

TWO THOUSAND YEARS OF LANDSCAPE IN A MEDITERRANEAN COUNTRY

The *PaHisCat* project and the history of the Catalan landscape

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Introduction: from historic cartography to historic landscape

Since 2010 a project has been underway in Catalonia whose aim is to characterize the historic landscape of several Catalan regions (Bolòs 2010a). The project, under the name of PaHisCat, has many similarities to an English Historic Landscape Characterisation project. The current stage of PaHisCat has fostered research awareness on the historic landscape of the regions under analysis and has also made evident the need to broaden this kind of study to the rest of the Catalan territory and other countries of western Mediterranean Europe.

In Catalonia, research on landscape history does not enjoy the same tradition as in England. An overview to 2004 was published by the present author as *Els orígens medievals del paisatge català (Medieval origins of the Catalan landscape)*; Bolòs 2004). Previous research had delved into specific topics such as Roman centuriation (Ariño *et al.* 2004) and several studies on the characteristics of settlements had been conducted, particularly on dispersed settlements and the morphogenesis of nucleated settlements (Bolòs 1999). At this point, it must be noted that the methodological significance of the contacts between Catalan university students and southern French researchers cannot be underestimated, especially in defining the characteristics of the medieval *new villages*, ecclesiastic villages, *castral* villages and open villages (Bolòs 2000). It is also worth mentioning the great interest aroused by the thesis of Aymat Catafau from the University of Perpignan on the origins of ecclesiastical or *cellera* villages in Roussillon, currently French but historically a territory adjoined to Catalonia (Catafau 1998). Another trend is the growing interest by many recent local studies developed in compiling and tracking the names of current and medieval farmsteads. Catalonia enjoys a long tradition of local studies, which have, on the one hand, made significant contributions and, on the other, have raised awareness about landscape and Catalan history.

Pioneering studies in historical cartography in Catalonia over the last thirty years have given way to a progressive interest amongst historians in territory. In turn this has indirectly triggered an increased interest in landscape archaeology. One of the main projects within this recent trend is the collection *Atles dels comtats de la Catalunya carolíngia* ('Atlas of the counties of Carolingian Catalonia') (Bolòs and Hurtado 1998–2009). Each volume of the *Atles* is dedicated to a different Catalan county of the 8th–10th centuries, with

an important section focussed on the reconstruction of the historic landscape. The *Atles* project was possible thanks to the fact that a significant amount of written evidence about Old Catalonia has been preserved from the period prior to AD 1000. This has enabled most villages, churches or fortifications to be located on the map in addition to many other landscape features such as farmsteads, roads, mills, forest lands and pasturelands.

The PaHisCat (Historic Landscape of Catalonia) project

The PaHisCat (*Historic Landscape of Catalonia*) project arose from the need to study, value and protect the historic landscape. In 2008, a *Manifesto* (Bolòs 2010c) was published to highlight the need to do something to preserve the Catalan historic landscape. An agreement between the Generalitat de Catalunya, the Observatori del Paisatge and the University of Lleida made it possible in 2010 to initiate the first phase of the PaHisCat project, which builds on the methodology established by Historic Landscape Characterisation (HLC) projects in England.

The primary goal of the PaHisCat project has been the execution of a characterization map of the historic landscape, by means of a GIS (Geographic Information System), endowed with characteristics similar to those from the HLC maps. Our aim has been to discover and represent, for each plot of land or area, the period in which it started developing its current characteristics. Researching Roman landscapes and defining the changes undergone during the 20th and 21st centuries has therefore been essential. In Catalonia, the cadastre (land registry) cartography from the beginning of the contemporary age is far more meagre than that of other European countries like England or France, but, on the other hand, Catalonia has at its disposal a lot of information from the Roman and medieval periods. This enables us to pinpoint the formation of most landscape features and their transformations during the last two thousand years. For this reason, in the Catalan PaHisCat Project, together with the characterization map, the maps from Roman times are of paramount importance with a study of centuriations, while the maps from medieval times come with an analysis of changes undergone by settlements, roads and water systems. Often, these chronological (Roman or medieval) or topic maps (like road maps) allow the map of the landscape features in the area under analysis to be drawn in considerable detail.

In this article I intend to show, by means of specific examples, the importance of this project in characterizing the historic landscape with a view to having a better knowledge of the landscape, the history of Catalonia

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and, in turn, that of western Mediterranean Europe. Like the English HLC project, this Catalan version reaches out to both the past and the future. The PaHisCat project aims to provide the tools to raise awareness among public administrators of the heritage characteristics often unseen in existing populated landscapes of Catalonia. After less than a year's work the possibilities of the PaHisCat project are already becoming apparent.

This paper focuses on several examples from the PaHisCat project. The research has made it possible to understand many things about the history of particular regions. The paper refers mainly to the early medieval (Visigothic and Islamic) centuries, a time period traditionally associated with 'darkness', since very little written evidence has remained and few archaeological excavations have been undertaken.

The studies reveal, in the four landscape units researched so far, remarkable continuities between the Roman and medieval landscape similar to those between medieval and current times. Despite the new cultural, political, economic and social realities of the Middle Ages, the research confirms the view that the landscape of the period owed the greatest debt to the Roman era. Oddly enough, these tight links hold true all through Catalonia, from its mountains to its plains, from Old Catalonia (under Muslim rule for very few years) to New Catalonia (under Islamic dominion for several centuries).

Nevertheless, these material continuities cannot negate the fact that the Middle Ages witnessed remarkable changes throughout the territory which led in turn to the creation and consolidation of villages, the creation or expansion of water channels, the creation of farmsteads or the deforestation of new cultivated land. An in-depth analysis of the landscape reveals that these changes can be appreciated precisely because they break the continuity of the various landscape features set up in Roman times. By tracing these continuities from the Roman to the medieval period the PaHisCat project has allowed us to identify all around us remnants with many centuries and even millennia of history. In itself this would more than justify such a project on the historic landscape of Catalonia.

The landscape in the early middle Ages near Lleida: irrigated fields and drove roads

Lleida belongs to the territory known by historians as *New Catalonia*. Whereas in Old Catalonia Islamic rule lasted less than a century, in New Catalonia, Islam persisted for over four centuries (until the mid-12th century). The dry weather conditions here (around 350 mm) mean regular irrigation is required to guarantee a good harvest, as in the plain of Lleida. These factors, both historical and climatic, have contributed to shaping the landscape of the western and southern regions of Catalonia. In the territory of Lleida, the studies conducted for the PaHisCat project have helped reinforce or clarify our knowledge. Understandably, such long-term studies embracing Roman to current times contribute to showing the importance of continuities and the present relevance of innovations that took place in earlier periods.

The PaHisCat project has succeeded in mapping many territories that had been inhabited throughout the

early Middle Ages, in defining the extent of their fields, in appreciating which roads led to them, in relating them to drove roads and in plotting ditches or streams watering the fields. The current toponymy has been an important source of knowledge, whenever it could be traced back to written evidence from the Middle Ages and as long as it could be linked to these territories. The case studies carried out after drawing the general maps have enabled us to obtain a far more accurate view of the early medieval past of the locations under study.

We had thought, for example, that the irrigation system of the land around the village of Torrelameu (as around many other towns) had been created in Islamic times (Eritja 1998, Bolòs *et al.* 2008). These irrigated regions are located between the village and the river Noguera Ribagorçana. Now, the long-term analysis of a wider region has driven us to reshape this initial idea, or at the very least has given way to a host of questions. We already knew that near the course of the river, there were important sites dating back to Roman times (such as Romeral, further to the north, in the region surrounding the village of Albesa (Marí and Revilla 2006)). However, the shared orientation of the irrigated land of Torrelameu and the Roman centuriation triggered the idea that a settlement could have originated on this site in Roman or Visigothic times and persisted through the Islamic period until the Christian feudal conquest (in 1149), when a new colonization took place. In fact, in the Segrià area the importance of the surviving Roman agricultural pattern forces us to consider continuities in the occupation of some settlements, especially those dating to the early Middle Ages (**Fig. 1**). This must have been the case despite the great changes that allow us to establish distinctions between Roman, Visigoth, Islamic and feudal societies.

Often, a close analysis of a limited area sheds a clearer picture of what happened to the whole region. In the small block of fields of Tabac, recently parcelled up and levelled out, aerial photographs from 1956 reveal that there was a small watercourse, a series of fields, one settlement, a road network (maybe some of them cattle roads), pasturelands and, even, in all probability, an irrigated field. Since we can match the land layout and even the orientation of the stream to that of a Roman centuriation, we may infer that the origin of the site is rather ancient. In fact, this location bears a pre-Roman place name (which, incidentally, does not have anything to do with American tobacco), and we know for a fact that the settlement was inhabited at least in Islamic times and after the Christian conquest in 1149. We believe that this small valley must have been settled since the end of the Roman period, and that after 714 (when the Arab army came) it must have been inhabited by the heirs of the same community of settlers. These communities were probably thrown out in 1149, although the block of fields of Tabac was still inhabited and in use, virtually unchanged, after the 12th-century conquest by new Christian settlers from the north. This landscape remained untouched until the 20th century, when it was levelled out and parcelled up.

Another obvious aspect of this territory is the fact that agriculture and stockbreeding complemented each other and that the latter was important throughout the early Middle Ages (Eritja 1998a: 43). In Vinatesa in the plain

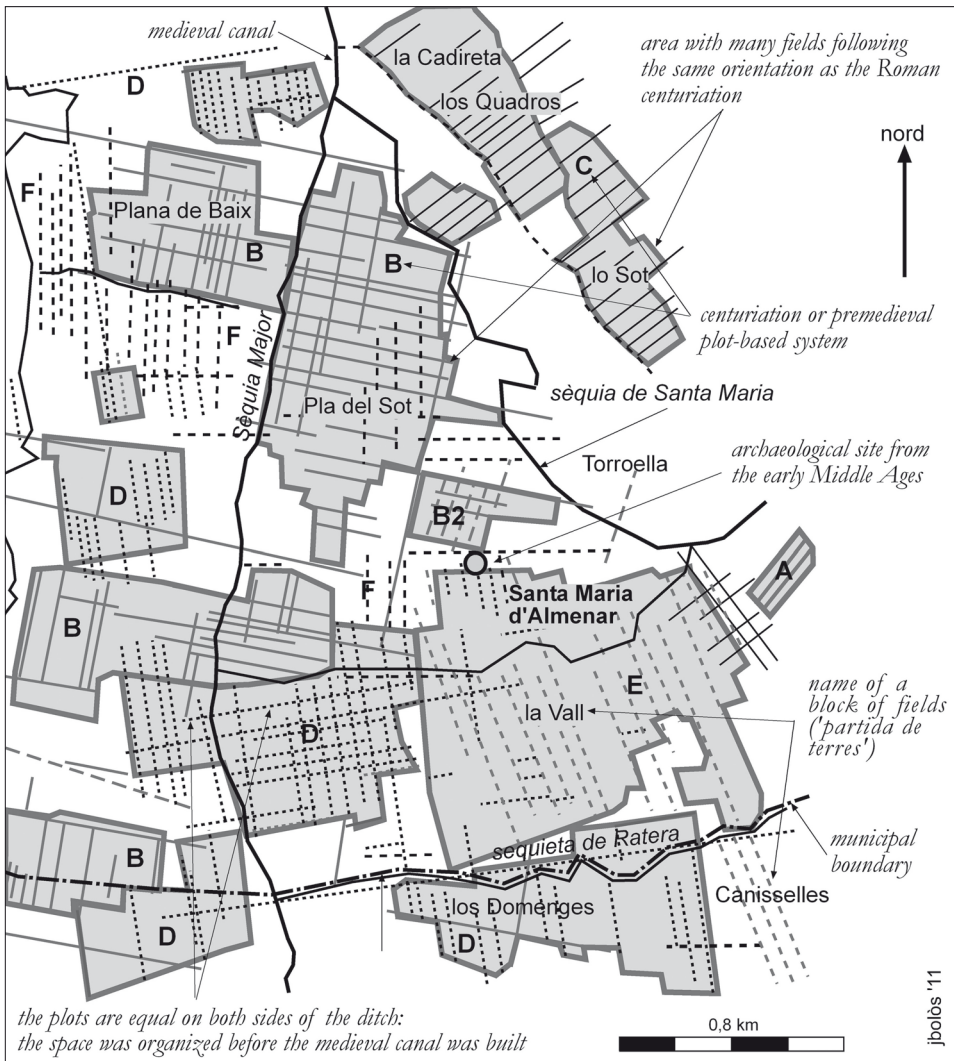


Figure 1 Map of the northern sector of Segrià, around the early medieval site of Santa Maria (municipal district of Almenar) and both sides of the ditch of Segrià (or canal de Pinyana). The eastern fields, laid out in line with a Roman centuriation, help us understand the characteristics of the medieval environment

of Lleida, there is the ‘fossilized’ land allotment of a dry land region from Roman times (Fig. 2). Some of the roads of this block of fields not only follow the orientation of the Roman centuriations but also were considered, until recently, cattle roads; in some cases, they coincide with the boundaries of the medieval and current settlements. This district to the south of the city of Lleida has both an early medieval place name (Vinatesa = ‘enlarged village’), early medieval cemeteries (Bolòs 2010b: 129) and structures built before 1149 (the year Lleida was conquered). Although the landscape has been altered it maintains the framework of a dry land farming region with pastoral infrastructure established in the Roman period.

Recognition of these features does not overshadow the importance of the changes caused by the arrival from 714 of Arab and Berber communities, mainly as a result of the consolidation of the influential city of Lleida (*madina Larida*). As in other parts of the Iberian Peninsula (Gutiérrez Lloret 1995, Guinot 2008), the cities under Islamic rule often promoted the creation of large irrigation and widespread peri-urban hydraulic systems. It is well-known that these Andalusian hydraulic systems were extended after the feudal conquest by the counts of Urgell and Barcelona (Eritja 1998b, Eritja 2000, Bolòs *et al.* 2008). Likewise, the landscape was

reorganized in order to divide it up amongst the new conquerors. In the 12th and 13th centuries, the feudal lords not only maintained the existing hydraulic systems but even enlarged them significantly. This was the case in Fontanet, Rufeà or throughout the irrigation ditch of Segrià (currently the canal of Pinyana). Written documents, which survive from that period, help us understand what happened (Bolòs 2001). In some areas the documents from after the 1149 conquest report on the existence of *parellades* (plots of land) of 10 hectares (0.039 sq. miles), plots of land that still now can be discovered next to the irrigation ditch that goes through the region of Segrià from north to south and that, in all probability, from the end of the Islamic period, allowed irrigating the fertile region of the outskirts of the city of Lleida (Bolòs 2010b: 122).

The landscape of the early Middle Ages near Poblet: the dry lands

Our research on the territory known as Conca de Poblet (in the region of Conca de Barberà between Tarragona and Lleida) has considerably improved our understanding of this landscape during the early Middle Ages. The reshaping of this landscape during Roman times has made it possible to recognise the later changes

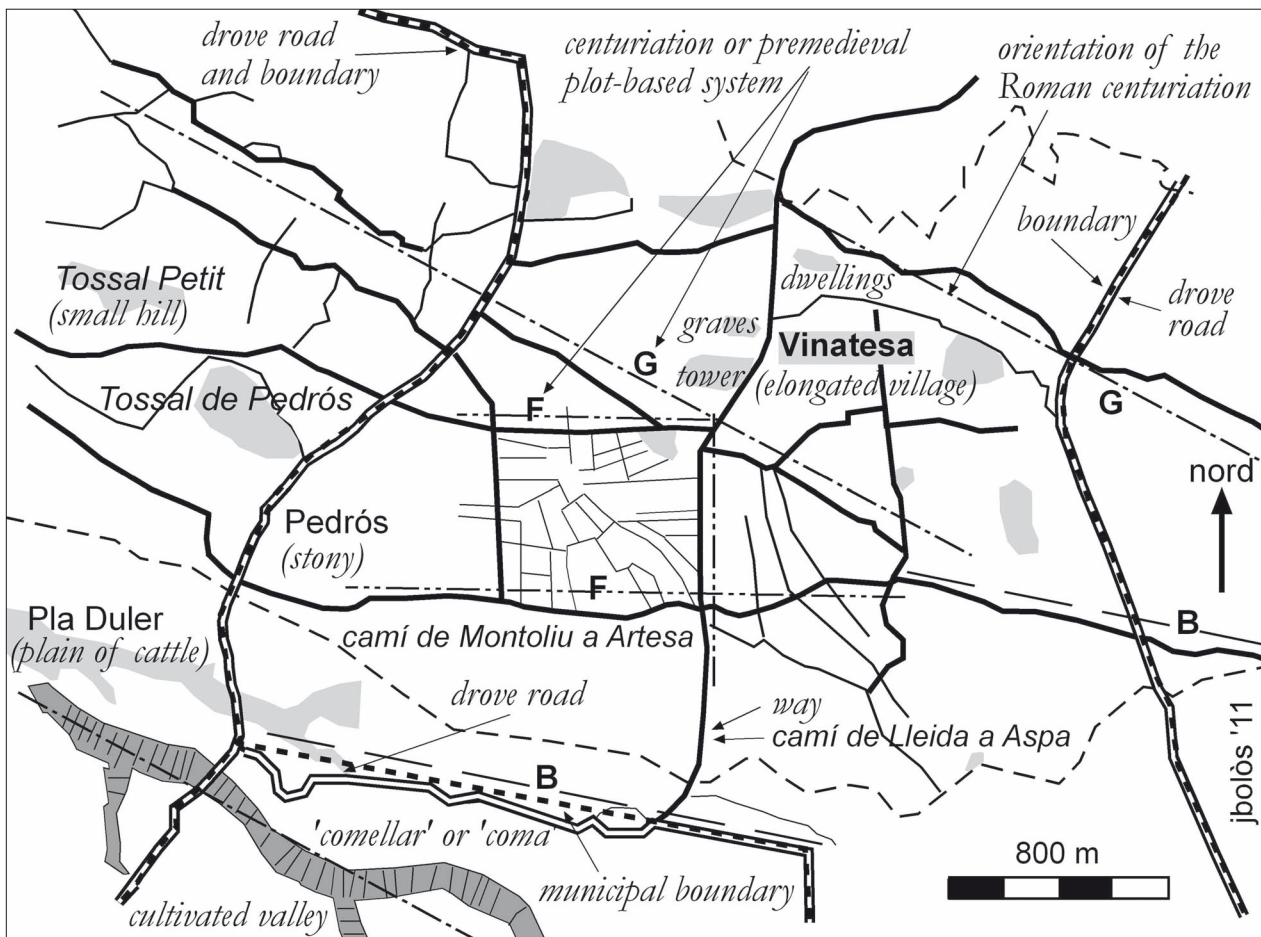


Figure 2 Map of Vinatesa (to the south of the municipal district of Lleida, Segrià). Around an early medieval site, we find fields, administrative boundaries and place-names that remind us of the almost uninterrupted exploitation of this space in the last two thousand years, as well as the importance of stockbreeding.

that took place in the medieval centuries. In this region, the irrigated spaces are of minor importance and there was no Roman or Islamic city. However, the project has allowed us to identify continuing occupation of small agricultural settlements in the early Middle Ages. Some have persisted on the same location as current villages or as inhabited spaces now corresponding to blocks of fields (which are often divided up differently to their surroundings). Three characteristics that can allow us to verify the organization of the agricultural space in the early Middle Ages deserve special attention.

Our first focus is the town of Rocafort de Queralt (Conca de Barberà). A look at the roads and pathways leading to Rocafort reveals a high percentage of them based on the road network created in Roman times and preserved by means of the possible settlements of this location for most of the early Middle Ages. We believe that to be the case because almost all the roads leading to Rocafort have the same orientation as that of the Roman centuriations or land divisions. Our theory that the only reason for maintaining this road network, inherited from the past, is by assuming on this site the existence of a settlement in the 'dark' centuries that made use of these roads. The origin of the village of Rocafort must therefore be dated back prior to 1076, date of the first written record of this castral settlement. It should be noted that the fact that roads leading to current villages

follow the same orientation as that of the centuriations has been verified in many other villages of this region and others in the west, centre and north-east of Catalonia (Bolòs and Hurtado 2009).

Another obvious aspect in the PaHisCat maps has been the continuation of *partides* of land (blocks of fields) whose fields are predominately aligned with Roman centuriations, as discussed above for Segrià. In the case of Conca de Barberà, the coincidence between the current and Roman land divisions also suggest continuity in the use of these landscapes. Around the village of Prenafeta fields extending over 1.5 km east to west, and 0.65 km north to south, are aligned on a Roman centuriation (labelled B). They also share the same name.

In Conca de Poblet, we have discovered that some fields occupied hollows called *comes* or *comellars* (valleys or glens) in the Middle Ages, which probably existed already as cultivated spaces from the early medieval centuries. Several facts point to an early origin for these cultivated spaces. Firstly, the roads bordering them often follow the same orientation as those of Roman centuriations. Secondly, some of these valleys had already been recorded at the end of the Middle Ages (for example, the case of Cavalleria de Barbó or Codoç in Fig. 3), the undisputed date for the existence of cultivated areas. Thirdly, when matching these cultivated

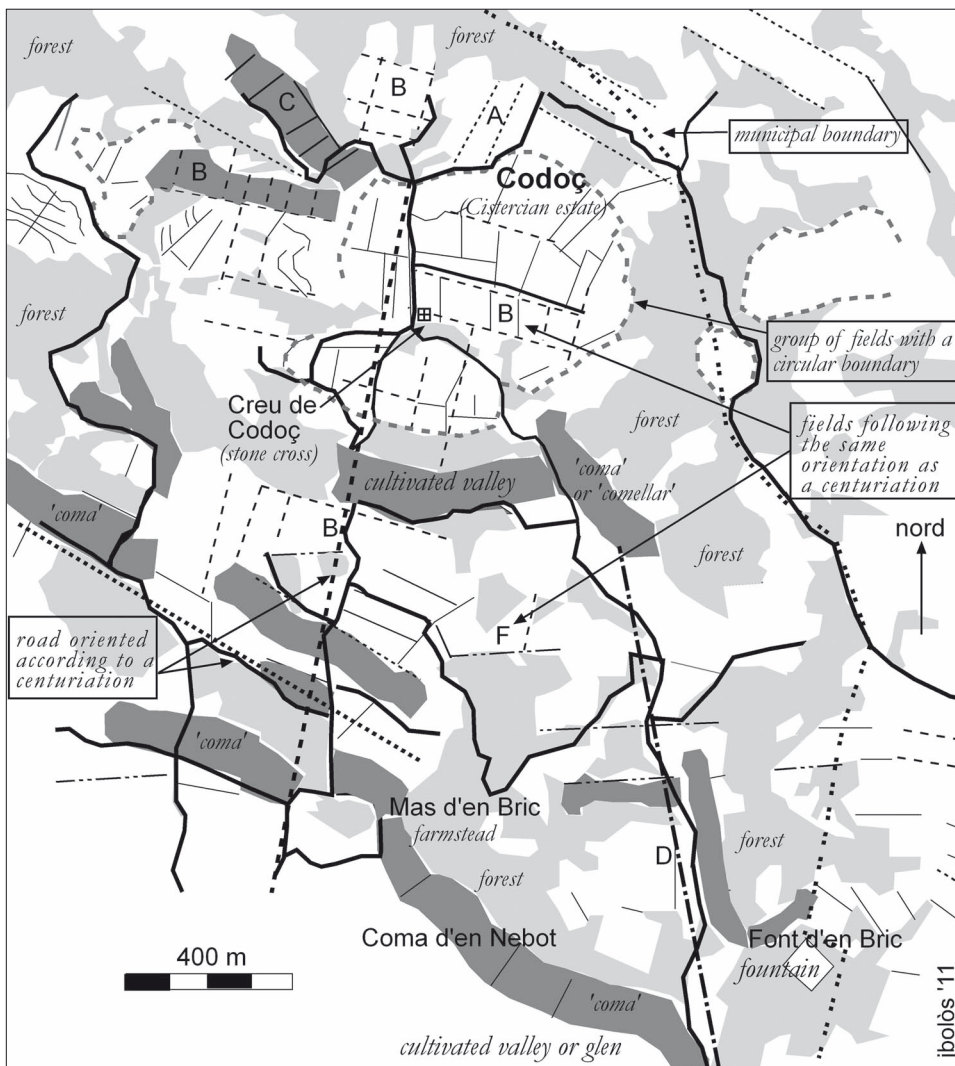


Figure 3 Map of Codoç (Conca de Barberà). From the 12th century, this territory belonged to the dominion of the Cistercian monastery of Santa Maria de Poblet. However, we can still recognise many fields and roads reflecting the earlier arrangement of the landscape which also bear witness to the constant exploitation of this space in the early Middle Ages.

spaces on the valleys against the cultivated spaces around single-family farmsteads, plausibly built during the 12th or 13th centuries, we realize that the former, those of the valleys, were created before the construction of scattered farmsteads.

At the time of the counts' conquest, in the 12th century, that led to the creation of a great Cistercian monastery in Poblet, several new villages (like Sarral or Montblanc), numerous castral towns (like Rocafort, Barberà or l'Espluga de Francolí) and a large number of churches and castles, we are not sure whether any of the earlier inhabitants from before the colonization still lived in this region of Conca de Barberà. However, we do know that those who settled after the counts' conquest did not start from scratch and made use of existing landscapes. Regardless of what happened in the 11th and 12th centuries, we can affirm that during the early Middle Ages many people had been living in this region and had made use of every corner of the territory. To date, we were mostly aware of these people thanks to their cemeteries (Menchon 1996). We can now discover many other traces of this undocumented stage such as the abundant remains of roads and fields from the Visigothic and Islamic periods.

The landscape of the early Middle Ages in Cerdanya: mountain land

La Cerdanya is a region of the Pyrenees with rather different characteristics to those analysed previously. The Cerdanya plain lies between 1,000 and 1,150 m above sea level, with relatively high rainfall (around 788 mm). By AD 788, the county of Cerdanya was under Carolingian rule. However, despite these differences, some aspects of the cultural landscape are surprisingly similar (Fig. 4). In the Cerdanya valley all the features originating in Roman times found in regions further south like Segrià or Conca de Barberà, are also evident.

Prior to the PaHisCat project, we already knew that Cerdanya was quite an 'old' region. Pierre Bonnassie referred to Catalonia in his thesis (Bonnassie 1979) and reported on the high settlement density of the Cerdanya shortly before the turn of the millennium. Some time ago landscape continuities had already been pointed out based on pollen analysis (Bolòs 1982), a method that had also identified changes occurring around the year 800 (Galop 1999). On the other hand, many current villages bear pre-Roman names which, according to philologists, could not have been coined later than the year 500 (Coromines 1965: 114), for example, Ger, Lles, Olopte, Urtx, Bor, Sansor, Ans, Age, Enveig, Er

and Estavar. Although some villages might have adopted existing names, the characteristics of the toponymy of this region also support the theory that most settlements originated in the early medieval centuries.

Various features originating before Carolingian times had already been identified from place-names and church dedications in research for the *Atlas del comtat d'Urgell* (v788-993), a county to the west of Cerdanya. Close to Seu d'Urgell we identified a village called Santa Llogaia de Cornellana whose name evokes that of a Roman *villa* belonging to a man called *Cornelius* and a church, most probably Visigothic, dedicated to Saint Leocadia (Bolòs 2010d). In Cerdanya a detailed study of the church network documented in Carolingian times reveals that a significant percentage of them already existed before the year 800. Churches whose dedication suggests they were built in the 9th and 10th centuries are often located either in marginal places or in between older churches.

These suggestions of a strong early medieval influence in the landscape have been confirmed by the PaHisCat project through additional case studies. Although we still do not know how many people lived in the Cerdanya settlements of Meranges, Estoll, Ger or Talló between the 6th and 11th centuries it is now possible to confirm that these settlements were inhabited without interruption through the early medieval centuries. This is suggested by church dedications and pre-Roman, Roman or Romance toponyms, and confirmed by the structure and organisation of the landscape.

The village of Meranges is located at around 1,500 m above sea level in the north of the region. Despite its height, we have discovered that during Roman times this place went through significant landscape changes that have continued to structure the landscape up to the present time (Fig. 5). The place-name, for example, was coined during the Roman period. In the early Middle Ages the territory

of *pagos Marianicos* (property of a Roman called *Marius*) was occupied by two settlements, Meranges and Girul. The uninterrupted exploitation of this space accounts for the maintenance of the plot divisions created around two thousand years ago, which are still fairly clear today adjacent to and beneath both settlements.

In many sectors of the Cerdanya plains remarkable remains of plot divisions created in Roman times survive. All these remains, often related to inhabited settlements, reveal the inhabitation of these places throughout the Middle Ages. Estoll is in the middle of a plain, at around 1,100 m high (Fig. 4). Its territory was entirely transformed in Roman times as shown by the orientation of surrounding roads and fields. Even the stream that flows beside the village, Ribera d'Alp, follows the course of the Roman centuriation. The existence of this past can be seen mainly on the fields situated to the north and west of Estoll, and as far as the villages of Soriguera, Soriguerola, Mosoll and Sanavastre. These remains bear witness to the uninterrupted use of this space in the so-called "dark" centuries, which divide the Roman and the Carolingian period, now properly recorded.

The same situation is found near villages bearing pre-Roman names (like Ger, Grèixer, All or Estoll), near villages with Romanesque names (like Soriguera or Vilallobent) and also near towns with toponyms coined in Roman times (like Nerellà, Olià or Prullans). On the north-east of the village of Nerellà and the north of Olià, situated on the west of the Cerdanya valley, there are visible remains of land divisions oriented according to one of the centuriations found in Cerdanya. Around the Roman capital of this territory, Llívia (*Iulia Livica*), the traces of a pre-medieval past are marked and are visible in the layout of the roads, fields and water courses (Fig. 6).

In this case, there was no break-up in the continuity of the settlement of this region. The heirs of the communities

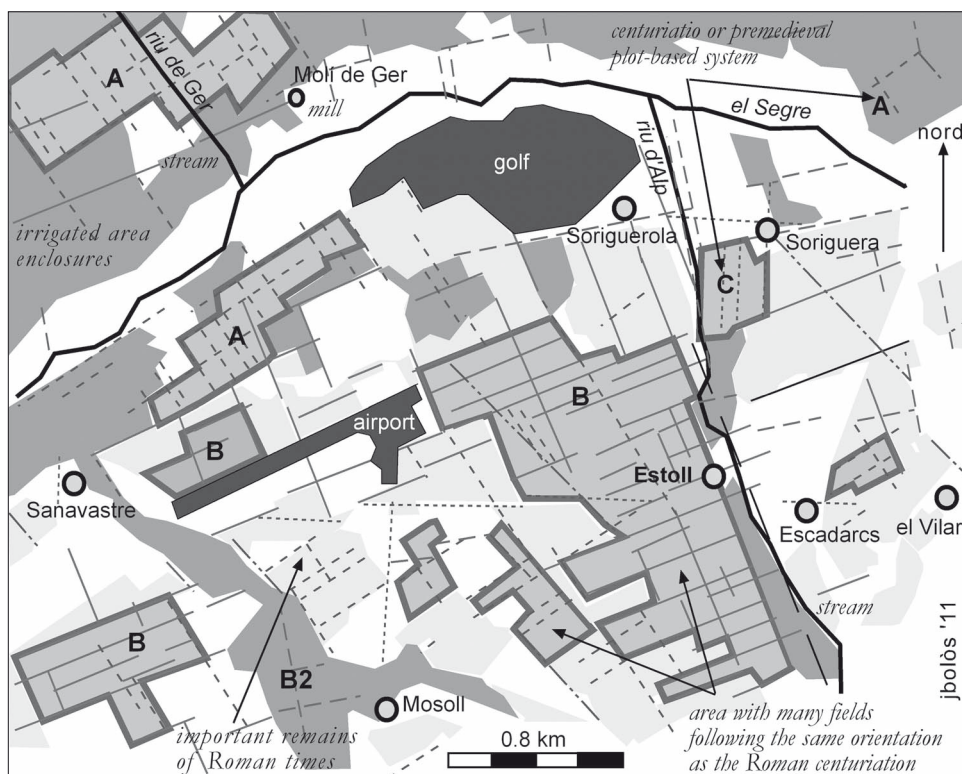


Figure 4 Map of the plain of Cerdanya, in the Pyrenees. The map shows the links between the different villages with fields influenced by Roman field divisions. The boundaries of many current fields and water courses stem from field divisions dating back to Roman times.

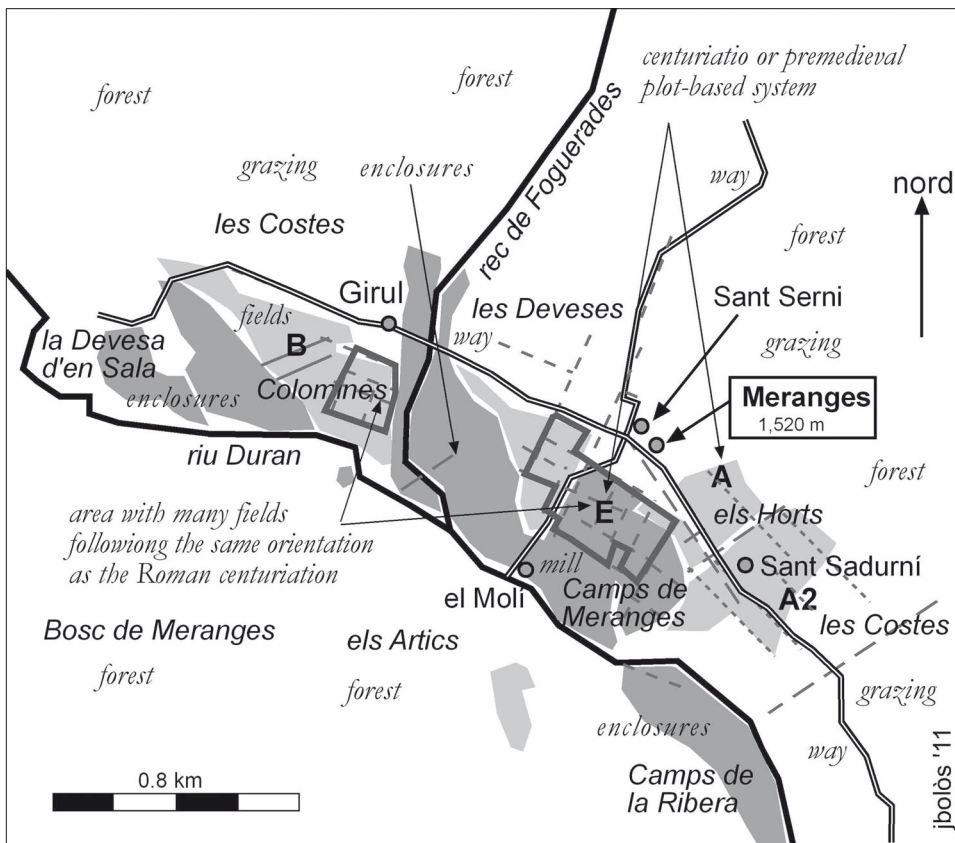


Figure 5 Map of the outskirts of the villages of Meranges and Girul, located at more than 1,500 m above sea level, in the region of Cerdanya. The map shows the principal areas of field boundaries dating to Roman times, and bears witness to the continuity of exploitation of this territory in the Middle Ages.

founded throughout the Cerdanya plain towards the year 600 also occupied the same sites in *villae* and hamlets in Carolingian times and in villages from about AD 1000. These settlements may have witnessed migrations, changes in economy and a shift from stockbreeding to agriculture, but the pattern of settlements, cultivated land and roads remained well-preserved.

The landscape of the early Middle Ages near Girona: villages and farmsteads

The fourth landscape unit studied in 2010 in the PaHisCat project, Terraprimis, belongs to the eastern territory of Old Catalonia and its features are different from those of the previous three. Thanks to texts from Carolingian times this landscape is well-documented from before the year 1000. Before the PaHisCat Project started, the written records had enabled the mapping of villages, hamlets and churches from the 9th and 10th centuries (Bolòs and Hurtado 1998–2000).

For many years, two facts had already been recorded relating to the territory of the bishopric of Girona. On the one hand, the origin of some of the towns' boundaries dated back to early medieval and even Roman times. The boundaries of the settlement of Vila-sacra, in the region of Empordà, show an almost exact coincidence with twelve Roman *centuriae* (Bolòs 2004: 98). The settlements of Ultramort, Parlavà and Rupià, also in the region of Empordà, recorded as comital villages in 989, were organized according to a pattern based on the Roman land division system (Bolòs 2006: 165). The municipal district of each and every town spread out across an area of about six *centuriae*. Very close to the region of Terraprimis, studied in the PaHisCat project, the

municipal districts of Juià and Sant Martí Vell are also oriented according to a Roman land division system. It should also be taken into account that the medieval parishes or the town or fiscal territories precede the current municipal districts.

Secondly, in these areas dispersed settlements are very important, specifically settlements divided into farmsteads. It seems that this form of settlement was predominant from the 12th century (To 1993). Every parish could comprise from ten to twenty farmsteads. The farmhouse of every farmstead was far from the church and the small population centre next to it (the *sagrera* or *cellera*) and was surrounded by fields, terraces, irrigated lands and, above all, forest or pasturelands. Often the farmsteads lay within a few hundred metres of one another (Bolòs 1995).

The results obtained by the PaHisCat project for the territory of Terraprimis reveal that Carolingian settlements were often sited in relation to field divisions dating back to Roman times (Fig. 7). Numerous fields and roads follow the orientation of the boundaries of *centuriae* and we can even identify the boundaries of forest lands sharing these features. This phenomenon is found, for example, on the south of Bàscara (*Baschara*, recorded in 817), next to Parets de Baix and Parets de Dalt (*Parietes*, 921), next to Palol (*Palaciolo*, 889) and Orfes (*Orfanis*, 968), next to Espinavessa (*Spinaversa*, 910), very close to Vilert (*Villa Dert* or *Sisterianus*, 966), Crespià (*Crispianus*, 834), Esponellà (*Expondeliano*, 921), Martís (*Mochdix*, 983) and Serinyà (*Seriniano*, 935). Many of these places bear names probably coined in Roman times (e.g. Crespià, *Sisterià and Esponellà). This shows a more or less permanent occupation of this territory situated along the river Fluvià throughout

the early Middle Ages. There must have been plenty of remains of Roman buildings near the churches of many of these settlements, whose origins may often be found in a Roman mausoleum (Burch *et al.* 2001, Aicart *et al.* 2008).

Certainly, some of these churches have been documented before the year 1000 (Santa Maria de Vilert, Sant Cebrià d'Esponellà, Santa Llogaia de Parets or Sant Medir de Romanyà). Furthermore, in some of these cases and others unmentioned in the written records,

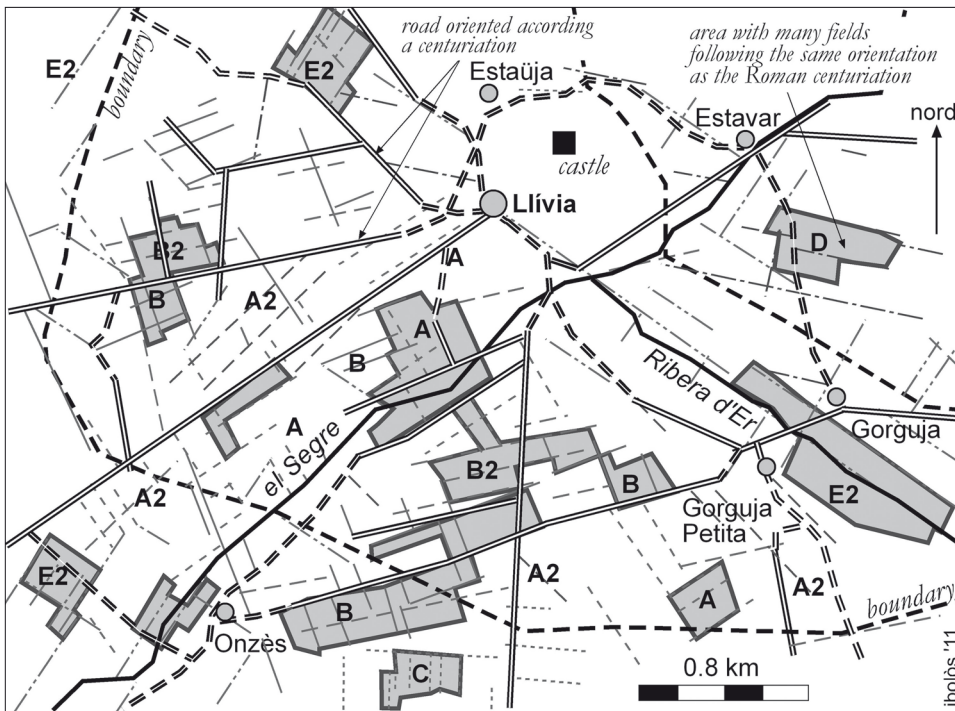


Figure 6 Map of the outskirts of Llívia (Cerdanya). Many of the roads, fields and even administrative boundaries follow the orientation of some of the centuriations or land divisions from the Roman period. Llívia (Iulia Livica) was the capital of the region. The significance of its Roman past is revealed in the landscape. Likewise, the continuity in the exploitation of this space in the Middle Ages is also evident.

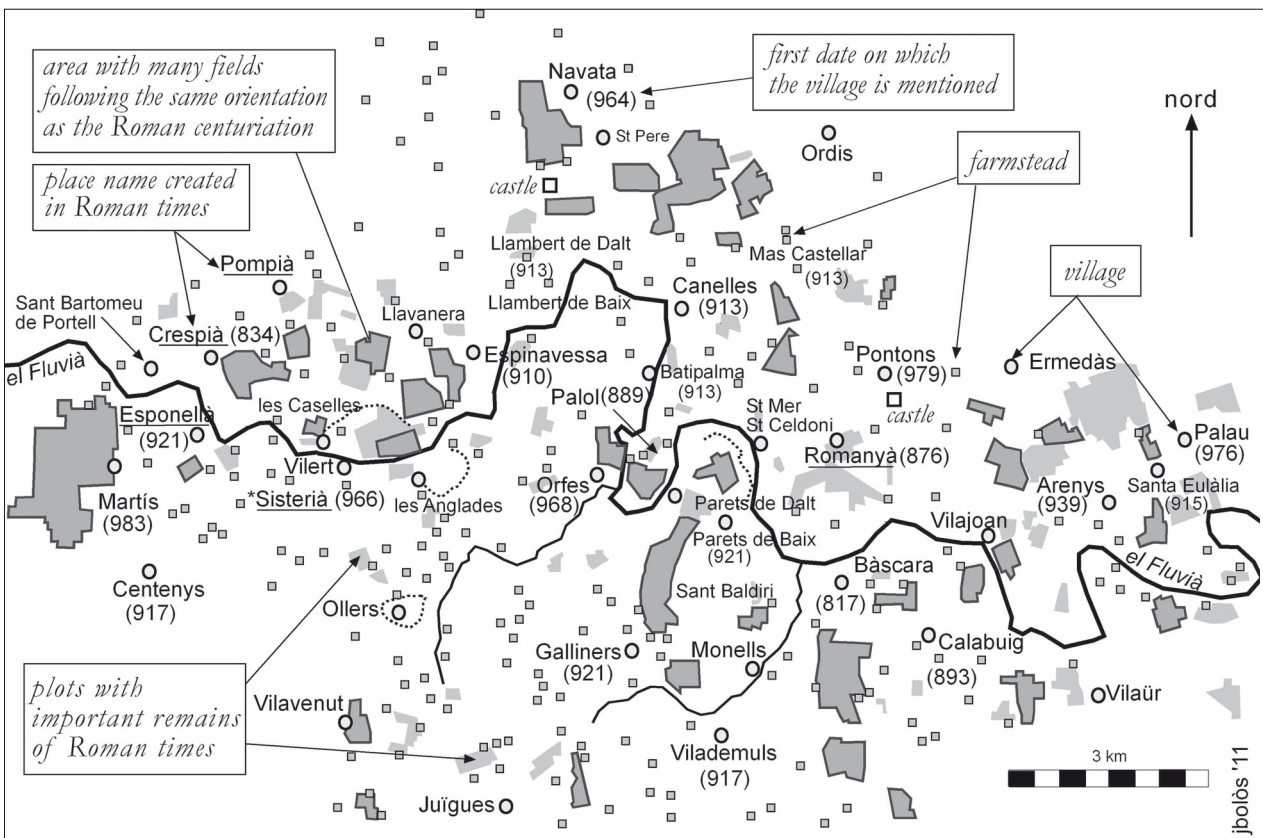


Figure 7 Map of the central sector of the basin of the river Fluvià (north of Girona). The map shows the link between settlements created in the Middle Ages and documented in Carolingian times with areas showing good preservation of Roman field divisions.

their dedication (like St Leocadia) relates to a church dating back to Visigothic times.

In this landscape unit, as in many others, the boundaries of a significant percentage of the current cultivated lands show strong traits of Roman influence and, at the same time, reflect a permanent occupation throughout the centuries after 476, the symbolic date of the end of the Roman Empire. These 'ancient' cultivated lands, due to their significance in revealing the evolution of the landscape as a historic reality, have been represented on the PaHisCat maps with a thick line using different colours, both in the maps from Roman times and in the characterization maps of the historic landscape. Certainly, in order to understand the medieval, the modern and the current landscapes it is essential to be acquainted with everything from before the 6th century.

Conclusions

Research for the PaHisCat project so far has allowed us to establish in-depth knowledge of the changes of the landscape in the last two thousand years. To start with, the project has contributed to confirming the importance of the great transformations of Roman Catalonia, proving that the currently cultivated regions owe their existence to landscapes inherited from that period. This continuity gives rise to a series of questions, about how and why the landscape's characteristics evolved as they did in subsequent centuries.

One of the main conclusions so far is that there has been a remarkable degree of continuity in the occupation and use of the territory from Roman times. This continuity can be appreciated everywhere, although the historic evolution of the settlements may have been different. In Horta de Pinyana, by the city of Lleida, the small agricultural and stockbreeding communities existed throughout the early Middle Ages. The size and precise location of such communities are yet unknown. However, there is evidence that one of these communities had irrigated lands and pasturelands in Tabac, that another had dry and pasturelands in Vinatesa and yet another had irrigated lands near the inhabited settlement of Torrelameu. In all certainty, these communities were founded in the late Roman period and they remained for centuries under Visigothic and Islamic rule. However, in most cases, the transition from the Muslim to the Christian world resulted in break-ups and substitution of wholly Islamic communities with new settlers who came mainly from Old Catalonia and southern Gaul.

In Conca de Barberà, the roads reflect the persistence of settlements through the centuries. The legacy of the past is also evident in the form of some *comes* (valleys) or *comellars* (glens) or the layout of some plots of land. Although changes occurred between the 6th and 11th centuries, these centuries saw continuity with virtually no break-ups of settlements in many of the locations of the basin area running from Lleida to Tarragona. The process of conquest and repopulation by the counts of Barcelona, in the 11th and 12th centuries, like that in the plain of Lleida, probably caused a break-up in the continuity of several communities, although the new settlers would later work the same land.

The same pattern could also be found throughout the early Middle Ages in Cerdanya, amongst many villages

and hamlets on the plain and the mountain sides. The village of Meranges, at 1,503 m above sea level, is a magnificent example of continuity through centuries and millennia. Most probably the people working in the fields in the 6th and 11th centuries had common ancestors despite a few years under Visigothic rule, a brief period of Muslim domination (Arabic but mainly Berber) and the conquest by Carolingian Franks.

The same continuity, with no significant break-ups in the transition to new settlers, is also evident in Terraprimis, near Girona. The place names created in Roman times like Serinyà, Esponellà, Crespià, Pompeià, *Sisterià, Romanyà, refer to continuities between the *villae* territories or Roman *fundi* and the areas inhabited by medieval settlers. It should be noted that this continuity refers to the territory, rather than to the current location of the village. As elsewhere, these locations reveal characteristics deeply rooted in the land division of the fields close to the settlements. Besides the place-names coined in Roman times, there are many Romance place names, now believed to be Catalan (like Palau or Palol or maybe Parets, Caselles or Cabanes). In all probability they existed in the 6th and 7th centuries, when vulgar Latin or a Romance language considered as pre-Catalan were spoken. Furthermore, both here and the region of Cerdanya, the role of churches in this period as space organizers is of paramount importance; if they were excavated, we would discover marked continuities throughout this early medieval period.

Continuity is a recurrent feature in the exploitation of many landscapes. As stated above, we may not know the exact location of the settlements but we do know that a block of fields, a cultivated valley, a road for people or stock or even a watercourse were used for the last 1,500 years virtually uninterrupted. The PaHisCat project has enabled us to obtain a global view of these territories. In the future the excavation of specific sites will allow us to clarify the evolution of villages, hamlets, farmsteads, cemeteries or even roads. In fact, an in-depth knowledge of the past landscape will allow us to understand the history of Catalonia better, especially for centuries with very little written documentation. We conceive of PaHisCat as an initial study, the precedent to further research on the four regions analysed to date.

The history of the landscape of Catalonia, a country of great diversity, surely shares many features with the history of the landscape of many other territories of the Mediterranean basin, including the south of France and the Iberian and Italian peninsulas. We believe the approach taken in our studies can be extrapolated to many other countries. In addition this research may result in improved management and better heritage appraisal of the territories studied. Della Hooke's words written with Europe in mind provide an appropriate ending to this paper: 'liaison between researchers and practitioners must continue and landscape historians should play an active role in formulating future policy decisions' (Hooke 2000: 154).

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Bibliography

- Aicart, F., Nolla, J.M. and Palahí, L. (eds.) 2008. *L'Església Vella de Santa Cristina d'Aro. Del monument tardoantic a l'església medieval*. Girona: Ajuntament de Santa Cristina d'Aro, Universitat de Girona.
- Ariño, E., Gurt, J.M. and Palet, J.M. 2004. *El pasado presente. Arqueología de los paisajes en la Hispania romana*. Barcelona: Universitat de Barcelona, Universidad de Salamanca.
- Aventin, M. 1990. *Vilamajor 872-1299. De la fi del sistema antic a la consolidació del feudalisme*. Sabadell: AUSA.
- Bolòs, J. 1982. 'Anàlisi pol·línica i història medieval. Aportació al coneixement del paisatge pirinenc durant l'edat mitjana'. *Quaderns d'estudis medievals* 10, 635-638.
- Bolòs, J. 1995. *El mas, el pagès i el senyor. Paisatge i societat en una parròquia de la Garrotxa a l'edat mitjana*. Barcelona: Curial.
- Bolòs, J. 1999. 'Landscape and society in the county of Besalú (Catalonia) in the Middle Ages'. *Landscape History* 21, 19-30.
- Bolòs, J. 2000. Le rôle du château et de l'église dans la structuration de l'habitat dans les Pyrénées catalanes. Les exemples du Pallars Sobirà et de la Garrotxa. In M. Berthe and B. Cursente (eds.) *Villages Pyrénéens*. Toulouse: Université de Toulouse-Le Mirail, 89-108.
- Bolòs, J. 2001. 'Changes and survival: the territory of Lleida (Catalonia) after the twelfth-century conquest'. *Journal of Medieval History* 27, 313-329.
- Bolòs, J. 2004. *Els orígens medievals del paisatge català. L'arqueologia del paisatge com a font per a conèixer la història de Catalunya*. Barcelona: Publicacions de l'Abadia de Montserrat, Institut d'Estudis Catalans.
- Bolòs, J. 2006. Pobles, vies, límits, conreus i advocacions. Viatge a través dels "segles foscos". *De Constantí a Carlemany*. In *El pas de l'Antiguitat Tardana al món medieval. III Jornades d'Història i Arqueologia Medieval del Maresme*. Mataró: Grup d'Història del Casal, 163-173.
- Bolòs, J. 2007. Conèixer el paisatge històric medieval per poder planificar i gestionar el territori. In J. Bolòs (ed.), *Estudiar i gestionar el paisatge històric medieval*. Lleida: Universitat de Lleida, 145-226.
- Bolòs, J. 2009. 'Landscape formation in a Mediterranean country of the Middle Ages. Changes and continuity in Catalonia between the sixth and the fifteenth century'. *Landscape History* 30, 21-36.
- Bolòs, J. 2010a. *PaHisCat: a project to discover the landscape of the past and manage the countries of the future*. In J. Bolòs (ed.) *La caracterització del paisatge històric*. Lleida: Edicions de la Universitat de Lleida, 371-407.
- Bolòs, J. 2010b. Un paisatge complex d'un país molt vell. Els estudis d'història del paisatge per comprendre i valorar el territori. In J. Bolòs (ed.) *La caracterització del paisatge històric*. Lleida: Edicions de la Universitat de Lleida, 83-147.
- Bolòs, J. 2010c. Manifesto for the study and preservation of the historic landscape in Catalonia and the rest of Europe. In J. Bolòs (ed.) *La caracterització del paisatge històric*. Lleida: Edicions de la Universitat de Lleida, 409-416.
- Bolòs, J. 2010d. Cambios y continuidades en el hábitat en los pirineos catalanes centrales a lo largo de la alta edad media. In Ph. Sénac (ed.), *Villa 3. Histoire et archéologie des sociétés de la vallée de l'Èbre (VII-XI siècles)*. Toulouse: Université de Toulouse-Le Mirail, 91-123.
- Bolòs, J., Busqueta, J., Eritja, X. and Monjo, M., 2008. La formación y evolución histórica del paisaje de Lleida en los siglos medievales: pautas de estudio. In R. Garrabou, J. M. Naredo (eds.), *El paisaje en perspectiva histórica. Formación y transformación del paisaje en el mundo mediterráneo*. Zaragoza: Prensas Universitarias de Zaragoza, 117-136.
- Bolòs, J. and Hurtado, V. 1998. *Atles del comtat de Besalú (785-988)*. Barcelona: Rafael Dalmau editor.
- Bolòs, J. and Hurtado, V. 1999. *Atles dels comtats d'Empúries i Perallada (780-991)*. Barcelona: Rafael Dalmau editor.
- Bolòs, J. and Hurtado, V. 2000. *Atles del comtat de Girona (795-993)*. Barcelona: Rafael Dalmau editor.
- Bolòs, J. and Hurtado, V. 2001. *Atles del comtat d'Osona (798-993)*. Barcelona: Rafael Dalmau editor.
- Bolòs, J. and Hurtado, V. 2004. *Atles del comtat de Manresa (798-993)*. Barcelona: Rafael Dalmau editor.
- Bolòs, J. and Hurtado, V. 2006. *Atles del comtat d'Urgell (v788-993)*. Barcelona: Rafael Dalmau editor.
- Bolòs, J. and Hurtado, V. 2009. *Atles dels comtats de Rosselló, Conflent, Vallespir i Fenollet (759-991)*. Barcelona: Rafael Dalmau editor.
- Bonnassie, P. 1979. *Catalunya mil anys enrera. Creixement econòmic i adveniment del feudalisme a Catalunya, de mitjan segle X al final del segle XI*, vol. I. Barcelona: Edicions 62.
- Burch, J., Nolla, J.M., Palia, L., Sagrera, J., Sudera, M. and Vivó, D. 2001. *Excavacions arqueològiques a la muntanya de Sant Julià de Ramis. I. El sector de l'antiga església parroquial*. Sant Julià de Ramis: Ajuntament de Sant Julià de Ramis.
- Catafau, A. 1998. *Les celleres et la naissance du village en Roussillon (X^e-XV^e siècles)*. Perpignan: Editorial el Trabucaire, Presses Universitaires de Perpignan.
- Coromines, J. 1965. *Estudis de toponímia catalana*, vol. I. Barcelona: Editorial Barcino.
- Eritja, X. 1996. Hàbitat i espai ramader a la regió de Lleida (segle XII). In J. Busqueta, E. Vicedo, *Béns comuns als Països Catalans i a l'Europa contemporània*. Lleida: Institut d'Estudis Ilerdencs, 75-90.
- Eritja, X. 1998a. *De l'almunia a la turris: organització de l'espai a la regió de Lleida (segles XI-XIII)*. Lleida: Universitat de Lleida.
- Eritja, X. 1998b. Les comunitats pageses i els grans espais irrigats de l'àrea de Lleida durant el període andalusí (segles IX-XII). In J. Barull, J. Busqueta, E. Vicedo, *Solidaritats pageses, sindicalisme i cooperativisme*. Lleida: Institut d'Estudis Ilerdencs, 169-184.
- Eritja, X. 2000. *Dominicum comitis: estructuració feudal de l'horta urbana de Rufeia (Lleida) durant la segona meitat del segle XII*. In E. Vicedo, *Terra, aigua, societat i conflicte a la Catalunya occidental*. Lleida: Pagès editors, 25-46.
- Galop, D. 1999. Le parchemin et le pollen: la Cerdagne médiévale, de l'archive écrite à l'archive naturelle. In *Les sociétés méridionales à l'âge féodal. Hommage à Pierre Bonnassie*. Toulouse: CNRS, Université de Toulouse-Le Mirail, 35-43.
- Guinot, E. 2008. Agrosistemas del mundo: criterios de construcción de los paisajes irrigados. In *Cristiandad e Islam en la Edad Media Hispana*, XVIII Semana de Estudios Medievales de Nájera, Logroño, 1-30.
- Gutiérrez Lloret, S. 1995. 'El origen de la huerta de Orihuela entre los siglos VII y XI: una propuesta arqueológica sobre la explotación de las zonas húmedas del bajo Segura'. *Arbor* 593, 65-94.
- Hooke, D. 2000. The appreciation of landscape history. In D. Hooke (ed.) *Landscape, the richest historical record*. Birmingham: Society for Landscape Studies, 142-155.
- Marí, L. and Revilla, V. 2006. *La vil·la romana del Romeral. Els mosaics: art, arquitectura i vida aristocràtica al segle IV*. Albesa: Ajuntament d'Albesa.
- Menchon, J. 1996. Arqueologia funerària medieval a la Conca de Barberà. Montblanc: Consell Comarcal de la Conca de Barberà.
- To, L. 1993. 'Le mas catalan du XII^e siècle: genèse et évolution d'une structure d'encadrement et d'asservissement de la paysannerie'. *Cahiers de civilisation médiévale* 142, 151-177.