gold in Dacian jewellery.

Glass production has so far been documented by discoveries of an iron blow tube and solidified glass paste balls at *Sarmizegetusa Regia* (Glodariu *et al*. 1996, 193). Pottery production, however, is better represented at several sites by pottery kilns of quite sophisticated construction. Two of them were discovered at Deva, one within the area of the modern town in the vicinity of the hillfort and the other within the settlement on Bejan hill. Both of them are clay-built structures, circular–oval in shape and 1.10 and 0.80–1 metres in diameter, with an internal grate to support the pots above the heat source and allow air circulation within the kiln. Another such kiln was discovered at Fetele Albe in a workshop supplied with water from a nearby spring through clay pipes and a fourth, badly damaged by the modern road, within the large open settlement at Costesti. Also, pottery production was presumably taking place at several other sites where tools used for polishing vessels have been discovered, as in Banita, Capalna, Craiva, Sebes-Lancram, Luncani-Piatra Rosie, Meleia or *Sarmizegetusa Regia*. Moreover, at the latter site misshaped fragments or wasters have been discovered which are usually found only at manufacturing sites (Gheorghiu 2001, 67, 171–3; Meleia – Glodariu *et al*. 1996, 89). A large variety of ceramic forms was produced, handmade and wheel-thrown, coarse and fine pottery, usually black/grey in colour. The fine pottery also included painted ware found in small quantities especially at high-status sites and largely associated with areas of special spiritual significance (Florea 1998, 250–1). The painting was made on white slipwares using most often red paint with high traces of iron oxides in its composition. The elaborate motifs were first scratched on the surface of the pot prior to painting and a compass was used for precision for circular motifs. Within the study area, painted pottery has been discovered at Capalna, Cozia-Piatra Coziei, Craiva-Piatra Craivii, *Sarmizegetusa Regia*, Meleia, Fetele Albe, Fata Cetei, Ardeu and probably Cetea. The painted pottery in the Orastie Mountains region develops as a particular style, both in terms of ornamentation and ceramic types, using figured decoration (plant and animal motifs) with a preference for decorating large vessels, mostly 'chiup'-type, but including very few kantharoi and bowls, though virtually no high-footed plates (Florea 1998, 176).

4.4 Death and worship

As seen in Chapter 3, literary sources noted significant particularities in Dacian religion and in their attitude towards life and death, facing birth events with sadness and death with great joy, thus indicating a great emphasis on the after-life. This was accepted as the immortal condition promised to the initiated by their deified prophet, Zamolxis/Zalmoxis (Herodotus IV, 95–6; Strabo VII.3.5) and was believed to have largely nourished their high motivation in battle. Dacian religion and sacred architecture have been the focus of extensive descriptions already (Crisan 1986; Glodariu 1983; Eliade 1991; Sanie 1995; and the latest overview in English by Lockyear 2004),

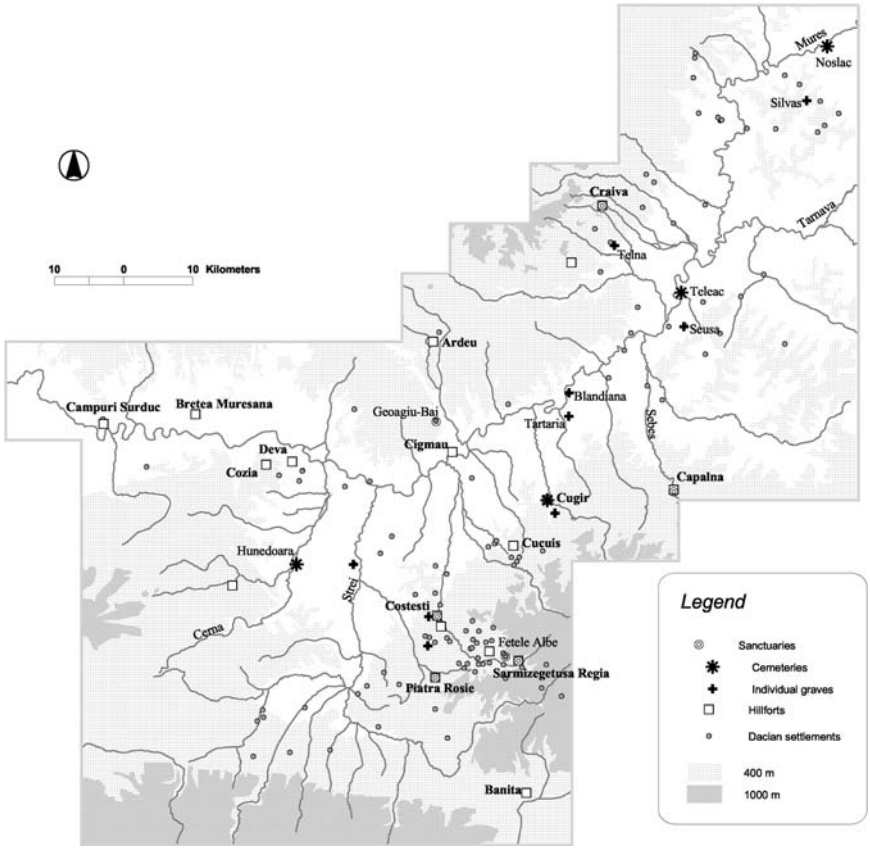

Figure 4.19 Distribution of pre-Roman spiritual activity.

and so the present study will focus on the functioning of worship and burial within the general settlement pattern.

There is not much known about late Iron Age funerary practices, especially for the period prior to the Roman conquest when funerary evidence seems extremely scarce (Figure 4.19). Since cemeteries seem to reappear only after the Roman conquest (e.g. Obreja), it is believed that the religious reforms may have changed the method of disposal of the dead and the rituals involved (Sarbu 1993). A cemetery of four tumuli dated to the first century BC was discovered outside the fortification at Cugir (Figure 4.9). One of the two excavated examples (no. 4) proved to be an extremely rich elite warrior grave where the deceased, wearing his full iron armour (helmet, chain mail, long sword and short sword of Dacian type and spear) and silver and gold jewellery, was burnt in situ in his three-horsed chariot. Other pieces included many iron and bronze fittings

from the chariot, a bronze situla and a ceramic 'fructiera' – (tall-based Dacian plate) (Moga and Ciugudean 1995, 88). Similar funerary habits are documented at Costesti-Cetatuie (dated to the second half of the first century AD – see http://www.cimec.ro/scripts/arh/cronica/detaliu.asp?k=925 visited 6 December 2006) but also outside the hillforts area at Calan (Streisangeorgiu), while scarcer traces of a cemetery and two individual cremation graves were discovered at Teleac, Blandiana and Tartaria, respectively (Gheorghiu 2005, 208–9). The remains were burned in situ (Cugir) or deposited in a pit at the centre of a stone platform (Calan) and only at Teleac is it likely that funerary urns were used. All the funerary contexts include limited quantities of pottery deposited inside (most extensively as an assemblage of two jars, two tall-based plates and another 'mid-sized' vessel at Costesti) or ritually broken over the stone platform (e.g. Calan – Gheorghiu 2005, 209), along with weaponry and harness pieces (Blandiana, Tartaria, Calan, Teleac, Cugir). Jewellery and appliqués, particularly silver and gold artefacts, are known so far only at Costesti and Cugir (the former also with a small hoard of 13 Histrian coins).

There seems to have been significant differences in the mode of funerary disposal of infants. The most recent, detailed and spectacular information come from Hunedoara. Sixteen inhumation graves of babies and children (0–7 years old) have recently been discovered at 'Gradina Castelului' (http://www.cimec.ro/scripts/arh/cronica/detaliu.asp?k=1972 visited 6 December 2006) near the Dacian settlement on the Sampetru Hill. The deceased were apparently disposed of in natural holes in the rocky surface of the hill covered by shallow topsoil without any particular care for certain geographical orientation. Since the inhumations do not overlap, some surface signposting may have been used, but no evidence was recovered. Although two–three pits contained more than one body, most deceased were placed in individual pits on their backs or on one side. Some of the skeletons had missing parts (skull, limbs), but the excavators supposed that this might have occurred through later disturbance. The grave inventory varies a great deal, both in type and quantity. As in adult inhumations, finds include jewellery (beads, pendants, an earring, a necklace, a bracelet), but also small tools (one iron needle and a possible bronze engraving tool). The ceramic finds were quite scarce, possibly for specific cult or religious reasons. The richest burial was that of a baby, buried together with a spear head and an arrowhead, a curved-bladed knife, two rings, a bead, two decorated bone artefacts, two broken 'fructiere' and, even more surprisingly, a denarius of Trajan of AD 98–99! The presence of weapons in the grave could indicate social connections to the warrior elite, although the other children do not seem to be related to an elite context. The whole cemetery offers surprising and detailed insights into a previously unknown aspect of the Dacian civilisation at the time of the Roman conquest. The example from Hunedoara is not alone; a similar case of child inhumation of

potentially similar date was noted at Seusa under the remains of a Roman villa (information M. Ciuta and I. Haynes).

Temples are found mainly in the vicinity of or inside hillforts. One sanctuary was excavated at 'Pietroasa lui Solomon' near Costesti-Blidaru and another four examples were located near Costesti-Cetatuie (one of them *intra muros*). Craiva, with three sanctuaries, would have represented an important religious centre, and at least one sanctuary is known at Luncani-Piatra Rosie, Capalna and Banita. They were all rectangular structures, consisting of rows of parallel plinths made of limestone, and in most cases were severely damaged supposedly in antiquity (or at Craiva, by medieval occupation). At Luncani-Piatra Rosie, there was also a building with an apsidal plan which may have had a religious character indicated by a *clipeus* decorated with representations of religious significance. Apparently, the presence of the elite seems to have determined the location of sanctuaries nearby. Fetele Albe is the only known settlement not associated with a known hillfort which had two sanctuaries. Both were circular, built in limestone, one on terrace II on a stone base replacing an earlier domestic dwelling and the other on terrace III with limestone plinths for columns. Also, at least one andesite sanctuary may have existed in the vicinity (Gheorghiu 2001, 71–2).

The largest known complex of sanctuaries is at *Sarmizegetusa Regia*. The sacred area (Figure 4.16) was located to the east of the hillfort on terraces X and XI which accommodated 10 or 11 circular and rectangular 'sanctuaries' (some of them earlier and replaced by other sanctuaries) along with staircases, a paved road leading to the hillfort, the solar disc or sacrificial altar and stone-built water supply or drainage channels. The preference for a rectangular or circular plan does not always seem to be related to chronological evolution, but the earlier sanctuaries tend to be erected in limestone, while the preference shifts towards andesite for the later ones. The terraces and all the structures they supported are a late architectural addition, but the extent of excavation is not sufficient to determine whether any earlier dwellings were affected (Lockyear 2004). Archaeological evidence suggests that *Sarmizegetusa Regia* is a later development than Costesti. Of potential significance also is the concentration of intense metallurgical activity there, with one big workshop on terrace VIII in the immediate vicinity of the temples, along with huge accumulations of food supplies discovered in burnt granaries. Indeed, the biggest granaries found on the site were located there. These associations could indicate the involvement and possibly control of metallurgy and taxation or administration by religious leaders, possibilities which (although not uncommon in early state societies of the Mediterranean – e.g. see Knapp (1990) for Bronze Age Cyprus) have remained unexplored so far in Dacia. Religious involvement in food storage may also be indicated by the prevalence of large storage vessels (rather than kantaroi) within the painted pottery specific to the Orastie Mountains, of which a large quantity comes from a terrace just below the religious precinct of

Sarmizegetusa Regia. Therefore, it is possible that *Sarmizegetusa Regia* was a religious centre (perhaps *Kogaionon*, the sacred mountain known to have existed, but not located precisely) before it achieved political importance, which may have occurred after the assassination of Burebista, linked to Dekaineos' ascension to power.

Dacian spirituality may have had a much larger variety of expression than simply that of adoration in temples. An alternative religious central place was probably at the natural hot springs of Geoagiu-Bai (*Germisara*) located between the Ardeu and Cigmau hillforts. Apart from 14 gold coins, direct traces of the use of site in pre-Roman times are almost non-existent, but it is the only spa site preserving a Dacian name and the local deities involved (the *Nymphs*) are likely to indicate an earlier feminine supernatural presence. On the basis of numerous deposits found there, a sacred pond may also have been located just outside the small enclosure (p. XXX) of the Luncani-Piatra Rosie hillfort (Strobel 1998, 207–16), near a building where a famous bronze 'shield'-clippeus ornamented with religious motifs (Florea and Suciu 1995) was found. The ritual hanging of trophies in trees (Jordanes *Getica* 40) might also indicate the existence of sacred forests and may have been practiced also in sanctuaries (given the discovery of hooked nails in some of them – Gheorghiu 2005, 200–8). In addition, some of the many deposits of coinage, tools or jewellery, so widespread within the study area, may originally have been concealed for a different reason than protection during violent episodes (normally taken as the conquest wars), which is their general interpretation. One such example is the deposit found at the foot of the hill of Piatra Craivii, which contains three fragmented swords, three spear heads and an iron fitting previously interpreted as a belt buckle. A silver local imitation of a Philip II tetradrachm found in the same place at a later date may have come from the same context. Pits with ritual significance have been identified at hillfort sites (e.g. Costesti-Cetatuie, Craiva; Gheorghiu 2005, 211) and within non-elite contexts (e.g. Sebes-Lancram; Popa and Totoianu 2000, 85–6). Finally, it has been observed that houses and tower-houses are oriented with the door facing mainly south-east (Balos 2000), sometimes with deviations towards south or east, which is a trend manifested in wider areas in prehistory and thought to have some religious significance (e.g. Parker Pearson 1996; Oswald 1997; Hamilton and Manley 2001).

4.5 Moving through the landscape

Central places, combining elite centres (hillforts) and large complex settlements with a wide range of activities, including manufacture, trade and religious services have been identified at *Sarmizegetusa Regia*, Costesti, Fetele Albe, Deva and possibly Craiva, though with three of them located in the Orastie Mountains along the Gradistea valley, their distribution within the territory is clearly uneven. Their very existence implies that a network of both social links and physical communications was in place.

Parts of double-plated balances discovered at Cozia (in bronze) and Craiva (one in iron and one in bronze), or of lead and stone weights from single-plated balances at *Sarmizegetusa* (utilising the Roman measurement system), are probably indicative of the trade functions of these sites (Gheorghiu 2001, 243–5). In addition, if future research confirms the unlikely apparent pattern of economic processes (agriculture, exploitation and processing of resources; p. 100), this would have involved a great deal of terrestrial transport in wagons drawn by horses (Herodotus, *Hist.* V, 9) or cattle between the production sites and processing or storage places. This situation certainly increased the need for a good transport and communication network for both shorter (for iron ores and wood) and longer distances (for cereals and building stone).

Throughout prehistory, the Mures was the main trade route. Access in and out of the study area was possible by following the Mures valley (the only one which was navigable). Terrestrial access was possible also through the Iron Gates of Transylvania and Jiu valley into Tara Hategului; through the Secas-Sebes valleys along the Olt river corridor; or through the Aries valley towards the north and north-west. However, with only Banita (and perhaps Capalna) located on such a secondary land route, it is clear that the Mures valley had a decisive influence on the settlement pattern and this has fed the traditional view that important settlements were located on the main trade routes (e.g. Glodariu 1983). But only 32 settlements (four hillforts) are located within 5 kilometres from the Mures (Figure 4.1). In addition, since the Campuri-Surduc, Bretea Muresana, Cozia or Cigmau hillforts have not provided sufficient evidence of significant ancillary settlement to be considered central places, Deva is the single most important central place in the immediate vicinity of the main river. The others were located at considerable distance away and, therefore, needed terrestrial access routes. But proper roads are absent from the pre-Roman landscape. The roads described by Apolzan (1987, 52–5) and Glodariu *et al.* (1996, 12–15) within the Orastie Mountains are no more than access routes. Moreover, they were established based on the analogy with the traditional settlement pattern and socio-economic system of the uplands from the modern era, related largely to specific historic conditions which cannot automatically be transposed back in time to the late Iron Age (e.g. avoidance of the demographic, administrative and ethnic stress present in the lowlands; economic dependence on forests and upland pastures, etc.).

Despite this impediment, imports found their way in, as proved by a range of artefacts: not only bronzes, glass and pottery, but also silver and iron. Some difficulty of transport was assumed as the explanation for the extremely rare occurrence (only at Costesti and Cetea) of wine amphorae, despite clear literary indications of wine consumption in ritual/elite contexts and in strong contrast to their presence in large quantities to the east and south of the Carpathian Mountains (Glodariu 1976, 11). The distribution of other imported pottery (present at Costesti, Gradistea Muncelului, Craiva

and Cetea) shows a somewhat similar paucity. This would seem to confirm the problems of transportation of such fragile materials so far away from the Danube line over the mountains. Glodariu (1976, 12) suggests the use of extra-Carpathian intermediary stations (e.g. Poiana and Cetateni), where the wine or oil was transferred from amphorae into casks of wood or leather, but the presence of quantities of imported pottery at Pecica on the lower Mures (Glodariu 1976, 19) confirms that the river was used as probable route of access for such imports into the study area. Furthermore, imported glass objects, which are even more fragile, are well-attested within the study area, with 92 pieces in this area alone out of a total of 192 for the whole of Dacia, with 43 from Gradistea Muncelului; 24 from Costesti; 14 from Luncani-Piatra Rosie; and 11 from Capalna (Glodariu 1976, 39–40). These examples tend to reduce, although not eliminate, the factor of difficulty of transport into the uplands, and perhaps different explanations for the absence of amphorae should be sought. Indeed, that the absence of amphorae may result from local choice is supported by the evidence of similar decisions made in other areas (e.g. Caesar, *DBG* 4.2; see discussion in Woolf 1998, 179–81). The source for imports prior to the conquest was the Roman world, which had replaced the previous Hellenistic source of luxury goods. The presence of imported goods and technologies is particularly related to elite sites (though surely a bias has been created by the current research focus on elite settlements). In general, the presence of foreign luxury items can be largely explained by trade, although future studies should take into account the possibility that the circulation of prestige goods included the Dacian elite.

Coinage was present in the area in large quantities, with Greek, Roman republican or local imitations of both indicating, through the nature of the discoveries, the wealth accumulated here (along with hoards of jewellery and other objects) rather than their intensive use in transactions. Within the study area coin discoveries from contexts other than hoards have been reported in 34 locations. Their distribution seems to indicate two distinct areas of use, one in the Orastie Mountains and the other to the north in the Craiva-Capalna region. Other smaller groups are found in the Deva–Cozia region, a couple of locations in the Hateg area and the Cigmau-Geoagiu region (though the discoveries from Geoagiu are very likely ritual depositions). Most discoveries were in coin hoards (Figure 4.14), some of them extremely rich, grouping a few hundreds or, indeed, thousands of coins. As expected, they tend to be located outside the settlement areas, although, with a few exceptions, in the immediate vicinity of settlements. Their geographical distribution shows a higher number of hoards in the western half of the study area, in the Orastie Mountains–Deva region and beyond, than in the eastern region (Cugir–Capalna–Craiva) where stray finds of coins or jewellery are prevalent. In addition, in the former region more hoards were discovered at distances significantly greater than 5 kilometres radius from the hillforts, while in the latter such finds are located mostly just

outside this 5 kilometres buffer zone. The wealth indicated by the presence of coinage in the Orastie Mountains was determined by industrial activity, along with politico-administrative and spiritual leadership, while the wealth of Craiva region could have been justified at least in part by the agricultural surplus of its hinterland; also economic reasons are likely to have determined the huge quantities of coins, totalling several thousands pieces, hoarded in and around Deva.

4.6 The social landscape

As shown in Chapter 3, the written sources describe a warrior patriarchal society under the authority of a military leader, a general assembly of warriors and a defined social hierarchy. The upper class(es) (*pileati*; *tarabostes*) seem to be differentiated within society by external rank markers such as a tall hat and/or symbolic-ritual tattooing or body painting for both men and women, with hereditary symbols transmitted up to the fourth generation (see Pliny the Elder, *Nat. Hist*. VII.11 (10) 50; XXII.1.2). The lower classes (*comati* – the long-haired?) were free men; though frequency of warfare made the region itself one of the main sources for slaves for the classical world (Strabo, *Geogr*. VII.3.12), there is only limited evidence for the use of slaves other than for sale.

Social stratification is visible within the settlement pattern through the emergence of hillforts on the one hand and of stone architecture on the other. The traditional interpretation of the fortified sites is as the local equivalent of the tribal centres from the Celtic world, the analogy with Gaul being mostly used (e.g. Glodariu 1983, 72). In the latest phase of evolution of Dacian society, Ferenczi (1988) believes that a union of tribes would have had several such fortified sites which would have still remained strategically important, and that this situation was perpetuated into the Dacian state. The basis for this interpretation is literary. Ptolemy (*Geogr*. III.8.1–4) gives a list of 43 names of *civitates* in Dacia, out of which arguably 33 were of Dacian origin. Most of the latter include the added suffix 'dava' (meaning settlement, village) (*Patridava*, *Carfidava*, *Petrodasa* (*Petrodava*?), *Sandava*, *Vtidava*, *Marcodava*, *Ziridava*, *Singidava*, *Comidava*, *Rhamidava*, *Zusidava*, *Paloda*, *Argidava*, *Netindava*), which was, therefore, seen as a possible analogy with the Celtic fashion of naming settlements after regions or tribes. But other Dacian names from his list lack the suffix (e.g. *Zarmisegethusa regia* = *Zermizirga*). In addition, nine other names of Dacian origin (e.g. *Apulum*) seem to have been latinised, while a final group of seven were probably Latin, which makes it less clear whether Ptolemy's account represents the reality before or immediately after the Roman conquest. The greatest difficulty is to relate them, however, with archaeologically identified sites. So far this has been convincingly argued only for *Sarmizegetusa Regia* and possibly *Apulum*, identified as the hillfort/citadels at Gradistea Muncelului–Dealul Gradistii

and Craiva-Piatra Craivii, respectively. The territories of the tribes named by the same source are also unclear.

Indeed, the general archaeological picture is somewhat different from that for Celtic *oppida*. The size and shape of the defended sites is variable and reflects not only the size of the group involved, but also its social structure. In the early Iron Age (Hallstatt) Transylvania had some of the largest fortified settlements in Europe at that time (30 hectares enclosed at Ciceu-Corabia for instance – see Vasiliev *et al.* 1991, 19; Vasiliev 1995, 149) capable of accommodating a large population. In contrast, the late Iron Age (La Tene) Dacian fortifications are smaller, covering areas between 1 and 7 hectares (Glodariu 1983, 67; Zanoci 1998, 30–2), or even less (0.5 hectares) at Costesti-Blidaru and Capalna. This contrasts with the general tendency traditionally observed elsewhere in the Continental Celtic area for example (Wells 2001), where the emergence of *oppida* produced a significant increase in the area of and, indeed, the size of the community living within the enclosure. The beginnings within the Hallstatt period were similar and, indeed, Transylvania's large enclosed settlements show clear indications of social aggregation. For some reason the later evolution saw the return of small-sized enclosures. But rather than indicating a decrease in population, this opposite evolution in Dacia could relate to a change in the social structure and the development of aristocratic/royal sites. Dacian hillforts are invariably related to the social elite and this is largely supported by the finds coming from such contexts, with luxury items including fine pottery (even painted pottery), imported goods and coinage, but their function has been less explored. Associated finds and amenities in their ancillary settlement (workshops, sanctuaries, public spaces, etc.) indicate that some of them had complex functions, but only at *Sarmizegetusa Regia* has it been estimated that craftsmanship managed to surpass the central role of agriculture (Glodariu 1983, 121–30). Invariably their topographic location is interpreted as an indication of a strategic function, doubling their economic-agricultural one (e.g. Arpasu de Sus, just outside the study area – Macrea and Glodariu 1976). But even though residential use of some hillforts is documented in internal tower-houses, it is likely that in Dacia, as in Britain for example, their location had more to do with social psychology and the pursuit of architectural monumentality as 'places for display' than has been recognised previously (Hamilton and Manley 2001; Williams 2003).

Similarities with the intra-tribal centralisation characteristic of Celtic areas are highly unlikely in the same format. A proto-urban function for the hillforts with large ancillary settlements, comparable with that of *oppida* and often supported by the Romanian literature, is in some respects debatable. A fundamental lack of aggregation of the settlements is clearly visible, indicating consistent social trends. Most settlements seem to have had a scattered structure, whether in small groups or in individual units. Even in settlements previously considered to be of compact structure (e.g. *Sarmizegetusa Regia*), the layout of the residential areas, consisting of terraces for

single households, hints at social tendencies towards individualism. Although this could represent only a pragmatic architectural solution to topographic awkwardness, its repetition within the general settlement pattern suggests that it was more likely to have been a reflection of social attitude.

The presence on a site of *murus Dacicus* seems, from what has been presented here, a valid indicator of social status (Lockyear 2004). It was used at all the hillforts around the capital and at the capital itself (Costesti at Cetatuie and Blidaru; Gradistea Muncelului – on Gradiste Hill and on Varful lui Hulpe; and at Luncani-Piatra Rosie), but also outside at Banita, Craiva Piatra Craivii, Capalna, and probably Deva; its alternative use for tower-houses and terraces is predominantly restricted to the Orastie Mountains, the only exception being Craiva. The appearance of *murus Dacicus*, therefore, indicates high status in the very late (state) phase of Dacian society and perhaps can be related to a political architectural programme.

An important trend probably of late date within Dacian society is the emergence of towers. Without necessarily totally excluding a strategic function for them, they are more likely to represent an expression of social transformation and trends within late Iron Age society. They can be interpreted as an architectural expression of social emulation within the Dacian elite, an extension of the elite houses in the areas outside enclosures. If the tower-houses within citadels are to be interpreted as chieftain or royal residences, the satellite tower-houses might be the houses of his courtiers (*hetairoi*?). The geographic distribution of the tower-house phenomenon (see Figure 4.1) is also significant in indicating centres of power. Tower-houses were located within both hillforts at Costesti and at Capalna, and possibly at Luncani-Piatra Rosie and Craiva. However, satellite towers were noted only at Costesti-Cetatuie and Blidaru (the most notable example, with 19 tower-houses in total), Craiva (11) and a few near Gradistea Muncelului-*Sarmizegetusa Regia* (3) and Varful lui Hulpe (2). More importantly, they do not show an even distribution of power across the territory: with the exception of Craiva, they are clustered within the Gradistea Muncelului–Costesti area.

The complexity and size of some open settlements around hillforts have already been interpreted as indicators of their importance as central places, with economic if not always politico-administrative functions. It is likely that at least some of the identified possible central places would have carried out certain administrative functions. After all, literary sources indicate that Decebalus instituted a clear division between the warrior elite and the economic elite (see Chapter 3). This is, however, not immediately apparent. The balances found at *Sarmizegetusa Regia*, Piatra Coziei and Craiva-Piatra Craivii do not seem to have been used for measurements of large quantities and, therefore, even if a certain involvement in the taxation process is not impossible, it is more probable that they were used in trade activities (as was their previous interpretation). Similarly, the distribution of painted ware (Florea 1998) confirms the importance of the sites from Gradistea Muncelului-*Sarmizegetusa Regia*, Costesti-Cetatuie Craiva-Piatra

Craivii and Capalna. But its occurrence in other locations (mostly within Gradistea Muncelului area – Fetele Albe-Sesul cu Branza, Fata Cetei, Meleia but also elsewhere – e.g. Piatra Coziei or Cetea) recommends it as a better indicator of socio-economic and/or religious, but not of political status. The social elite did not necessarily hold a monopoly on craftsmanship as a whole, although their residences did attract industries, especially metallurgy and pottery (Figure 4.17). At both Deva and Costesti, pottery kilns were located within the open settlement around the hillforts, along with evidence of metallurgy (iron, bronze, silver and gold). Although traces of metallurgy with no apparent relationship with elite or religious site have been identified in various locations (even outside the Orastie Mountains e.g. Tara Hategului), at *Sarmizegetusa Regia* there might be a possible link between religion, industrial metallurgy and, possibly, production of painted pottery. In many respects, Costesti shows a politico-administrative potential significantly higher than *Sarmizegetusa Regia* where religious and industrial significance seems to have prevailed.

Settlements at the lower end of the social hierarchy are far less well known because of lack of research. Their prevalent individual character in terms of the size of the social group that inhabited them is largely assumed here on the basis of the recent re-consideration of evidence from other geographical areas normally used for comparison, but until large-scale programs of survey take place, there will be no definitive answer to this problem. Furthermore, any assumptions about the importance of particular sites need to be flexible. For example, an open settlement like Vintu de Jos has all the indicators of a purely agricultural village. Nevertheless, its size, but especially its location on the bank of the Mures, makes it potentially interesting as a central place for trade and communications. Another possible central place is at Cetea, based on the type of artefacts discovered at the site, which include imported amphorae. Finally, a site which to all appearances is simply an individual farmstead, like Saracsau, can hide under its floor four large and four small brooches, one fibula pin, three necklaces, four arm rings and six rings all in silver, which gives some indication of its economic power.

Understanding social structures as expressed by discernable patterns inside settlements themselves is still at its very beginnings and based on the current level of research little can be said with certainty. One observation already made is that only in a very few cases was some provision of public open areas clearly defined (*Sarmizegetusa Regia*, possibly Fetele Albe and outside the study area at Arpasu de Sus), although two of these (*Sarmizegetusa Regia* and Fetele Albe) seem to be associated with sanctuaries (Balos 2000). However, the data presented throughout this chapter reveals a number of patterns which give new insights into Dacian social structure. One of them indicates that, despite significant architectural differences within upland and lowland houses, they all reflect the individuality of the basic family (parents and children); the division of space and the evidence of hearths within the excavated examples makes it unlikely that the houses would have hosted much

larger groups (not more than two to three generations together). Also, clustering of buildings into small groups is obvious both in upland (e.g. Rudele) and lowland areas (e.g. Vintu de Jos). The duality of tower-house structures present in the hillfort at Costesti-Cetatuie should be further analysed by future research into their chronological relationship. The interpretation of their social significance differs depending on whether they were totally contemporary, or if one of them constituted a later addition. The chronological challenge of a possible duality should then be extended further, in analysing the relationship between the two citadels at Costesti (Cetatuie and Blidaru) which are located unusually (and perhaps unnecessarily) close together. Until then, a consequent duality of the elite group living there or even a duality of power should be considered probable.

5 The Roman social landscape

The Roman conquest saw the appearance of Roman colonists (both military and civilian) and their associated apparatus, resulting in substantial changes in the landscape and settlement pattern in the study area. Concentrating essentially on the civilian landscape and settlement, this chapter analyses the character of those changes and the influence of the newcomers on social and economic activity and communications.

5.1 Inhabiting the landscape

The settlement pattern of Roman Dacia is traditionally interpreted as consisting of urban-status settlements (*colonia* and *municipia*) and of rural settlements as villas and villages (*vici*), but previous interpretations of the non-urban settlement pattern of Roman Dacia fail to address a number of issues in a satisfactory manner. Since the general preoccupation was towards settlement status, this has generated an incomplete settlement pattern and uneven coverage of settlements by research (see also Chapter 1). With no written evidence for the legal status of non-municipal settlements, especially for the central places without urban status, the so-called 'small towns' (e.g. Protase 1968; Tudor 1969), no status-related assumptions could be made and these sites were placed in a 'grey' area and, therefore, omitted from both urban and rural studies. Moreover, all too often labels such as villa or village (*vicus*) are applied on the basis of too little archaeological evidence, and for this reason no *stationes*, *mansiones* or rural temples are mentioned in earlier studies. Numerous further problems are created by the fact that general studies (e.g. Protase 1968; Tudor 1969; Popa 2002) approach villas and villages mostly from an architectural rather than functional point of view. Indeed, very little attempt has been made to interpret the whole landscape functionally. Therefore, the interrelationships between settlements and the interpretation of the whole economy (resource exploitation, agricultural and industrial production, trade, transport and communications), society, administration–taxation or, indeed, religious life outside colonial or municipal establishments are unclear. For example, the relationship between rural settlements and cultivated fields has not yet been revealed because of a

lack of landscape or environmental analysis and, therefore, the agricultural economy of these sites is an assumption based largely on their location in regions with known agricultural potential, and sometimes on finds evidence. Also, land divisions and the division of the landscape within the administrative territories of the towns are unknown. Finally, the dominance of the Roman element is evident within previous interpretations, as almost invariably these are represented by Roman architectural models based on the use of stone walls, bricks and tiles. About 214 sites seem to have used features such as stone walls, bricks, tiles, mortar, wall plaster – sometimes with painted decoration or, indeed, elaborate pavements. However, very few sites have been recognised as settlements belonging to the native Dacian population and even fewer (e.g. Cetea, Noslac, Cicau) have provided evidence for continuity of occupation from the pre-Roman to the Roman period.

Apart from the major towns (*Sarmizegetusa* and *Apulum*), the mid-Mures Valley and Tara Hategului have provided archaeological evidence of 402 sites datable within the Roman period; 266–270 of them were, or could have represented, settlements (Figure 5.1). The archaeological evidence in most of the cases is extremely scarce and the research methodology traditionally employed is far from being satisfactory in defining the nature of the settlement in the large majority of the reported sites. Therefore the nature of 213 of these settlements is yet to be clarified. However, since the size of known settlements as established on the basis of the surface covered by artefacts varies from over 10 hectares to less than 1 hectare (Gudea and Motu 1994, 512), this could suggest considerable variation of settlement type.

5.1.1 Individual settlement: villas and homesteads

Defining what is meant by the term 'villa' has been under much debate in archaeological literature. In the beginning, the usage of the name 'villa' was strongly influenced by the phenomenon of Italian luxury villas and ancient literary descriptions, and scholarly interest was prompted mostly in relation to the lavish artistic expressions of luxury life within villa architecture (see Dyson 2003, 13–18). However, such a model would hardly have done justice to the large majority of Roman buildings in the rural landscapes within the provinces, especially those outside the Mediterranean area; nor could it cover the functional complexity of the villa phenomenon, especially in relation to its economic activities. Unfortunately the identification of economic functionality or of character of site occupation (whether temporary, seasonal or permanent) is usually a result of more in-depth post-excavation analysis, while construction technique or site plan, normally identified by archaeological survey, is nowadays the most common mode of identification and research in rural archaeological features. Therefore, current presumptive interpretation as a villa still relies on architectural data. The rural setting is an essential defining feature, along with stone architecture (at least in part; Wightman 1970, 139) but, as Smith (1997,

Figure 5.1 Comparative distribution of Dacian and Roman settlements.

10–11) argues, more recent evidence of romanised layout of farm buildings in timber (e.g. Druten in Holland) or Roman 'urban comfort' (e.g. bath buildings among round or rectangular timber structures at Harting-Garden Hill or Barnsley Park IV) can also give support to villa/proto-villa site interpretations. Therefore, the term 'villa' has ended up by being generalised in the context of Roman provincial archaeology to include farms of Roman date with signs of Roman influence, either in their use of building materials or their architectural design. These might include features that are usually classified as 'urban comfort', such as baths, hypocaust installations and elaborate flooring and wall painting. In accordance with their functions, essentially of accommodation and economic (agricultural and industrial) production, they are supposed to include multiple buildings falling into two main categories, the *pars urbana* (including the house and baths – whether within the same building or as a different complex), and the *pars rustica*

(containing ancillary buildings largely related to economic activities), all of them located within an enclosure.

The total number of villas within central Dacia is uncertain, much like elsewhere in the province. Less than 30 appear on the published heritage lists throughout the province (http://map.cimec.ro visited 6 December 2006), but this is clearly an underestimate. In the central area of Dacia, Tara Hategului and the mid-Mures valley, 9 villas are listed by the heritage authorities, but the present analysis shows that in 24 cases the nature of the evidence is sufficiently strong to indicate with reasonable confidence the presence of villas and, on the basis of more fragmentary remains, some 111 of them might generously be taken into account as possible villas (Figure 5.2). But care must be taken not to over-estimate their number by the identification methodology employed. Very few of the sites have been excavated to any great extent and, since the *pars urbana* has constituted largely the main

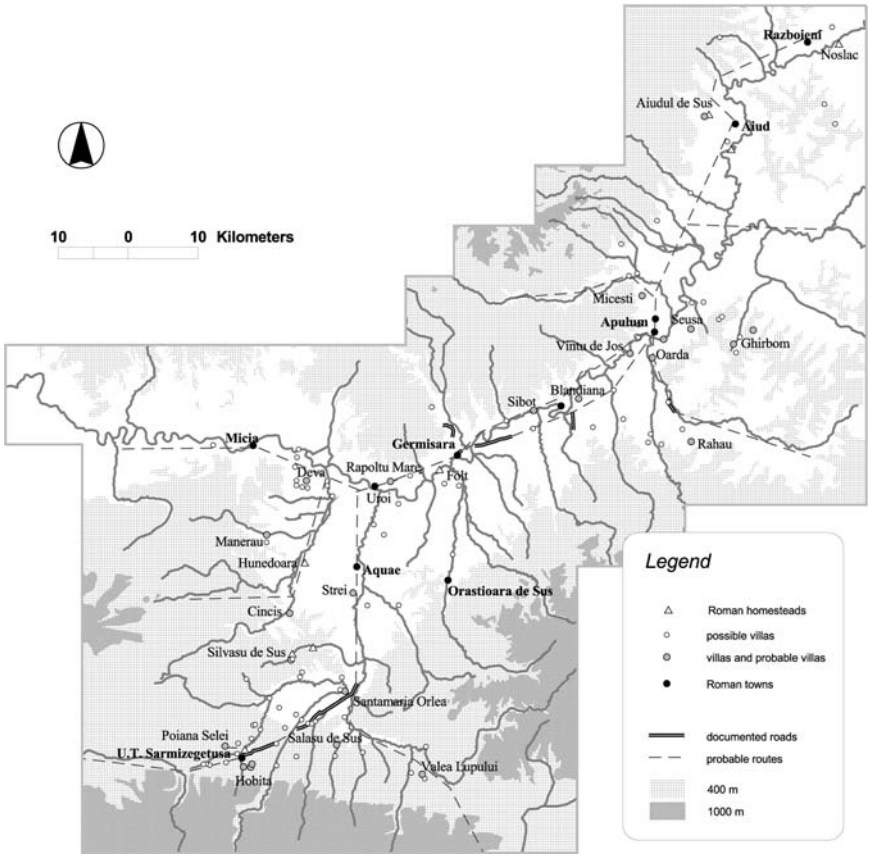

Figure 5.2 Distribution of Roman villas and individual homesteads in relation to towns.

focus for excavation, for many of them the partially recovered site layout is insufficient to support the typological identification of the settlement. Indeed, for some examples the existence of ancillary buildings (*pars rustica*) and that of an enclosure is yet to be confirmed. In other cases, even if such elements were identified on the ground, their location was not included in the site plans, so it remains difficult to establish what the site might have looked like. This situation is not unique in Roman provincial archaeology. Similar problems are encountered in Britain and in other European provinces in relation to older excavations (Smith 1997, 20), but in those areas more recent excavations had since been undertaken in villas which helped to improve outdated interpretations.

In Dacia, older interpretations relying on field walking data tended to be more relaxed in identifying villas on the basis of any solitary complex on agricultural land with evidence of Roman building material, such as stone walls, bricks, roof tiles, and sometimes hypocaust materials, *tesserae* or painted wall plaster. This is probably a safe assumption when no site plans or more detailed research is available, based simply on the supposition that in a normally developed Roman provincial settlement pattern the density of villas is likely to be higher than that of villages. Unfortunately, these features are proof only of the use of romanised building materials and techniques, and perhaps of a concern for providing some elements of urban comfort. But since such features are not restricted to villas (e.g. presence of such features in the small town at Cristesti, see Husar and Man 1998, 58), this evidence alone, without other indications of the size and layout of the site, does not preclude the possible identification of the site as a *vicus*, *mansio*, temple or (when only bricks and tiles are reported) even a funerary construction. Given their capacity for revealing the internal structure and function of a settlement, the recovery of a site plan provides a more reliable (crucial) basis for identifying sites as villas. In several cases, the recent recovery of site plans has enabled re-interpretation of a number of sites. In one case to the north of Alba Iulia (Figure 5.3) the site was thought to be a villa by some, but its plan consists of only one small building of square/rectangular shape, unlikely to be a villa since no other (ancillary) buildings, or even a multi-roomed house could be identified and during recent reconnaissance it became apparent that it was a mausoleum. By way of contrast, the identification of one building between the modern villages of Soimus and Balata (Figure 5.4) previously thought to have been part of a village (Tudor 1968, 126; Russu *et al.* 1984, 206) lends more weight towards a re-interpretation of the site as a villa.

Within central Dacia, there are currently some 24 sites identified mainly through excavation or aerial photography, which constitute certain, or are very likely to represent villas (Figure 5.2). In terms of the layout of the sites, in only a few of the excavated examples in the area has the research undertaken been extensive enough to enable reconstruction. Overall layouts are available only for the villas at Hobita and Deva and few are known elsewhere in Dacia (Figure 5.5). Both sites consist of a number of

Figure 5.3 Aerial photograph showing funerary constructions at Alba Iulia (see transcription 5.36 A).

buildings of different function grouped within a compound (enclosed yard), with most of the ancillary buildings located along the enclosure walls. The two examples indicate considerable variation in the size and shape of the area within the enclosure. The villa at Hobita-Hobeni Hill has a irregular stone enclosed yard, its shape dictated by the local topography (of rectilinear shape and possibly sub-divided at its southern end), which covers an area of 0.58 hectares (Floca 1953, 744–5). Within the enclosure the excavators identified three buildings in stone and four in timber (two of which could be internal partitions of a larger stone building, otherwise undivided). Two of the stone buildings, a small square-ish construction built along the eastern enclosure wall and a multi-roomed construction of 25.3 by 15 metres inside the courtyard, have been identified as for residential use. The third stone building (20.20 by 38.40 metres) and two timber buildings (*c* and *d*) along the northern and north-eastern enclosure walls were interpreted as ancillary buildings. In contrast, the 0.26 hectares villa at Deva (Figure 5.5) was surrounded by a small rectangular enclosure. Most of the internal area was occupied by a number of stone constructions built against three sides of the enclosure wall, mainly on its southern and eastern sides (Marghitan 1998). Only two buildings have been partially excavated in a villa site at Santamaria Orlea (Figure 5.6) located some 17–18 kilometres to the east of the colonial settlement at *Sarmizegetusa Ulpia*. However, antiquarian accounts indicate

Figure 5.4 Aerial photograph indicating the buried remains of a single stone building near Balata.

that it consisted of at least five buildings, visible at that date as raised platforms/banks of square–rectangular shape inside an enclosure of about 220 by 150 metres, along with another small circular stone enclosure interpreted as a possible tower (more likely a small religious or funerary *tolos*) to the east, outside the enclosure (Martian 1910, 341, 535). On the basis of the information, it was considered among the largest villa establishments in Dacia. For other sites such as Manerau (Figure 5.5; Mitrofan 1973), Strei (Figure 5.7; Popa and Lazin in Popescu 1970, 515) Rahau (Mitrofan 1973, 147–8), and Valea Lupului (Popa 1987, 55–6; Popa 2002, 209), there is also evidence of at least two buildings of different function. But only one building has been so far documented (in part or completely) by excavation at Cincis (Figure 5.5; Floca and Valea 1965), in two different locations at Ghirbom ('Intre Veli'– Moga 1995; and 'Capul Sesului' – Aldea *et al.* in Popescu 1970, 507; Moga and Ciugudean 1995, 98–100) and probably at Seusa and Rapoltu Mare (http://www.cimec.ro/scripts/arh/cronica/detaliu.asp?k=890 visited 6 December 2006).

A number of villas and probable villas have been identified through aerial reconnaissance (Figure 5.8) (the Aerial Reconnaissance of Western

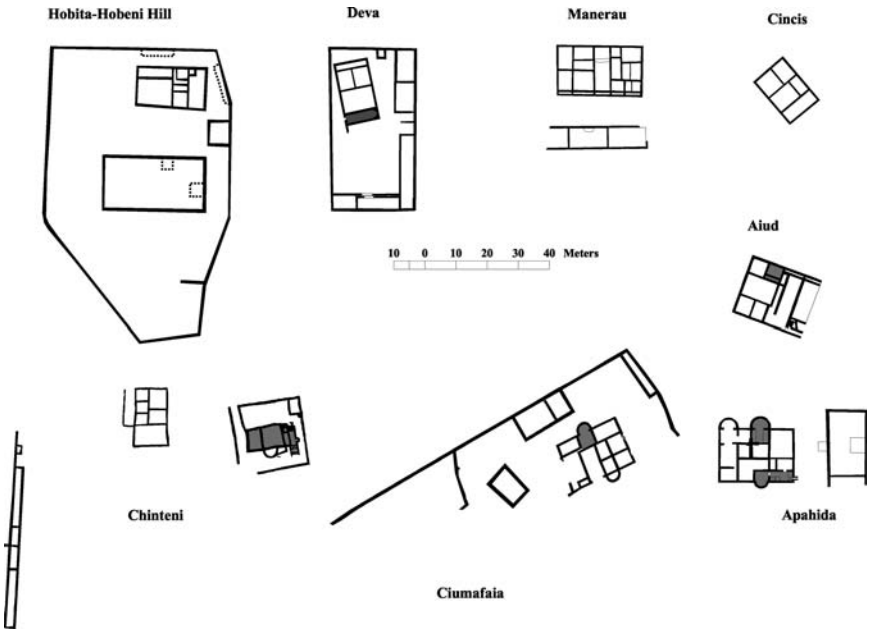

Figure 5.5 Examples of excavated villa complexes and buildings in central Dacia (Hobita, Deva, Manerau, Cincis, Aiudul de Sus) and in the north-western Dacia, around *Napoca* (Chinteni, Ciumafaia, Apahida). Rooms with hypocausts marked in grey (Manerau and Apahida not oriented to north and the two buildings are not in their correct spatial relationship).

Transylvania Project, see Chapter 1) and a few through systematic field walking, followed by geophysical survey (The *Apulum* Hinterland Project), but because of specific conditions of recovery, only some of these examples provided evidence for their overall layout. Several examples at Oarda, Sibot and Vintu de Jos were photographed from the air and subsequently confirmed by field visits and, in the latter case, by recent excavations. At Oarda (Hanson and Oltean 2003; Oltean 2004; Oltean and Hanson forthcoming b) the remains spread across approximately 1 hectare (Figures 5.8 and 5.9) and consist of a number of separate building ranges, which appear to be grouped around three sides of probably a large central courtyard (C). Multiple stone buildings are apparent also at a villa site located across the Mures from the modern village of Sibot (Figure 5.8). The site contains a set of stone buildings aligned with their long side to the south-east covering a total area of at least 0.19 hectares. A small rectangular building of 7 by 13 metres has two internal partition walls, one parallel to and 3.5 metres away from the north-eastern short wall and the other probably dividing the remaining space into two rooms, each of some 8.5 by 3 metres. A large

Figure 5.6 The site of the villa at Santamaria Orlea from the air; the remains of two to three buildings (some partially flooded) are visible in the foreground and further partially extant building remains are visible in the background.

building of about 14 by 30 metres also had its length internally divided into three sections of 12, 8 and 8.5 metres. Two other possible buildings were located to the east connected by a wall (possibly part of an enclosure) on the same alignment. They do not seem to have been sub-divided and were perhaps ancillary in function. The villa at Vintu de Jos, located in the immediate vicinity of a Dacian and Daco-Roman village of sunken houses and storage pits (see Chapter 4 and p. 145) (Figures 5.10 and 5.11), covers at least 0.24 hectares and consists of three stone buildings. For two of them with a probable accommodation function, the plan has been recovered only fragmentarily; the third one is a large rectangular construction built (at least partially) in stone of about 14 by 20 metres and there are parts of another two buildings located closer to the edge of the terrace and overlapped by the modern field boundary (Hanson and Oltean 2003, 115–16; Oltean 2004). Ongoing excavations by the *Apulum* Hinterland Project will shed more light on the site plan, stratigraphy and chronological evolution. A smaller villa with at least two buildings at Oarda-'Sesul

Figure 5.7 Remains of excavated villa buildings at Strei and the adjacent early medieval church from the air.

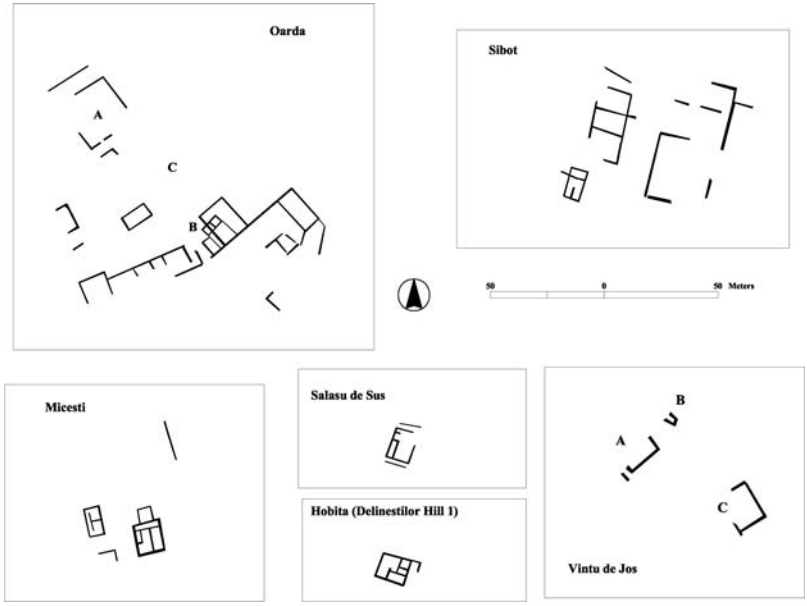

Figure 5.8 Plans of villa and probable villa sites discovered from the air.

Figure 5.9 Buried remains of multiple buildings of the Roman villa at Oarda. Oblique aerial view from the north-west.

Orzii' was located on the southern bank of the Mures to the east of the village (http://www.cimec.ro/scripts/arh/cronica/detaliu.asp?k=3182 visited 6 December 2006) and geophysical survey in addition to limited excavations on the site at Seusa seem to confirm its original interpretation as a villa. In addition, remains of another site with at least two buildings were recently discovered at Micesti (Figures 5.8 and 5.12), in an area where field walking has noted Roman materials (information I. Haynes and D. Bogdan). Only single buildings, whose orientation and plan resemble excavated examples of villas and may, therefore, be related to larger villa settlements, have been noted at Sebes, Salasu de Sus (Figure 5.8) Balata (Figure 5.4) and in one case at Hobita on Delinestilor (Sucioni) hill (Figures 5.13 and 5.14) (Hanson and Oltean 2002, 114, Plate 43). The latter area was reported to be rich in ruined buildings of Roman date, which included the remains of a kiln for the production of building materials (Popa 1987, 44) and a set of large millstones (Figure 5.15).

When we turn to structural details, we find that yards seem to be paved with pebbles (Oarda-Sesul Orzii and possibly Aiud) or, more expensively, with limestone (Deva). No clear entrances have been found, but at Hobita one was supposed to have been located on the western or northern side as

Figure 5.10 Aerial photograph of a multi-period site at Vintu de Jos; cropmarks indicate the presence of a Dacian and Daco-Roman village of sunken houses and storage pits in the immediate vicinity of a Roman villa.

being the most accessible (Floca 1953, 745). Sub-divided yards are apparent at Hobita-Hobeni hill and probably at Oarda, but identification of the function of various buildings by excavation at the former does not indicate the sub-division of yards between the *pars urbana* and the *pars rustica*. At Deva, however, the layout of the yard in comparison to the villa house and the identification of other buildings outside the enclosure may indicate its chronological evolution involving expansion, or more likely a division, of the property.

Whenever plans of villa houses can be reconstituted (Figures 5.5 and 5.8), they invariably indicate internally sub-divided rectangular constructions resembling private buildings from military *vici* (e.g. *Micia*, Cigmau; see pp. 162–164) or towns (e.g. *Sarmizegetusa*, see Alicu and Paki 1995). The dimensions range between 30.5 by 19.5 metres (Manerau, which is twice the size of other examples and among the largest in Dacia) to 25.3 by 15 metres (Hobita) and 22–21.5 by 15 (Santamaria Orlea, Cincis and probably Deva – the dimensions specified in the text, 21.5 by 19.5 metres, do not match the published plan). Nevertheless, even smaller examples have been recorded from the air (Hobita, one phase of Oarda, Vintu de Jos). Excavations indicate that villa houses were built in *opus incertum*, in some

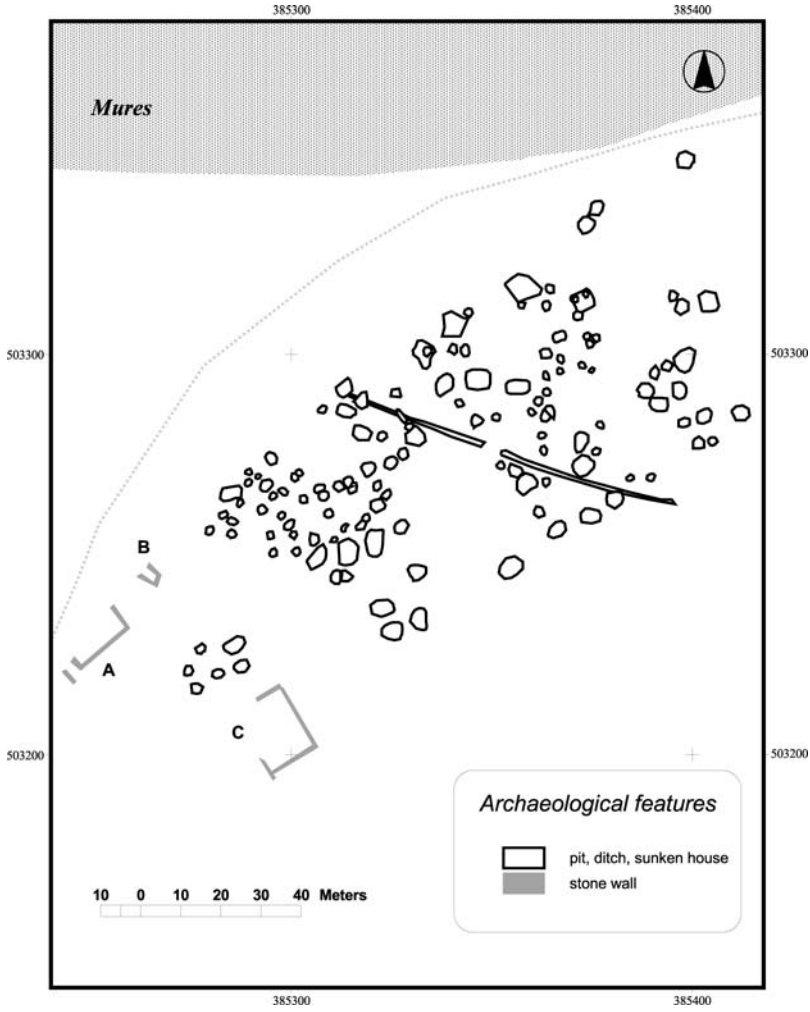

Figure 5.11 Site plan of Vintu de Jos based on aerial photographic evidence.

cases with limited use of bricks within (e.g. Oarda-Sesul Orzii) and had tiled roofs. The internal space was sub-divided into an apparently large number of rooms and corridors by partition walls (0.5–0.4 metres) which were consistently thinner than the outer walls (0.65–0.70 metres). Although some of the internal rooms are larger, and could have served as an *atrium* or hall, in most cases the internal space is not structured around them. What is common to most examples, however, is a basic division of the internal space into three main sections, be they further sub-divided or not. At Manerau for example, the published plan presents a much-divided internal space split

Figure 5.12 Aerial photograph of a probable villa site at Micesti, north of *Apulum*; buried remains of stone walls or foundations are indicated by cropmarks.

into two almost symmetrical (and further sub-divided) areas by an elongated central space/corridor running along the whole width of the building. The villa house at Santamaria Orlea may have had a larger, hall-like central space with a row of three rooms on its eastern side and maybe a similar row on the western side (see Popa 1972). By contrast, Hobita-Hobeni hill had large rooms at both eastern and western ends divided by a middle row of smaller rooms. Although the elongated larger space on the eastern side was interpreted as an inner courtyard (Floca 1953, 747), its brick pavement indicates that the space was surely protected by a roof. Finally, the examples at Deva (Marghitan 1998), Cincis (Floca and Valea 1965) and Aiudul de Sus (Winkler *et al.* 1968, 59–67) indicate the presence of a corridor on the south-eastern side of the building, in the latter case this being doubled by a semi-open corridor in front.

On the basis of the limited evidence available from Dacia, but largely from comparison with sites from other provinces of the empire, villa houses were assumed by previous research to have had the kind of lavish decoration and amenities found in other areas (Mitrofan 1973, 1976, 1998; Alicu 1998). But the poor condition of the remains and the limitations of the excavation methodology mean that, for example, no stucco decoration has been recognised in Dacian villas. A small number of examples with wall

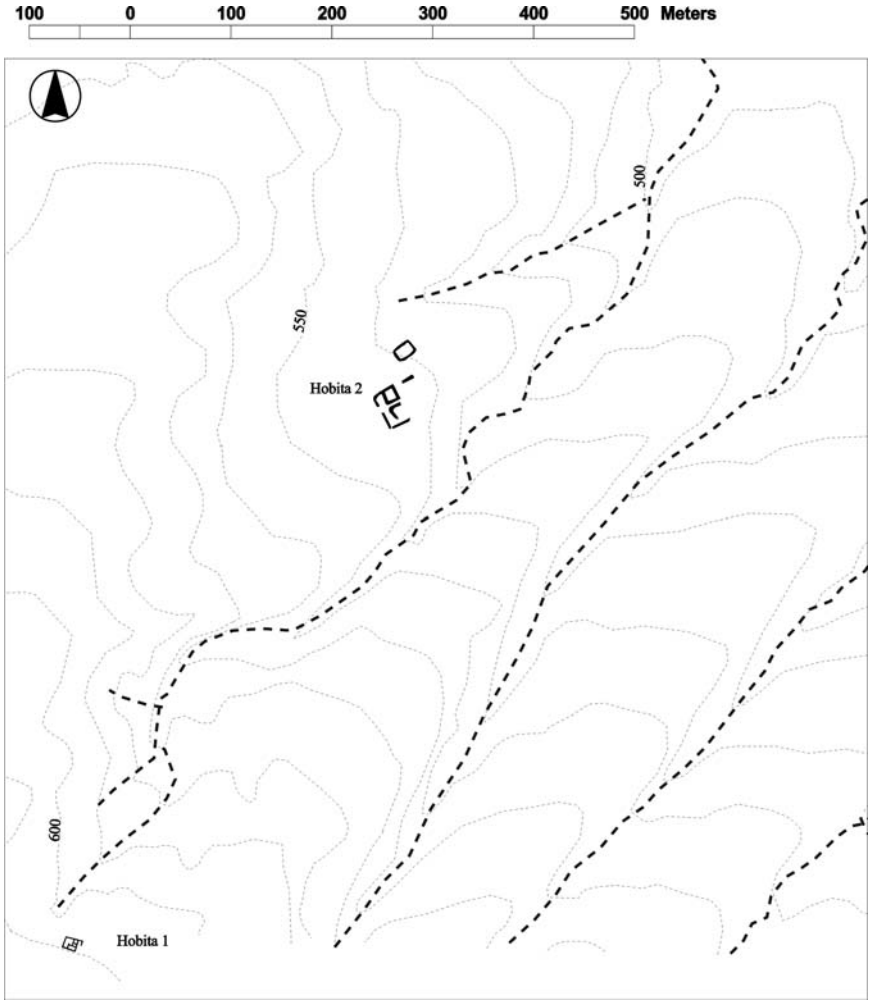

Figure 5.13 Plan of two probable villa sites discovered from the air on Delinestilor (Sucioni) hill at Hobita.

painting were, however, encountered (e.g. Deva, Hobita, Rahau). Other architectural decorations such as columns, architraves, etc. were occasionally present (Deva and Aiudul de Sus) and, at Ghirbom – Intre Veli, fragments of glass indicated the presence of windows (Moga 1995), a rare occurrence in Dacia, but also noted from the villa at Apahida outside the study area (Mitrofan 1972, 131). However, despite previous publications indicating the presence of mosaics in Dacian villas, in reality no examples have yet been found. The few examples known in Dacia come exclusively from urban contexts, from *Sarmizegetusa* and *Apulum*. At best, villas are likely to

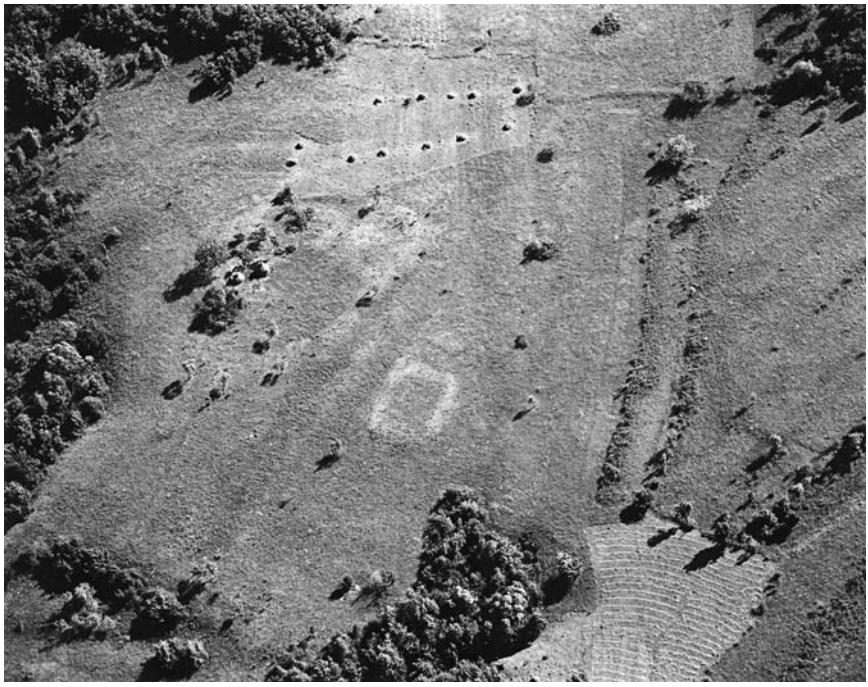

Figure 5.14 Aerial photograph of a possible villa at Hobita on Sucioni hill (2).

have had tessellated floors (with figure of eight-shaped or hexagonal *tesserae*) often related to the presence of heating systems beneath, brick floors or *opus signinum*. Moreover, the surfaces covered with such floors normally amounted to less than 50 per cent of a villa house. The only example with more extensive use of such flooring is Manerau, with 7 (perhaps 8) of the 13 internal compartments covered with bricks, *tesserae* or *opus signinum*, and perhaps Deva. Indeed, at Manerau even some of the floors excavated in an adjacent building – thought to be ancillary – had such a pavement, though in one of these rooms, thought to be a kitchen, the floor was covered with pebbles. Nevertheless, failure to mention such flooring in publications probably means that significant surface areas would still have been clay-floored, both inside the villa houses as well as in stone-built or timber ancillary buildings.

Hypocausts were found in all of the excavated villa sites with the exception of Cincis (see Figure 5.5). In some of the examples (Manerau, Santamaria Orlea; also, Apahida near Napoca – see Mitrofan 1973, 130–2) it is clear that the hypocaust covered only part of the room, which has resulted in some problems with recognition and interpretation. These partial hypocausts created the need for more complicated sub-structures, including supple-

Figure 5.15 Set of millstones from a probable villa at Hobita (Figure 5.14).

mentary, thinner supporting walls of stone or brick, delimiting boxes of infilling material from the hollow spaces under the floor supported with *pilae* where hot air would have circulated. This system is quite obvious at Ghirbom (although misinterpreted; see Moga 1998) and might explain a narrow 'corridor' beside the hypocaust-heated room at Aiud (see Winkler *et al.* 1968). A further problem is that, with the possible exception of Aiudul de Sus, in none of the excavated examples is the way that the hot air was led into the hypocaust clear. Only at Manerau did the excavators made specific reference to this detail. But, given that there were further indications on the site that the hypocaust had not been fired, Mitrofan (1973, 145) thinks that the system could have been used to protect against water infiltration from the nearby stream. This explanation is, somehow, difficult to accept. Roman constructors had more efficient methods for water insulation, essentially consisting of thick layers of hard *opus signinum*, and it is hard to believe that a tessellated floor would have been used above a potentially flooded space. The only other example noted of an unfired hypocaust comes from

Britain (Whitton) (Jarrett and Wrathmell 1981, 79, 95) where this might be explained by the native origin of the owner who built a hypocaust, but did not fully appreciate how to use it. Finally, reading the published evidence, one could see that some of the hypocausts were probably installed from the beginning (Manerau – Mitrofan 1973, 145), but many others were added in a later phase, when their construction results in raising the floor levels of those rooms (e.g. Santamaria Orlea.

Thermae have been identified in very few Dacian villas, and where they have, baths incorporated into the villa house are thought to be the norm (e.g. Apahida, Hobita, Chinteni-phase III). Within the study area, the room provided with a hypocaust at Hobita-Hobeni hill is thought to have represented a bath, but the details provided by the excavation are insufficient to support such an interpretation. Despite the absence of any reference in the published reports, baths might still have been present at Santamaria Orlea and very possibly at Deva. At the latter, the excavation revealed traces of hypocaust *pilae* material and significant quantities of ash in the southernmost space of the villa house, which could be related to *thermae*. Furthermore, the transformation of one end of the room into an internal apse and the presence of a 0.8 metre wide gap in the outer wall at the western end between a 1-metre wide square base and the corner of the hall could have supplied the necessary gap for leading hot air into the room from outside. The occurrence of separate buildings dedicated to bathing is extremely rare throughout the province. In fact, the only certain example in Dacia is at Chinteni, which underwent transformations over time. The baths were installed there in a sub-square building to the east of the villa house whose original function was uncertain. Later this whole building changed its function once more and became a house-and-*thermae* complex (smaller *thermae* were constructed on one side of the building copying the exact layout of the previous phase; Alicu 1994, 1998). However, based on similarities in building plan and proportions, such a complex is likely to be found in the large villa at Oarda (Figure 5.8, A).

Finds have been recovered from villas in only relatively small quantities, certainly less than in urban or military contexts, which probably has made them less attractive as a focus for research. They are, however, quite important and can potentially provide information about activities carried out at the site. Unfortunately the precise archaeological context, or even the room where they were found, is not always specified, which means that it is difficult to identify the function of most of the rooms with any certainty. Given the quantity of pottery, glassware and an iron spoon discovered (Mitrofan 1973, 145; Marghitan 1998, 305), possible *triclinia* were documented at Manerau and Deva. In a number of cases (e.g. Aiud, Manerau), rooms interpreted as possible corridors or halls were used for storage or domestic activities, and millstones, storage pottery or even agricultural tools were present; and a few other storage spaces were identified in ancillary buildings (e.g. Deva, Hobita-Hobeni hill). Further problems

of villa analysis are related to the identification of access and movement flow inside the buildings. In some excavated sites, entrances were identified in sufficiently well-preserved walls, whether as gaps in the wall (Santamaria Orlea) or marked by stone, even marble slabs (Hobita – Floca 1953, 750). The entrances would have had wooden doors, as some discoveries of door hinges indicate (e.g. Cincis – Floca and Valea 1965; Aiudul de Sus – Winkler *et al.* 1968). But very rarely was the relationship between the 'entrance' level and the floor level made explicit, nor that between the identified floors and the foundations. Smith (1997) has attempted to interpret possible entrance and access schemes based on the assumption that it was likely that the number of passage rooms would have been kept to a minimum and that one central room could have ensured access to all the rooms around it. This assumption does not find support in the evidence from pre-Roman architecture, in either circular or rectilinear examples from pre-conquest Dacia. On the contrary, it is obvious there that access was obtained usually from the south-east, through successive (two, three) rooms (see Chapter 4). Also, it is evident in a number of villa cases that access inside the house was probably made from the south-east (Aiud, Manerau, Hobita-Hobeni hill; also elsewhere in Dacia at Apahida and Ciumafaia near Napoca).

A variable number of ancillary buildings has been identified in a number of excavated villas and others are likely to have been present at several villas identified from the air. Some of them were located more centrally within the villa complex (e.g. Hobita building III), but most tended to be arranged around the enclosures (Deva, Hobita, Oarda). Some of these constructions were also built in stone (*opus incertum*), but others were lighter, timber constructions. At Hobita-Hobeni Hill (Figure 5.5) two long and narrow (10 and 12 by 2 metres) timber constructions attached to the northern and north-eastern enclosure walls of the villa were interpreted as probably storage annexes, based on their different construction material and associated finds (which indicate they were used for storage of tools – e.g. ploughshare, millstone fragments – and supplies, e.g. pottery including amphorae in large quantities). The most extensively excavated *pars rustica* of a Dacian villa is at Deva (Marghitan 1998, 306–11). Over a third (980 square metres) of 0.26 hectares covered by the compound was occupied by long and narrow ancillary buildings, blocking the southern and eastern sides of the yard (Figure 5.5). They are on a slightly different alignment from the house, following that of the enclosure. They were built in stone with narrow (partition-like) walls against the enclosure, which might indicate a gradual process of accretion. Given the thinner walls, the lack of tiles in this area of the site and the large numbers of short nails, these buildings were probably covered with shingles. One long building in the south-eastern corner, paved with *opus signinum*, hosted a millstone workshop which on excavation produced numerous millstones, some of them unfinished. Finds indicate that another construction in the south-western corner may have been used for activities involving the

processing of animal carcases (cattle, pig, game) or bone. Finally it could be said, at least one of the rooms from the north-eastern corner was used for storage, since it contained large quantities of pottery, mostly Roman storage types along with some tableware (plates) fragments of Dacian coarse hand-made pottery. Most of the Dacian pottery was represented by storage jars, but there were also a few examples of 'Dacian mugs' including one of unusually large dimensions (Marghitan 1998, 319–20).

Spaces previously identified as being used for storage are very scarce, especially with respect to grain storage (as opposed to vessel or tool storage, which are more easily identifiable). But large buildings in stone with a tiled roof, though without internal divisions are not an infrequent occurrence. One example (23 by 15 metres) was excavated at Santamaria Orlea, some 40 metres west of the villa house (Figure 5.6). The large, centrally located stone construction at Hobita, was defined by its stone foundation walls and roof tiles. It had two timber-walled internal cells (5 by 4.50 and 4 by 3.50 metres) attached to its northern and eastern outer walls, containing a few pottery sherds. Because of the large dimensions of the building (18.40 by 36.60 metres), it has been interpreted as an 'internal courtyard' (Floca 1953, 750). The outline of large rectangular stone buildings like these are also visible in several examples of sites discovered through aerial photography (e.g. Vintu de Jos, Oarda, Sibot, Figure 5.8). Their dimensions and layout is similar to stone buildings used for storage in Dacia or elsewhere (e.g. the so-called 'aisled buildings', see Hadman 1978). Recent excavation confirmed that the example from Vintu de Jos (Paul *et al*. 2006) was a large rectangular and undivided stone ancillary building covered with tiles. Larger granaries identified in Dacia include the 56.40 by 21.60 metres example from *Ulpia Traiana Sarmizegetusa* where a second one has (comparable dimensions with Hobita see Diaconescu 2004b, Figure 4.10) and with a large granary identified through aerial photography and subsequently excavated at Cigmau (http://www.cimec.ro/mapserver/asp_script/cronica/detaliu.asp?k=1959 visited 6 December 2006). Given the methodology employed for earlier excavation in Dacian villas, it is possible that some of them were provided with internal features to help support the roof, which have escaped the notice of previous research.

The extent to which a number of buildings with *opus incertum* walls and tiled roofs were entirely ancillary may be debatable. The long and narrow, sub-divided second building discovered at Manerau (at least 38 by 8.95 metres; Figure 5.5) was built parallel with the villa house some 14.5 metres to the east. One of the rooms was with a pebble floor, plastered walls, though probably without painted decoration, and a collapsed oven that was perhaps a kitchen, but the rooms on each side of it, one paved with *tesserae* and the other with bricks, may have had a different function (Mitrofan 1973, 144–7). Also, recent excavation at Oarda-Sesul Orzii identified a simple rectangular construction, built in stone and brick with a tiled roof and sub-divided end, as an ancillary building with the combined function of accommodation

for animals and/or dependants and storage (http://www.cimec.ro/mapserver/asp_script/cronica/detaliu.asp?k=3182 visited 6 December 2006).

Towers associated with enclosure are not an uncommon feature of Roman villas in Dacia, but only as single examples, as at Hobita-Hobeni Hill, Deva, Valea Lupului, Poiana Selei and possibly at Vintu de Jos. Large towers were excavated in villas near *Sarmizegetusa*, like Hobita and Poiana Selei, while the tower at Deva was much smaller in size. If the smallest building at Vintu de Jos was indeed a tower (Figure 5.11, B), it may have been of similar dimensions to the tower at Deva. All were built in *opus incertum* and both the Hobita and Deva examples were paved with *opus signinum*. The tower at Valea Lupului replaced an earlier timber-made structure which was burned down. The function of these towers is not yet fully clarified. Whenever their positioning could be appreciated, they seem to be overlooking the lowlands (Hobita, Deva, Poiana Selei) or the river Mures (Vintu de Jos), without being necessarily located at the highest point of the site. However, given that even the examples found along the enclosures (Deva and Hobita) were not located by the entrance, it is difficult to attribute to them a fully defensive role. Floca (1953) considers that at Hobita the tower had a dual function, as both storage space and, with its flooring and decorated wall plaster, as accommodation (maybe for a *vilicus*). However, the reduced dimensions at Deva would militate against similar interpretations.

Given the nature of data recovery and publication, dating evidence for these sites is often problematic. Defining construction phases is difficult when dealing with aerial photographic evidence, but at least in one case (Oarda) two phases are visible because of clear overlap of features. Unfortunately, for very few excavated cases do the original publications make reference to any construction phases. Traditionally, the chronology of sites has been totally reliant on the meagre coin evidence. Within the study area, coins have been found inside the villa house or ancillary rooms at Deva (three – Trajan; Hadrian AD 124–125; Severus Alexander AD 227); Hobita-Hobeni hill (two – Antoninus Pius AD 139 and Elagabalus AD 222); Santamaria Orlea (one – Septimius Severus AD 201–210) and Manerau (one – Elagabalus); four other coins were discovered in the villa cemetery at Cincis, but for only one of them was an identification attempted, indicating possible dating in the reign of Antoninus Pius. Both of the earliest examples come from the same site (Deva). The remaining are more evenly distributed chronologically and spatially and reflect the more widespread circulation of coinage from the reign of Antoninus Pius and more intensely in the early third century AD. In general, the coins discovered in villa contexts in Dacia range from Trajan to Philip the Arab, but most of them are of Severan date (Mitrofan 1998, 171), suggesting that it took most of the second century AD for villas to become properly established.

The interpretation of villas in Dacia by Smith (1997, 207–8) and others, as in other areas of south-eastern Europe, is that they were rectangular block buildings with multiple small rooms, some of them

provided with apses, though no attempt is made to offer a reasonable explanation of the particularity of their plans. But our understanding of the plans needs to be revised, since phases of construction or repair have been recognised by previous interpreters in only a very few examples. Unless sites were in a particularly poor state of preservation (see http:// www.cimec.ro/mapserver/asp_script/cronica/detaliu.asp?k=3182 visited 6 December 2006 for Oarda-Sesul Orzii), evidence of repairs or changes of plan within a building, or even changes of use of the buildings, are the norm in more recent urban archaeological excavations. It seems improbable, therefore, that villa sites would not have experienced similar changes. Unfortunately, published excavation reports rarely express any concern about identification of successive phases in site evolution; therefore, they have produced incomplete site plans where chronological developments are now only to be guessed at. There are many cases where interpretation as so-called 'corridors' has been put forward for narrow spaces of variable length (sometimes even less than 1 metre in width, e.g. Aiudul de Sus, Manerau, Hobita; see Figure 5.5) which contribute to the great fragmentation of the internal space. These could have been created either by elaborate floor foundation systems (especially related to hypocausts), or as results of the movement of partition walls in different phases of occupation (e.g. Chinteni – see Alicu 1998); further research is likely to make them disappear from the plans. At Santamaria Orlea (Popa 1972, 442–3), apart from the correctly identified phases of construction in relation to the hypocaust (see pp. 134–135), the published report gives indication of a wall that was deliberately demolished, although that the significance of this find has not been correctly acknowledged. Another demolished (?) wall is present on the plan of Manerau and the parallel walls 0.8 metre apart on the south-eastern side indicate with fair certainty different widths of the house in different phases of its occupation. At the latter, an attempt has been made to interpret different phases of use and of the access circuit inside (Smith 1997, Figure 60), but these cannot be entirely validated by the current level of research. One possible indication of a difference in construction date for walls in villa complexes is given by their variable widths, especially of partition walls. Most villa houses have walls of varied widths. Normally, the outer walls are wider (0.8–0.9 sometimes 0.6 metres) since they bear most of the weight of the roof. This is a basic architectural requirement. Internal partition walls tend to be narrower. For those examples where there are significant variations in width within these two categories of wall, this could perhaps reflect different dates of construction, if other explanations (e.g. topography, geological background) do not apply. At Aiudul de Sus, for example, the original interpretation of the layout of the villa house (17.4 by 21.1 metres; Winkler *et al.* 1968, 59–67) needs to be revised. Differences in wall widths and a brief mention in the published report of differences in the stone used for walls (quarry stone and river cobbles) are most likely to indicate that probably several construction phases, all overlooked by the excavators, have been conflated to

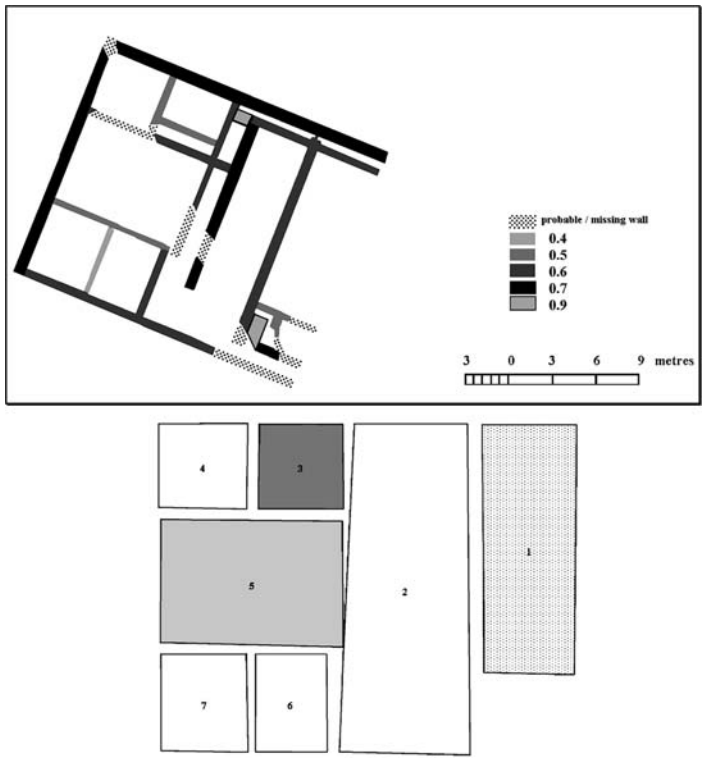

Figure 5.16 Plan of the villa house at Aiudul de Sus showing differences in wall widths and a possible interpretation of internal space division.

create the impression of the sub-division of the internal space into 10 rooms. An alternative interpretation (Figure 5.16) suggests that in its most elaborate stage the site probably had a semi-enclosed entrance 'corridor' (*porticus*?) developed along the width of the house (with the exception of its southern end where the plan is unclear) followed by a second, this time enclosed corridor, while the main section of the house had two pairs of small rooms on each side of a large central room, possibly a hall.

The villa at Deva (Figure 5.5) also provides indications of gradual evolution. This may not have been restricted to the enlargement of a southern ancillary building. The apse of the heated room at the southern end of the villa house (bath? – see p. 136) may represent a later addition; moreover, its walls are all of the same width as the outer walls (Marghitan 1998, 305–6), including the wall dividing the space from the largest room in the house (hall). This could indicate either that this wall was originally the outer wall of the house and the bath was added later, or that this area of the house might have had an upper storey. Apart from these indicators, at least two major phases of the settlement were supposed on the grounds that the villa

would have outgrown its own enclosure. However, this hypothesis is less appealing than the contrary assumption, that the site may have originally been significantly larger (including the villa house and the two outer buildings), but had to be reduced in size at a later date and confine itself to the limits of the small enclosure (which was added later and followed an independent evolution). This would explain, for example, the difference of alignment between the villa house (and, indeed, its awkward setting therein) and the enclosure and its attached structures. Indeed, the partition of estates would have been a frequent occurrence in the Roman period, as in any other (Smith 1997, 16–18; for analysis of traditional inheritance customs in Romania, see Stahl 1986).

If more attention were given to indications of evolutionary phases (especially in relation to the introduction of hypocausts) and floor levels (particularly in relation to so-called entrances and wall foundations), it could produce even further re-interpretations of villa typology in Dacia and perhaps of the neighbouring provinces. For example, the evidence from Chinteni indicates clearly that the pattern of site evolution there involved transforming the baths complex into living quarters (perhaps to take benefit from the extensive heating installation which was totally missing from the villa house of the first and second phase of occupation). Moreover, the late addition of a hypocaust tended to produce a significant rise in floor level; this is illustrated clearly at Santamaria Orlea, where a hypocaust was introduced in one room on the eastern side; this resulted in the floor level in that room being some 0.6 metres higher than the rest of the rooms, while part of the wall plaster of the earlier phase got caught under the new floor level above the hypocaust (Popa 1972, 442–3). The villa at Apahida near Napoca was also provided with hypocausts of obviously different phases of construction, the one in the row of small rooms identified as a bath suite being at a raised level. The analogy with Santamaria Orlea could indicate, therefore, that the hypocaust from the identified bath area was a late addition. Indeed, a further analogy with Chinteni could mean that the combined function of the building as both accommodation and baths replaced a previous unique function as baths, which would have been equipped with the early hypocaust from its large apsidal room. This scenario opens the possibility that the square examples of those south-east European villa houses 'with multiple small rooms' (Smith 1997, 207–8) and apses may have once been used as large baths before being converted into houses.

Numerous sites discussed above produced traces of prehistoric settlement, but few indicate late-Dacian settlement (e.g. Rahau, Seusa, Poiana Selei, Vintu de Jos; also at Chinteni in the north-west of Dacia). Dacian material (agricultural tools and pottery, including tableware and 'Dacian mugs', but also storage and cooking vessels) is present in a number of other locations (e.g. Deva, Santamaria Orlea, Aiudul de Sus), but it is normally linked to the occupation of Roman date. Among the numerous coins from the Rahau area, which include pre-conquest (local imitations and original Greek

and Roman) and post-conquest Roman issues, whether as hoards or stray discoveries, is one hoard containing accumulations of both Republican and Imperial coins, which was discovered 100 metres away from a small cemetery probably associated with the villa. Another hoard of early Republican denarii and local native imitations was discovered inside the villa at Salasu de Sus (Sasa) (Popa 1987, 53) which, together with other information may indicate the native origin of the occupants (see p. 206). However, Vintu de Jos is so far the only example of a villa with a native Dacian and Daco-Roman village in its immediate vicinity (Figures 5.10 and 5.11).

The bulk of this section has been concerned with the evidence from villas. This does not mean that other forms of individual settlement did not exist. Unfortunately, the inappropriate and inadequate methods of data collection in the past have tended to impede the recognition of other site types, such as individual homesteads, which may be related to native farming. The few such sites which have been included under this category (see Figure 5.2) are mainly sporadic sunken houses unrelated to clear indications of a larger native-type settlement (village) (e.g. Aiudul de Sus – near the villa site; Aiud – Cetatuie; Noslac). Also, in this category may be included sites indicating workshop activity (iron metallurgy – e.g. Hunedoara site 83; ceramic production – e.g. Breazova; Silvasu de Jos; Silvasu de Sus; Folt) not associated with larger settlements, which may, therefore, be related to settlements of individual type (homesteads or villas).

5.1.2 Villages

During the period of the Roman occupation, the settlement pattern of the study area shows a significant shift towards nucleation. The terminology used for such settlements is much varied and has suffered a great deal of definition and re-definition in order to find the most appropriate labels for the even more varied archaeological evidence. Numerous terms have been used in relation to aggregated Roman provincial settlements (see e.g. Hingley 1989). Some emphasise their size (e.g. 'larger rural settlement'; 'hamlet') or their location (e.g. 'roadside settlement'); others focus on their status ('*vicus*', 'small town'; 'lower order settlement'; 'proto-urban centre') or function (e.g. 'lowest-order market centre'; 'local centre'; 'local market centre'); yet others emphasise their social structure ('nucleated settlement') or the ethnicity of the inhabitants (e.g. 'native settlement'). However, the most commonly used terms tend to be 'village', 'small town' and '*vicus*'. Following the approach employed in the previous chapter, the present study will leave behind the terminological issues as an ultimately sterile debate and use mainly the terms 'village' and 'small town' as providing together reasonable coverage for the general class of 'nucleated' settlement.

In the study of aggregated rural settlement in Roman Dacia, most of the attention to date has focused on juridical and administrative aspects in defining the terminology for settlements of non-municipal status (e.g.

the *vicus–pagus* issue or the *civitates* issue) (e.g. Tudor 1968, 319–28), and much less on the archaeological evidence. But despite these efforts, we are still unsure of the boundaries of all the municipal territories, though various attempts have been made to define them (Gudea and Motu 1994; Piso 1995; Ardevan 1998; Popa 2002), and the number of settlements is highly uncertain. In central Dacia, there are approximately 10 villages (aggregated settlements) of most likely agricultural function, and a further 18 sites may also fit into this category (Figure 5.17). The layout of all these examples follows two main types. On one hand, there are the examples built in a traditional manner, many still with largely sunken houses and in a few examples showing evolution towards surface timber constructions. On the other hand, there are those built in the Roman fashion, of a structure resembling some of the *vici* described by Rorison in Gaul (2001). The villages following a pre-Roman architectural model (which in some cases show an evolution towards Roman models) were easier to identify and represent the

Figure 5.17 Distribution of Roman aggregated settlements.

largest majority, but the evidence for Roman-type villages without sufficient grounds to be considered as having some urban character (small towns) is very scarce. The reason is not their absence from the settlement pattern, but is rather a consequence of the lack of appropriate research methodology. To define these sites, simple mention of artefacts, even if sometimes with more precise indication of the extent of the remains than 'small' or 'large', which is the norm, is not sufficient. Villa sites too, which are also built using Roman materials, can extend over areas as large as 3 hectares. Indeed, for some 119 sites out of 214 with evidence for the use of Roman building materials (see p. 120) there is at the moment no possibility of estimating their character. They all need clearer site plans to give an indication of the structure of the settlement (whether involving a single household unit or several units). Such plans would also allow differentiation between domestic sites and cemeteries, religious sites (temples) or military installations, all of which could reveal themselves through similar classes of artefacts.

The village with traditional architecture at Obreja has been the most extensively excavated (1961–1973). Its size is understood to be approximately 6 hectares and it is built on pre-Roman architectural concepts, with both sunken and surface houses and the practice of storage in pits still in operation. The excavated area revealed 30 sunken and semi-sunken and eight surface timber houses, along with 80 storage and rubbish pits and a bread oven (Moga and Ciugudean 1995, 132–3). In a fairly similar village at Noslac dated to the second and third centuries AD, excavations during 1963–1966 revealed six semi-sunken houses with 13 storage pits, 1 kiln or oven and two hearths. Although only deliberately fired storage pits re-used for rubbish were discovered by excavations in 1884–1887 and later in 1973 at Radesti on the bank of the Mures (Moga and Ciugudean 1995, 150–1), the large number of pits (27) could be interpreted as an indicator of a larger community. It is possible that the houses were light timber structures, whose traces might have escaped notice or vanished over time. As proven by excavations in 2005 and 2006, the Dacian village at Vintu de Jos (Figures 5.10 and 5.11) described in Chapter 4 continued to be occupied in the Roman period possibly simultaneously with the Roman villa nearby (Paul *et al.* 2006). Another village, discovered from the air in 2004 at Berghin (Figures 5.18 and 5.19), in an area where previous discoveries of Dacian and Roman artefacts have been reported (Moga and Ciugudean 1995, 55–6), contained at least 18 rectangular and sub-rectangular/trapezoidal sunken houses similar in dimensions to the excavated examples at Obreja. A number of ditches may indicate the foundations of surface buildings. Several sites located in the north-east and along the Mures Valley (Asinip; Hoparta; Silvas; Spalnaca; Petrisat, Lunca Muresului, Unirea and Lopadea Veche, Telna, Sasciori; Ceru Bacainti; Folt; Bircea Mare), but also in the Orastie Mountains (Beriu; Prihodiste) or in Tara Hategului (Ohaba de sub Piatra; Poieni; Farcadin, Bercu), were identified exclusively through pottery (Figure 5.17) and, therefore, their type is unclear. But given the general frequent occurrence of Roman construction

Figure 5.18 Aerial photograph indicating the buried remains of a village with sunken and (possibly) surface-built houses at Berghin.

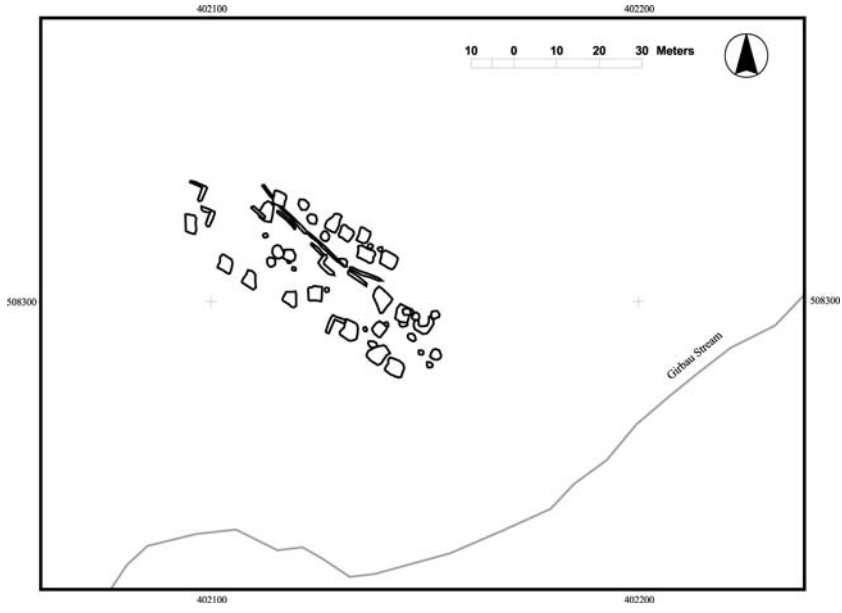

Figure 5.19 Transcription of the archaeological features based on aerial photographic evidence at Berghin.

materials indicating settlements throughout the region, it is possible that these sites do represent settlements similar to those presented above, especially in that in 12 cases Dacian pottery was also present.

Despite their traditional architecture, the largest proportion of the material culture seems to be Roman and in some cases the pottery types include local *terra sigillata* (e.g. Vintu de Jos, Radesti); glass vessels have also been documented at Radesti in storage or rubbish pits and in the cemetery at Obreja. Dacian pottery is mainly represented by coarse cooking pots, but Roman cooking pottery is equally represented (e.g. Radesti). At Obreja, only 10–15 per cent of the pottery on the site is Dacian and, indeed, it is present in only 12 out of 243 graves in the village cemetery. Personal jewellery (brooches – Vintu de Jos and Obreja; beads, earrings, rings – Obreja), cosmetics and Roman sandals (Obreja) were available and attractive to the inhabitants. Roman tools (sickles, scythes, millstones, a ploughshare –Obreja; Noslac) indicate the agricultural character of the settlements, though at Noslac some metallurgy was also undertaken (slag finds). Obreja (and perhaps Berghin) gives clear indications of evolution towards surface-built dwellings. Acculturation was perhaps less dramatic at Noslac, where a larger proportion of Dacian pottery is documented (55 per cent) and where excavations have not found traces of architectural evolution towards Roman models. Given that early prehistoric occupation is documented at Vintu de Jos (Bronze Age, La Tene), Obreja (Neolithic and Bronze Age) and Noslac (Bronze Age, Hallstatt), it is surprising that the latter more extensively excavated examples seem to be post-conquest creations and not showing continuity from earlier settlement. However, a number of Dacian villages, such as Cicau-Saliste, Uioara de Jos and possibly Hunedoara – Sampetru Hill (Figure 4.11), continued to be settled and embraced surface timber architecture in the Roman period. The large Daco-Roman village at Cicau-Saliste examined between 1969 and 1973 overlies earlier occupation of Bronze Age, early Iron Age and pre-Roman Dacian (third to first centuries BC) date and had two levels of occupation. In the first Roman phase, the houses were built in traditional (semi-sunken) fashion, but these were replaced by surface timber houses with dry stone bases and tiled roofs. The technique was perhaps not entirely new, since some of the houses in the upland settlements before the Roman conquest were also built in timber with stone being used at the base of the walls, but the examples from Cicau used Roman roof tiles. Roman pottery present on the site was represented by coarse and fine ware, including *terra sigillata*, both original and local imitation. Other finds included stone and iron tools and a *sestertius* of Trajan. The latter, along with the fourth century pottery, indicate that the settlement was probably occupied throughout the Roman period and for a while thereafter. The Roman phase of occupation within the multi-period settlement at Cetea ('La Pietri') (including a pre-Roman Dacian phase of occupation, see Chapter 4) could represent either a village or an individual homestead. It is represented by 'foundations of stone buildings and a cemetery' (Moga and Ciugudean 1995, 72) without

other architectural details. The artefactual evidence comes mainly from the cemetery and includes coarse ware and *terra sigillata*, bronze and iron artefacts (keys, knives, nails, needles, vessels – bronze?), jewellery (brooches, bracelets, beads) and millstones. Finally, at Uioara de Jos the settlement occupied an area estimated to be at least some 8 hectares, although possibly in a scattered or semi-compact structure. Field walking in 1963 identified Dacian pottery mixed with traces of a stone wall and mortar (supposed to come from mortared bases of timber buildings – Popa 2002, 206), but this detail could perhaps indicate that the village was built in the Roman fashion.

For the reasons explained above, the villages built in Roman fashion were recognised only when more evidence than the usual scatter of Roman building materials suggested a settlement more complex than a villa. A typical roadside village whose occupation ended through fire seems to have been located at Aurel Vlaicu-'Voivoda' in the immediate vicinity of the Mures. Unfortunately, the site is known only from a brief report of field walking, but according to the description, it consisted of buildings grouped in two parallel rows along the Roman road with *interstitia* delimiting each property. Quite possibly the buildings were of the strip-house type. The bases of walls were constructed in stone (mortar is not mentioned) and brick and tile were also present. Indeed, this is the only site with a description sufficiently detailed to indicate the certain existence of a village here (Popa 2002, 28–9). Another aggregated settlement could have been located in the area of Sebes, as indicated by extensive Roman funerary activity to the south-east of the modern town. Cremations with Dacian pottery present among largely Roman artefacts and also inhumations, one stone sarcophagus containing an infant and a *denarius*, were documented, along with disturbed materials containing bricks, tiles and a fragment of funerary inscription (Moga and Ciugudean 1995, 167). A pre-Roman village nearby continued to be settled in the Roman period, but given the analogy with Obreja it is unlikely that all these traces (especially the sarcophagus and the funerary inscription) are related to the Daco-Roman village. Another possible village is located at the edge of the modern town of Vintu de Jos near the bridge over the Mures, not far from its confluence with the Pianu river (Figure 5.20). It probably extended over at least 1.6 hectares and had multiple, probably stone buildings. A rectangular example (11 by 18 metres) faced south-east and had its internal space sub-divided into three rooms, one large to the south-east and two small rooms at the opposite end. A site visit by the author recorded pottery of potentially Roman and medieval date, and the county gazetteer lists in the area a number of discoveries, including traces of a Roman road, sculptures, figurines, amulets, stamped tiles of legio XIII Gemina (Moga and Ciugudean 1995, 209) and inscriptions including a list of names, perhaps of legionaries (CIL III, 8064 = 1629) and votive altars (CIL III, 7798 = 6264, 14473, 7782, 1133). A larger number of rectangular stone-built constructions photographed from the air at Batiz (Figure 5.21) in the Strei valley, 2 kilometres north of Calan-*Aquae*, could represent another Roman

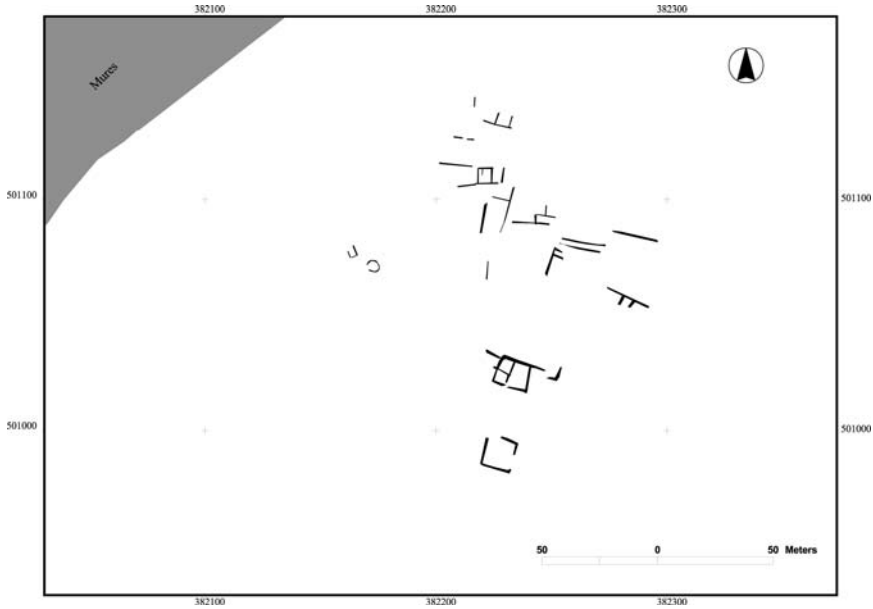

Figure 5.20 Plan of fragmentary remains of multiple stone-buildings of probable Roman date on the northern edge of the modern settlement at Vintu de Jos based on aerial photographic evidence.

village. Another, possibly scattered to some extent, was located around Benic (Figure 5.22). Aerial reconnaissance has also identified a small number of individual scattered stone building remains to the south of the village in an area where an altar dedicated to *Jupiter* has previously been found (Moga and Ciugudean 1995, 53). Also, in several other locations in the vicinity a votive dedication to Liber Pater, a fragment of funerary *stela* (private yard), the lower part of a 'stone grape press' and material probably related to a funerary context (tiles, bricks, funerary lion) have been discovered (Moga and Ciugudean 1995, 53).

Even when site plans are available, it is often difficult to estimate when a group of farms (be they 'romanised' or not) makes a community; without site plans it is even harder. To the north-west of Hateg there are reports of a Roman settlement with stone building bases and 'Roman materials' (including fragments of a sarcophagus and pottery), extending over an area of some 2 hectares, as well as a significant cluster of discoveries within the area of the modern town, but the nature of the site remains uncertain. It is also possible that some of the several individual units/possible villas clustered at Paclisa near *Apulum*, at Deva, Ghirbom or in the Petresti-Rahau area may have been tied together in some sort of semi-nucleated community. Similarly,

Figure 5.21 Aerial photograph indicating buried remains of multiple stone buildings at Batiz, probably from a Roman village.

at Hapria five different locations with Roman discoveries lie very close to each other along a stream to the south-west of the modern village, at 'Vadul Balgradului' (pottery, roof tiles, stone walls), 'Fantana Lisului' (pottery, bricks and roof tiles), 'Gura Zapozii' (pottery, roof tiles, and clay pipes), 'La Groape' (sarcophagus) and 'Gruiul Faurului' (bronze fibula) (Moga and Ciugudean 1995, 105). Many other settlements of unidentified type with extensive finds distribution could have been villages: Bacia-Palatiste; Drambar; Geoagiu; Hoparta; Lunca Muresului ('Deasupra Viilor'); Pestisu Mare; Rahau ('Biserica Alba') and Soimus ('Telegi').

5.1.3 'Small towns'

It is often difficult to define the boundary between these 'romanised' villages and most of the sites that fall under the category of 'small towns'. Although small towns tend to cover at least 10 hectares, some larger villages could reach a similar extent. Similarly, small towns sometimes reached a significant extent (50 hectares or more) comparable to that of major towns (Hingley 1989, 76). Therefore, identifying such sites has tended to focus on those

Figure 5.22 Buried remains of one stone building and possible traces of several others south of Benic.

which operated beyond a purely subsistence economic level and, at least in part, were involved in trade and industry (as opposed to villages with a primarily agricultural function; Hingley 1991, 76). Particularly interesting for this category are, for example, those sites which acted as central places in providing a number of combined services for smaller communities around without being 'proper' towns. An increase in the workforce involved in activities other than food production would increase the need for a market apparatus to supply the food from somewhere else in the vicinity; afterwards, once the market was established, this would have serviced as large an area as it could attract. This is the reason why mining communities have been included in this category, along with centres of industrial production, trade, taxation, or others providing various services for areas larger than their own limits (Figure 5.17).

Potters settlements have been recognised elsewhere in Dacia as a class of specialised settlement (e.g. Micasasa and Cristesti) but within the central area, ceramic production (whether pottery or construction materials) is better represented in relation to villa and possible villa sites and is also extensively attested in small (*Micia*) and major towns (*Apulum*, but also *Sarmizegetusa*). However, some 21 sites involved in gold, iron, stone or salt exploitation had or may have had some form of workers settlements nearby, as indicated by occasional finds of specific tools and sometimes traces of buildings. Settlements at Deva and Uroi (identified as *Petris* mentioned in the *Tabula Peutingeriana*) were linked at least in part to andesite quarries, and extensive

Figure 5.23 Traces of quarrying and associated settlement of probable Roman date at Cozia; the circular structure (left foreground) could be late prehistoric.

remains of settlement at Cozia near Deva (Figure 5.23) (Hanson and Oltean 2002, 113) were perhaps connected with another andesite quarry exploited by the Romans in the immediate vicinity (Tudor 1968, 126). Other settlements were at Bucova linked to marble quarrying (Wollmann 1996, 260) or at Pianu de Sus and Ocna Mures related to the gold and salt exploitations there, respectively. Unfortunately, the settlements themselves have all been subject to very limited research, priority being given to the extraction sites (Wollmann 1996), but it is possible that at least some of these traces such as those from the iron mining district in the Poiana Rusca Mountains (Ruda, Teliucu Inferior, Alun, Ghelar, Hunedoara, possibly Almasul Mic) might indicate scattered settlement of a type documented more recently in the area of Alburnus Maior (Damian 2003). For most of these sites the evidence for considering them small towns is scarce, but, as it will be analysed further, at least in a few cases their potential involvement in other services (e.g. transportation – *Petris*-Uroi, Bucova, *Aquae*-Calan, Ocna Mures) may increase their chances to represent more than simple villages.

Apart from the main towns (*Sarmizegetusa* and *Apulum*), the itinerary depicted by the *Tabula Peutingeriana* mentions the following settlements

along the main route within the province: *Aquae*, *Petris*, *Germisara*, *Blandiana* (between *Sarmizegetusa* and *Apulum*) and *Brucla* (beyond *Apulum* towards Potaissa). The number of settlement names in the *Tabula Peutingeriana* and other itineraries is very small compared with the number and location of rural settlements. The former might well represent only the larger settlements placed exclusively on the main roads, which could have been of interest for travel, communication, trade or other such activities, and perhaps they should be recognised as 'central places'. This would mean that their function was more complex, including some that are characteristic of urban or semi-urban sites. In the cases of *Aquae* (Calan-Bai) and *Germisara* (Cigmau) their functional complexity is evident. Both were based on natural springs still in use today. *Aquae* was a spa and probably a religious centre (Figure 5.24). The name *Germisara* attested by the *Tabula Peutingeriana* and by epigraphic material (Russu *et al.* 1984, 213–57) seems to have been in use for both the fort/*vicus* complex at Cigmau and the Roman baths at Geoagiu-Bai (cf. Rusu-Pescaru and Alicu 2000, 66) probably because the latter were considered to belong to the *vicus* as was probably the case elsewhere in Dacia at Baile Herculane some kilometres away from the fort and settlement at Mehadia (Benea and Lalescu 1998). *Germisara* seems, therefore, to have included a whole complex of sites (military *vicus*, cemetery, hot springs – Figure 5.25; quarry – at mid-distance between the *vicus* and the spa and extensive cemetery for both the *vicus* and the spa), occupying a significant area from Cigmau to Geoagiu and Geoagiu-Bai.

The identifications of *Petris* (Uroi), Blandiana and *Brucla* (Aiud) have not yet been confirmed epigraphically. If *Petris* was, indeed, located at Uroi

Figure 5.24 Calan-Bai (*Aquae*) Roman stone pool and adjacent modern installations.

Figure 5.25 *Germisara* Roman spa and ritual complex near modern pools at Geoagiu-Bai.

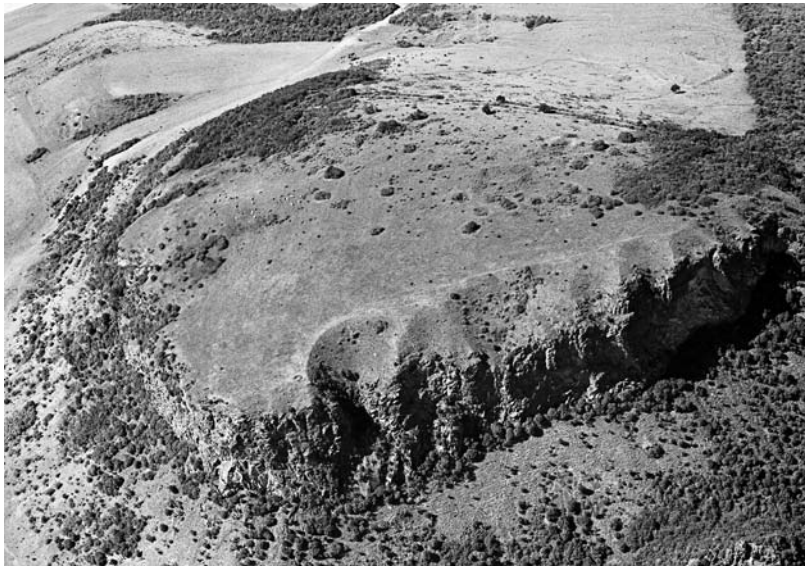

Figure 5.26 Roman andesite quarry at Uroi (*Petris*?) in the Mures valley.

(Figure 5.26) and perhaps extended on both sides of the river, it would have been primarily an industrial centre, which would have also been an important site for trade and the communication network. It is very likely to have had a harbour, important for river navigation and transportation of stone, and it would have provided the river crossing for the main road of the province. Blandiana and Aiud do not seem to have had a combined function, their importance being linked mainly to their role in the transport network. Yet, both of them seem to have been sizeable romanised settlements located by the main road along the Mures valley. Although the only information on the settlement at Blandiana, supposedly located in and around the modern village with the same name, comes from old excavations (1888 and 1948), they indicate traces of an important settlement built in stone, with evidence of brick and tiles, sculptures and columns. Other finds include 'bronze objects' and large quantities of pottery, as well as lamps, a millstone and a spearhead. There is also evidence of coin use and the epigraphic habit (one fragment of a funerary monument – Russu *et al.* 1984, 279). Similar finds come from Aiud, where settlement traces have been identified to the south-west, west and north-west of the modern town which probably overlies the main core of the settlement. Roman building materials (including stamped bricks of the *V Macedonica* legion from Potaissa) and pottery, numerous coins (indicating circulation not just for the second and the third centuries AD but also in the fourth), a fragment of a military diploma (AD 86), many sculptures, altars (e.g. for *Jupiter Optimus Maximus* (CIL III, 942–3) and an epigraphic dedication to the governor P. Furius Saturninus, give some indication of the life there. Surprisingly, however, for what was evidently a highly romanised settlement, archaeological research in the area of the late medieval fortress revealed two surface houses built perhaps in timber on un-mortared stone foundations and with a roof made from lighter material than tiles. Although the inventory (mainly pottery) was exclusively Roman and included coins (two bronze third-century coins and an unidentified *denarius*), the traditional mode of storage in pits was still used.

In Dacia, there are a lot of settlements supposedly connected with military sites (military *vici*). Unfortunately, in many cases this is merely an assumption where a fort is known, or where a fort is assumed on the basis of finding a stamped brick with the name of a military troop in an otherwise civilian context. However, few of these sites have been examined in any detail. In the mid-Mures valley, civilian settlements were identified outside the auxiliary forts at *Micia*, Cigmau, Razboieni and Orastioara de Sus. Extensive excavations have been undertaken since 1929 at *Micia* (Alicu 1998), with a range of buildings identified. These include a baths and *palaestra* complex, a small amphitheatre (Figures 5.27 and 5.28), several private houses (Marghitan 1970a, 579–94) including a large building with cellar and hypocaust (Teposu-Marinescu 1985, 126), a temple for the native gods of the Moorish garrison and another for Jupiter Erapolitanus (Rusu-Pescaru and Alicu 2000, 77, 92–4). In addition, eleven pottery kilns further to the north-east (Floca

Figure 5.27 Excavated area of the military *vicus* at *Micia* – *thermae* and amphitheatre.

et al. 1970) and two cemeteries (Ciongradi 2004b) were located. Research on a more occasional basis was undertaken also at Razboieni (in 1847, 1859 and 1960), though no plan has ever been published, but only one small excavation was undertaken in 1957 in the *vicus* at Orastioara de Sus providing some limited epigraphic and sculptural evidence (Russu *et al*. 1984, 257) to speak for its status and level of romanisation, while the *vicus* at Cigmau has been ignored. More recently, the information on the *vici* at *Micia*, Cigmau and Razboieni has been greatly enhanced through systematic aerial reconnaissance. Cropmark evidence over the summers of 1998–2004 enabled the recovery of site plans relating mainly to their stone phases of construction (Oltean and Hanson 2001; Hanson and Oltean 2002; Oltean *et al*. 2005). Despite its limitations in terms of the variable visibility of archaeological features and general inability to elucidate site phasing (see Chapter 1), aerial photographic evidence has provided considerable insight into the nature of military *vicus* settlements in Dacia through giving an appreciation of their extent, internal layout, structure and the range of activities present.

Micia (Figure 5.28) is the largest *vicus*, with stone buildings on all sides of the fort, extending for approximately 1 kilometre from north-east to south-west across the limits of the settlement. The main focus of intense activity was to the north and east of the fort, which is also the most densely populated area. Recent systematic excavation uncovered four structural phases, three of timber and one of stone (Oltean *et al*. 2005), but possible further stone phases may have been removed by intensive agricultural activity (three stone

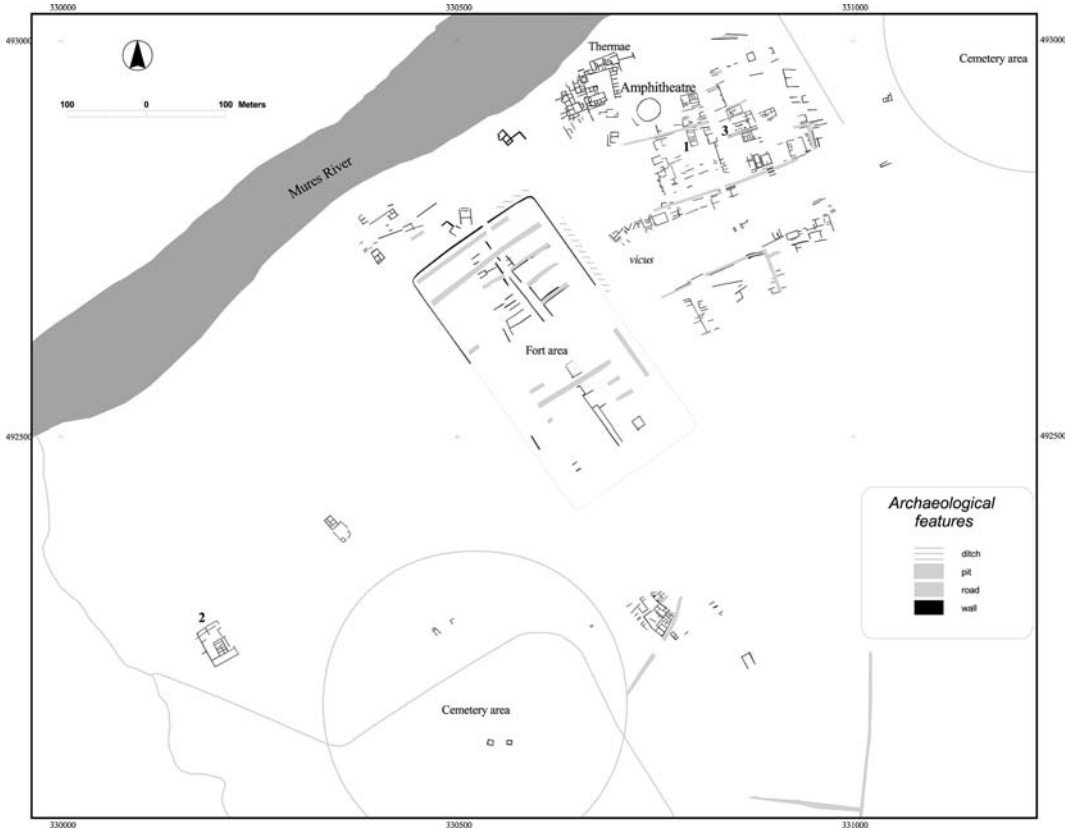

Figure 5.28 Site plan of the Roman fort and military *vicus* at Vetel-*Micia*.

phases have been recorded not far away in the same area of the settlement, see Marghitan 1970a). Located on a narrow spur on the right bank of the river Mures some 5 kilometres south of the Roman hot springs resort of Geoagiu-Bai, the fort at Cigmau also developed its own *vicus*. Its buildings clustered over at least 17.3 hectares to the north-east of the fort (Figure 5.29) and the site plan has been entirely reconstructed on the basis of aerial photographs. Finally, at Razboieni, the *vicus* was originally identified by trial and rescue excavation in the vicinity of the Batavian cavalry fort on the 'Cetate' plateau and in the immediate area. Indeed, the area to the north of the fort seems to have been heavily occupied (the existing 'gaps' in the site plan probably determined by modern buildings or non-responsive vegetation coverage). The civilian area extended some 200 metres to the north of the fort and for at least 750 metres from east to west (Figure 5.30). Cropmark evidence established, however, that the extent of the *vicus* was significantly larger than expected, with another nucleus of dense occupation occupying an area of 5 hectares some 300 metres to the south of the fort and modern village, towards the Mures River and its multiple (nowadays marshy) palaeo-channels.

The layout of the *vici* indicates a considerable level of planning control and organisation, either by the military or the *vicani* themselves (see discussion in Hanson 2005a). This is apparent from a combination of factors: details of street and building layout; evidence of initial planning of the size of the

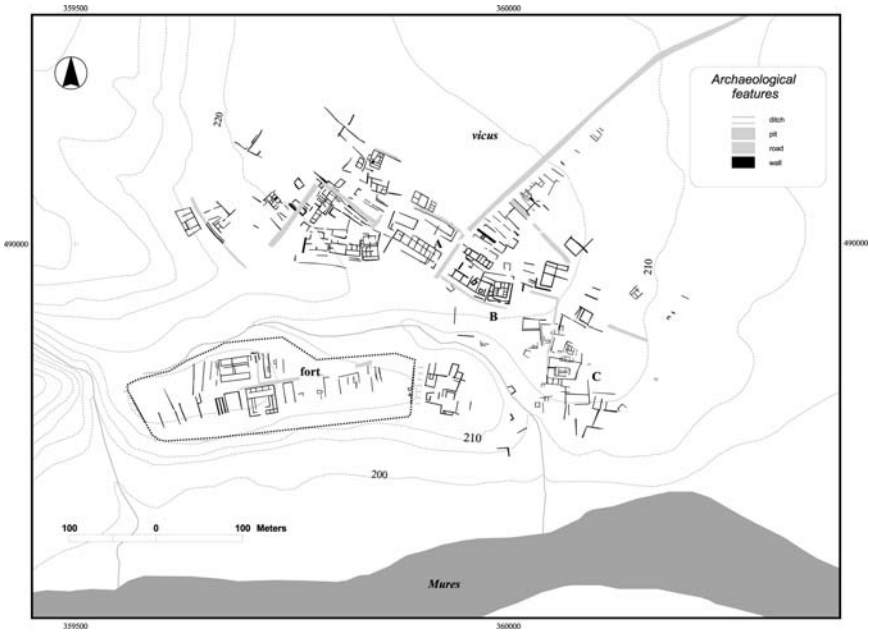

Figure 5.29 Site plan of the Roman auxiliary fort and military *vicus* at Cigmau-*Germisara*.

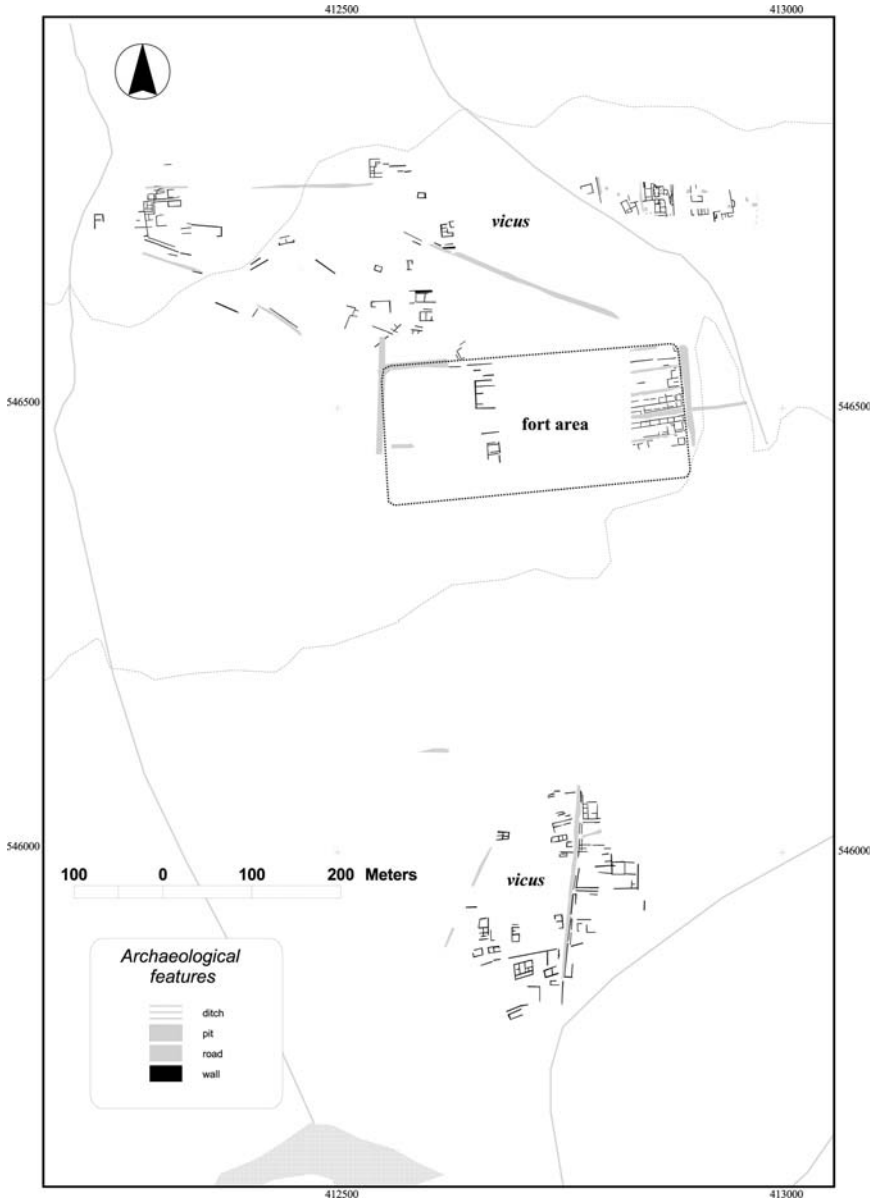

Figure 5.30 Site plan of the Roman fort and military *vicus* at Razboieni (Salinae?).

settlement, as indicated by the position, when known, of the cemeteries located sufficiently far away to allow adequate space for the construction of the *vicus* (see Sommer 1989, 472; 1999, 86); or by evidence of stress upon the available space within the habitable area. Systems of minor roads

are apparent, forming a loose grid pattern and emphasising the proto-urban character of the settlements. Such systems of roads structuring the internal division of space and the construction of buildings are evident in the sites discussed above, especially at *Micia* (Figure 5.28). In its most densely occupied north-eastern area, major roads oriented east–west (three or four) and north–south (two) were located at some 90-metres intervals, although on a slightly different angle to the fort alignment, in a pattern paralleled in the civilian *vicus* at Mathay in Gaul (see Rorison 2001, 189–90). Most of these internal roads appear to have stone drains on each side. Like at *Micia*, Cigmau was laid out on a north-west/south-east alignment, with a more rudimentary street grid sub-dividing the main settlement area. This grid seems to be roughly aligned to two perpendicular roads, which seem to extend further beyond the settlement, one to the north-east (probably the main road of the province) and the other to the north-west. The cluster of buildings began immediately beyond the eastern rampart of the fort, but the focus of the settlement lay on the flatter ground to the north-east, extending for distances between 250–350 metres away from the probable area of the fort (Figure 5.29). By contrast, at Razboieni, the buildings in the northern *vicus* outside the fort are mainly aligned with the roads identified, which did not necessarily form a grid (Figure 5.30), while in the south, a number of buildings were grouped mainly on each side of a road running north–south for some 300 metres, in a pattern resembling the layout of the excavated part of the *vicus* from *Tibiscum* (Benea 2000). Precise evidence of the location of the cemeteries in relation to the settlement is available only at *Micia*, where they are found at some distance to the south and east of the fort. Modern constructions largely destroyed the eastern cemetery, but a number of small buildings south of the fort, which could have been funerary enclosures or small *mausolea*, indicate the location of a second cemetery. Their approximate location at Cigmau and Razboieni indicates similar concerns for space. Small temples and shrines can be found towards the limits of the settlement (Rorison 2001, 44), sometimes associated with the cemeteries, as is evidenced at *Micia*, where two small rectangular buildings and one rectangular structure with an apse to the south-west of the fort may represent temples or *mausolea* (Figure 5.28).

Although some of the present gaps in the site layout might have been a result of modern building developments, both *Micia* and especially Razboieni could be categorised as a partially dispersed settlements (a term used to describe the *vicus* at Housesteads on Hadrian's Wall with its clusters of buildings interspersed with cultivation terraces, Snape 1989, 469). At Razboieni, the layout in the northern part of the *vicus*, with two sets of grid alignments and a variable density of occupation, might suggest that the settlement first started to evolve as a ribbon-type development along the east–west road (very likely part of the main road system of the province), as in the southern sector of the *vicus* along the road to the river crossing, and later the empty spaces were gradually infilled (Burnham and Wacher 1990, 24–5; Rorison

2001, 33). A ribbon-type arrangement without further evolution is apparent to the west of the fort at *Micia*, but to the east, in the main focus of the site, and at Cigmau, the use of space is more highly structured. The latter is more focused and compact, but still extends for some 500 metres mainly around the north and east of the fort and away from it along the main road, in a fashion highly reminiscent of the military *vicus* at Old Carlisle in Cumbria, also recorded entirely from aerial photography (Jones and Mattingly 1990, 174). Its layout fits a combination of two types of *vicus* layout (tangential and circular) as defined by Sommer (1999, 81–3).

Both *Micia* and Cigmau (less so Razboieni) hint at considerable pressure on space in the *vicus* and the importance of proximity to the fort itself. At neither of them is any sign of restrictions on buildings encroaching right up to the defences of the forts apparent. Though the natural topography constrains the extent to which this is possible at Cigmau, there are buildings immediately outside the east gate on the plateau occupied primarily by the fort, although these could have included the shared facilities of the baths. Similarly, at *Micia* buildings and the baths complex occupied the limited space between the fort and the river Mures. At Razboieni, however, dense occupation around the fort area might not have been so apparent from the beginning, the space being occupied subsequently when faced with many settlers seeking to be located as close as possible to the fort, but without the same topographic pressure that had faced *Micia* and Cigmau. In Britain, it is assumed that the forts would have needed an unoccupied area beyond the defences as a security cordon, and a similar pattern of encroachment is thought to be a late (perhaps Severan) development, explained by the abolition of the ban on military marriage resulting in an increase in the demand for space in the *vicus*, or as a reflection of the peaceful character of the frontier by that time (e.g. Salway 1967, 13–14). To some extent this would suggest a similar situation existing for auxiliary forts, as demonstrated by Piso for legionary bases, that military jurisdiction extended for two *leuga* around (Piso 1991). But this evidence is exclusively related to the property rights of Roman communities and is not linked to strategic dispositions, since it is known that *canabae* were normally located *intra leugam*. Moreover, in Germany, where more extensive excavations of military *vici* have taken place (Sommer 1989, 472), there is no indication that empty space was ever left between the fort ditches and the first houses. Without excavation it is impossible to say whether the crowding of buildings up against the defences of the forts is a late development in Dacia, or merely a normal reflection of the close association between the military and civil communities, but the latter seems more likely given the current indications that the stone buildings mirror the position of their earliest timber predecessors. Furthermore, the fact that the buildings at *Micia* had been demolished and rebuilt systematically in the same location by re-using material from earlier phases, and the absence of finds (mainly coarse pottery and broken lamps) indicating that they had been

systematically cleared before demolition (Oltean *et al.* 2005), emphasises once again the pressure on the available space (see also Ruscu 1999).

The morphology of the buildings indicates particular types of activity carried out within the settlement. Within the *vici* at *Micia*, Cigmau and Razboieni several types of buildings have been identified. The most common form in a military *vicus* is generally considered to be the so-called strip-building, a long rectangular structure usually positioned with its narrow end facing the road to maximise access to the street frontage (Salway 1967, 167–9). Such buildings are frequently characterised as taverns or shops, possibly involving small-scale production on the premises (e.g. Sommer 1988 and forthcoming). Possible examples of such structures are apparent at the north-eastern limit of the *vicus* at Cigmau lining the main road from the settlement, for they are frequently found especially along major arteries, but also on secondary roads within settlements (Rorison 2001, 44). Several possible examples of such structures are apparent at *Micia* in the busy area to the east of the fort, where circular structures could have represented kilns or ovens (Figure 5.28) giving further support to locating potential manufacturing activity there and where recent excavations on a limited scale have allowed greater detailed analysis. The length of the excavated buildings and their orientation in respect to the road indicates that they fall into the category of strip-buildings. Furthermore, their function in most phases seems to have combined both domestic and industrial activity. The nature of the commercial or industrial activities involved is indicated by some of the artefactual material recovered, such as iron slag, melted glass, unfinished artefacts, and quantities of animal bones, while their domestic use is confirmed by the presence of decorated wall plaster in the second timber phase. Their construction, with possibly two-storey structures and tiled roofs indicated in the third timber phase, also attests a certain level of architectural pretension (Oltean *et al.* 2005).

Cellars are common features of houses and workshops in both civilian and military *vici* in Gaul (Rorison 2001, 38–9) and Germany (Sommer 1999, 88). Several positive crop marks indicate sunken structures in the north-eastern corner of the *vicus* at Razboieni including pits, some of them too large to suppose their function was for storage. Their chronological associations are unclear from the aerial photographs, none of them being visibly overlapped by or overlapping stone structures of Roman date, so they are potentially contemporaneous. Indeed, some large sunken structures/pits, which seem to have been integrated within the plan of stone buildings at Razboieni (in the north-eastern corner), could perhaps have been used as cellars. However, previous rescue excavations in the area of the northern *vicus* indicate the presence of Neolithic occupation and these structures could, therefore, belong to a much earlier phase of occupation (Moga and Ciugudean 1995, 153–4).

One barrack-like structure from Cigmau (Figure 5.29, A) is not readily paralleled in Dacia, but can be found in a few other examples elsewhere, such

as in the military *vicus* at Old Carlisle in northern England (Jones and Mattingly 1990, 17) and in the civilian *vici* at Bliesbruck and Malain in Gaul (Rorison 2001, 70–1). It is probably a result of conjoining a number of standard strip-houses without the provision of *interstitia*, as in the earliest phase of construction in *insula XIV* at the *municipium* of *Verulamium* in southern England (Frere 1971, 14–19 and Figure 8). This would suggest that the function of this building at Cigmau is likely to involve a combination of residential and industrial/commercial activity like the ordinary examples of strip-buildings. Their layout seems likely to reflect some military influence in their construction and the use of *tegulae* produced by the local military and civilian *officina* in one building at *Micia* attests a similar relationship (Teposu-Marinescu 1985, 126).

Many of the houses within *vici* seem to have a plan similar to those encountered in villa sites, though most of them have considerably reduced dimensions. Here too the compact house plan is visible, along with similar internal space division. An elongated building with a central corridor (Figure 5.28, no. 1) on the north-eastern side of the *vicus* at *Micia* is similar to a type of 'row house' known in the Danube area, paralleled in the villa house from Winden am See, Austria (Smith 1997, 203 and Figure 56). At *Tibiscum* and *Porolissum* in Dacia, a number of excavated buildings have rooms ranged on each side of a central corridor and with a sort of entrance portico or, indeed, colonnades facing the road. There individual properties seem to have been well delimited by passageways or alleys providing access from the street to the workshops at the back (Benea 2000, 33–6 and Plates 3 and 10). Examples of this type are present also at *Micia*, Razboieni (where the resemblance in plan with *Tibiscum* is striking, especially in the southern sector of the *vicus*) and probably at Cigmau in the north-eastern sector along the main road (Figures 5.28–5.30).

Finally, a number of buildings appear to be associated with enclosures or yards containing ancillary structures. The two buildings located some 250 and 450 metres, respectively to the west of the fort at *Micia*, both rectangular and internally sub-divided, are associated with enclosures containing ancillary structures. Both seem likely to be domestic structures with a yard, the westernmost of them, with the house inside a rectangular yard with ancillary buildings along the enclosure walls, looking very similar to a villa (Figure 5.28, no. 2) (e.g. Deva). Three buildings immediately to the east of the fort at Cigmau (Figure 5.29, C), are probably also domestic.

So far, none of the military *vici* displays obvious examples of buildings that might reasonably be interpreted as having a public function. There are as yet, for example, no indications of designated public market spaces, as attested at some of the German sites (e.g. Sommer 1999, 86–7). Therefore, we must assume that trading activities must have taken place within the workshops and a large number of buildings with access and porticoes facing the main roads could support this assumption. The most frequently attested official buildings found in *vici* are *mansiones* (Salway 1967, 170–3;

Sommer 1984, 47), though even on the basis of excavation these can be difficult to identify with any certainty. The only possible candidates at any of the sites discussed here are the buildings with rooms grouped around a central yard at Cigmau and perhaps one to the north of the fort at Razboieni. Until further research has been undertaken, it is best to assume that these are more likely to be domestic structures. There are no clearly identified formal spaces for local administration purposes, either *basilica* or *curia*, indicating that none of the sites had acquired municipal status, despite their size and importance. Several attempts have been made at *Micia* to identify a *basilica* within the *vicus*. But the large building identified as a possible example (Teposu-Marinescu 1985, 126) lacks adequate confirmation, and the provision of both a cellar and hypocaust is more indicative of a combined residential and commercial property than a public building. Similarly, the possible public building nearest to the fort, identified by Marghitan (1970a, 591) on the basis of its architectural elaboration, has more in common with other domestic and commercial buildings in the vicinity, including the provision of hypocausts. However, the discovery of what looks to be an aisled building of considerable size within the eastern area of the *vicus* adds a new possible candidate on morphological grounds (Figure 5.28, no. 3).

The development phases and chronology of these settlements are uncertain. Only at *Micia* have the usual estimations based on finds and epigraphic evidence been verified by excavation, most of this of the very recent date. The *vicus* there seems to have been established in the Trajanic or Hadrianic period, at the same time or very soon after the establishment of the local garrison, and it was not for some time (in the Antonine period) that the timber architecture, although undoubtedly showing architectural pretentions, was replaced by stone buildings (Oltean *et al*. 2005). According to earlier discoveries there, the settlement continued to be in use after the retreat of the army unit, until the fourth century AD. At Cigmau and Razboieni timber phases have not yet been highlighted (as in most military *vici* of Dacia), but on the basis of the new excavations at *Micia* and that at Casei, it seems reasonable to infer that there would have been at least one earlier phase of timber construction in most of the military *vici* in Dacia prior to their construction in stone. In the northern sector at Razboieni, the two different building and road alignments might indicate different phases of settlement planning. In any case, the very size of these settlements, along with the internal provision of various amenities, attests their importance, not just as central places for a large area around, but as examples of what would have been the most common form of substantially romanised settlement in the province.

5.1.4 Major towns

Sarmizegetusa (now the village of Sarmizegetusa, Hunedoara County, Figure 1.4) was founded by Trajan as a *colonia deducta* (Daicoviciu 1974; Ardevan

1998, 42–5) for his veterans and was from the beginning the most important symbol of Rome in the newly conquered province. Its status at the top of the settlement pattern of the province ensured by its charter (further reinforced by the later acquisition of *ius Italicum*) is reinforced by its significant administrative role. It might originally have served as the governor's seat during Trajan's reign, when it was conveniently located midway between the two legions of the province, the XIII Gemina at *Apulum* and the IIII Flavia Felix at *Berzobis*, but it remained throughout the Roman occupation the seat of the financial procurator (Piso 1983) and the centre for the imperial cults. As proved by the discovery just over a decade ago of a large monumental inscription above the entrance in the *forum* constructed under the reign of Trajan, the name of the town, *Colonia Ulpia Traiana Augusta Dacica Sarmizegetusa*, was established from the beginning and was not a later Hadrianic addition (Diaconescu 2004b, 91–2).

With its original enclosure of 530 by 430 metres, at the beginning the town covered 22.5 hectares. Its layout conformed to the usual regular rectangular plan structured around the main streets running north–south (the *cardo maximus* ending in the forum) and east–west (the *decumanus maximus*, crossing the *cardo maximus* at right angles and passing in front of the forum), a structure perhaps extended at least in part outside the town enclosures and which may have been preserved to some extent by the street layout of the modern village which occupies most of the area (Figure 5.31). This enclosure was later extended further west by some 170 metres, covering now 32 hectares, but the town still had a dense extra-mural occupation which could have extended for some 500–600 metres outside the enclosures and covering as much as 100 hectares. So far a number of public amenities have been excavated, such as two monumental *fora*; an amphitheatre; the seat of the financial procurator of the province and two *horrea*; numerous temples within an extensive *area sacra* to the north of the town and in a number of other locations (to the west and south-west of the town); as well as a number of private houses and industrial or commercial establishments (Figures 5.31–5.33). Public baths, a Capitoline temple and a theatre are yet to be identified. Unsurprisingly, given the conditions of its foundation, the early development of the town bears significant traces of military support in providing the most important public buildings (the *forum*, amphitheatre, *domus procuratoris* and the larger of the two *horrea* nearby). Military influence is visible in construction material as well as architectural style. This involvement prompted previous interpretations of the town as utilising an earlier legionary fort, a theory which has been disproved by excavations in the forum (see extensive discussion in Diaconescu 2004b).

Roman *Apulum* (now the town of Alba Iulia) started its existence as a legionary base under Trajan. The 400 by 400 metres fortress was built on a plateau on the right bank of the river Mures overlooking its confluence with the Sebes and the Ampoi rivers and controlling the access to the Apuseni Mountains gold mines (Figure 5.34). The fort may have been built on

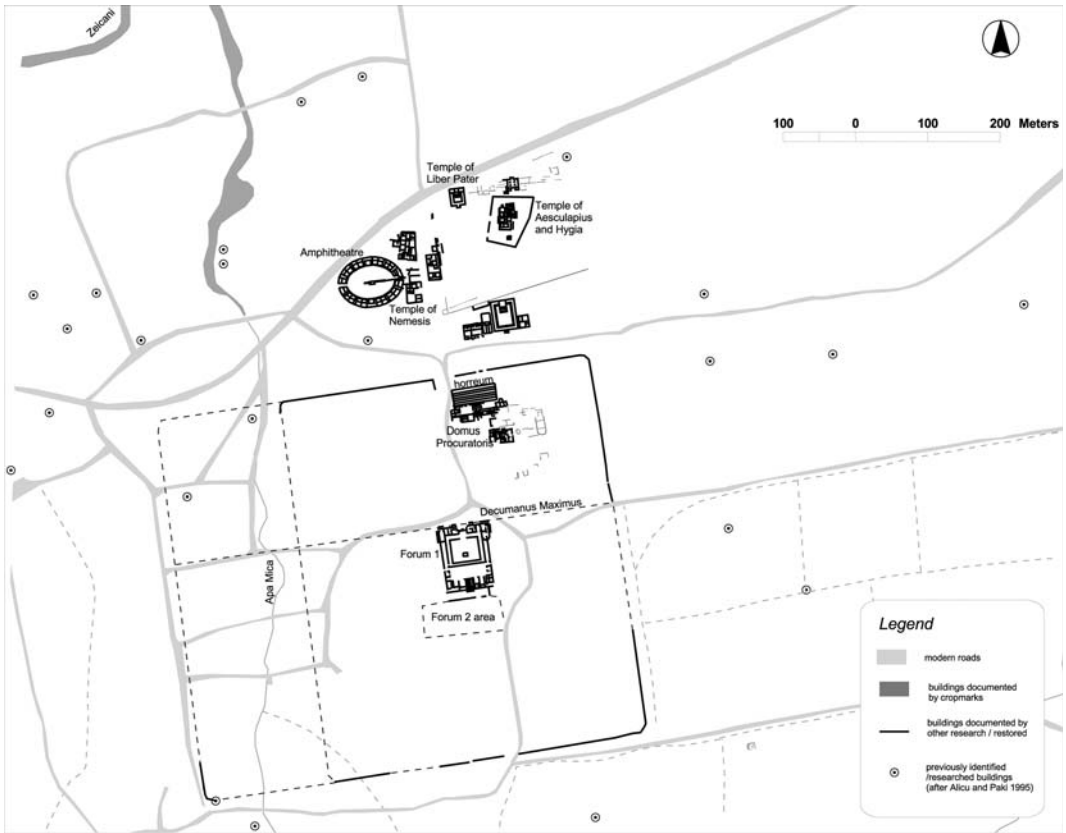

Figure 5.31 Site plan of the Roman town at *Sarmizegetusa Ulpia*.

Figure 5.32 Aerial photograph of forum 1 at *Colonia Sarmizegetusa*.

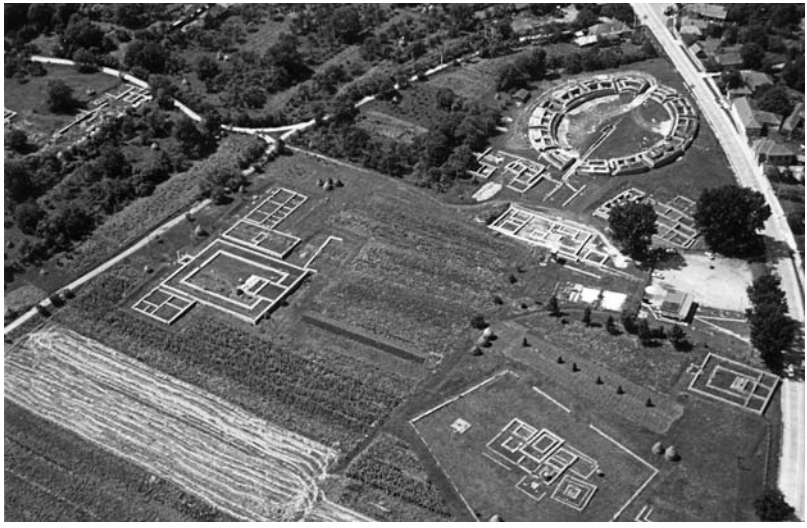

Figure 5.33 *Colonia Sarmizegetusa*: the amphitheatre, temples and buildings outside the enclosure near the north gate.

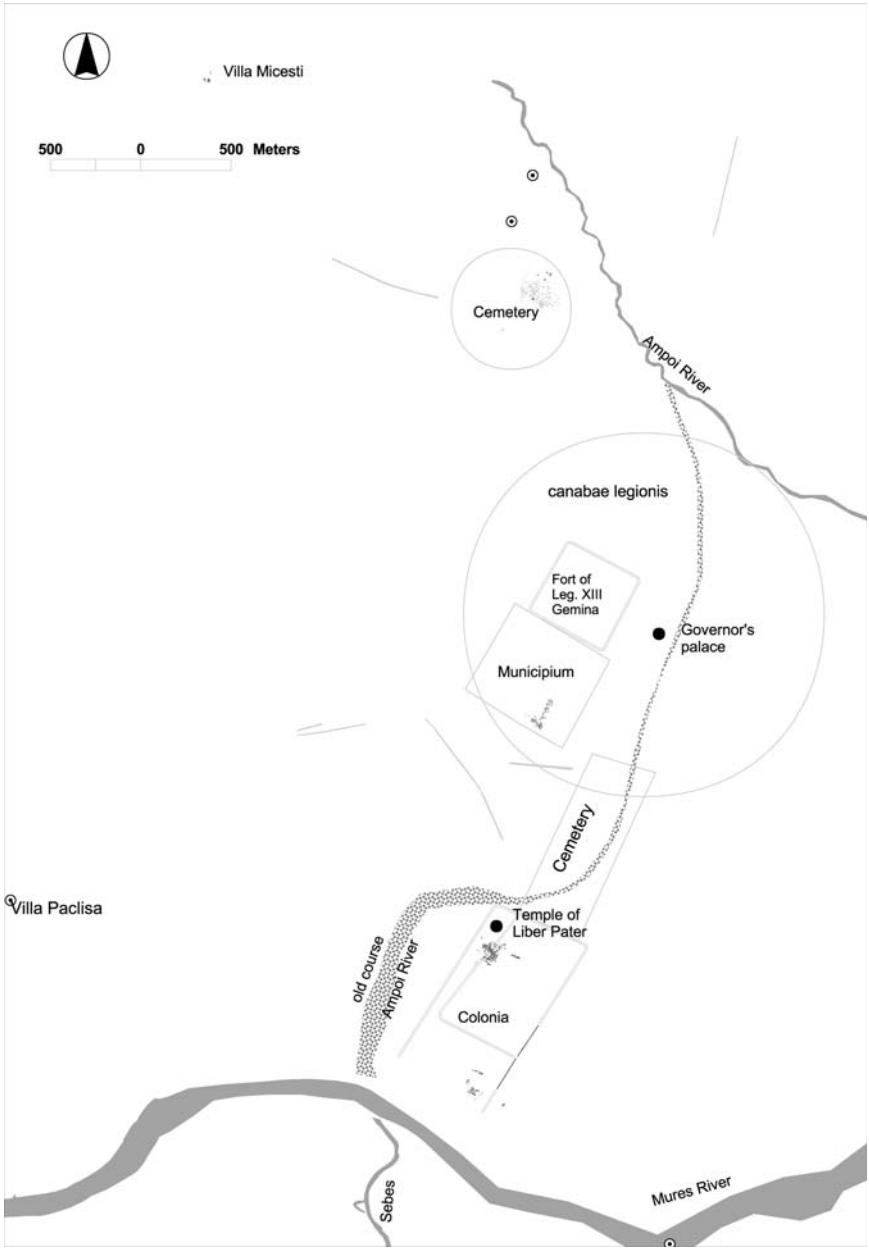

Figure 5.34 General plan of the Roman settlement at *Apulum*.

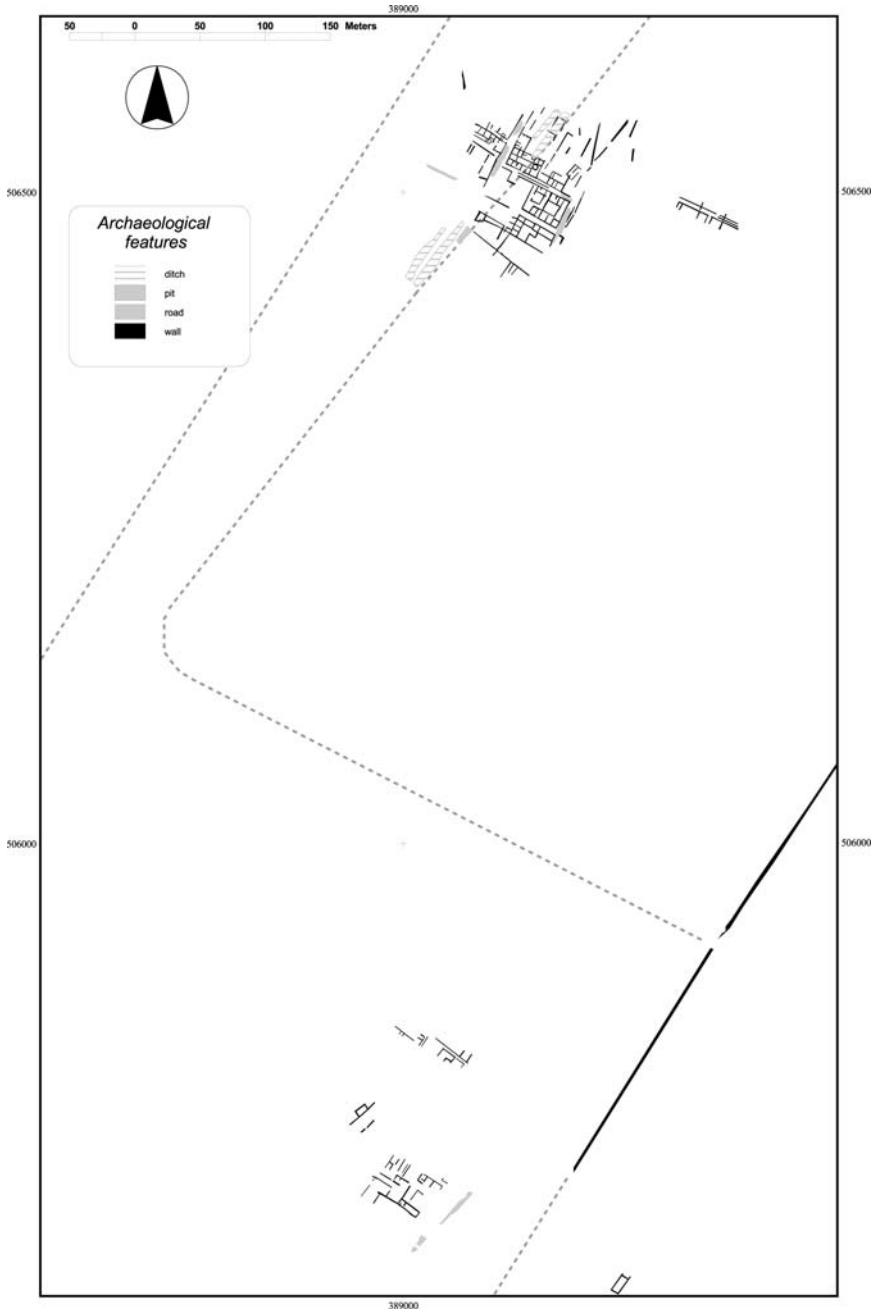

Figure 5.35 Plan of structures within the *Colonia Aurelia Apulense* (Alba Iulia-Partos) based on aerial photographic evidence.

the site of a previous late pre-Roman traditional sunken-housed settlement (Moga and Ciugudean 1995, 37). The *canabae legionis* emerged immediately in its vicinity and ended up surrounding the legionary fort to the north, east and south and extending for at least 500–700 metres. Already in the Trajanic period a civilian settlement also emerged some two *leuga* away from the fort by the river Mures, an area currently occupied by the Partos suburb of Alba Iulia (Figure 5.35) (Diaconescu 2004b, 112–13). This settlement developed rapidly from a *vicus* of *Sarmizegetusa* into a *municipium* (under Marcus Aurelius), then a *colonia* (under Commodus) (Ardevan 1998, 45–50). When Septimius Severus finally gave municipal status to a part of the *canabae* (*Municipium Septimium* which subsequently may have also reached colonial rank, Figures 5.34 and 5.36B), given that after the provincial re-organisation by Hadrian it became the seat of the provincial governor, the town was a clear competitor to *Sarmizegetusa* itself as a provincial capital. With two settlements of high urban status and covering an area of at least 300 hectares (which may have extended to 1,000 hectares) (Figure 5.34), *Apulum* was not just the greatest conurbation of the province, but one of the largest in the area (Diaconescu 2004b, 109). As proved by excavations, the first town enclosure in Partos consisting of a turf rampart, with two defensive ditches enclosed only some 33 hectares. This area was significantly enlarged at a later date when it covered some 58 hectares. Diaconescu (2004b) links these events with the achieving of municipal and colonial status by the town. The second town at *Apulum* emerged in the immediate vicinity of the fort, when a part of the *canabae* reached municipal status. At least two different alignments of roads and internal features visible on aerial photographs (Oltean and Hanson forthcoming a) suggest that the enlargement of the town enclosures may have involved a re-design of the street grid (Figure 5.35).

Apart from the governor's palace, a colonnaded road inside the *colonia* in Partos and a few temples (*Liber Pater*, *Mithras*), most of the remains discovered so far are fragmentary and lack sufficient contextual information to support identification of urban public amenities (Moga and Ciugudean 1995, 29–43). Also, there is insufficient data to reconstitute the earlier phases of occupation of the town, but enough to place the beginning of its Roman occupation during the reign of Trajan. The extent of the pre-municipal settlement in Partos is difficult to estimate, but it may have been larger than the area first enclosed there (Diaconescu 2004b, 112). In the light of the excavations over the past 20 years, the early occupation of *Sarmizegetusa* is better documented. Despite the fact that from the beginning it had a town enclosure, as in *Apulum* more likely to demonstrate its privileged status than specific defensive needs (Diaconescu 2004b, 91), the earliest urban development documented so far was in timber, which was gradually replaced by stone constructions. A first timber phase of the town enclosure was replaced by a sandstone wall probably under Hadrian (Diaconescu 2004b, 91). A provisional timber *forum* of the *colonia*, smaller but of a similar

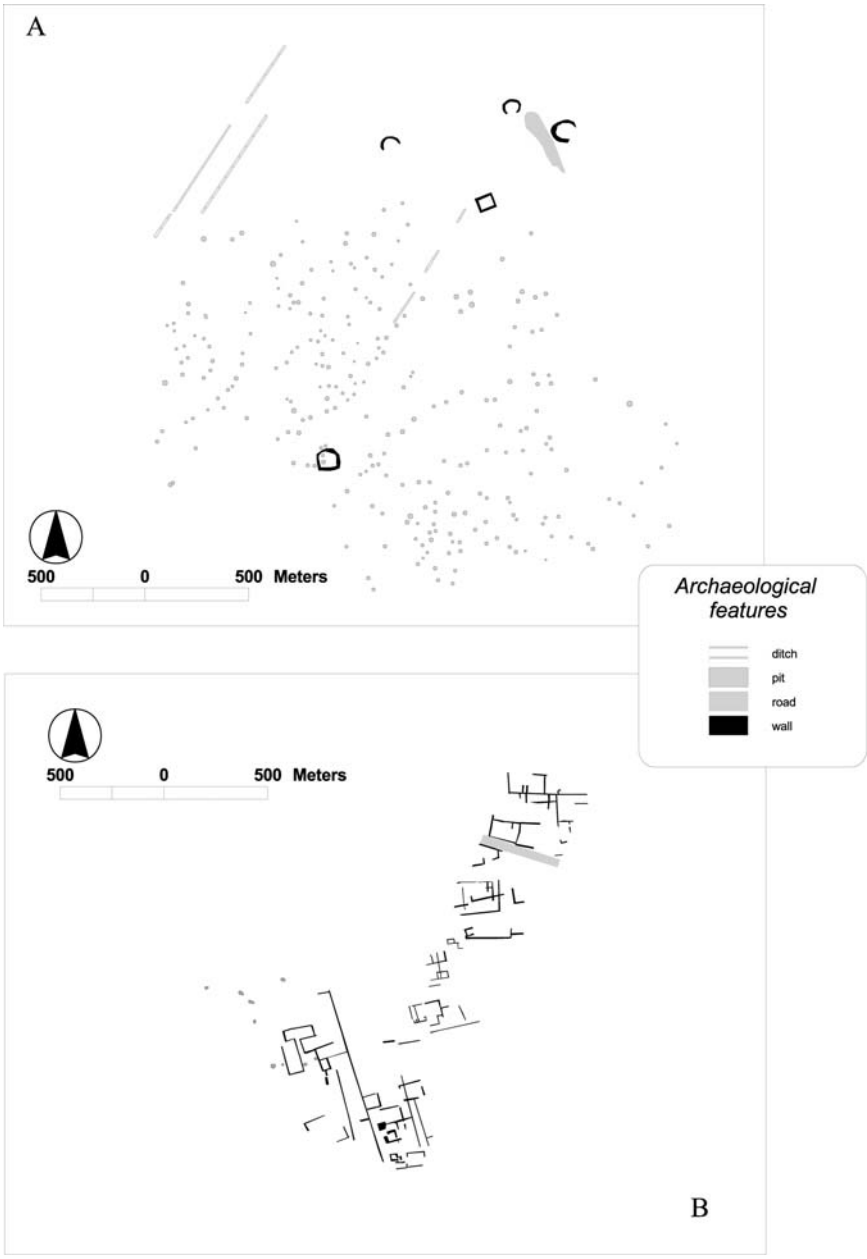

Figure 5.36 Plans of the Roman cemetery north of the *canabae* at *Apulum* (A); and of archaeological features inside the *Municipium Apulense* (Alba Iulia) (B) based on aerial photographic evidence.

architectural structure probably ensured the availability of public facilities during the construction of the Trajanic stone forum (Etienne *et al.* 1994). A timber phase (dated towards the end of Trajan's reign and the beginning of the Hadrianic period) followed by a reconstruction in stone around AD 158 was documented also for the city amphitheatre (Diaconescu 2004b, 99–103). Private dwellings also change to stone architecture early in the second century AD (late Trajanic and Hadrianic period), except for one building by the amphitheatre (EM 13), which may have been replaced with a stone construction towards the middle of the second century. Most of them are simple houses with one to three rooms and very simple hearths (Alicu and Paki 1995, 24), though among the more elaborate, newly excavated examples to the south of the *forum*, both the central corridor type of house (specific to north and central European provinces) and the Mediterranean atrium house are illustrated (Diaconescu 2004b, 98).

Soon after its foundation, therefore, the town gains the architecture befitting its status. Like in any major town of the Empire, the first forum (Figures 5.31 and 5.32), with its monumental entrance at the intersection of the *decumanus maximus* with the *cardo maximus*, was the political and administrative heart of the community. A large *basilica*, with a *tribunalium* at both ends and a *carcera* below the eastern *tribunalium*, provided appropriate space for the court activity of the city. The *curia* hosted the meetings of the local senate and the city *aerarium* and the *tabularium* were nearby. Further public offices and seats of *collegia*, including that of the *augustales* and of *fabri*, were also located in the forum (the former by the *curia* and the latter by the entrance in the forum, accessed from the *decumanus maximus*). The internal courtyard surrounded by colonnaded porticoes and dominated by a large central monument (large statue base or *trophaeum*) soon became crammed with imperial statues (some of them in *quadrigae* – see Diaconescu 2004b, Figure 4.1). Therefore, the public market (*macellum*) with its *tabernae* located immediately to the south behind the first *forum* was demolished to make space for a second *forum*. Its square was dedicated to the statues of the provincial governors who were often adopted as city patrons. Little more than the statue bases have survived from all this monumental display (Diaconescu 2005, 9–10) which suffered badly from early Christian and later, modern destruction and looting, but enough to make it clear that Severan *Sarmizegetusa* was a town beyond its Trajanic limestone and Hadrianic sandstone monumentality, which preferred to display its identity by elaborate ornamentation in white and polychrome marble. With the spread of the evergetism, the taste for marble transcended from the public sphere into the private one, in both domestic (Alicu and Paki 1995) and funerary contexts (Ciongradi 2004a). The better preserved area in front of the first *forum* facing the *decumanus maximus* shows extreme concern for architectural monumentality. The forum itself was accessed through a *tetrapylon* entrance topped by the large limestone inscription of city (or forum) foundation by Trajan and flanked by two *nimphaea*

dedicated to the imperial house of Septimius Severus. The sophistication of the public amenities available in the town is further demonstrated by a large sewage channel identified underneath and following along the *decumanus maximus*.

The amphitheatre located to the north of the town was clearly considered sufficiently important for the new colony from the beginning to be provided at the same time as the *forum* and with similar support from the army. However, it survived in its original construction (with a stone wall for the arena and for two *tribunalia*, but with the rest of the seating area on timber platforms) for much longer than the forum; it was replaced by a fully stone-built construction with a larger seating capacity probably only after the Marcommanic Wars (Diaconescu 2004b, 99–103). As usual, a temple dedicated to *Nemesis* was located in the immediate vicinity of the amphitheatre. A number of temples, some of them unidentified, others dedicated to *Liber Pater*, *Aesculapius* and *Hygia*, were also located to the north of the town at some distance from the amphitheatre. A whole complex with four buildings was dedicated to the gods of medicine including a celto-germanic *fanum*, two wells and a stonemason's workshop within an enclosure. Further temples (*Mithras*; Palmyrenian Gods; *Malagbel*) were identified in various locations around the western side of the town (Tudor 1968, 73–103).

Private dwellings have benefited from very little research in the intramural area. Antiquarian research (which at *Sarmizegetusa* dates as far back as 1773) provided only fragmentary evidence of constructions, but it is difficult to locate them or to identify their function. Excavations by M.J. Ackner (in 1823), B. Jano (in 1913) and C. Daicoviciu (in 1924) revealed multi-roomed stone buildings (*opus incertum* and *opus mixtum*) utilising bricks, marble and polychrome mosaic floors in three different locations inside the town. At *Apulum*, however, recent aerial photographic evidence within the enclosed areas of the town in Partos (Figure 5.35) indicates in the north-western corner a grid system of roads (two to three roads on an NE–SW alignment some 58 metres apart and three other roads at right angles at closer intervals) defining several *insulae*. Within the *insulae* have been identified several buildings of apparently domestic character with their short axes fronting onto the main road. A number of individual houses are clearly distinguishable, employing different combinations of ranges of rooms, corridors and courtyards, illustrating several types of urban *domus*. Two neighbouring buildings in the same *insula*, divided by a single wall, had a range of rooms surrounding a courtyard. Two other buildings, facing each other across one major road on the other side of the main north-south road, are aisled structures with ranges of rooms on either side (to north and south) of a central aisle or corridor. Each of these has a circular structure centrally positioned at the eastern end of the corridor which may indicate kilns or wells. Similar circular structures were recorded in the *vicus* to the east of the fort at *Micia*. Finally, other buildings with access to the main roads are smaller in size but sub-divided into several

small rooms. More fragmentary evidence in the south-eastern quadrant of the town indicates the presence of further buildings and a road reminiscent of those in the north-west of the town. Nineteenth century railway development and early twentieth century excavations (Cserni 1911–1913) affecting over 6 hectares in the western and north-western parts of the town, even though they have not produced any plans or indications of stratigraphy, are still sufficient to reconstruct this area of the town as occupied by stone-paved roads and large stone and brick buildings (perhaps on two levels?) covered with tiles. They were decorated with columns and statues, were equipped with bath facilities and small finds (pottery including *terra sigillata*; terracotta figurines; lamps; glass vessels; tools; coins; various bronze objects and fittings; and numerous hairpins (some 361!) indicate a rich and highly romanised material culture (Moga and Ciugudean 1995, 41–3). Moreover, these excavation accounts confirm one of the dimensions of internal *insulae* (55 metres; one 10-roomed building excavated in 1911–1912 with dimensions of 55 by 14 metres) as a consistent pattern and the presence of pottery manufacture in this area of the town. Highly romanised houses are attested further throughout the *canabae* and the area of the *Municipium Septimium.* In two strip fields on the western edge of the historic town, traces of stone walls visible from the air reveal a series of properties quite close together (one long and narrow building plot) demarcated by stone walls some of them aligned to a road running E-W and containing rectangular stone buildings. Also, traces of circular – oval pits possibly indicate late or post-Roman occupation on the site (Figure 5.36, B). Recent rescue excavations nearby confirmed the presence there of a range of buildings, one of them with a hypocaust, along with evidence for late/post-Roman occupation (Ciobanu *et al.* 2000).

Domestic buildings are better illustrated at *Sarmizegetusa* outside the town enclosures where over 15 have been excavated (Alicu and Paki 1995) (see Figure 5.31). Most of them go through a number of phases of reconstruction and/or refurbishment (two to four), some of them replacing earlier timber structures. At least one example (EM23) continues to be inhabited into the fourth century AD. Several houses excavated by Kiraly in 1883 (Alicu and Paki, 1995, Plates XXX and XXXI), possibly from the northern extramural quarter, resemble in layout and dimensions examples of courtyard-type urban houses mapped at *Apulum*, while others (EM 9 – Alicu and Paki 1995, Plates XXXV–VI) may have been reminiscent of villa houses. A number of examples demonstrate significant architectural refinement and comfort. Tessellated floors are widely used, and in some cases polychrome mosaics are also documented, sometimes in relation to hypocaust installations and baths (e.g. EM 11 – Alicu and Paki 1995, Plate XVI). Other elements of luxurious decoration included columns, marble floors or stairs or polychrome wall painting. Like in *Apulum*, in some of these buildings traces of industrial and potential commercial activity were detected (Alicu and Paki 1995, 23–6).

Therefore, both towns clearly demonstrate a level of Roman architectural and socio-economic development rivaling that seen anywhere in the western

empire. The speed of their development is notable and presumably reflects to a large erxtent the high percentage of veterans and other incomers who made up the urban population.

5.2 Choosing settlement location

As with the pre-Roman settlement, it is perhaps premature to generalise about settlement patterns on current evidence because of the difficulty of identifying settlement types. As shown above, the character of a very large number of sites is unknown and cannot easily be estimated based on their extent or the nature of associated artefacts. However, a few remarks can be made. At present it is believed that the most populated zone of Dacia was western Transylvania, particularly the Mures valley and along the main road of the province, most of which is covered by the study area. Indeed, settlement is very dense (see Figure 5.37) and, as might be expected, the most populated clusters are grouped around the major urban centres at *Ulpia Traiana Sarmizegetusa* and *Apulum*. The recorded sites are fairly evenly distributed across the territory. As many as 153 out of 402 recorded sites are located within 5 kilometres of the Mures, another 101 being located in Tara Hategului. Occupation is focused on the lowlands, as 80 per cent of them are located at altitudes lower than 400 metres. But apart from several sites on the western side of Tara Hategului, in the vicinity of *Ulpia Traiana Sarmizegetusa*, where the terrain is naturally higher without being necessarily hillier (or more fragmented), the exceptions are usually specialised settlements, mainly involved in quarrying or mining, or represent settlement continuing from the pre-Roman times in the same place (e.g. Cetea).

Theoretical studies have observed the tendency of ancient and modern rural central places to emerge at distances of 5–10 kilometres and that of larger towns even 30 kilometres apart (Bintliff 1997). Within the present study area, the nearest smaller centres are 30–32 kilometres away from the main centres of *Sarmizegetusa* and *Apulum* (Calan for *Sarmizegetusa*; Aiud for *Apulum*, though Blandiana is closer at less than 15 kilometres away). Whether the reality reflects this theoretical model or represents a fossilisation of the pattern of advance during the conquest wars (see Diaconescu 1997, 14–15) is uncertain, but it is clear that the distribution of central places in the landscape was reasonably capable of covering the eventual needs of the settlements arround them.

One exception is apparent, however. Settlement clustering is evident around *colonia Sarmizegetusa*, but the town itself is far from being located centrally. From its position at the western edge of the lowlands it offered uneven coverage for the surrounding area. As many as 44 recorded settlements are located within a radius of 15 kilometres, but the remaining 57 on the eastern side of Tara Hategului are situated 27 kilometres, and even as far as 32 kilometres away (e.g. the settlement near the quarries at Banita);

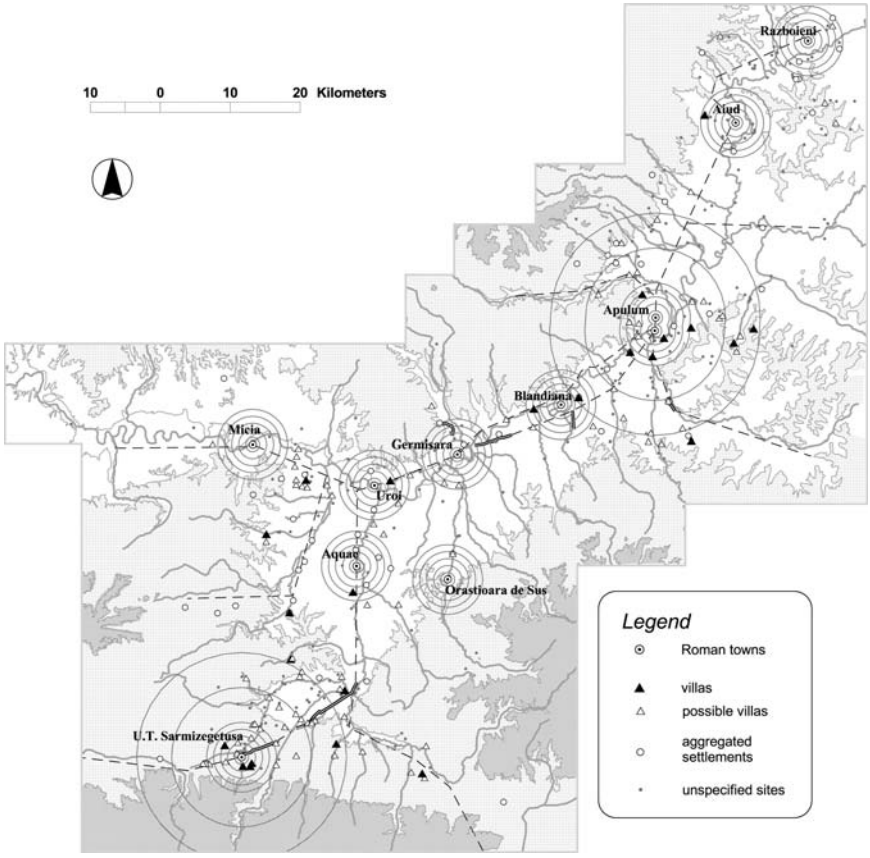

Figure 5.37 Distribution of Roman settlement in relation to major and small towns (buffers at 1 kilometre intervals, with 10 and 15 kilometres buffers around major towns); topography indicating areas above 400 and 1,000 metres.

these settlements were no better located in relation to the smaller centre at Calan-*Aquae*. The later medieval and modern settlement pattern firmly established the local centre at Hateg, 16 kilometres further east than *Sarmizegetusa*, proving that the Roman arrangement was unsound in economic terms. Moreover, as a settlement of veterans, the expectation would be that the *colonia deducta* would be placed in the middle of the most fertile agricultural land available, but Tara Hategului is hardly comparable with the Mures Valley in terms of its arable potential. The location of the town controlling the transit through the Iron Gates of Transylvania seems to indicate that issues of communication and access may have been more relevant than agriculture. Therefore, it is hard at this point to decide whether its equidistant

position is to be seen as between the two legionary fortresses at *Bersobis* and *Apulum*, and therefore relevant for its Trajanic conjunction with the location of the governor's seat (Diaconescu 2004b, 97), or whether it is a reflection of an original larger territory, extending into both the Mures valley and Banat. Whatever the explanation, this justifies the need for further centres to emerge.

Clustering of sites is also recorded around *Apulum*, with 93 recorded sites within 15 kilometres of the two towns and a few more just outside this zone. The emergence of the first town at *Apulum* (Alba Iulia-Partos) was largely related to the proximity of the legionary base and the centre of the provincial government (the governor's palace), which undoubtedly would have attracted a civilian presence. However, since the site was positioned in the middle of the most fertile sector of the Mures valley, near the gold mining area and in a crucial location for both the riverine and terrestrial communication networks, its location was extremely favourable in an economic sense. Finally, the small centres, such as the military *vici* and the possible sites mentioned in the *Tabula Peutingeriana*, also have signs of settlement activity clustering around them, with the exception of *Micia* and Orastioara de Sus (Figure 5.37).

Much like in other provinces of the empire, villas (Figures 5.2 and 5.37) are located mainly in areas with agricultural potential and idylic settings such as on gentle slopes preferably facing south, near streams or rivers (e.g. Thomas 1980, 285; for earlier assessments of villa location in Dacia see Mitrofan 1974, 1998). Indeed, most of the examples examined in this chapter, including the new additions found through aerial photography, fulfil some of these requirements. However, it has been noted that many were not located on south-facing hill slopes, but quite the contrary (e.g. Hobita-Hobeni Hill, Hobita-Sucioni, Deva, Aiud and Salasu de Sus). Indeed, the expectation that villas would have used only south-facing slopes would greatly and unreasonably limit the number of such establishments; inevitably their location would have been dictated by the location and topography of the individual property to which they belonged. A particular trend visible in many examples where site plans are available is a tendency of the villa houses to be oriented on a north-west to south-east alignment (see p. 137). But even if a south-facing hill slope was not available, villas were certainly 'houses with a view'. From their location, they overlooked large areas of the rural countryside, and in some examples it has been noted that it was in these particular parts of the complex that investment in luxury flooring or wall decoration was made (e.g. Hobita, Deva, Aiud – see pp. 132–136). Moreover, in some cases a tower was built on that particular side along the enclosure wall (Hobita and Deva – Figure 5.5). Whether 'the view' from the villa towards the surrounding landscape was more important than that from the surrounding settlements towards the villas (based on assumptions about the expression of social status through architectural monumentality, as in the case of hillforts) is debatable. Probably both were equally important.

But the location of villas, certain and possible, in relation to other sites shows a different pattern to that which has been assumed so far to be in

force. The location of villa sites has been generally related simply to their proximity to main roads and navigable rivers, and to easy access to the towns or military centres which provided the market for their products (Mitrofan 1974, 46). However, though within the study area these sites are located without exception in arable areas, they are found mainly within the buffer zones of the major towns, which seem to have attracted them more than smaller centres (*Sarmizegetusa* with 30 and *Apulum* with 28, Figure 5.37 – see Oltean and Hanson forthcoming b). Other central places have fewer villas in the vicinity. The majority of sites throughout the study area provide evidence for extensive use of Roman building material, in contrast with other parts of the province, especially in the eastern half (Popa 2002, 221–2). This has been once again taken to reflect ethnicity and wealth. But according to current data, these sites were also the most favoured in having easy access to Roman products given their location in terms of road and river transport,

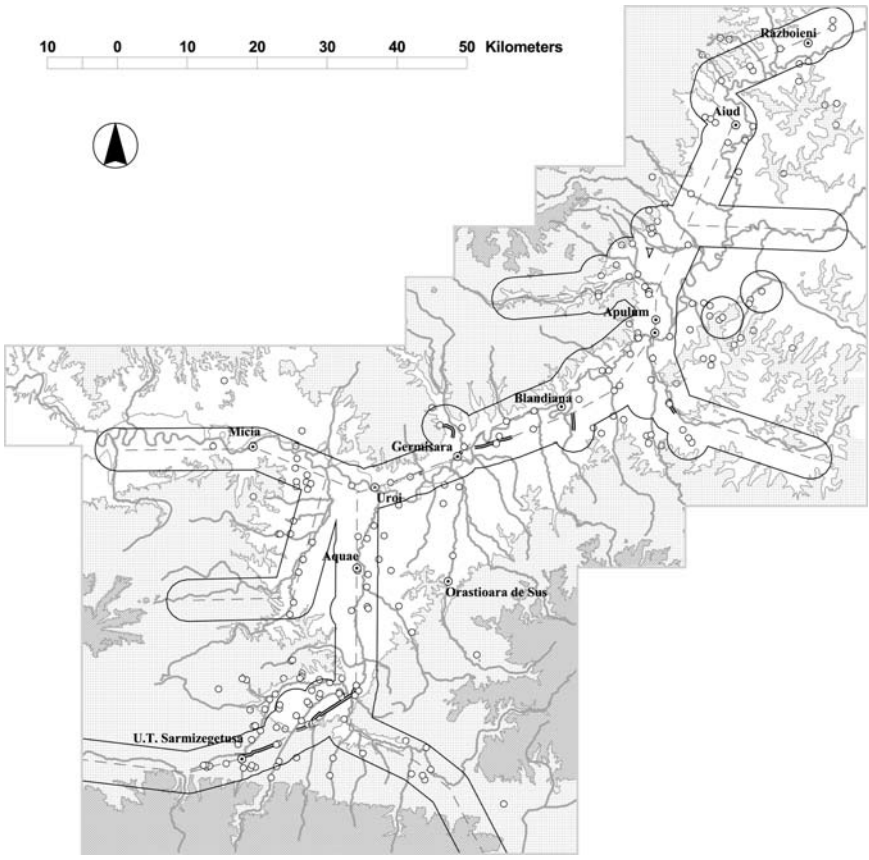

Figure 5.38 Distribution of Roman buildings or construction materials in relation to roads (buffer zone at 3 kilometres).

or in relation to the main urban centres. Out of 214 sites with reported use of stone walls, bricks and tiles, 147 are within 3 kilometres of the line of an identified road or of the site of a reported road, and quite possibly more of the remaining 67 would come into the first group if further work were to be undertaken on the Roman road system in the area. By way of comparison, a larger proportion of reported sites based on pottery finds, but without Roman building materials was located further than 3 kilometres from the roads. The relationship to the tranport system would appear to have been an important factor, therefore, in the process of romanisation of the landscape (Figure 5.38). Indeed, a similar pattern is apparent in Pannonia Inferior, where excavations demonstrated that the evolution of rural settlements' traditional design towards romanised architecture was positively influenced by their location in relation to Roman roads (Gabler 2003, 242–3).

5.3 Working the landscape

5.3.1 Farming

Clear indications of the agricultural use of rural territories come, in other provinces of the empire, from studies of ancient field systems. Centuriated lands, with *centuriae* usually of 20 by 20 *actus* (i.e. 200 *iugera* each – cf. Dilke 1971, 82–8) are often present in Italy and in the Mediterranean area fossilised within the modern landscape (Chouquer and Favory 1991; Arino-Gil *et al.* 1994). But non-centuriated field systems have also been detected. In Britain, agriculture of Roman date has been investigated archaeologically through the field systems and drainage systems identified largely through the interpretation of aerial photographs. This has provided the opportunity for huge areas of landscape to be mapped in detail (e.g. Palmer 1995, 1996). Grazing lands or examples of plough marks have also been identified, while environmental analysis has provided evidence of the types of crops used (e.g. Neal 1974, 42; van der Veen 1992). But in Dacia, since no previous landscape studies have been undertaken in order to reveal clear connections between settlement occupation and arable fields, the relationship of settlements to agriculture is in most cases more implicit than explicit. Aerial reconnaissance within western Transylvania has recorded a number of linear features indicating previous field boundaries, but unfortunately the additional problem of multiple changes within property systems of recent date (see Chapter 1) has reduced the chance of providing a sufficient basis for attempts to reconstruct ancient field systems. Moreover, the distribution of land to colonists (*adsignatio*), which everybody assumes to have taken place, still remains largely a supposition. Veterans from the legions used to be given landed properties according to their rank (*secundum gradum militiae*) within the territory of *coloniae deductae* such as *Sarmizegetusa* (Piso 1995, 63). Indeed, the rural territory of *Sarmizegetusa* is the most likely candidate for centuriation, as indicated by the circumstances of its foundation and on

analogy with the contemporary *colonia* at Poetovio in Pannonia. Although clear signs of centuriation have not yet been discovered at the latter settlement either, a reference in the *Agrimensores* indicates that it did exist (Mocsy 1974, 119). In the Mures valley a set of cropmarks indicating 90° road junctions have been discovered just outside the area occupied by buildings at *Micia*, and the pattern of parallel roads extending eastwards outside the area occupied by the modern village and Roman remains at *Sarmizegetusa* may also indicate an earlier (Roman) pattern. However, considerable further study is needed before this possibility can be confirmed.

The evident focus on settling the lowlands in the Roman period is, however, a clear indicator of the stress on arable cultivation. Moreover, the positioning of villas, particularly around small towns, seems to indicate that certain agricultural activities may have been undertaken by the latter's inhabitants. Most villas and other settlements provide convincing structural or artefactual evidence to indicate their involvement in agricultural production. At Hobita-Hobeni hill, Santamaria Orlea, Vintu de Jos, Oarda and Sibot the large buildings probably used for storage demonstrate the potential to accommodate impressive quantities of grain. Moreover, associated finds of ploughshares (e.g. Hobita-Hobeni hill, Aiudul de Sus), sickles (e.g. Aiudul de Sus) and millstones (e.g. Hobita-Hobeni hill and Sucioni hill, Cincis, Aiudul de Sus, Manerau) indicate both production and grain processing. The nature of the discovery of the millstones at Deva, however, indicates their local production for commercial sale, rather than for use on site. This interpretation seems to be further reinforced by the lack of large capacity grain storage there. Millstones, ploughshares and sickles were also recorded in agricultural villages, possible homesteads and many other settlements of unknown nature with both Roman and Daco-Roman material culture (Cetea, Obreja, Noslac, Blandiana, Sebes, Sebesel, Varmaga, Ciumbrud, Ciuguzel, Decea, Miraslau, Petresti, Paclisa, Spalnaca – see Figure 6.2), while from Benic comes the lower part of a grape press. Although largely assumed (Cincis and Lechinta de Mures – see Protase 1968, 508), the association of agricultural villages and villas is perhaps documented so far only at Vintu de Jos, if the villa proves to be contemporaneous with the habitation of the adjacent village (see p. 127). However, the lack of further examples in the archaeological record is due to the failures of the previous research methodology rather than to their real absence within the landscape.

Since no animal enclosures have been highlighted at any of the sites, the pastoral economy is also documented only implicitly and through the evidence of significant quantities of bone (especially of pigs and cattle) present on virtually all the archaeological excavations (although not always mentioned in print). A wax tablet list from Rosia Montana (CIL III, 933) proving the availability of lambs and piglets for meat consumption on the local market and the epigraphic reference to a *collegium centonariorum* (CIL III, 1174, 1208, 1217) from *Apulum* suggests possible use of locally produced

wool. Artefacts involved in wool processing, such as scissors and spindles, have been found in the Santamaria Orlea villa and, even though the site lacks specific indication that they were farming sheep, a source of supply could easily have been found not too far away. A study of bone material by Gudea and Gudea (2000) from a sunken house in the settlement at Cicau-Saliste produced evidence for 44 fragments of cattle bones, 16 of horse, 10 of pig and only 3 of sheep/goat. Significantly larger quantities come, as expected, from the fort at *Micia* (cattle, 894; sheep/goat, 324; pig, 343; horse, 44 and birds, 30 pieces); from *Apulum*-Statia de Salvare (cattle, 792; sheep/goat, 317; pig, 317; horse, 229 and birds, 15 pieces) and from the amphitheatre at *Sarmizegetusa* (cattle, 133; pig, 59; sheep/goat, 21). In some cases, the large quantities of bones could indicate processing of carcasses, as for example in the *vicus* at *Micia* (Oltean *et al*. 2005) and perhaps in the villas at Deva and Manerau. Further observations have been made that in general (including the examined sites from the study area) the animals killed were generally adults, which means that for cattle and sheep/goats they would have been exploited primarily for non-meat products (milk, wool) or for traction (use of cattle for traction has been clearly documented in the osteological material from *Apulum*). The same study also advances the observation that some breed improvements could have been made, as suggested by an increase in the size of the adult animals (Gudea and Gudea 2000, 264–5). Finds also indicate that not all the animals exploited were farmed. Game (boar, stag) were hunted in the area (antler – e.g. Deva, Santamaria Orlea; boar tooth – Deva) and fishing would have been carried out too (e.g. fishing net weights at Spalnaca).

5.3.2 Exploiting the natural resources

The exploitation of natural resources such as gold, iron, stone and salt in Dacia was extensive (Figure 5.39). The famous gold mining district in the Apuseni Mountains was intensively and systematically exploited by the Romans immediately after the conquest of Dacia had ended. The area developed rapidly and suffered great transformations as a result, some of which have recently been revealed during the large scale rescue excavation project at Rosia Montana (*Alburnus Maior*) outside the study area (Damian 2003). Other exploitations of alluvial gold would have taken place in the area, though these are difficult to locate with traditional methods of survey. A large surface exploitation site for gold is known at Pianu de Sus (Wollmann 1996, 149–50), of which traces are still extant (Figure 5.40) and which probably continued pre-conquest activity (see Chapter 4). The iron mining district in the Poiana Rusca mountains also attracted intensive activity in the Roman period, with extraction centres at Hunedoara, Teliucu Inferior, Ruda, Ghelar, Alun and perhaps Almasu Mic. Traces of quarrying, mining tools and even remains of buildings related to the extraction activity or indicating associated settlements have been discovered there (Wollmann

Figure 5.39 Distribution map of Roman industrial activities in relation to settlement evidence.

1996). A surprising development, however, is that the iron resources from the Orastie Mountains around *Sarmizegetusa Regia* seemingly ceased to be exploited during the Roman period without apparent reasons (see earlier in Chapter 4 and further discussion in Chapter 6). Another important resource available in the area at Ocna Mures was salt, which was also exploited by the Romans. Even the Latin name of the settlement, *Salinae* (for Ocna Mures itself, for the fort and *vicus* at Razboieni across the Mures or perhaps for both of them) confirms this. According to Wollmann (1996, 241), traces of Roman surface exploitation and adjacent buildings (some of them with vaulted roofs) were still visible in the nineteenth century over a large area between Ocna Mures and Spalnaca. Probably the traces of quarry pits identified near Uioara de Jos are also related to salt resources.

There are numerous traces of stone quarrying in the Roman period (Figure 5.39). Probably the most famous quarry in Dacia is that for marble

Figure 5.40 Extensive extant remains of gold quarrying activity of Roman (possibly Dacian) and later date at Pianu de Sus.

at Bucova immediately to the west of the Iron Gates passage and only 11 kilometres away from *Sarmizegetusa*. 'Until 1884 when the marble quarry at Ruschita was opened, [Bucova . . .] provided almost without interruption the material for urban constructions, monuments and even lime' (Wollmann 1996, 260). The capital at *Sarmizegetusa* made the most extensive use of this material, so intensive that it entitled some to identify a genuine 'culture of marble' (see Ciongradi 2004a; Diaconescu 2004b), but the marble originating in this quarry travelled around the whole province and was used at *Apulum* and in many other urban and rural locations. Andesite availability was concentrated around Deva (Deva, Bejan, Pietroasa, Cozia, Uroi – Figure 5.26). From there, it travelled according to market needs, probably as finite products (millstones, but also funerary monuments or architectural pieces), since discoveries in the quarries (e.g. Bejan) included stonemason's tools among those used for extraction. Limestone was more readily available across the area. It continued to be extracted at the Magura Calanului quarry and in the area, where now at least four quarries are in operation (Calan, Streisangiorgiu, Valea Sangiorgiului and Santamaria de Piatra). The quarry at Telna north of *Apulum* also continues to be used, but not that at Craiva (despite an evident intensification of activity in the area, with another quarry at Telna and new quarries at Remetea, Ighiu and Ighiel). *Sarmizegetusa* also

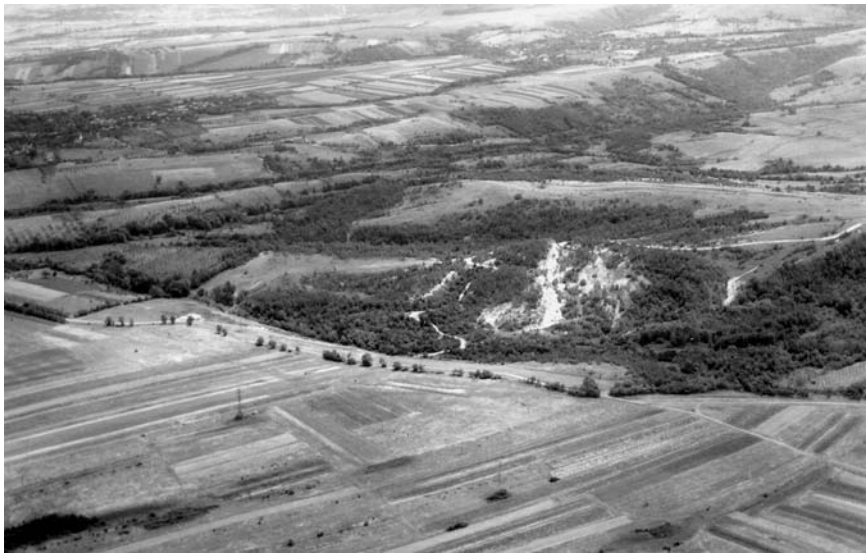

Figure 5.41 Limestone quarry (foreground) to the west of *Sarmizegetusa Ulpia* (background left) (I. Oltean).

used limestone available in the vicinity, probably that from the Iordachel valley immediately to the west of the town (Figure 5.41). Other quarries were located at Banita, Carjiti, Geoagiu, Carpinis and Cabesti. At some of these sites, tools were also found (at Ighiu, Santamaria de Piatra, Pianu de Sus, Teliucu Inferior, Ghelar, Deva, and Cincis). So far only one sandstone quarry has been identified within the study area at Sard, but it is also supposed that a sandstone quarry would have existed in the Deva-*Micia* area (Wollmann 1996, 260). For similar reasons, we should assume the presence of another source in the vicinity of *Sarmizegetusa*, where sandstone was used extensively especially within the early stone phases of the town (e.g. for the Hadrianic forum – see Diaconescu 2004b).

Mines were probably under the imperial administration, but some involvement of local individuals must also be accepted. The discovery of extraction tools in the villa house and of iron ore ritually deposited in the graves of the small cemetery of the villa at Cincis nearby indicates that the site was probably associated in some way with iron ore extraction (Floca and Valea 1965). The opening of new quarries, as well as the continuity of previous extraction sites and their location not far away from the main urban centres and populated areas, reflects the general spread of stone architecture in the study area in the Roman period. Also, although some transport of stone was undertaken, it has been noted that, unlike the pre-conquest period, local resources were used whenever available and future research into the location of Roman quarries will probably confirm this (see also Wollmann 1996, 267).

Stone working (Figure 5.39) is attested mainly through the discovery of tools related to such activities at quarry sites (e.g. Deva-Bejan, Santamaria de Piatra) where some level of stone working was also being undertaken. Given the extensive epigraphic habit and the need for monumental architecture in both the private and public sphere documented there, *Sarmizegetusa* and *Apulum* would have had their own stone workshops. Moreover, recent studies on funerary monuments from Dacia support the idea of local workshops at *Sarmizegetusa*, *Micia* and *Apulum* producing funerary monuments (*stelae*); unfortunately their presence is documented more on stylistic and typological grounds (see Ciongradi 2004b), since the simple platform inside the *Asclepieion* at *Sarmizegetusa* tentatively identified as a stonemason's workshop (Alicu and Paki 1995, 25) gives less basis for such interpretation than the millstone workshop from the excavated villa at Deva. Nevertheless, indications that stonemasons' workshops were present even in smaller towns are provided by 'advertising signs', such as a fragment of a stone column from Calan with the inscription of *Diogenes lapidarius* (CIL III, 7859), a votive altar to *Victoria Augusta* and to the *Genius collegii* (*fabrum*?) by another *lapidarius*, *M. Coceius Lucius* at *Micia* (CIL III, 1365) and a late Severan marble statue of Venus bearing the inscription '*Cla*(*udius*)/*Satu/rnin*(*us*)/*sculp/sit*' (Ciongradi 2006).

Although no settlements of potters similar to Micasasa (and perhaps Cristesti) have been identified in the area under examination here, extensive pottery production was clearly undertaken in *Apulum* and *Micia*. Pottery kilns have been reported at *Apulum* in the *canabae* area, but more extensively so in the Partos area. The earliest excavations there by Cserni (Moga and Ciugudean 1995, 42) found pottery kilns within Roman buildings and more recent excavations in the area of the sanctuary of Liber Pater proved that industrial pottery production, which preceded the extension of the enclosed area of the town there, continued throughout the Roman period and lasted until sometime in the fourth century AD (http://www.cimec.ro/mapserver/asp_script/cronica/detaliu.asp?k=1230 visited 6 December 2006). Pottery and tegular material were also produced at *Sarmizegetusa* to the southeast and east of the town enclosure (Alicu and Paki 1995, 8 and 24); indeed, pottery continued to be produced there after the abandonment of the province though in a more restricted range (Diaconescu 2004b, 132–3). Extensive geophysical survey over the north-western corner of the colonia at *Apulum* revealed that pottery production may have extended throughout the whole area surveyed (see Haynes *et al*. forthcoming) and certain circular stone structures visible from the air may have also represented kilns (Figure 5.35). Similar circular stone structures were detected through aerial reconnaissance at *Micia* inside the *vicus* a short distance from the fort (Figure 5.28); further indication of industrial production of pottery comes from a group of pottery kilns excavated to the north-east of the *vicus*, probably on the outskirts of the settlement and near one of the cemeteries.

Other crafts documented archaeologically include bronze metallurgy (brooches?) at *Micia* (Cocis 2004, 35; Oltean *et al.* 2005) and glass production, possibly in combination with iron metallurgy at *Sarmizegetusa Ulpia* and *Micia* (Alicu and Paki 1995, 25–6; Oltean *et al.* 2005). At *Sarmizegetusa*, the evidence so far may be seen to indicate a segregation of industrial activities outside the enclosed area, but since internal *insulae* are still to be excavated, this is more likely to reflect a bias of research rather than reality. Indeed, at *Apulum* massive pottery production extended within and outside the town enclosure. Similarly, at Napoca in Dacia Porolissensis several workshops (for bronze artefacts, bronze brooches and glass and iron) were all identified within the precinct, some of them not far away from the probable location of the forum.

Manufacture was not restricted to towns (Figure 5.39). Inside the villa at Deva numerous millstones including unfinished pieces, indicate the presence of a workshop producing millstones rather than implying the intensive involvement of the site in cereal cultivation and processing (see p. 137). Since the villa site is located at the foot of the large andesite quarries around Deva (Deva, Bejan, Pietroasa), the workshop was most likely using the andesite available nearby. The workshop was located in one of the ancillary buildings of the villa which, although covered with shingles like the rest of the ancillary buildings, was paved more expensively with *opus signinum* and *tesserae*. In a different building less expensively furnished, finds indicate a potential second workshop processing animal bone. With one, possibly two workshops on site, but without a granary to indicate an agricultural economic base, this villa seems more firmly oriented towards cash-industry production. A mould and fragments of local *terra sigillata* pottery discovered at Pesteana (Popa 1987, 46–7) suggests a workshop producing local imitations. Kilns for pottery (Oarda, Silvasu de Sus) and construction materials (Zeicani, Hobita-Sucioni Hill, Breazova, Silvasu de Sus, Folt) discovered mainly at possible villa sites in Tara Hategului (excepting Folt which is on the Mures) could perhaps hint at further villa-related cash-industry production, in a fashion already revealed elsewhere (e.g. Italy – see Attolini *et al.* 1991; Britain – see Darvill and McWhirr 1984). Also, evidence for iron metallurgical activities, mainly in the form of slag, comes from sites primarily located on the eastern side of Tara Hategului, likely to represent villas or homesteads (two at Sampetru, two at Bucium-Orlea and one at Valea Daljii). Interestingly, at both Sampetru and Bucium Orlea iron metallurgy has been attested in a pre-Roman context (see Chapter 4) in the immediate vicinity. Reduction of iron ores was certainly undertaken in the area of Hunedoara where an ingot was made probably using local ore. Finally, finds indicate weaving taking place to some extent in the villa at Santamaria Orlea (spindles, loom weight) and woodworking in the village at Obreja (borer, axe, adze) and at Spalnaca (chisel, axe), though there is no reason to believe that these were for other than the immediate needs of the settlement.

It is unfortunate that, as seen above, evidence for craftsmanship and manufacture is severely biased by the survival of artefacts in archaeological contexts as it is for the pre-Roman period. Since no waterlogged complexes have been excavated, preservation of organic materials means that only manufacture involving pottery and glass production, metalworking and stoneworking are well represented within the study area. Nevertheless, the epigraphic presence of *collegia* (e.g. *collegium fabrum* at *Sarmizegetusa* and *Apulum*; also the *centonarii* and the *dendrophori* at *Apulum*) gives some indication of crafts other than those detectable archaeologically, but also shows that these professional communities were sufficiently developed to have created their own institutional structure (Ardevan 1998, 296–312). The *collegium fabrum* seems to have been the most important, probably grouping a large number of crafts and artisans. Its seat in *Sarmizegetusa*, which hosted a number of public functions, was located inside the forum by its entrance from the *decumanus maximus* (Diaconescu 2004b, 94).

The potential importance of the gold plundered from the conquest of Dacia as an element in Trajan's decision to annexe Dacia is frequently postulated. The archaeological remains give evidence for continued and extensive exploitation of all the natural resources of the province, reaffirming the importance of economic factors in Trajan's decision. Moreover, the rapid development of craft organisations, local manufacture and trade demonstrates that the province was fully integrated into the commercial life of the empire.

5.4 Death and worship

Spiritual activity has a significant presence throughout the central area of the province (Figure 5.42). *Sarmizegetusa Ulpia* and *Apulum* demonstrate no less religious variety than any major city of the empire. *Sarmizegetusa* was the provincial centre of the imperial cult and hosted the meetings of the *concilium trium daciarum* (Ardevan 1998, 337). But the imperial cult, in the usual format of *Jupiter Optimus Maximus* and the Capitoline triad, as well as *Domus Divina* or gods favoured by the emperors recognisable by the epithet *Augustus* attached to their name, was exercised everywhere across the province. Numerous temples, including a complex for the gods of medicine and temples for *Liber Pater*, *Nemesis* or *Silvanus*, were located at *Sarmizegetusa Ulpia* mainly in a large area outside the precinct to the north and east of the amphitheatre (Figures 5.31 and 5.33); other temples were scattered elsewhere inside (*Serapis*) or around the precinct (*Mithras*, *Malagbel*/Palmyrene Gods), and a number of other cults are also attested (*Caelestis*, *Apollo*, *Diana*, *Hercules*, *Dis Pater*/*Proserpina*, *Dolichenus* and *Isis* – Rusu-Pescaru and Alicu 2000). Though at *Apulum* only the temple of *Liber Pater* and a *mithraeum* have been excavated, a number of gods may have been celebrated there as well (e.g. the Capitoline gods, *Apollo*, *Aesculapius* and *Hygia*, *Nemesis*, *Dolichenus*, *Aeternus*, *Iarhibalus*, *Domina*, *Epona*, the *Matrons*

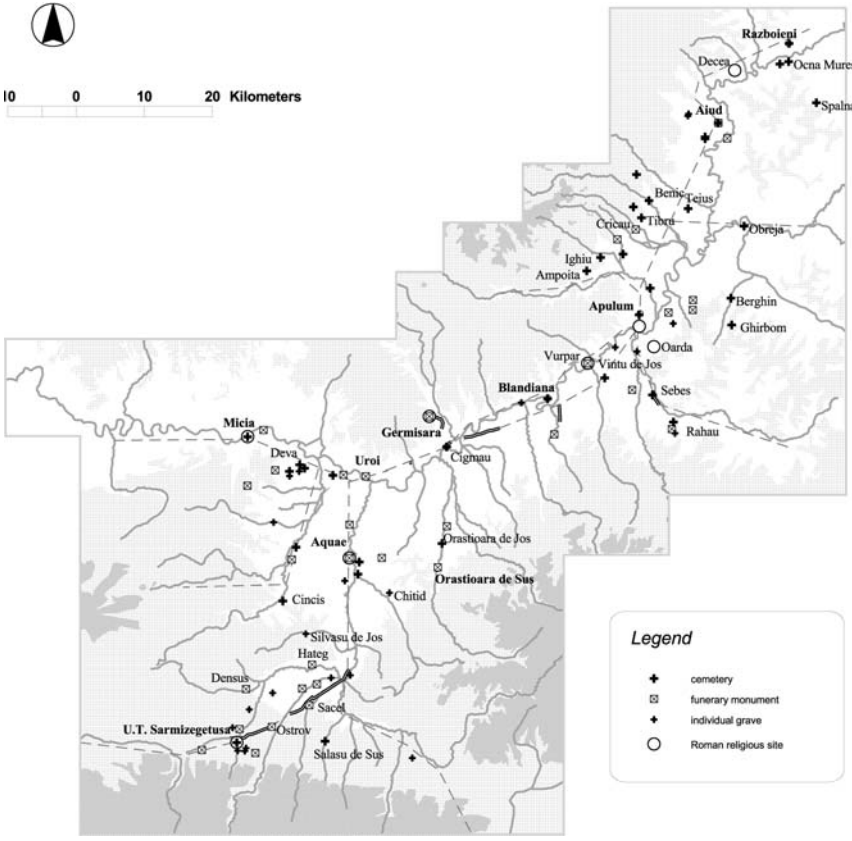

Figure 5.42 Distribution of Roman spiritual activity.

and *Bursumarus* – Rusu-Pescaru and Alicu 2000). The largest religious centre outside *Sarmizegetusa* or *Apulum* was at *Micia*. So far two temples, one for the *Dii Mauri* and the other probably for *Jupiter Erapolitanus*, have been identified archaeologically. They were located outside the town to the south (at some distance) and south-east, respectively (the latter very poorly preserved) (Rusu-Pescaru and Alicu 2000, 77 and 92–4). On the basis of epigraphic evidence, other deities worshiped there were *Mithras* (*Sol Invictus*), *Isis*, *Hercules* and *Nemesis* (Rusu-Pescaru and Alicu 2000) and even *Diana* (one votive inscription discovered within the north-eastern zone of the *vicus* – Russu *et al.* 1984, 63), *Liber Pater* and *Silvanus Domesticus*. The imperial cult (*IOM*, *IOM Dolichenus*; *Domus Divina*) and those cults related to local public administration (e.g. *Genius Miciae*, *Genius Pagi Miciae*) are also present. A dedication to *Mithras* (*Sol Invictus*) at Cigmau, one to *Diana* at Orastioara de Sus and several to *Apollo*, *Pan*, *Epona*, *Hercules Magusanus* at

Razboieni may indicate that, like at *Micia*, temples and cultic activities were present in other military *vici*. At the latter, Rusu-Pescaru and Alicu (2000, 126) advance the possibility of the presence of a *fanum*. This extensive range of gods and cults attested further confirms how integrated into standard religious activity these major towns were.

Not much is known so far about religious foci (solitary temples) within the rural landscape. There are numerous places within the study area where dedications to several gods have been encountered: *Hercules* (three places); *Silvanus* (three places); *Liber Pater* (two places); *Dionysos*, *Diana*, *Daphne*, *Apollo Pythus*, *Bonus Puer*, *Juno* and *Nemesis*, *Saturn* and *Minerva*, or *Bacchus* and *Ceres*. An interesting mixture is attested at Salasu de Sus, where the owner of a possible villa worshiped *Hercules*, *Silvanus* and the Thracian Rider. Dedications to gods are found at stone quarries (Deva, Santamaria de Piatra or Valea Sangiorgiului), but they reflect the location of a workshop there and not a place of worship. The worship of *Mithras* is attested in several locations. At Decea, antiquarian research from 1901 located the *cella* of a *mithraeum* dug into the slope of a hill 300–350 metres away from the Roman road; inside were found a relief, a statue and two altars dedicated to *Mithras* (CIL III, 12547–8). The site may have been related to some military presence there (Rusu-Pescaru and Alicu 2000, 78), though rich finds across the village (an unidentified goddess figurine; coins – among them a hoard of Roman *denarii* and another of Dacian coins; a ploughshare; pottery – including storage vessels; lamps and bricks) could also indicate the presence of a larger agricultural settlement probably with romanised architecture. Another *mithraeum* with altars and sculptures is reported at Vurpar, a Mithraic relief was discovered at Lopadea Noua and an altar to the same god at Sard.

The sites at *Aquae* and *Germisara* probably started as religious centres connected to the presence of natural hot springs, but they might well have developed into more complex settlements because of their public attraction. The largest complex known in Dacia was at Baile Herculane to the southwest of Tara Hategului, near the fort and *vicus* at *Ad Mediam* (Mehadia). It had complex installations (with pools and baths) and several places of worship connected to the use of local hot springs (Benea and Lalescu 1998). Similar features, taking advantage of the natural hot water and gas accumulations in the bedrock, have also been found on a smaller scale at *Germisara*/Geoagiu Bai (Figure 5.25) some 5 kilometres away from the military *vicus* at Cigmau (Rusu and Pescaru 1993; Rusu-Pescaru and Alicu 2000, 65–74). They consisted of a large complex, excavated since 1986, involving at the beginning elaborate channelling of the water from its natural stone pool into basins cut into the native bedrock and probably lined with timber, and associated buildings facing one channel. One of the buildings was identified as a *fanum*; the function of the other building nearby remained unidentified, but its inventory of finds (pottery, small glass vessels and a bronze spatula) indicates possible involvement in healing

practices. In front of them and towards the natural pool, several stone altars were discovered along with statue bases dedicated to *Diana* and the *Nymphs* by officers of the *Numerus Singulariorum Britannicianorum* from Cigmau and of the *XIII Gemina* legion. The natural pool itself was used only for ritual deposits, and about 600 coins and, exceptionally, seven gold votive tablets dedicated to *Diana*, *Hygia* and the *Nymphs* have been found. Damaged by localised tectonic movement, the complex was rebuilt and much enlarged in its second phase. Unlike Baile Herculane, where the god worshiped was *Hercules*, cult activity was focused around *Diana, Aesculap Hygia* and the *Nymphs* (Rusu and Pescaru 1993; Rusu-Pescaru and Alicu 2000, 65–74). From *Aquae*/Calan (Figure 5.24) comes scarcer archaeological evidence. A natural stone pool was probably used for ritual bathing by worshipers, but no traces of cult buildings or extensive works have been found (http://archweb.cimec.ro/scripts/arh/cronica/detail.asp?k=251 visited 6 December 2006). A dedication to *Hercules* was discovered accidentally nearby (CIL III, 1406). However, the importance of the spa site is probably indicated by fact that it is the only one present in the *Tabula Peutingeriana* (although this may be explained by the fact that both Baile Herculane and Geoagiu Bai are some distance from the main road).

Understanding sepulchral aspects of Roman Dacia is far from complete, even for the better known urban sites. Study has traditionally been focused on funerary monuments, either on artistic or epigraphic topics, but recent studies give more attention to the social information revealed by funerary monumentality (Ciongradi 2004a,b). Most of the recovered funerary art comes from major towns and is dislocated from its archaeological context. However, it demonstrates that, although *stelae* were the most common type of funerary monument, more elaborate monuments were also present, such as mausoleum, *tumulus*, *aedicula*, funerary enclosure and segmented pyramidal-shaped or altar-shaped monuments, most of them with architectural decoration (e.g. funerary medallions, copings, columns, funerary lions, etc.) (see Ciongradi 2004b). After a few earlier attempts in 1934, when the large mausoleum of the *Aurelii* family was discovered (Daicoviciu and Floca 1937), and in 1982–1984 when a funerary enclosure containing four graves was unearthed (Allen 1984), systematic excavation of part of the extensive cemetery located some 400 metres east from the town precinct at *Sarmizegetusa* along the main Roman road began in 2001. Recent excavations revealed some 100 cremation (the large majority) and inhumation graves as well as a number of funerary enclosures and other installations, first defined by ditches or wattle partitions and later in whitewashed *opus incertum* (http://www.cimec.ro/mapserver/asp_script/cronica/detaliu.asp?k=1489). At *Apulum* archaeological excavations during 1979–1984 revealed a large Roman cemetery to the north of the *canabae* with a few hundred graves overlapped by over a thousand early medieval inhumations (eighth–ninth century). More recent rescue excavations in 2002–2003 in areas at the northern limits of the modern occupation revealed a predominantly Roman necropolis with 573 graves

representing mainly inhumations and cremations, but also bi-ritual graves and cenotaphs (http://www.cimec.ro/mapserver/asp_script/cronica/detaliu.asp?k=2153; http://www.cimec.ro/mapserver/asp_script/cronica/detaliu.asp?k=1865 visited 6 December 2006). As indicated by aerial photographs, at *Apulum* the necropolis extended much further than the area already excavated (with 257 other cremation graves and a number of funerary constructions – see Figures 5.3 and 5.36A), increasing the area occupied by the necropolis to some 15.5 hectares. Recent evidence indicates that at *Sarmizegetusa* most funerary contexts represented cremations in *ustrinum*, with the remains deposited in wooden caskets in pre-fired pits, but without funerary urns being utilised. The few inhumations represent either children or very late (Roman or medieval) examples. Although inhumations were more frequent at *Apulum* (in brick cists or simple pits), the Roman examples still referred mostly to children. The adults were normally cremated on site or in *ustrinum* and in most cases either caskets or urns were used for the cinerary remains. In a few cases documented at *Apulum*, only skulls were deposited in the graves. In both towns the graves were marked on the surface by funerary monuments or simply by tiles. Only the excavations at *Sarmizegetusa* provided evidence for larger constructions (enclosures?), but their presence is documented also at *Apulum* by aerial photography with at least five larger rectangular and circular funerary monuments in stone (large circular stone rings probably coming from barrows were also found elsewhere in Dacia at Rosia Montana/*Alburnus Maior*). Interestingly, one excavated pit at *Apulum* contained a *stela* and another stone architectural decorations (a pine cone monument coping, and fragments of an *aquila* and of a column), without any trace of human remains inside. The funerary fashion, as expressed in the method of disposal of the human remains, by the evidence of funerary feasting and the presence of coinage, along with the material culture itself, are clearly Roman. Indications of very rich burials are rare (e.g. a fragment of silverware in an *Apulum* grave instead of the usual pottery), though the evidence may be biased by subsequent robbery. Other cemeteries like those east of *Micia* (Figure 5.28), at Razboieni or Geoagiu (possibly used by the visitors to the *Germisara* spas) have suffered significant destruction because of modern constructions (for *Micia* see Ciongradi 2004b; for Razboieni – Moga and Ciugudean, 1995, 153–4; for Geoagiu – Russu *et al.* 1984, 228 and 261–3). Surviving funerary monuments (*stelae* or parts from more elaborate architectural types) and sarcophagi in stone or brick indicate that they were typically Roman. As indicated by aerial photographs, a second cemetery to the south of *Micia* seems to be less disturbed; a few small rectangular enclosures, one of them with an apse, may represent remains of funerary constructions (Figure 5.28).

Outside the two major towns, funerary activity was indicated at 44 locations, whether in a group (19 cemeteries) or individually (25) (Figure 5.42). Multiple traces of funerary activity have been unearthed over the years along the Roman road north-west of Aiud, such as a brick sarcophagus, cremation

Figure 5.43 Traces of a probable Roman cremation cemetery at Vintu de Jos.

graves with urns and funerary inventory (coins, jewellery and pottery). Also, similar discoveries at Sebes may indicate the presence of a settlement larger than a villa in the vicinity. A cemetery of a larger community was also located at Vintu de Jos (Figure 5.43). Aerial reconnaissance identified a cremation cemetery bearing good resemblance to the cemetery photographed from the air on the northern edge of the Roman and modern settlement at Alba Iulia, but it is less busy and, more importantly, it seems to lack stone constructions. But not far away were discovered funerary monuments, architectural decoration (sphinx, column), along with remains from stone buildings and pottery (Moga and Ciugudean 1995, 209), suggesting a certain degree of sophistication in funerary habit.

Few cemeteries have been excavated in the rural areas, where work has focused mostly on those identified as of Dacian type. A large such

cemetery has been excavated within the study area at Obreja near a Daco-Roman village, where between 1967 and 1971 over 240 cremation and six inhumation graves have been revealed. In only five cases were the cremation remains not deposited in an urn. Epigraphic manifestations were totally absent, but the material culture proved by the funerary inventory is, like in the settlement, overwhelmingly Roman. Very few ceramics found in the cemetery or in the village are Dacian; indeed indigenous pottery vessels were present in only 12 graves (and in only seven were they used as urns), the vast majority being Roman (in red or grey ware). Similarly, in the Daco-Roman cemetery at Soporu de Campie outside the study area, only 10–15 per cent of the pottery was Dacian. Apart from a few bronze coins (most very damaged, but some determined as from the reign of Antoninus Pius), the inventory included personal jewellery – beads in glass or amber (one in silver); ear and arm rings in bronze or silver (one gold earring), several brooches and rings with cameos – and other possesions (e.g. mirrors, a cosmetic box, a bone comb, a glass and a *lacrimarium*).

Some funerary sites are, or assumed to be, related to villa settlements (certain – Cincis; assumed – Deva, Reea, Ghirbom, Salasu de Sus, Orastioara de Jos, Hapria). At Cincis, the small cremation cemetery 200 metres from the villa included five simple pit graves, eight tumulus graves (one double) and four graves in a funerary enclosure/construction. Inside the construction only one grave had a brick sarcophagus; two were tumuli and the fourth was in a simple pit. Previous accidental discoveries indicated the use of ashlar blocks in the funerary enclosure and the presence of two funerary statues in marble from Bucova. The cemetery was identified as related to a native village associated with the villa (Floca and Valea 1965), but this is contradicted by the small number of graves and the immediate proximity of the villa. The finds inventory is Roman (with the occasional presence of Dacian pottery) and included pottery, lamps, a few bronze coins, personal items and jewellery (even in gold and silver), but lacking terra sigillata. Exceptionally, near the double tumulus grave a fragment of a *stela* was discovered, with its inscription severely worn. Another cremation cemetery thought to be related to a villa site was discovered at Deva (Marghitan 1998). In this case, the graves were in cists made in brick and tile; the upper part of a *stela* representing two lions on each side of a Thanatos, and the fine pottery (mainly grey, but also red wares) reveal a Roman tradition. The site was excavated only partially and no estimation has been made of its real extent. However, the fact that it is located approximately 1 kilometre from the villa and at a lower altitude down towards the Mures, and that there is dense (although perhaps scattered) Roman occupation in the area of Deva, makes it more likely that the cemetery should be related to a different site, or perhaps even served several sites in the area.

It is clear that in general the funerary practices in Roman times contrast significantly with those in the period before the Roman conquest when very few such contexts have been documented (see Chapter 4). The evidence from

the towns again reinforces their highly romanised development, as might be expected from settlements made up largely of incomers. Beyond those sites, it is perhaps in this context that the evolution in personal identity of the indigenous population towards romanisation can be best followed, as for example at Obreja and Cincis.

5.5 Moving through the landscape

Sites were not separate entities but maintained relationships and communications with each other. The communication system in the Roman period continued to make active use of the river Mures, both for navigation and for structuring the terrestrial network around it (Figure 5.44). The exact trajectories of most roads are unknown, for too little research has been undertaken on this topic. As indicated by the *Tabula Peutingeriana*, the main road is supposed to have run from the Transylvanian Iron Gates and Bucova

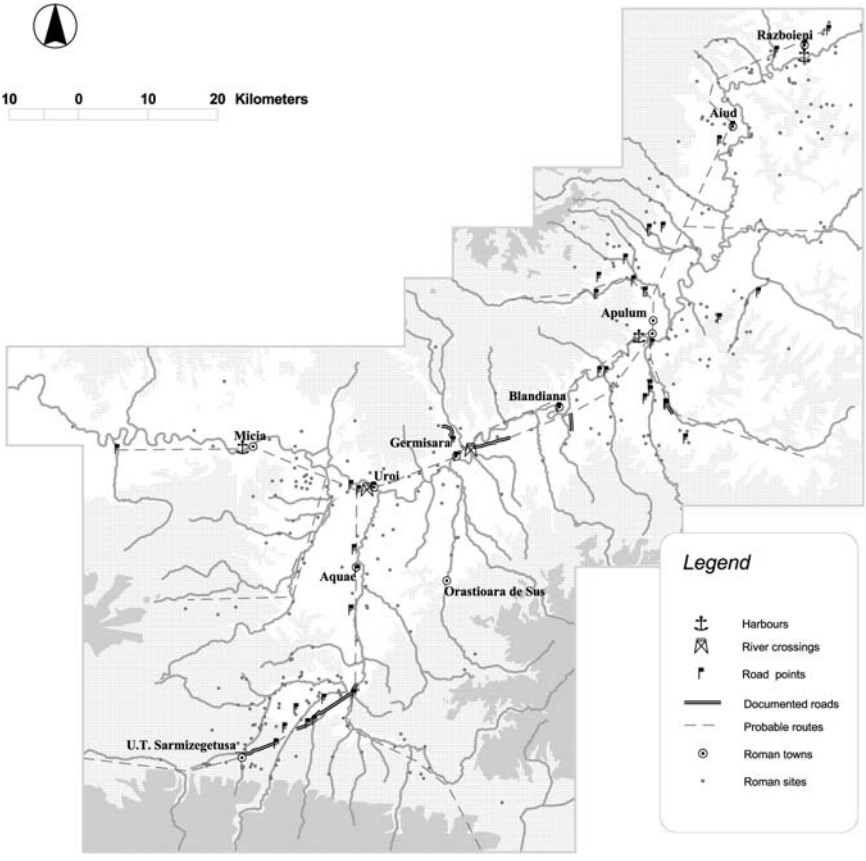

Figure 5.44 Roman terrestrial and riverine transport network.

through *Sarmizegetusa*, crossing the whole of Tara Hategului to reach the Strei valley. It would then have followed the line of the river until reaching the Mures valley somewhere east of Simeria where it would have crossed the river to Uroi (*Petris*) and continued following the Mures line on its north side towards *Germisara*. The road continued to follow the river through Blandiana, *Apulum*, Aiud and Razboieni, where it had preferred to follow the line of Aries river to reach *Potaissa* outside the study area (and from there to Napoca and Porolissum). Further extensions led to other centres of the province or beyond its boundaries. *Sarmizegetusa* was an important centre involved in commerce and terrestrial transportation, with a *collegium* of *lecticarii* epigraphically attested (Ardevan 1998, 297).

Until recently (Fodorean 2006), little research has been done into the Roman road network of Dacia. Traditional publications mentioning roads rarely include plans of the identified sections and, therefore, numerous reports can be taken into consideration here only as point discoveries. Several sectors of the road (Figure 5.44) were identified on the 1870–1875 Austrian cadastral map of Transylvania (indicated by labels such as '*Römer Weg*'; '*Drum Trajan*') (Figure 1.9). Aerial survey has also identified and enabled the mapping of further road sectors at Bobalna, Sebes, *Micia*, *Apulum* and to the east of Cigmau (Oltean and Hanson 2001; Hanson and Oltean 2003, 103–9), and further segments of roads were mapped on the basis of satellite imagery at Cigmau and around Alba Iulia. Insofar, they provide insufficient basis to advance the interpretation that they were part of a system of centuriation; what is clearly visible, however, is the relationship of both major and small towns along the road described by the *Tabula Peutingeriana* as the main artery of the province. The road crossed through the middle of the settlement at *Germisara*, *Apulum*, Aiud and Razboieni; at *Sarmizegetusa Ulpia* it passed along the northern line of the town enclosure, but was clearly a factor in the location of the amphitheatre and *area sacra* there, as well as in the rapid development of the extramural settlement.

The road system was little affected by problems of river crossings. These would have been more difficult across the Mures, but river crossing services were probably in place in multiple locations. In the eastern part of the study area all the towns and small towns (Uroi, *Germisara*, Blandiana, *Apulum*, Aiud, Razboieni) are located on the right bank of the river, while many of the villa sites and villages are located on the left. Accordingly, major river crossings would have been necessary at least at Uroi-Simeria, Geoagiu-Gelmar, Alba Iulia (Partos)-Oarda and Razboieni-Ocna Mures. The importance of the Mures for transportation was maintained and probably enhanced during the Roman period. *Apulum* was a major centre for riverine transport with two *collegia* based there (*utriclarii*, *nautae* – Ardevan 1998, 306) with related activities. Apart from the harbour at *Apulum*, such installations are supposed to have been in place at *Micia*, to which we could probably suppose others at Uroi and Razboieni-Ocna Mures in order to facilitate the marketability of their products.

Processes like administration and taxation within territories are often difficult to define. In most cases, we have to rely largely on the possibility of defining the status of the settlements and on historical information about such processes. The centre of provincial administration was the seat of the governor, which was based during Trajan's reign at *Sarmizegetusa* and at *Apulum* thereafter. The governor's palace at the latter, located to the east of the fort of the *XIII Gemina* legion (Figure 5.34), was identified recently (Diaconescu and Piso 1993, 72–3; Piso 1994) on the basis of extensive tegular evidence. It was a large edifice built by the *pedites singulares*, which had been excavated more extensively in the nineteenth century, but the archaeological information from the excavated areas is insufficient to identify its public sector from the private one or, indeed, associated offices.

Epigraphic evidence indicates that local administration at *Sarmizegetusa Ulpia* and at *Apulum* was carried out in the traditional manner of Roman towns in the *forum*, through the local magistrates and *ordo decurionum* (Ardevan 1998). The *forum* has not been located yet at *Apulum*, but at *Sarmizegetusa* two have already been identified (Figures 5.31 and 5.32), one of them fully investigated in the 1990s (Etienne *et al.* 1994). Located inside it were the *curia*, with two strong rooms underneath (one for the treasury and the other perhaps an archive), a *basilica forensis* with two *tribunalia*, a number of public offices and the seats of the *collegia* involved in the local administration (*augustales* and the *fabri*).

The territories belonging to the main Roman towns are difficult to define. Piso (1995) tried to define the limits of the rural territory of *Sarmizegetusa* on the basis of epigraphic evidence mentioning individuals from *Sarmizegetusa*'s citizen-body. This has established that the only *colonia deducta* in the province, founded immediately after the conquest, had a very large territory extending over the whole south-western half of the study area, perhaps divided from the territory of *Apulum* by the Cioara stream. However, important parts of its territory would have been under imperial administration as mining or quarrying districts (e.g. the iron mines of the Poiana Rusca Mountains). In Dacia, the resources of gold, iron and salt were more localised, but stone quarries, especially limestone and sandstone, were more scattered (see Figure 5.39). Indeed, the tendency to use local stone whenever possible has been noted above. It is, therefore, possible that the iron mining 'district' in the Poiana Rusca Mountains was an extensive imperial estate. Considerably smaller areas could have included the salt mining zone around Ocna Mures or even the clusters of stone quarries arround Deva, Calan or north of *Apulum*. But for all the remaining quarries, it would be more reasonable to suppose small, site-focused estates. The centres at *Micia* and *Aquae* (Calan) in the territory of *Sarmizegetusa* were probably involved at a local level of administration, although it is unclear in what way. *Pagus Aquensis* and *pagus Miciensis* are both attested by inscriptions (Calan-*Aquae*: Russu *et al.* 1984, 10; *Micia*: CIL III, 1352, 7847; and Russu *et al.* 1984,

80). What exactly that status covered is unsure (possibly a territorial unit subordinated to the town – Piso 1995; but see Ardevan 1998, 75–8).

Apart from these areas, which would have been connected in some way with the imperial taxation system, the way taxation was carried out within the territory is uncertain. The centre of provincial finances was *Sarmizegetusa Ulpia*, where the partly excavated seat of the *procurator* of Dacia *Superior/Apulensis* was located inside the city precinct by the northern gate and therefore easily reachable from the main provincial road (Figures 5.31 and 5.33) and in the immediate vicinity of two very large *horrea* one built *manu militari* like other early public buildings and the other built by the town authorities (Piso 1983; Diaconescu 2004b, 89–103). In addition, *Micia* would also have been involved with imperial taxation; thought to lie close to the provincial border, epigraphic evidence (CIL III, 7853) attests the existence of a customs office there (Dobó 1975, 150).

Sarmizegetusa and *Apulum* were clearly important commercial centres. *Sarmizegetusa* has a *collegium* of *negotiatores* (CIL III, 1500) and a *macellum* with *tabernae* functioned behind the first *forum*, before it was demolished, probably relocated in the Severan period when the area was attributed to the second *forum*. In addition, several shops may have been located inside private houses, as documented in a case in the northern extramural area of the town (Alicu and Paki 1995, 22). Moreover, the material culture within the study area becomes so overwhelmingly Roman even in the 'poorer' settlements with native occupants, that it is impossible to imagine such a result without the ease of access to such goods and, as shown above, the major towns alone could not properly cover the demand within the territory. The spatial distribution of settlement within the study area indicates some potential problems of access resulting from the distance between the major towns and the settlements within their territories. Although some of the problems involving the movement of people and goods would have been significantly improved after the pre-conquest period by the introduction of the road system soon after the conquest, it would have remained impractical to travel on a regular basis more than 10–15 kilometres to the local market and service centre (Bintliff 1997). Both *Apulum* and *Sarmizegetusa* could have performed the role of local centres, but because of its location, the latter would have experienced difficulty in covering even the whole of Tara Hategului (see Figure 5.37 and pp. 175–177) Smaller centres must, therefore, have been needed and it is probably not coincidental that most of the known and potential smaller centres (e.g. Calan, *Micia*, Cigmau, and eventually Uroi and Blandiana) are positioned fairly evenly within the areas not readily covered by either *Apulum* or *Sarmizegetusa*. Calan is located some 17 kilometres beyond the 15 kilometres buffer-zone around *Sarmizegetusa* and 22 kilometres from *Micia*. The distance from *Micia* to *Sarmizegetusa* is much larger, but the positioning of the iron mining 'district' in between makes this less relevant. The pattern repeats itself further north and east with Cigmau at 21 kilometres from Calan and some 18.5 kilometres beyond the *Apulum*

buffer-zone; and Aiud at 15.5 kilometres away from Razboieni and 17 kilometres from the *Apulum* buffer-zone. This pattern of spatial distribution suggests that Cigmau, Aiud and Razboieni could have similar administrative significance as the attested *pagi* at *Micia* and Calan. The central places thus identified are likely to have been important as local trade centres. Trade activities were clearly undertaken in *vici* elsewhere, whether military or civilian (e.g. Whittaker 1990; Rorison 2001; Sommer forthcoming) and often they were provided with special market-buildings (*macellum*). However, no such buildings have been detected within the military *vici* of the study area. The architectural type of the strip-house is frequently attested, which indicates that trade was taking place most likely within the same buildings in which the goods were produced. They indicate particular attention being given to access to the street frontage. These were normally provided with front porticoes which, apart from attracting clientele through architectural decoration, provided covered sidewalks whenever needed. Commercial activity was probably extremely active in the *vicus* at *Micia*, since it was involved in supplying the local auxiliary unit, the settlements in the territory around, and also in import–export activities for the areas beyond the provincial boundary. Also, especially at Cigmau and Razboieni, positioning along the main road of the province as it passed through the settlement had a special value. It is significant that these settlements have provided the largest quantities of coinage from archaeological excavations or as accidental discoveries in non-urban contexts throughout the study area.

Although so far no clear evidence has come from the area, further trade was necessarily present in specialised settlements. Of course, the products of the quarries would have been traded to some extent there, but also the fact that the local workforce did not produce their own food implies the need for such products in the market. The spa centres at Calan-*Aquae* and Geoagiu-*Germisara* were likely to attract not just visitors, but also the Roman equivalent of the services that relate to the modern 'tourist trade'.

Finally, the presence of 'cash industries' associated with villa sites within the study area indicates that these settlements had significantly larger involvement in the local market system than previously anticipated on the basis of exclusively agricultural products. More than market providers, these sites were a significant sector of consumption, and not just of 'luxury goods'. Roman pottery is present in large quantities at every site, and the simple distribution of bricks and tiles across the study area (although considered as falling within a low demand market sector – see Darvill and McWhirr 1984, 242) provides striking evidence of the extent of the market that needed to be supplied with such materials.

5.6 The social landscape

Traditional research on the population of central Dacia has been based exclusively on epigraphic evidence, since the volume of available data allowing

archaeological interpretations became more substantial only in recent years. Given the circumstances of town foundation and status, the overwhelming Roman, veteran-originated, population of the *colonia Sarmizegetusa* (Alicu and Paki 1995, 49–86; Diaconescu 2004b, 121–2) is unsurprising. The legionary veterans came from *XIII Gemina*, *IIII Flavia Felix*, *XV Apollinaris* and *V Macedonica*, though the presence of veterans from the *beneficiarii* troops or auxiliary units (cohorts and *numeri*) is also epigraphically visible (Alicu and Paki 1995, 78–9). In general, the upper class was formed from families dating their Roman citizenship prior to the conquest of Dacia (Ardevan 1998, 191). The overall number of veterans in public offices is not large, but they include first decurions of the *colonia*. They make a clear statement of Trajanic veteran and first settler identity in the political life of the town as well as in funerary contexts, where they are the only ones in *Sarmizegetusa* who could afford marble *stelae* before the local Bucova marble became readily available (Ciongradi 2004a, 172–3). The legionary base and governor's seat at *Apulum* would have undoubtedly attracted a citizen presence from the beginning. Their presence was originally predominant in the *canabae* rather than *extra leugam* in the Partos *vicus*, since this settlement received municipal recognition and rights almost half a century later from Marcus Aurelius. Apart from citizens, large numbers of the urban population were represented by non-citizens. The number of citizens increased in time but, if *Sarmizegetusa* indicates a steady evolution (34 Ulpii; 38 Aelii), *Apulum* faces a veritable citizenship-boom (38 Ulpii; 117 Aelii) (Piso 1993b, 330 and 332). Insofar, the (epigraphic) evidence indicates that the towns were populated by colonists, any native presence being insufficiently documented (Alicu and Paki 1995, 82–5; Diaconescu 2004b, 121–2), but only further research into the private domestic and funerary areas of the towns will finally clarify this issue. Towns would have looked very Roman to visitors from other provinces and their inhabitants, particularly the elites, behaved in similar fashion to elites across the empire. Society was not static. Horizontal spatial movement is documented, not just through incoming colonists, but also through citizens of *Sarmizegetusa* or *Apulum* attested beyond the provincial boundaries at Rome; *Mogontiacum* (*Germania Superior*); *Carnuntum* and Villach (*Pannonia Superior*); *Novae* and *Durostorum* (*Moesia Inferior*) or even *Lambaesis* in northern Africa (Petolescu 1996, 2000). Vertical social movement is documented through a fierce ongoing competition for public honours at numerous levels (city magistratures; *ordo decurionum*, *collegium augustalium*, *collegium fabrum*, etc. – see Ardevan 1998) and limited numbers of wealthy elites acceded to the equestrian level. The concern for social status is significant enough to be transported into funerary behaviour, as specific types of funerary monuments were reserved for specific categories of people (e.g. decurions, members of *collegium fabrum* – see Ciongradi 2004a, 172–6).

A major question, however, is who were the inhabitants of the countryside of Roman Dacia? A simplistic scheme would assume that architecture reflects

social status or wealth and, even more, ethnicity. The more romanised aggregated settlements including the small towns are assumed to have been inhabited by colonists, while the others, built in traditional fashion, to have belonged to natives; by the same token, it is assumed that villas were owned by Roman colonists, veterans and the municipal elite, and formed estates around the towns in which they lived (e.g. Protase 1968, 508–9; Diaconescu, 2004b). Under this traditional scheme, a stratified provincial society has been assumed with an elite stratum of villa owners at the top, largely of veteran origin, but including perhaps also some rich entrepreneurs among the colonists. Below this would have been a stratum of colonists in settlements built in the Roman fashion and finally, at the lowest level, the native population of the 'poorer villages'.

Clearly there was a stratified society in the area and their social status would have found expression through architecture, which would have influenced the wide typological range of settlements. But to what extent does architecture indicate wealth? The most romanised examples of architecture outside the major towns are to be found in the small towns, in particular the military *vici*, and in villas. Like elsewhere, the 'small towns' (especially the military *vici*) tended to garner a very cosmopolitan society (Sommer forthcoming; Rorison 2001, 80–9) through the variety of their functions (trade, transport, crafts, religion, administration) and through the availability of money to be spent or invested. *Micia*, for example, was a centre for anybody with interests connected with the military unit stationed there. It was a producer of pottery, metal and glass artefacts, stone monuments and sculptures, commercialised in numerous shops. It had large public baths, a small amphitheatre and various temples. Also, it was a financial centre (at least through its customs office); a starting or temporary stopping point for road and water transport and for travel to and from the territories beyond the *limes*; and it had its own elite and pseudo-institutions (Ardevan 1998, 75–8). Unfortunately, not enough is known for the other small towns in the area, but since most of them had multiple and varied functions, some of this description could fit them as well. Like major towns, 'small towns' also had both a permanent and a temporary population. They were visited on a regular or incidental basis by large social groups from variable distances. Epigraphic evidence from *Germisara* and *Aquae* has provided sufficient indication of their attractiveness, not just within the region, but within the whole province, and at all social levels. We meet at *Germisara* governors (e.g. P. Furius Saturninus – Russu *et al.* 1984, 232 and 236) or municipal magistrates (e.g. Aurelius Maximus – Russu *et al.* 1984, 215), along with freedmen (e.g. M. Aurelius Crescens – CIL III, 1399), and even one of the very few epigraphic manifestations of a probable member of the native population (Decebalus Luci dedicating a gold tablet to the *Nymphs* at *Germisara* – Rusu and Pescaru 1993, Figure 20).

The majority of sites in central Dacia provide evidence for extensive use of Roman building material (Figure 5.38), in contrast with other parts of the province, especially the eastern half (Popa 2002, 221–2). This has been

taken once again to reflect differences in ethnicity and levels of wealth. But according to current data, and following a similar pattern to that documented in Pannonia (see Gabler 2003, 242–3), these sites were also the most favoured in terms of easy access to Roman products given their location in relation to road and river transport, or to the main urban centres. As shown above, most of the sites with reported use of stone walls, bricks and tiles, are within 3 kilometres of the line of an identified road or of the site of a reported road, and more than half of the sites with only pottery finds are located further than 3 kilometres from the roads. Moreover, the sites which embrace romanised construction methods include some settlements continuing from the pre-Roman period (Cetea and Cicau) or 'new' Dacian settlements (e.g. Uioara de Jos). It is, therefore, just as likely that the distribution of 'romanised architecture' reflects primarily availability, rather than ethnicity. On this basis, since the effort and costs involved in acquiring these materials would have increased progressively with their distance away from the main transport routes and sources of supply, we should not simply assume that villages in the eastern half of the province were poorer than those in the west.

Villa sites of Dacia have looked disappointingly poor to most scholars of the subject (including their excavators!). It is true that estimating their original appearance and real estate value is now very difficult given, on the one hand, the research methodology employed for their study and, on the other, their repeated looting over time. Materials from Santamaria Orlea, for example, have been extensively used throughout the modern village and around (Popa 1972), Roman bricks from the villa at Aiudul de Sus were re-used in modern buildings in Aiud (Moga and Ciugudean 1995, 24) and also medieval strongholds (Malaiesti; Rachitova; Rau de Mori) or early medieval churches (Densus – Figure 5.45; Strei – Figure 5.7) were all built extensively with Roman material (Popa 1987, 41–58). But it is often the case that material culture surviving in archaeological contexts can create a false or incomplete impression of the wealth and status of the site. The villas of Dacia stand little chance in comparison with Roman villas elsewhere in the provinces along the Danube, or in Western Europe. Generally, villas are still defined by the presence of both 'prestige' and 'romanised' attributes, such as mosaics and tessellated floors, baths, sculptured columns, marble wall veneers, painted plaster and aspects of the ground plan of the building, although it has been accepted that many other sites without such features could still be interpreted as villas (see p. 120) and Oltean and Hanson forthcoming b). As shown above, the villas of Dacia rarely have tessellated, brick or even *opus signinum* floors and painted wall plaster is only occasionally mentioned in excavation reports. Sometimes the provision of hypocaust installations or indeed baths is very limited (e.g. Hobita-Hobeni hill) or even completely absent (e.g. Cincis). Finally, there is very little evidence of stone/marble sculptures and architectural ornamentation, and no evidence of formal gardens – indeed, only on very rare occasions is the layout of the

Figure 5.45 Roman funerary altar re-used as a pilaster inside the early medieval church at Densus, north of *Sarmizegetusa Ulpia*.

courtyard and buildings within the enclosure known. On the other hand, villa houses from Dacia with dimensions of 20–30 by 14–20 metres are not much smaller than standard western examples (the largest house so far is at Manerau, twice the size of other examples within the study area!) and when wall painting occurs it is often elaborate, even in houses considered on the basis of their house plan to have minimal architectural (and, therefore, social) pretensions (e.g. Deva).

The practice of comparative analysis can be particularly dangerous when no attention is given to chronology at both an intra-site and inter-site level of study. Despite this, the chronological evolution of the sites being used for comparison is often overlooked in comparative studies. The evolutionary pattern of the villa phenomenon in Britain indicates clearly that, apart from a very limited number of large examples in south-east England, the villas of the first and second century are very simple, unimpressive buildings, both in plan and decoration (Todd 1978, 200–3; Wacher 1998, 115–20). The emergence of the villa is thus related to romanisation through architectural expression of elite status by the natives. The most elaborate and

architecturally sophisticated Romano-British villas, seeking deliberately to create visual display of social status and power in the general landscape as well as to their visitors, emerge only in the late third/early fourth century. Even then, they reflect exceptional and regionally uneven investment decisions, while most villas retain their small dimension (Scott 2000, 167–70). In Dacia, the emergence of villas starts in some cases in the first half of the second century AD, but becomes more established much later, which is the normal evolution in other provinces. So far it appears that villas were built directly in stone and (subject to future research) without a timber phase, but at their peak, these sites were at a similar stage of development and probably had a 'property value' similar to most of their contemporary western counterparts. But in Dacia, villas never achieved the late third and fourth century 'villa boom' of Britain or the geographically closer provinces of Pannonia and Moesia (Mulvin 2002), simply because by that time it had ceased to be a territory of the Roman Empire and in those circumstances, the evolution of its landscape in both historical and archaeological aspects would have been very different.

Overall, the settlement pattern of the study area outside the urban centres within the Roman period to a large part reflects society and its structure. Most of the excavated villas attest architectural pretensions and increasing provision of comfort (e.g. hypocausts, decorated floors and wall plaster, glass windows and baths) in a sustained evolutionary process culminating in the Severan period. They probably would have evolved further had there not been an early interruption of the Roman occupation. In the light of new site plans provided by aerial photographic interpretation, large houses with plans similar to villas (although smaller in size) have also been discovered within the major (e.g. *Sarmizegetusa* – Alicu and Paki 1995) and smaller towns (*Micia*, Razboieni, Cigmau), or at their edges (e.g. *Micia*) which were probably the more 'up-market' properties within these settlements. However, non-urban centres also provide evidence for extensive use of timber architecture, sometime mostly replaced by stone architecture (at *Micia* in later phases) but on some occasions still preserved, along with the use of features of native-origin (e.g. storage pits at Aiud).

As for the apparently 'poor settlements', again the conclusions cannot be clear-cut. Lower-order settlements are more difficult to define, mostly because of the biases affecting the current data set and research methodology, but future studies could address this issue if the awareness is already there. According to the architecturally based definitions of wealth and status, lower-order (native architecture) settlements are apparent in both individual and aggregated types of settlements, from individual homesteads to very large villages. The finds in the traditional village at Obreja were lacking very expensive luxury items. However, the finds inventory of the cemetery clearly indicates the use of sandals, Roman jewellery (including a few silver and gold items) and personal hygiene items (cosmetics, oils, combs, mirrors). But the cemetery of the villa at Cincis was also lacking in numerous luxury

items and, perhaps not accidentally, the same villa house is the only recorded example from the study area without a hypocaust.

Summarising, it needs to be underlined that the contrast between central Dacia (with rather poorer villas but traditional-built villages with surprisingly wealthy material culture) and other provinces of the empire is only apparent. Villas do indicate the social status of their occupants, but the definition of their economic wealth should take into account several factors. First, there is the chronology factor referred to above, which should stop us from making unfair comparisons with the late third/fourth century villas elsewhere. Secondly, one should remember that villas were, ultimately, just a particular (i.e. romanised) type of individual homestead and a large variety of types (and probably real-estate values) has been documented elsewhere (Smith 1997). On the basis of its size and provision of luxury amenities, the villa at Manerau in central Dacia clearly indicates a degree of wealth considerably higher than the one at Cincis nearby; however, small villas like Deva can also indicate considerable levels of wealth. That within central Dacia there was no shortage of sites with evidence of Roman building materials, may well indicate that smaller, perhaps native farms found the materials reasonably affordable. It is hoped, therefore, that a more thorough and nuanced definition of social status will soon come to replace the ones currently in force in the archaeology of Dacia.

More nuanced analysis is also required when it comes to defining ethnicity through material culture. So far architecture has very much been taken as a good indicator of ethnicity in Roman Dacia, as exemplified in the typology applied to villages (Roman-built and traditionally built), which to some extent has been preserved in this study. But the material culture (tools, bread ovens) of the poorer settlements is also Roman, apart from mixed ceramics (with wheel-thrown Roman, and hand made, non-Roman forms). Moreover, as shown above, the settlements with traditional architecture and those which continued to be occupied from the pre-conquest into the Roman period all provide clear indications of architectural 'romanisation'. This suggests quite an extensive exposure to Roman culture and an active process of acculturation taking place. Unsurprisingly, many colonists are attested in the military *vici* and in major towns but for the large majority, the process of their romanisation was possibly not much advanced at the time of their arrival and may have been finalised in Dacia. Indeed, the fact that none of the military *vici* of the study area has been granted municipal status (unlike *Porolissum* or *Tibiscum*) might indicate the fact that, despite a very Roman appearance and lifestyle, still the body of Roman citizens was not sufficiently large under Septimius Severus to justify such status; it was probably only after the *Constitutio Antoniniana* that everybody there became a citizen (*contra* Ardevan (1995, 1998) who explains it by lack of land available in the territory). The same applies to the colonists in the gold mining area who, on their arrival in Dacia, were not very romanised either, at least in view of their form of administration given the

perpetuation of pre-Roman administrative structures (native *principes* are attested epigraphically – CIL III, 1322 = ILS, 7153).

If in both urban and military sites funerary, epigraphic and other types of evidence seem to indicate quite a large population with an origin other than indigenous (e.g. Ciongradi 2004a,b), the current level of archaeological data for the rural areas makes it impossible at this point to assert a similar percentage of colonised elements there. The argument in support of a Roman veteran origin for the owners of villas in Dacia is usually built around the epigraphic evidence. But the huge majority of epigraphic monuments discovered in Dacia come from urban and military sites; only a few come from rural contexts and, with very few exceptions, they were discovered in secondary positions. Indeed, there is only one certain epigraphic indication of a veteran origin for a villa owner (at Ciumafaia in *Dacia Porolissensis* – Mitrofan 1973, 135–6) with only hints from a few other examples (e.g. Rahau – Popa 2002, 151). Moreover, the *adsignatio* that everybody assumes to have taken place still remains largely a supposition, with very limited direct evidence (Oltean 2004).

More recently, the analysis by Smith (1997, 199–216), in stressing the similarities between Dacian, Pannonian and Moesian villas as very different in conception to villas in Italy or the western provinces of the Empire, intimates that it could suggest a local tradition of construction. But despite his general tendency to interpret villas from the social perspective of the indigenous pre-Roman population, when dealing with the south-eastern European areas he fails to consider the evidence of pre-Roman elite houses in order to understand the link between social structure and villa architecture or, indeed, to seek other explanations for architectural particularities. In fact, examples of native pre-Roman houses (Figure 4.4) from Luncani and *Sarmizegetusa Regia* area reveal a strong resemblance to the local type of villas from this area of Europe. Within the area covered by the present study, among the details of villa plans that can be paralleled in pre-conquest architecture are the orientation (probably accessed from the south or south-east), the internal space division and the possible gradual flow of access through different rooms (*contra* Smith 1997, see p. 137). This might, therefore, suggest pre-Roman roots for the villa houses in Dacia, like in the western part of the Empire. Their gradual evolution in sophistication could reflect the intensification of their romanisation rather than an increase in wealth and social status. Archaeological evidence included sporadic finds of handmade Dacian ceramic fragments in the *pars rustica* of several villas, which represent mainly storage vessels. Although they could be indicative of the function of the building, rather than of the ethnic origin of its occupants, they nevertheless suggest some kind of native presence (Protase 1980, 154–7 and Figure 23). However, at Santamaria Orlea the discovery of fragments of fine Dacian tableware led to the suggestion that the site might have been owned by a member of the native elite and at Aiudul de Sus, a similar possibility was advanced based not just on evidence of Dacian pottery (including a

tableware fragment), but also on the presence of a Dacian-type ploughshare. Late pre-Roman native occupation of villa sites has been documented by excavation at Rahau, Seusa (see Haynes and Hanson 2004, 23) and, outside the study area, at Chinteni (interestingly, under the remains of the house from the earlier phases – Alicu 1998, 132). Another example of a relationship between a villa site and a late pre-Roman and Daco-Roman settlement is at Vintu de Jos (see p. 127 and Chapter 4). The lack of similar evidence at other known sites (or, indeed, of earlier timber villa phases) could again be the result of limited stratigraphic excavation failing to reach earlier levels at most excavated villa sites. The case of the unfired hypocaust found in the Manerau villa may indicate a native owner (see pp. 135–136 and Oltean 2004). Finally, numerous hoards discovered in the study area have accumulations of Republican and Imperial coin (Jeledinti, Tisa, Rahau, Teius, Decea – Rahau related to villa), and in some cases (Teius, Decea) they contain even earlier Greek and Dacian coinage. Although it contained only pre-conquest coinage, the hoard of 97 early Republican denarii (third to first century BC – see Popa 1987, 36 and 53) and 14 Dacian imitations was discovered at Salasu de Sus (Sasa) inside a villa. The presence of Republican coinage in later Roman hoards is not uncommon; but in these particular examples the presence of native pre-conquest imitations may indicate pre-conquest date accumulations by former Dacian elites and therefore, these assemblages may also suggest a link between the pre-conquest and post-conquest wealth.

It would be wrong to ignore the fact that epigraphic sources and ancient historians give a somewhat different picture of the native population of Roman Dacia, as virtually non-existent (2 per cent of Thraco-Dacian names). But it would be just as wrong to ignore all the other indications that the villa population in the study area (and probably in Dacia as a whole) might have been just as 'multicultural' as elsewhere in the Roman provinces. In this case, another explanation should be sought for the absence of the natives in the epigraphic record, other than their physical absence from the upper echelons of society.

6 The romanisation of the landscape

Roman rule affected not just the inhabitants of conquered territories but the whole landscape. The pre-Roman and the Roman settlement pattern presents significant differences as well as elements of continuity. These reflect equally the impact that Rome had on the Dacian landscape and the transforming effect that the particular nature of Dacia had on the overall Roman approach to dealing with the province.

6.1 Transformations in the settlement hierarchy and in settlement typology

Contrary to the traditional scheme of interpretation, largely based on hillforts/citadels of the elite and villages of the masses, the pre-Roman settlement pattern seems to show greater complexity, directly reflecting the social structure (Figure 6.1). Both aggregated and individual types of settlement were present, with the latter (some 80 examples) exceeding the former (some 20 examples). As is often the case, the lower social strata living in villages and individual homesteads are the least visible in the archaeological record, the settlements belonging to social elite having a better chance of survival and recognition by traditional methods, and subsequently attracting greater research interest. As a result, the landscape tends to be dominated by fortified sites (with *murus Dacicus* or only earthwork enclosures), including those previously interpreted as hillforts or citadels, along with those previously considered as fortified settlements. They show variable importance within the landscape, reflected to some extent by their architecture and more strikingly by their capacity to attract further settlement and amenities in their vicinity. The best-known examples were identified in the uplands, most of them in the Orastie Mountains and along the northern edge of the Sureanu Mountains (Cucuis, Cugir, Capalna), but also elsewhere (e.g. Craiva, Ardeu, Deva, Bretea Muresana, Campuri-Surduc, Banita). Nevertheless, they were surely present in the lowlands, as demonstrated by the recent discovery through aerial reconnaissance of such a fortified site at Cigmau. At the lowest level of the settlement hierarchy were not just villages, but very likely numerous individual homesteads which, although

<table>
<tr><td>Hillfort / fortified site</td><td>Hillfort with associated settlement</td></tr>
<tr><td>Tower house</td><td>Tower house with associated settlement</td></tr>
<tr><td>Individual homestead</td><td>Village
• compact, unenclosed
• scattered, unenclosed</td></tr>
<tr><td>Individual settlement</td><td>Nucleated settlement</td></tr>
<tr><td rowspan="2">Villa</td><td>Major town
• Colonia
• Municipium</td></tr>
<tr><td>‘Small town’
• military vici
• specialised settlements</td></tr>
<tr><td>Individual homestead</td><td>Village
• traditional type
• Roman type</td></tr>
</table>

Figure 6.1 Schematic model of settlement type and hierarchy in the late Iron Age (above) and the Roman (below) periods.

disregarded by previous research, potentially formed the largest part of the settlement pattern. Unfortunately, the current level of research makes it difficult to estimate their number. The structure of the villages differs little in the lowlands from those in the uplands. Lowland villages (e.g. Vintu de Jos) are usually open and have a compact layout. In the uplands open villages are also documented, both compact (e.g. Fetele Albe, Fata Cetei) and scattered in structure (e.g. Meleia, Rudele), with the latter more common. Although within the lowlands scattered villages are not sufficiently documented to justify consideration as a distinct type in this study, scattered settlement probably extended there too (e.g. Orastioara de Jos). Deeper differences between the lowlands and the uplands are visible in architecture. The predominant dwellings of the lowlands consist of sunken-floored houses with pits used for storage or rubbish disposal and ovens around the houses. In the uplands surface timber architecture is predominant and, although in a few cases pits are still present, ancillary structures consist usually of surface-built timber granaries/storage buildings. In both areas, however, there seems to be a preference for circular house plans. The layout of upland houses is often more elaborate, with two or three rooms laid out concentrically, indicating a requirement for gradual access towards the centre of the house.

Apart from the fortified sites and the settlements for the masses, the present study has identified a new intermediate category of sites, whose significance has escaped previous studies. This is represented by tower-houses, some of them with traces of open settlement around. These rectangular/square structures built in *murus Dacicus* with upper storeys of lighter materials (brick, and perhaps also timber) are sometimes present within hillfort enclosures, clearly indicating their function as elite houses. They are to be found for the most part, however, orbiting a few hillforts (mainly Costesti – Cetatuie and Blidaru – and Craiva; a few also at Piatra Rosie, *Sarmizegetusa Regia* and Gradistea Muncelului-Varful lui Hulpe). Though very little research has been carried out on these sites, their appearance may be related to the emergence from among other elite members within Dacian society of a particular category, probably warrior in character and associated directly with political leadership.

The most functionally complex settlements were probably places of central interest. Several important central places were located at Costesti, Craiva and Deva, but Gradistea Muncelului-Dealul Gradistii has already been convincingly demonstrated as the most important site in Dacia prior to Roman conquest and probably correctly identified as *Sarmizegetusa*, the capital of Decebalus. Indeed, the site included a hillfort built in *murus Dacicus* surrounded by an extensive open settlement. But unlike other sites in this category, it had the most extensive religious presence documented so far in Dacia, with several monumental sanctuaries built in stone in two distinct programmes of building, the first using limestone and the second andesite (Crisan 1986). The other feature which makes this site unique is its extensive

involvement in metallurgical production, particularly iron, carried out in several large workshops – one of them in the immediate vicinity of the *area sacra* – making *Sarmizegetusa Regia* arguably the largest iron producer in *Barbaricum* at that time (Iaroslavschi 1997).

The Roman conquest produced multiple changes in the existing settlement typology and hierarchy. First, the totality of high-status settlements of the previous period (hillforts and tower-houses) disappears (Figure 6.1). Archaeological evidence from hillforts and other types of settlement, especially from the Orastie Mountains, shows deliberate destruction. This was interpreted as a normal consequence of the wars of conquest, despite the fact that only at *Sarmizegetusa Regia* (with its burned down granaries still containing large quantities of stored grain) or at Meleia is there clear indication that the violent destruction occurred while the settlement was still in use. But the hillforts are unlikely to present a picture other than that of destruction and abandonment after the wars of conquest and, therefore, continuity of occupation there is likely to have been the exception rather than the rule.

The wider landscape experiences substantive changes: the emergence of Roman-type urbanism, a large increase in settlement numbers and settlement density, diversification in the range and function of settlements, and probably also diversification in the organisation and division of the land itself. Major towns emerged quickly after the conquest within the central area of the province. The first, during the reign of Trajan, was *Sarmizegetusa* the only *colonia deducta* in Dacia. From the very beginning, Trajan's *Sarmizegetusa* was intended to become a true city of the empire, an intention which was successfully achieved. Its timber buildings and enclosure were rapidly replaced by stone edifices, at least in the central area of the settlement, and its original walled enclosure, although extended further to the west at a later stage, never managed to enclose the whole settled area. A forum with basilica actively functioned from the early days of the town, along with an amphitheatre, temples and other public buildings (Alicu and Paki 1995; Diaconescu 2004b); and the importance of the town as central place within the administrative system of the province was further enhanced by the location of the financial procurator here. Subsequently, from the large conurbation that had flourished at *Apulum* in the proximity of the legionary base and the governor's headquarters, the area of settlement located *extra leuga* and closer to the river and harbour was granted municipal status by Marcus Aurelius, and later it too became a *colonia*. With the exception of the legionary *canabae* at *Apulum*, which received municipal status under Septimius Severus, these two remain the only major towns of the area throughout the Roman period. Following the pattern of the other towns of the province, neither was founded on the site of a previous Dacian settlement, despite their Dacian names (Glodariu 1993). The Dacian sites thought to have inspired their names are located 42 kilometres east (*Sarmizegetusa*) and 20 kilometres north (*Apulum*) of their Roman counterparts.

But outside these centres a dense occupation has been traced. Some 270 settlements are attested, as opposed to only 140–150 in the period before the Roman conquest, and clearly imply a substantial increase in the density of occupation (and probably also in population), with a wide variety of settlement types attested. Again, both individual and nucleated settlements were present and, even though for most of them the current level of research cannot give sufficient indication as to their character, it still seems that once again individual settlement forms outnumber aggregated ones. The settlement hierarchy in each of these categories was confined to only two main groups, an upper and lower level, without an intermediary one. However, the types of settlements within each of these levels were sufficiently varied to reflect significant social differences. Villas and small towns represent the upper level of the settlement pattern. These categories have been defined loosely as including, in the first case, any individual settlements (homesteads) with evidence of Roman influence and, in the second, aggregated settlements with functions more complex than agricultural (military *vici* and specialised aggregated settlements). At the other end of the spectrum were located homesteads and agricultural villages (of both traditional and Roman type).

Among these four broad categories, the least well attested is that of the non-villa homesteads (farms), of which only a few examples have been identified. One of the possible reasons for this is the methodological bias relating to the identification of this category of settlement in the pre-Roman period, since traces tend to be very scarce and easily overlooked by traditional field methods. But another possibility is that 'romanised farms' were indeed the norm in the landscape as the occupants of homesteads found Roman building materials available and affordable. Indeed, it has been observed previously in this study that most of the villages which to some extent perpetuated native architecture also showed Roman influence in building technique and materials. But it is the very presence of Roman building materials (particularly bricks and tiles) which traditionally have been taken as indicators of villa sites. Future research clarifying the chronology and layout of these sites could shed more light on this aspect.

It has been shown in this study that those villas and military *vici* where more detail of their layout, structure and internal features is known seem to have been not dissimilar to contemporary types of sites from neighbouring provinces or even further afield (e.g. Smith 1997). These sites show a constant development throughout the second century AD with evolution in complexity and pretensions, indicating not only their social status, but also their economic prosperity. This evolution ceased without any archaeologically identifiable signs of previous decline when the province was abandoned, even where there are indications that the sites continued to be occupied.

The present analysis of the settlement pattern and typology has revealed that, despite all of the significant changes, there were more elements of continuity than previously estimated. Excavated villages of traditional architectural type (e.g. Obreja, Noslac) show that they started at the

beginning of the second century AD at the same time as those of the Roman type. This has been used to support theories of the extreme treatment applied by the Romans to native society after the conquest (see Chapter 3). But continuity of population is manifested by continuity of occupation in a number of settlements throughout the study area and by survivals from the pre-Roman period in both the typology and architecture of sites. Very few settlements in Dacia have been proved to be continuously occupied from the pre- to the post-conquest period (Figure 6.2). Within the study area, the most famous examples are the settlements at Cetea and Cicau (see Chapter 5). As is clear from the case of Cetea, the Romans did not move all the Dacian settlements into the lowlands by force. Sometimes, however, settlement movement towards lower altitudes involved only short distances, which may reflect no more than minor adjustments in response to different economic and social circumstances. At Varmaga, for example, Dacian occupation was identified on the top of the hill to the north of the modern

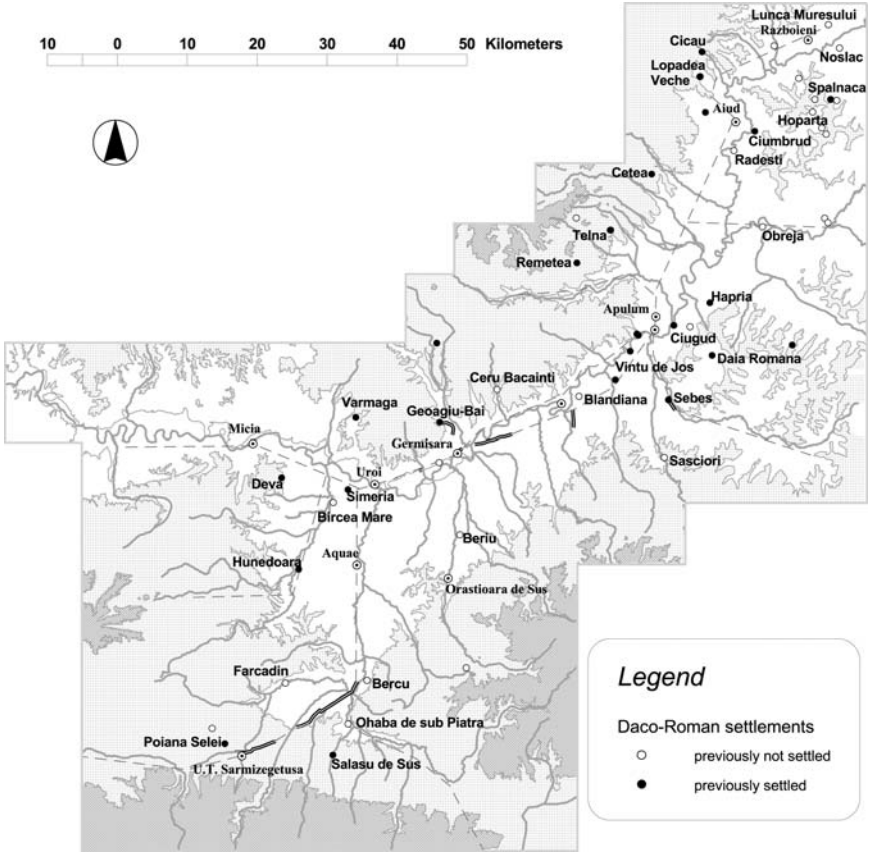

Figure 6.2 Distribution of Daco-Roman settlement.

village, while occupation of Roman-date was discovered a little distance further down the hill, closer to the modern village. Some 46 sites throughout the area have been documented on the same location in both the La Tene and Roman periods (see Figure 6.2), and future research could prove their continuous occupation more explicitly. One such example is at Hunedoara, where traces of both Dacian and Roman occupation have been identified on the Sampetru Hill near the medieval castle. This was documented largely by pottery, until limited rescue excavations identified traces of 'romanised' buildings there (in the area of the modern cemetery). In this context, one might have assumed that the Dacian pottery found there might have been of Roman date too, but recent excavations nearby revealed the presence of a Dacian cemetery of infants. This was dated to immediately before the Roman conquest (see Chapter 4) and was perhaps still in use immediately thereafter – as one coin of Trajan associated with one of the burials seems to indicate. In this context, continuity of occupation on the site from the late Dacian to the Roman period becomes evident.

Other aspects of continuity have been detected in architecture, such as the persistence of traditional forms of sunken houses and storage pits in several locations including where continuity of site occupation was not necessarily applicable (e.g. Obreja, which is a post-conquest foundation). But although previous interpretations related such architecture to 'native villages' of low economic and social importance, it is now clear that these traditional forms have a much wider distribution. Indeed, storage pits have been detected even in small towns such as Aiud (see Chapter 5) and at Vintu de Jos recent excavation of two of the sunken houses associated with the adjacent villa has confirmed the presence of fine Roman pottery, produced in the nearby workshops of the *Colonia Apulense*, and of a number of Roman brooches in silver and bronze. Furthermore, the current study has been successful in tracing probable pre-Roman architectural survivals even in the type of settlement considered by traditional interpretations as the most 'Roman' in nature: the villa. Where site plans have been available, it has been noted that villa houses were oriented on a northwest–southeast alignment, sometimes even if this did not fit with the layout of surrounding features (probable location of gates or even main roads outside the settlement). This directly reflects pre-Roman trends, attested also in Dacian houses (see Chapter 4). Also, analysis of their location has clearly shown a tendency for these sites to occupy dominant positions in the landscape where they can easily overlook the surroundings as well as be seen, again reflecting similar attitudes of the elite identified in the pre-conquest period.

6.2 The choice of settlement location

According to Aston (1997, 93), normally the settlement pattern of any area develops in relation to subsistence values: proximity to resources (e.g. water, arable/pasture land, natural resources, depending on the character of the

economy); ease of access (less steep slopes and non-marshy ground); and commodities (services, roads/transport network, etc.). However, sometimes the emergence of a settlement can be influenced by other factors, related more to ideology than to pragmatism.

The Dacian settlement evidence is clearly incomplete and strongly biased by both survival zones and detection methodology (traditional survey and a high level of interest in the Orastie Mountains as opposed to other areas). This creates an image in which settlement was largely restricted to upland areas from where the inhabitants were farming the lowlands for cereals and using the higher altitudes for summer grazing. But such a pattern is clearly not economically viable, at least with respect to cereal production, because the distances involved are far too large to make it practical. Also, the necessary infrastructure was lacking (roads, administration and, not least, peace).

Despite the fragmentary evidence for settlement location, it is obvious that there are several areas of denser settlement within the study area. By far the highest density is recorded in the Orastie Mountains, where it is artificially increased by the existing methodological bias and, possibly, by the fact that most of these sites would have been individual or scattered settlements. A smaller area of very dense occupation is also visible at Deva indicating a settlement which, with the exception of the tower-house 'belt', is similar to the extensive scattered settlement at Costesti. At a different level of density, a more homogenous distribution is attested in the lowlands of the northern half of the study area, where mostly lower-order settlements were perhaps involved in arable cultivation. However, extensive zones in the mid- and lower Strei valley or in the Mures valley were probably scarcely occupied (if at all). Tara Hategului was thought to have been unoccupied in the Iron Age prior to the Roman conquest, but subsequently more extensive survey involving traditional field walking in the 1980s (Popa 1987) identified several settlements including a few sites involved in iron reduction and processing. Still, the pre-Roman Dacian presence in this area remains scarce. This demonstrates clearly that the impact of Roman colonisation on the native property system in the area was considerably less aggressive than suggested by traditional interpretations.

Before the Roman conquest, the natural landscape had already experienced significant changes in topography and possibly vegetation through human exploitation. The most significant effort in changing natural topography is documented by the construction of hillforts, most of them located on hill-tops flattened by soil removal (sometimes involving digging even through bedrock) and terracing. Extensive terracing was needed also for sanctuaries or domestic buildings associated with the hillforts, or in other upland settlements. The extraction of natural resources (iron ore, perhaps some gold, but particularly stone – limestone and andesite) would also have impacted on the environment. Apart from the effect on local vegetation by terracing and hilltop flattening, a certain level of deforestation is suggested by the

significant quantity and typological variety of woodworking tools and by the extent of timber architecture.

The current evidence for settlement location and distribution needs to be re-addressed by future survey, which may result in it making more economic sense than at the moment. It is likely that the lowlands were more densely occupied than it is known at present, although it is already clear that in the Dacian period settlements went to significantly higher altitudes than during the Roman occupation. Also it is still to be seen whether or not the 'empty areas' detected in the Mures and Strei valleys will be sustained by future research. At the moment, settlement location in the Dacian period seems to have been influenced only in part by the provision of natural resources (e.g. arable land, ore sources) or ease of access and communications, contradicting previous theories (most recently Gheorghiu 2001). Indeed, only one large central place (Deva) has been located within the immediate vicinity of the Mures river, and access to other centres for various services/functions (e.g. trade, administration, religion) would have been considerably more difficult. Still, most of them tend to have been located not too deep into the mountains, overlooking the Mures valley or those of its main tributaries (e.g. Costesti, Cucuis, Cugir, Capalna, Craiva, Ardeu or Bretea Muresana).

Deeper access into the Orastie Mountains and to *Sarmizegetusa Regia* would have been increasingly difficult. It seems that there were reasons other than pragmatism for the emergence and development of the whole extensive inhabited landscape there created at the cost of significant human effort. The only economic reason apparent is related to the provision of iron ore, used extensively at *Sarmizegetusa Regia* and in several other locations around. It was the considerable religious significance of the site (possibly linked to iron metallurgy) which probably determined the extensive settlement and human effort documented there. Like Craiva further upstream in the Mures valley, the large centre at Costesti is the most likely candidate along the Orastie river for a politico-administrative centre; such functions at *Sarmizegetusa Regia* would probably have been stimulated by its religious (and perhaps metallurgical) significance. The shift of the political sphere towards *Sarmizegetusa Regia* could represent, therefore, a later political development. Such an interpretation seems to be supported by the historical accounts of the political events in the late phase of the Dacian civilisation. The religious reform and support given to royalty by the great priest Dekaineos during the reign of Burebista was followed by the acquisition of these powers (both political and religious) by the former after the dramatic death of the first king. This holding of dual power occurred on several occasions under his successors, with religion ensuring authority over all the Dacians despite the loss of political unity after the death of Burebista (see Chapter 3). However, this assumption needs to be demonstrated by future clarification of the site's chronology.

By contrast, the Roman settlement pattern in the study area reveals itself as largely pragmatic. The great majority of settlements are located in the

lowlands (most of them below 400–500 metres high) and, compared to the modern land-use, within areas which would have had arable potential. The main trade and communication routes give more structure than ever before to the organisation of the landscape and the emergence of settlement. Topography and the water courses (that of the Mures and its main tributaries) are the major factors in determining the access network throughout the area. This influenced the location of the military bases, which in turn influenced the construction of the road network. Further transport facilities were also needed to connect the extraction sites or places of religious significance, such as the spa at *Germisara*, to the major routes. The communication network seems very extensive, with a major access route heading northwards along the Tara Hategului, Strei corridor and the Mures valley. At least in the sector between Geoagiu and *Apulum*, the road appears to have followed the valley on both sides of the river. The identification of road sectors in several other places outside the main line suggests the presence of an additional extensive network of secondary roads. The access facilities available attracted major towns and smaller centres, which emerged along their line. Furthermore, these routes seem to have played an important role in the general romanisation of the countryside, particularly visible in the introduction of Roman architecture and building techniques. The proper functioning of communications and transport would have determined the location of ancillary services, such as river crossing points, harbours, and even *stationes* or customs centres (see Chapter 5).

The location of mines and quarries was, unsurprisingly, related primarily to the location of the resource itself; this is clear for the exploitation of iron, gold and salt, but it applies to stone quarrying only with respect to special stone (marble and andesite). The availability of limestone and sandstone was much more widespread and, therefore, the quarries seem to be located near major centres of demand, i.e. major and small towns. In most cases they are clearly connected to the transportation network and in the few cases where roads are not documented, they are likely to have existed (e.g. a probable access route for the iron mining district in the Poiana Rusca mountains along the river Cerna towards the Mures).

The location of sites with industrial activity is dictated by various factors, such as the location of resources or of the markets for products (e.g. military *vici*). Processing near extraction centres is attested for industries involving stone and iron, but the present analysis has determined that this extends beyond the limits of the specialised settlements associated with the quarries and has been detected in villas or homesteads too (e.g. iron extraction at Cincis; iron working at Hunedoara, Sinpetru-2, Bucium-Orlea-2 and Valea Daljii; stone working at Deva). Indeed, the iron working activities at Sinpetru and Bucium-Orlea were continuing pre-Roman precedents.

Finally, the location of settlements in this landscape seems to have been influenced by multiple factors. The major towns and the smaller centres are located in the lowlands and on the main communication routes of the

province. Also, it seems that the smaller centres emerged in those areas which experienced the most difficulty in reaching either *Sarmizegetusa* or *Apulum*. The location of rural settlement is influenced mostly by the major towns, in addition to their extensive extramural/sub-urban activity. Of the 101 settlements in Tara Hategului, 45 are located within 15 kilometres of *Sarmizegetusa*, 32 of which were villas or possible villas, while of the 93 sites within 15 kilometres *of Apulum*, 34 were villas or possible villas. In contrast, apart from some possible equivalents of 'sub-urban' examples at *Micia*, villas in particular seem to be almost absent from the hinterland of the smaller centres. Similarly, the large centres (and this time some of the smaller centres too) determined to a great extent the location of quarries providing building material – limestone or sandstone.

As outlined above, the general trend in the Roman period sees an increase in settlement in the lowlands, but without being too methodical in eliminating upland settlement. One exception, however, seems to have been in force: despite the organised approach to the exploitation of the natural resources of the area and of the province, so far there are no indications whatsoever of the exploitation of the iron resources available around the former Dacian capital at *Sarmizegetusa Regia*. It is possible that the rules of economic pragmatism were not in force in this case and that the phenomenon should be related to a deliberate avoidance of occupation in the area following the Roman conquest. The same attitude cannot be detected, however, in the area around the former Dacian centre at Piatra Craivii, so it seems that the Orastie Mountains is the only area that may have experienced the forced depopulation and settlement movement described by ancient sources and accepted by traditional interpretations.

6.3 The impact of the Roman army on the creation of the landscape

It has been generally accepted that there was a massive Roman military presence in Dacia. The number of forts and camps identified throughout the province is very large (over 100; see Gudea 1997), but identification of phases of occupation by stratigraphic principles and their more precise dating by analysis of associated ceramics remain in their infancy, so that very few have been precisely dated and overall calculations of the army contingent at any given time are difficult to estimate. According to estimations by Piso (1993, 83) based on epigraphic evidence, some 60 auxiliary troops were present in the Dacian provinces – Superior, Inferior and Porolissensis – during the Marcomanic Wars under the exceptional command of Pertinax. However, most of the forts belonging to auxiliaries were located along the boundaries, with only the one or two legions and a few auxiliaries stationed in the interior. Within the central area of the province under consideration here, troops were stationed at *Apulum* (legion *XIII Gemina*), *Micia*, Cigmau, Orastioara de Sus and Razboieni (*auxilia*). *Micia* was garrisoned by *ala I Hispanorum Campagonum*, *cohors II Flavia Commagennorum*, and the *numerus Maurorum*

Miciensium. Other *numeri* were located at Cigmau (*Singulariorum Britannicianorum*) and Orastioara de Sus (*Germanicianorum Exploratorum*) and a second *ala* was stationed at Razboieni (*ala Batavorum miliaria*) (Figure 6.3). With the possible exception of Orastioara de Sus, where the information is scarce, all seem to have been occupied throughout the second and the third centuries AD, probably until the Roman retreat in the second half of the third century AD.

The Roman army was clearly an important factor in Dacia. Military sites are associated with the emergence of highly romanised settlements, the *canabae* and military *vici*, which played an important role in the urbanisation of the province (Oprean 2000), with both *canabae* (*Apulum* and *Potaissa*) and as many as five (possibly six) military *vici* receiving municipal status, many of them under Septimius Severus (Ardevan 1998). Many army veterans colonised the province as landowners (legionary veterans) or as the inhabitants of towns and some of them became active in local municipal administration.

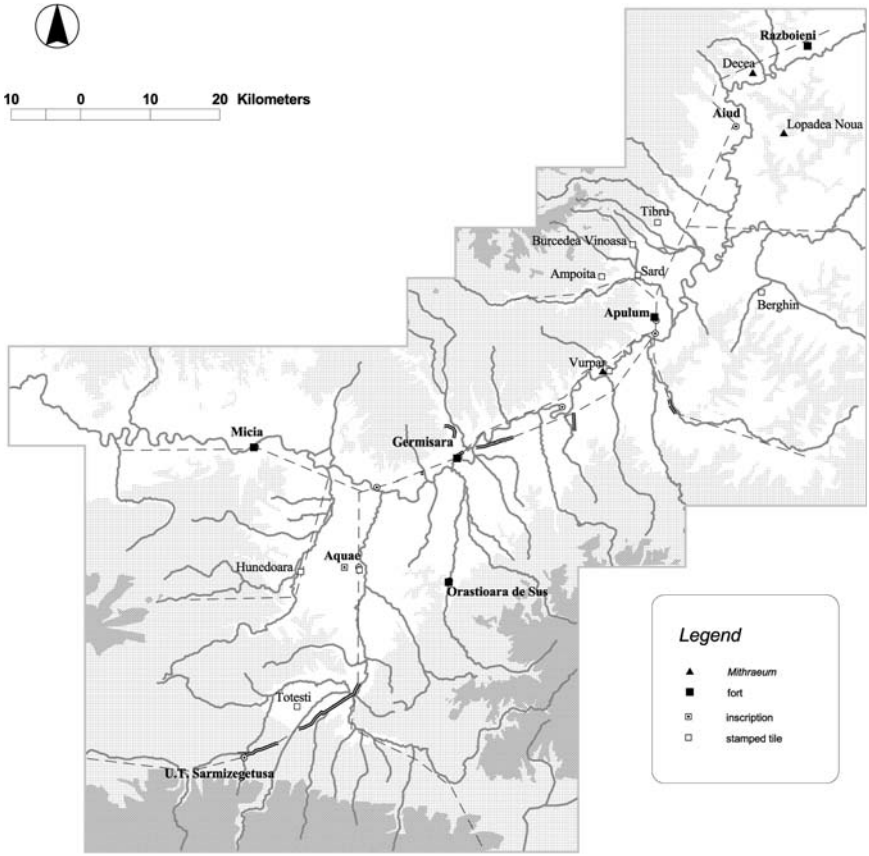

Figure 6.3 Distribution of military sites and materials.

But increasingly, recent studies have tended to suggest that the role of the army in the urbanisation process was significantly less than was traditionally envisaged. While some still consider that both *Sarmizegetusa Ulpia* and *Apulum* originated in legionary fortresses converted for civilian use (e.g. Alicu and Paki 1995; Oprean 2000), it seems that in both cases the city enclosures were built by the civilian authorities probably as an expression of their status. Also in the case of *Sarmizegetusa Ulpia* the *principia*-derived forum plan reflects a particular fashion and further enhances the town foundation as a political statement of success in conquest and colonisation, rather than indicating the military roots of the settlement (Diaconescu 2004b). Nevertheless, if the military were not the direct stimulus to urban foundation, at least active legionary support in the provision of the necessary buildings for both civic and provincial administration and public use is clearly visible (e.g. the *forum*, *domus procuratoris* and *horreum* at *Sarmizegetusa*).

Within the central area of Dacia, the military *vici* as well as the *canabae* provided important centres for a large number of activities and services directed at both the army and the civilians, including industry, trade, transport and religious activities. The active monetary circulation in these centres is not a surprise and is a clear result of the military presence. In addition, there are indications that the *vici* might have been involved to some extent in taxation and local administration in the neighbouring territory. Furthermore, the unit would have provided the local legal authority through its *praefectus castrorum*. Through their functions these sites had a huge impact and contributed to the rapid romanisation of the territory.

More than in terms of administration or markets, the Roman army crucially influenced the development of the rural landscape through the construction and maintenance of the communication system. This influenced the location of settlements and ultimately made the whole landscape mechanism work. Approximately 20 sites in the study area have some military connection, but in only 9 locations, other than attested forts and their *vici*, have stamped tiles or bricks from a military workshop been discovered attesting at least a temporary military presence and some sort of involvement in construction activity. Most of them belong to legion *XIII Gemina*; in two cases, these were found in association with stamps from other troops (*Numerus Singulariorum Britannicianorum* from Cigmau and legion *I Adiutrix*). Other military elements were present at mines and quarries (e.g. Uroi), and some further traces of their activity can be seen in their religious activity, although in only a few cases can religious adoration be explicitly linked to military presence. Altars dedicated to divinities at religious centres such as *Germisara* were perhaps signs of personal adoration, but active support of the centre by the auxiliary troop from Cigmau is indicated by altars dedicated by the unit commanders in a special location on the site (see Chapter 5). The only other cult usually linked to the presence of the military is that of *Mithras* (*Sol Invictus*) that appears to be worshipped in four locations outside known garrisons (two *mithraea* at Vurpar and Decea;

and two personal dedications at Lopadea Noua and Sard) (Figure 6.3). On this basis, the presence of the military more widely throughout the territory is surprisingly limited.

6.4 The stimulus for change in the settlement pattern

According to the current orthodoxy (largely based on ancient texts re-enforced by the epigraphic evidence), after the Roman conquest Dacia experienced the first large influx of populations from outside its cultural boundaries as a deliberate imperial policy to organise the newly conquered province quickly and efficiently. The colonists were encouraged to settle within the Dacian territory, as did the representatives of the new legal and administrative system and the military, while the natives had to comply with the situation.

State-directed policy was largely channelled towards urbanisation and the granting of status and tax exemptions. In Dacia, this manifests itself much like in other provinces and reflects the approaches to provincial administration and romanisation by the emperors throughout the Danubian area and, indeed, the wider Empire. Within Western Transylvania the key moments of such direct political involvement came under Trajan (*colonia Sarmizegetusa*), Marcus Aurelius (*municipium Apulense*) and Septimius Severus (*colonia Apulense*; a new *municipium Apulense* from the *canabae* of Legion *XIII Gemina*; and *ius Italicum* for the two *coloniae*, *Sarmizegetusa* and *Apulum* – see Ardevan 1998, 111–19). Apart from indicating the largest nuclei of romanisation in the province, the emergence and status of both *Sarmizegetusa* and *Apulum* explains the concentration of settlement in the surrounding territory.

But the context of these political decisions is significantly different. Trajan's approach to romanisation was traditional, centred on the establishment of *coloniae deductae* (e.g. *Sarmizegetusa* in Dacia, *Poetovio* in Pannonia or *Ratiaria* in Moesia Superior) and not on raising the status of existing communities, which was the line adopted by his successor (Dise 1991, 60–5). The foundation of the *colonia Sarmizegetusa* was as much a political statement as a result of the traditionalist views of Trajan regarding conquest, the rewarding of veterans and finding a solution to the deep cash crisis of the monarchy through economic exploitation of provincial natural resources. Indeed, these features of his policy have been noted elsewhere too, in the colonial settlements mentioned above or the organisation of mining in Moesia Superior (see Dise 1991, 60–5), and cannot be interpreted as designed specifically for Dacia. The fact that in Dacia this policy was most extensive is explained fully by the momentum immediately following the wars of conquest.

As indicated by the landscape analysis below, the reasons for the location of the town at *Sarmizegetusa* also seem to be other than purely economic. As a settlement of veterans, one would expect the *colonia deducta* to be placed in the middle of the most fertile agricultural land available, but it is hardly

so. Tara Hategului, where the town was located, is hardly comparable with the Mures Valley in terms of its arable potential. Nor is it placed centrally, but at the western edge of the plain, where issues of communication and access, seemingly more relevant than agriculture, appear to be more coherent in the wider provincial context than in the immediately surrounding area, which had uneven access to town. It is, therefore, likely that its conjunction with the initial location of the governor's seat there (equidistant between the two legionary fortresses at *Bersobis* and *Apulum* (Diaconescu 2004b, 97) irreversibly influenced its location. Moreover, if its territory was indeed originally extending into both the Mures valley and to the west outside the Carpathians into Banat, this explains the need for further centres to emerge.

The emergence of the first town at *Apulum* (Alba Iulia-Partos) was largely related to the proximity of the legionary base and centre of provincial government (the governor's palace), which undoubtedly attracted a civilian presence. But its location was extremely favourable in an economic sense too, positioned as it was in the middle of the most fertile sector of the Mures valley, near the gold mining area and in a crucial location for both the riverine and terrestrial communication networks. In its case we see a gradual evolution towards urbanisation. The town emerged after the establishment of the legionary fortress, as indicated by its location outside the two *leuga* buffer zone of the garrison, when the prosperous non-urban settlement that has developed around the local harbour was granted recognition as a town sometime during the reign of Marcus Aurelius. Here, political influence on the evolution of the settlement pattern could be considered more limited, as the status did nothing but confirm not just the existence of a strong body of Roman citizens, but, more importantly, the function of the settlement as a major centre. A more explicit political intervention is visible though when Septimius Severus decided to reward his loyal supporters in the civil wars of AD 193–196 (among them the Dacian army and its leaders) and granted the status *of municipium* to the legionary *canabae* at *Apulum* (as well as at *Potaissa*, elsewhere in Dacia), perhaps raising the status of the neighbouring earlier town to *colonia*, but surely granting it the *ius Italicum*, as at *Sarmizegetusa* (Ardevan 1998, 115–19).

Political involvement in the emergence and evolution of Roman settlement in the study area is less visible in relation to centres with non-urban status. The establishment of military *vici* was influenced more by strategic than political reasons (linked to the location of forts). Other possible centres (e.g. Calan, Aiud-*Brucla*, possibly Uroi-*Petris* and Blandiana) seem to fill the gaps as if there was sufficient justification in the need for a local centre in that region, though several of them had other functions as well (see pp. 216–217 and Chapter 5).

In many areas around the Mediterranean, the most visible effects of deliberate policy impacting on the landscape at one particular moment in time are provided by *centuriatio*. As shown in the previous chapter, this process is not yet sufficiently documented anywhere in Dacia. The circumstances of

town foundation, along with the possible analogy with *Poetovio* in Pannonia and the frequent reference to Roman roads outside the line of the main road might indicate that such a system had been in place.

The overall picture generated by the analysis of the settlement pattern in central Dacia only partly supports the view that Dacia experienced its massive influx of population from outside its cultural boundaries as result of a rapid, extensive and deliberate policy instigated and actively supported by the state. It can be considered, therefore, that political factors impacted on the settlement pattern and distribution only to a limited extent, which was largely restricted to the reign of Trajan. His measures were focused particularly on urbanisation, and the colonial community of *Sarmizegetusa* made an impact as an organised group on the native landscape, which was visible mainly in the Tara Hategului. Trajan's original colonists were probably veterans from the legions who received properties in that region (see Chapter 3). The establishment of forts after the conquest influenced the emergence of further civilian groups through the founding of military *vici*. But it is probably the case that this deliberate policy had echoes in a larger-scale individual migration into Dacia, as well as into neighbouring provinces (the Pannonias and the Moesias; Dise 1991, 62–3). Such individual colonisation was supported by Hadrian who, by granting Roman citizenship, contributed to an increase in the number of citizens in the area. The presence of Aelii in a significantly larger number than Ulpii is visible particularly at *Apulum* (Piso 1993b, 330, 332), with a total of 38 Ulpii, and 117 Aelii (26 and 64 civilians, respectively) attested epigraphically. This situation contrasts with the statistics at *Sarmizegetusa* which had, seemingly, a more homogenous composition with 34 Ulpii and 38 Aelii. However, it was only after half a century that a second town received municipal status (*Apulum*). Marcus Aurelius' involvement at *Apulum* is rather limited. It seems likely that the settlement there and its satellites had already emerged and prospered, and by granting municipal status he merely acknowledged it officially. Septimius Severus' more extensive measures (new *municipium* and *ius Italicum* for the *colonia*) could have resulted in a stronger encouragement of satellite settlement in the territory outside, as well as an increase in the numbers of those willing to receive the town's citizenship. But it is likely that the main features of the settlement pattern would already have been established by that date, hence the effects of this political act were more matters of detail than of substance.

6.5 Resistance, social identity and self in Roman Dacia

The orthodox view of the way the Romans established their rule in Dacia sees the natives being forced to move from the top of the mountains and settle in the lowlands, with the Romans taking the fertile lands for their own and forcing the natives to move away or work on their properties as cheap labour. This suggests a very firm-handed, indeed, violent treatment towards the

native population. If true, the resulting attitude of the Dacians towards their conquerors is likely to have been characterised by resistance to acculturation, rather than receptiveness, and would contradict the second widely held belief that close, peaceful and friendly relationships were subsequently established between all the inhabitants of the new province as the basis of a rapid and durable process of romanisation.

There is no doubt that the Romans acted aggressively in the process of pacifying and securing the territory, possibly to a greater extent than was needed in conquering other provinces. The present study has offered the opportunity to analyse the traditional interpretation in more detail and see whether the current evidence supports the generalisations concerning mass movement of population and ownership change, or whether more nuanced interpretations should be accepted. The general focus of Roman settlement location was, indeed, the lowlands, but the focus of pre-Roman settlement in the uplands was probably more *apparent* than real (see p. 214 and Chapter 4); whether change was brought about by the use of force is again arguable. As shown, the only area in the uplands where the evidence matches the literary and artistic depiction of settlement destruction and forced population movement is the Orastie Mountains, which seem to have been completely unoccupied and, indeed, avoided, both in terms of settlement and exploitation of resources. Although explainable, given the strong opposition encountered there during the wars and the subsequent necessity of securing the area in order to eliminate further rebellion by the natives, it is unlikely that the same treatment was extended to other areas. Furthermore, we know nothing about the property system in Dacia before the Roman conquest. The predominant absence of enclosures and field systems could suggest that there was less pressure to define boundaries and individual properties; but the preference for individual settlement forms (for even in the more aggregated communities a scattered structure is prevalent) is a clear indication that the ownership system was characterised by some form of individuality. A certain level of state control is also possible: a royal monopoly could have applied to gold mining activities, for example. In the Roman period private ownership was undoubtedly associated with villa estates, though its extent would have been reduced by the presence of military zones, imperial domains, pastures (*conductores pascui et salinarum* are epigraphically attested) or unused municipal land (*subseciva*, *loca relicta*). The location of settlements seems to indicate only scarce traces of pre-Roman occupation in the extensive areas of arable land in Tara Hategului and the mid- and lower Strei valley closest to *colonia Sarmizegetusa* – the first (and strongest) centre of private property in Dacia. If this is maintained by future systematic research, it will indicate that the distribution of arable land to the citizens of *Sarmizegetusa* might have had less impact on the previous ownership system than has previously been suggested. This demonstrates that the violence in the post-conquest treatment of the natives potentially affecting their individual property and economic resources should be regarded as limited in its extent and not necessarily generalised.

According to G. Woolf, 'Roman culture is the product of a tension between romanisation and resistance to it' (1998, 19). In recent decades, special lines of research on resistance to romanisation and its varied forms of expression or spatial extent have been developed. The phenomenon was particularly related to the north-African territories of Rome, notably Tripolitania (e.g. Bénabou 1976; Mattingly 1995; Grahame 1998), from where the discussion was enlarged to include other areas of the Roman West (e.g. Hingley 1996). Wherever identified, resistance has very rarely taken the form of military action (rebellion), but has usually involved rather more subtle means of rejection or re-interpretation of Roman identity, whether in its ideological or material expression, at a collective or individual level (Given 2004, 11).

An essential step in performing such analyses is to define those manifesting resistance. As defined in general by sociological studies, personal identity is a unique combination between self and collective identity which is continuously subject to self-verification against a specific set of defining elements within a social context (Burke 1991; Orring 1994; Stryker and Burke 1994). To complicate things, identity can be perceived from outside only through its expression occurring as a deliberate act (Orring 1994), whether by means of direct and explicit statement or by the behaviour adopted in the process of self-verification (or self-categorisation) of the personal identity. The fact that the expression of identity in the past was 'patchy, discontinuous and ever-changing' (Mattingly 2004, 8, after Jones 1997) was explained for modern identity on the one hand by its constant process of self-verification in relation to other identities and on the other by the necessity of its expression in order to be perceived from outside. Declaration of identity is very rarely evident archaeologically at a personal level, though the chances increase slightly when dealing with collective identities, among them ethnicity, through identification of emerging patterns.

Nevertheless, it is clear that not just the available social set against which self-verification was performed (see Jones 1997, 129–30, 140; Mattingly 2004, 10–11), but also the circumstances for the need for identity to be expressed deliberately, were different in antiquity. This makes a very fine boundary between cultural acceptance and identity change, on the one hand, and resistance on the other. One of the problems, wherever studies of resistance have been attempted, is that the presence of the natives within the Roman Empire is defined through those very elements which are also taken to imply resistance, whether expressed in their names, their religious beliefs and funerary customs, the character of their settlements or their material culture. Traditional studies of the population of Roman Dacia were based on the surviving epigraphic record. Because the native elements in Roman Dacia appear rarely in an epigraphic context (only 2 per cent of Thraco-Dacian names are attested), modern interpreters have taken this to support theories of extermination. But the expression of ethnic identity in an epigraphic context through specific details (e.g. *domus*, *origo*), through names, social associations (e.g. *spyra Asianorum*; see Schafer 2004) or religious

affiliation should be considered exceptional and more likely to be embraced and strongly supported by immigrant groups (diasporas) than by the natives, unless there was some particular benefit which required specific declarations of ethnic identity from them.

The possibility that pre-Roman tradition might have influenced the way Dacian villa houses were inhabited (see discussion in Chapter 5), remains a supposition until confirmed by future research. Nevertheless, it could support a serious argument in favour of certain levels of personal resistance in the upper echelons of provincial society. The archaeological evidence considered in this study provides no clear traces of Dacian resistance to occupation and romanisation, that is clear and deliberate action to reject the assimilation of Roman material culture. There is persistence of certain elements of native material culture, particularly pottery, in varied archaeological contexts. The tall 'jar'-shaped cooking pot is still produced, reflecting some pre-Roman culinary habits still in force in Daco-Roman contexts, and the ubiquitous 'Dacian mug' is present even in Roman forts (Tentea and Marcu 1997), reflecting the adoption of pre-Roman customs, like smoke-inhaling, by individuals in the Roman army (Diaconescu 2004a), although it is possible that at least for some, part of the religious context of the practice would have survived too. It is difficult to decide whether the continuous use of native traditions in pottery forms or in architecture, such as the use of traditional village architecture, should be interpreted as evidence for a different cultural response to the adoption of Roman artefacts and fashions, or was simply reflecting differential economic development. The undoubted continued occupation of at least one sunken house in the Dacian village adjacent to the villa at Vintu de Jos needs further explanation to clarify the date of the emergence of the villa there and whether the native structures coexisted or were replaced by it. However, given the fact that both pottery and building techniques show increasing levels of Roman influence, they are more likely to represent temporary cultural reminiscences, a form of cultural conservatism, rather than deliberate rejections of Roman culture.

6.6 Development of the romanisation in Dacia

The context for the creation of any Roman province was the extension of the Roman domination over its neighbours beyond its borders. Simply by their physical presence and by dictating the rules of the game in newly acquired territories, the incomers should be considered the initiators of the process of change which we categorise as romanisation. To what extent they themselves were Roman is debatable, since they were often inhabitants of neighbouring areas already under Roman rule and themselves at various stages of romanisation, rather than coming from Rome or even Italy. But the success of romanisation depended on the level of acceptance of these new rules by native society. Mattingly (2004) has raised awareness of both the chronological development of the markers defining elements of *Romanitas*

and of the varying personal circumstances (discrepant identities) involved in analysing identity and romanisation. 'Roman' action and native response determined the particularities of each case of provincial romanisation and they were both the product of a particular set of historical circumstances. It is crucial, therefore, to place each case of romanisation and its participants in their particular evolutionary and chronological context.

Dacia faced the disappearance of the 'Orastie Mountains civilisation': the settlements ceased to be occupied or were destroyed and the Romans did not exploit the local iron resources. This pattern fits the account in the literary sources. The sources also say that the population was moved into the lowlands. But the very particular type of architecture seen in the Orastie Mountains cannot be traced in any of the identified native-type settlements of Roman date. On the contrary, these look similar architecturally to the pre-conquest lowland villages (with sunken houses and storage pits, e.g. Vintu de Jos, Lancram).

The archaeological evidence for the period following the Roman conquest depicts a society of colonists and natives, which varied hierarchically and ethnically, involved in a sustained process of acculturation. Evolution in the settlement pattern indicates that the settlers preferred to live in the lowlands as opposed to the uplands; otherwise, settlement typology was more affected by change than the settlement hierarchy. Significant evolution in social composition and attitudes can be detected. In striking contrast to the pre-Roman landscape, funerary and religious sites are a frequent occurrence in association with settlements and reflect a variety of customs, beliefs and economic wealth.

The nature of change under Roman rule in Dacia as reflected in material culture is very similar to that experienced by other Roman provinces. However, in Dacia there are particular circumstances which have led to extreme interpretations of the processes of colonisation and romanisation. So far, no equivalent of Fishbourne has been found. This Roman palace built supposedly for a British native prince (Cunliffe 1998) has long been a symbol of the deliberate Roman policy of admitting – even attracting – the leaders of conquered societies into a unified ruling elite of the Empire through political and cultural assimilation formalised by Roman citizenship (Woolf 1998, 18). Moreover, through generating emulation among neighbouring native sites of similar status, Fishbourne is a symbol of the importance of such a social attitude in the creation of the imperial culture. The lack of a Dacian equivalent suggests at first sight that the native elite was not involved in provincial administration (which might be taken also to explain the absence of an administrative structure based on a *civitas* system), was not encouraged to take its place in the Imperial ruling class and, therefore, reflects a very different attitude on the part of the Romans towards the conquest and organisation of Dacia as compared to Britain or Gaul, for example. In recent years, modern interpreters have gone from explaining it either in a brutal colonialist way (Romans coming as a ruling class in its own right and exploiting the natives, who were kept as

servants) to suggesting the physical disappearance of the elite (e.g. Diaconescu 2004b).

The major difference between Dacia and the Celtic world, for example, lies in its politico-administrative status at the moment of its conquest: it was a unified state, under the rule of one king and not a regional tribal structure which could be easily converted to the Roman *civitas* system of administration. Since the king was dead by the end of the wars of conquest, there was no need to build a Roman palace for him. The Dacian elite itself was more 'specialised' than elsewhere; by the end of the Dacian state a division between a warrior and economic elite was already in operation. It is possible that a part of the social elite would have followed the king's example and taken their own lives; but, even if the warrior elite had disappeared, the economic elite would have been a valuable asset for the new administration. As stated above, so far they have not been identified epigraphically and even if the adoption of epigraphic practice is a personal decision, it is still among the markers of romanisation. Nevertheless, the clear indications that native lifestyles and influences were present also in the upper echelons of the settlement hierarchy leave this possibility open and it should be investigated further. Trajan was not Agricola and had his own administrative and political philosophy. Indeed, the Roman approach to conquest and administration at a collective level would have evolved to some extent by the beginning of the second century AD, and also the political context of the Empire was different when Dacia was conquered. Whether or not this justifies the rarity of Dacians recorded on inscriptions remains to be seen. Similarly, unexplainable is the fact that apparently no Dacian god creeps into the Roman pantheon. Moreover, the main Dacian sacred site was destroyed during the wars and the place was doomed. But other places of religious significance like *Germisara*, where the pre-Roman use of the site is combined in the post-conquest period with particular nuances in cult and worship and which, incidentally, provided the epigraphic evidence for a Decebalus Luci (see Chapter 5), show that some elements of the Dacian supernatural did survive, despite the Roman names applied to local divinities. Nevertheless, the level of political encouragement and the apparent lack of resistance are the likely explanations for the fact that Dacia was more rapidly integrated in comparison to other provinces, for it had already achieved full development by the time of its abandonment.

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