

## 46. A view from the edges: the Mesolithic settlement of the interior areas of the Iberian Peninsula reconsidered

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*The archaeological data that might be related to Mesolithic settlement in interior Iberia are discussed. The ethnographical evidence on empty interior areas close to coastal hunter-gatherer settlements is also considered. It is concluded that there is a reasonable probability of a regular Mesolithic settlement in the interior regions of the Peninsula.*

Keywords: Spain, Portugal, hunter-gatherers, land resources.

### **Introduction**

As in many other parts of Europe, the Mesolithic settlement of the Iberian Peninsula is concentrated along the coastal areas. Most archaeological evidence for this period comes from central and southern Portugal, Cantabrian Spain, and some parts of the Mediterranean coastal regions (Juan and Martí 2002). However, it has not been clearly established whether this is a result of the absence of regular hunter-gatherer activity in interior areas, or rather an artefact of biases in the research. This question is fairly important, and not only for a better understanding of the last societies of European hunter-gatherers, but rather for its implications in the study of the transition to the Neolithic. In fact, the supposed unpopulated status of the interior areas of the Peninsula during the first half of the Holocene has been one of the main bases for the invasionist explanations of the neolithisation of interior Iberia (Estremera 2003; Kunst and Rojo 1999). Yet some authors have considered the possibility of the existence of a Mesolithic settlement playing a relevant role in the introduction of agriculture into the Iberian interior (Delibes and Fernández Manzano 2000; Rubio and Blasco 1988–9; Rubio 2002). The aim of this paper is to discuss the archaeological data that might be related to Mesolithic settlement in interior Iberia, and to evaluate the most probable scenario with the current evidence, including not only the archaeological information, but also ethnohistorical data.

Before broaching the main issue, we should discuss a geographical question: What do we mean by ‘interior’? Though this might seem an easy question, it is in no

way irrelevant. We would all agree that Madrid is in the interior part of the Iberian Peninsula, and that Lisbon is in a coastal region. But, where do we put the border? Moreover, for Spanish and Portuguese scholars, the issue is clearly contaminated by a subjective perception of national geography, related to political factors. Thus, frequently the archaeological discussions on the colonization of interior Iberia tend to exclude any site from contemporary political regions that do have coast, despite the evidence that some of those regions are rather large, and some parts of them are really distant from the shore. For instance, a site such as Cueva del Nacimiento, in the Andalusian province of Jaén (Figure 46.1), is not usually considered. That is probably due to the fact that the region of Andalusia (which has a surface similar to medium-sized European countries such as Austria) has a long coast. However this particular site is located more than 100km from the Mediterranean shore, in the mountains of Cazorla. In fact, the time distance from Nacimiento to the coast is probably more than double that for some sites in the northern *Meseta* that are included among the interior sites, because they are now located in the currently non-coastal region of Castile. However, it is clear that the exploitation of coastal resources was not among the usual activities of the people who were living in Cueva del Nacimiento, at least while they were occupying that particular settlement.

The criteria used in this paper has been to consider as interior sites those that are located in places which require more than twelve hours of walking to reach the coast (around 50km), that is settlements from which it

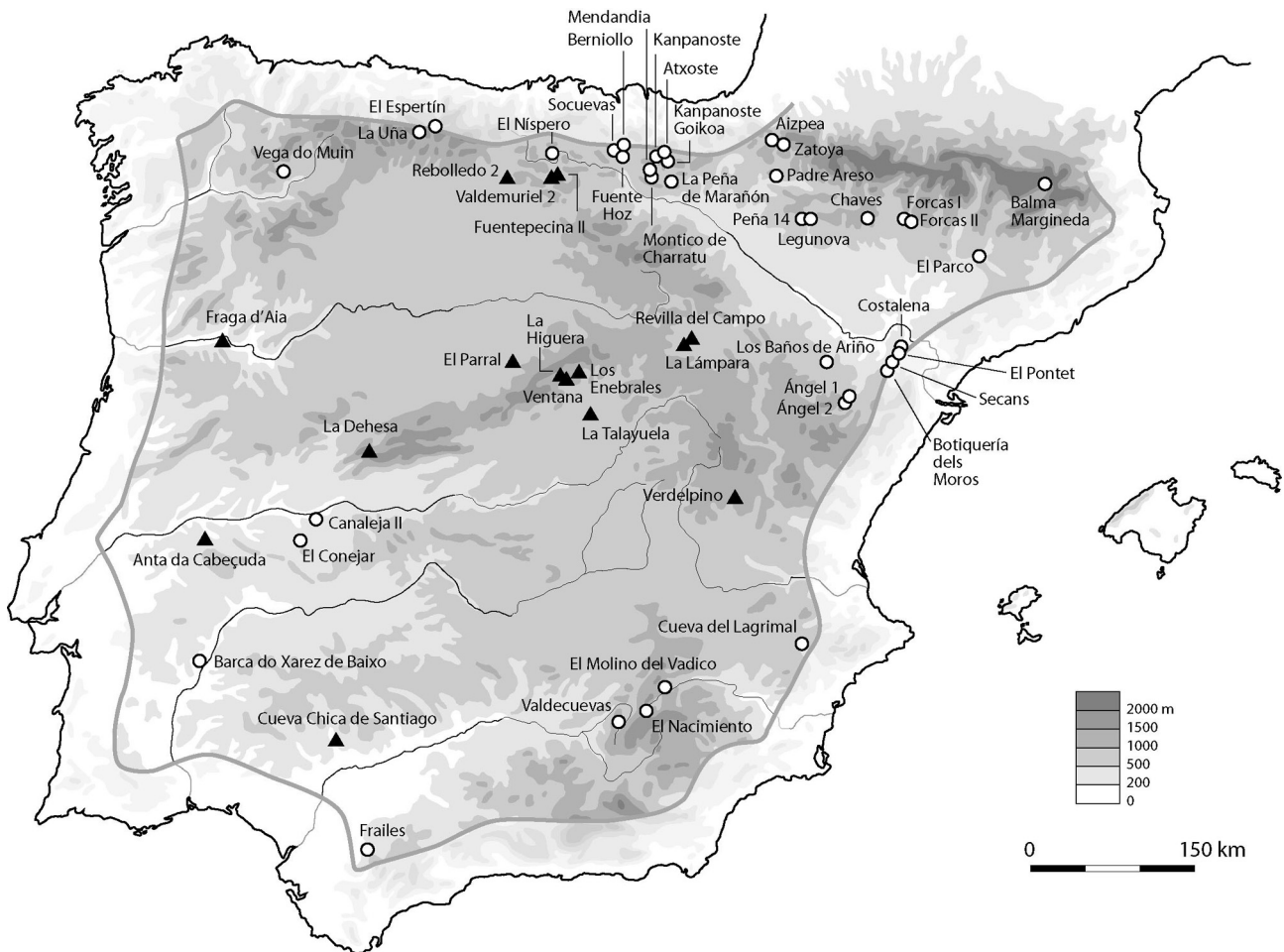


Figure 46.1. Map of interior sites where indices of Holocene hunter-gatherer activity are available. The line indicates 50km from the current coast.

would be impossible to go to the coast and return in less than two days.

### **The archaeological evidence**

So far, the archaeological evidence for the first half of the Holocene is very scarce. This has frequently been interpreted as evidence of the lack of human activity. However that is a dangerous inference in relation to this case. It is appropriate to remember that, from a logical point of view, the absence of evidence is not evidence of absence. Furthermore, in this case, the characteristic argument of researchers who defend the 'deserted' *Meseta* model, i.e. the negative results of exploration, is for many areas relatively weak. In most regions of interior Iberia there has never been a specific program of archaeological exploration focused specifically on the resolution of this problem (as there has been for the Upper Palaeolithic; see Cacho 1999). And when there has been, the results have often been positive. This is indeed the case of the Upper Ebro valley, in the southern part of the Basque country, where a systematic archaeological survey, including stratigraphic test pits, has resulted in the discovery of an ample number of Mesolithic sites (see below).

On the other hand, the possibilities of a casual occurrence of sites, or of finding them during general projects of archaeological survey are fairly low in this case: the interior Mesolithic has a serious problem of archaeological visibility. Lacking some kinds of evidence that are related to the seaside, such as the presence of shell middens, there are no clear criteria to assign unstratified material to this period. The most characteristic archaeological items, such as microliths, can also be attributed to other periods, such as the Neolithic. We can try to imagine, for instance, what we would know about the Cantabrian Mesolithic if there were no shell middens in that region. Equally, we could wonder what view we would have on the Upper Palaeolithic of the interior if we lacked some evident *fossil directeurs*, such as the Solutrean points, or if we did not know the open-air rock art. In fact, the history of the research in interior Iberia shows us the risks of the abuse of this kind of criteria. A little over fifteen years ago, the same arguments currently used to question the interior Mesolithic were employed to deny the existence of a Neolithic before the construction of megaliths (e.g. Kalb 1989), which is now clearly demonstrated.

In addition, although certainly scarce, there are indeed some signs that indicate the presence of hunter-gatherers in

the area. Some of them may be defined as direct evidence of the activity of those societies; others just as indirect indices. The highest density of direct evidence is located in the northern third of the Peninsula, mainly on the southern slopes of the Cantabrian mountain range and the Pyrenees, and in the Ebro valley; in fact the only areas of interior Iberia where a systematic survey has been developed.

On the interior side of the Cantabrian mountains, recent research conducted by the University of León has included the excavation of two Mesolithic cave sites: La Uña, corresponding to the Early Mesolithic (Azilian), and El Espertín, dated to the first half of the seventh millennium cal BC (Gif-10053: 7790±120 BP; 7030–6440 cal BC) (Bernaldo de Quirós *et al.* 1997; Neira 1997). Certainly, both sites have provided strong evidence that links them with the Cantabrian Mesolithic; yet they are too far away to have permitted regular contact with the coast. Moreover, the archaeological evidence from the northern slope of the same mountain range shows that it was possible for Holocene foragers of the area to live on non-coastal resources. This is what is suggested by the palaeodietary information obtained for a well-documented inland site in Asturias: Cueva de los Canes. The diet of its inhabitants appears to have come exclusively from terrestrial resources, contrasting with the values obtained for some contemporary sites of the coastal Mesolithic (the so-called Asturian shell middens), which point to a diet in which the marine component was the dominant one among the proteins (Arias 2005–6).

Going east, to the Castilian province of Burgos, evidence of a Mesolithic occupation has been found in El Nispero, a cave site located on a rock canyon on the left bank area of the river Ebro. The site was excavated in the 1980s by S. Corchón, who identified a sequence of six layers, three of them with archaeological remains. The earliest one (layer VI) is attributed to the early Mesolithic (it is defined as 'Aziloid'), whereas layers V and IV are assigned to a 'Middle Epipalaeolithic' on both typological and palaeoecological grounds (Corchón 1988–9). The industry recovered in the latter was primarily backed bladelets, notches, denticulates and splintered pieces, including two triangles (2.89%). Faunal remains are predominantly rabbit (*Leporidae*), but some remains of red deer (*Cervus elaphus*) and horse (*Equus*) were also found. Palynological evidence seems to confirm the dating of layers IV and V to the Holocene. All this evidence leads Corchón (1988–9) to propose a tentative chronology in the second half of the eighth millennium cal BC (last third of the ninth millennium BP).

One of the densest concentrations of Mesolithic settlement is located in Alava, the southern province of the Basque country. This has provided strong evidence of the presence of human groups from the Early (Berniollo) to the Late Mesolithic, when several rock-shelters, many of them radiocarbon dated to the seventh and sixth millennia BC, have provided assemblages comparable with the geometric Mesolithic of Mediterranean Spain: Fuente Hoz, Socuevas, Mendandia, Atxoste, La Peña de Marañón, Kanpanoste Goikoa, and Kanpanoste (Alday 2002; 2005).

The Alava concentration is distributed along the

southern slopes of the Pyrenees. There, we must highlight some very important sequences that cover all (or at least most of) the first half of the Holocene: the cave site of Zatoya in Navarre (Barandiarán and Cava 1989a), the rock-shelters of Las Forcas I and II (Utrilla and Mazo 1997) and Peña 14 (Montes 2005) in Aragon, Balma Margineda in Andorra (Guilaine and Martzluff 1995), and El Parco in Catalonia (Mangado *et al.* 2002). Other sites present evidence for a particular part of the Holocene: Chaves and El Parco for the early Mesolithic, Legunova for the eighth millennium, and Aizpea, El Parco, Montico de Charratu and Padre Areso for the Late Mesolithic (see Utrilla 2002 and Utrilla and Rodanés 2004 for a general view on the Mesolithic and Neolithic in the Ebro valley). Among the latter we include some sixth millennium contexts that have been usually classified as Neolithic because of the presence of pottery (Aizpea layer b, and Zatoya layer I), but which have provided no evidence of agriculture or stock herding (see Arias 2006 for further comments).

It must be stressed that many of the Alava and western Pyrenees sites have yielded Mediterranean mollusc shells (Álvarez 2003; 2006). It is much more likely that these items arrived in this area through networks of interchange amongst hunter-gatherers rather than by direct transport. Thus, this suggests that between the western Pyrenees and the Mediterranean coast there was a certain density, albeit low, of Mesolithic groups. As a matter of fact, sixteen Mesolithic sites in the Ebro valley (corresponding to all the subperiods: Microlaminar, Macrolithic and Geometric Mesolithic) have evidence of Mediterranean shells so far (Álvarez 2006).

Going south, to the other side of the Ebro, there is an important nucleus of Mesolithic settlement which is just within the limits of distance that we have proposed: the low Aragon rock-shelters, in the provinces of Teruel and Zaragoza, including the sites of Botiquería dels Moros (Barandiarán 1978), Costalena (Barandiarán and Cava 1989b), El Pontet (Mazo and Montes 1992) and Els Secans (Rodanés *et al.* 1996). Although some of them seem to have been occupied somewhat earlier (probably in the eighth millennium cal BC: layers d of Costalena and i and g of El Pontet), most of the evidence for this area corresponds to the late Mesolithic, characterized by geometric microliths.

Clear evidence of the existence of a Late Mesolithic settlement in a more interior location in the Ebro valley is provided by the rock-shelter sites of Los Baños (Utrilla and Rodanés 2004) and Ángel 1 and 2 (Utrilla *et al.* 2003).

Evidence of Mesolithic settlement in the central plateau of Spain (the *Meseta*) is scarce and very often problematic. Some sites which lack a precise chronology have been attributed to the Mesolithic, mainly on typological grounds, but also from stratigraphic observations. That is the case of La Higuera cave (Barrio and Rubio 2002), where some possible evidence of an earlier occupation below Neolithic layers (providing backed bladelets and engraved schist plaques) has been tentatively attributed to the Mesolithic (Jiménez 2001, 43). More problematic are several poorly contextualized sites, generally surface surveys, such as El

Parral (Jiménez 2001), Los Enebrales (Jiménez 1998), La Talayuela (Hernando 1999, 235) and some sites in the Sorbe valley (Pastor 1999). Other sites lack a precise chronology, yet many reveal lithic assemblages that may be attributed to the late Palaeolithic, although an early Mesolithic chronology (Azilian) cannot be excluded. This also occurs at such sites as La Dehesa, in Salamanca (Fabián 1997) or La Ventana, in Madrid (Jiménez and Sánchez 2004).

However, in Extremadura there are two recently studied archaeological sites that can be ascribed to Holocene hunter-gatherers without any doubt: El Conejar and Canaleja II. El Conejar, near Cáceres, is a poorly preserved site where, apart from evidence of a Neolithic settlement (Cerrillo 1999), a breccia with some Mesolithic lithics (choppers, chopping-tools, bipolar quartzite cores) has been dated to the last third of the eighth millennium cal BC (Beta-154490: 8220±40 BP; Beta-154491: 8220±40 BP; 7350–7080 cal BC) (Carbonell 2003). An engraved schist plaque with linear motives might be attributed to the Mesolithic context.

Recent research at Canaleja gorge, a valley close to the River Tagus in Cáceres province, has documented several sites in small rock-shelters, most of them corresponding to the Neolithic or later periods. However, at least one of them, Canaleja II, can be ascribed to the Mesolithic. In this site, a short-term occupation characterized by a fireplace and some lithic artefacts (geometric microliths, flint cores) have been identified. A radiocarbon date obtained from charcoal from the fireplace has placed this context in the second third of the eighth millennium cal BC (Beta-214600: 8740±40 BP; 7770–7580 cal BC) (unpublished information from the 2005 excavations conducted by E. Cerrillo and A. González Cordero).

There is also some indirect evidence provided by radiocarbon determinations that might be related to Holocene hunter-gatherer human activity in the *Meseta*. That is, indeed, the case with the sites of La Lámpara and Revilla del Campo, where several dates from the ninth to the early sixth millennium cal BC have been obtained for pine charcoal collected in pits together with Neolithic pottery (Rojo *et al.* 2003). As it seems unlikely that the charcoal is coeval to the Neolithic structures (well dated in the late sixth millennium by the epicardial pottery, direct evidence of human activity, such as the grave at La Lámpara, and the radiocarbon dates obtained from samples of bone), those determinations might testify to pre-Neolithic activity, disturbed by the first farmers.

In fact, the existence of hunter-gatherers in the *Meseta* would help to explain some peculiarities of the first Neolithic in the region, such as the presence of 'mixed' traits, in a more satisfactory way than a purely colonialist model. Numerous authors have stressed that the material culture of the 'interior Neolithic' includes features which suggest contacts with the area of Valencia, while others indicate the Andalusian Neolithic or even the Portuguese (Estremera 2003). It is easier to justify such evidence via the existence of groups that became Neolithic through contacts with small groups of colonists from different sources, or

through mere acculturation, than to defend the colonisation of a virgin territory by populations arriving from outside, which should result in Neolithic assemblages showing a closer resemblance to those from their region of origin.

Similar evidence has been provided by some palaeosols covered by megalithic tombs, where older lithic tools have been recovered, or charcoal has been dated to pre-Neolithic chronologies, suggesting the possibility of previous, Mesolithic, settlement in those areas. That is the case with the sites of Anta da Cabeçuda (Oliveira 1997), in Portugal, and Fuentepecina II, Valdemuriel 2 and Rebolledo 2 in Castile (Delibes and Rojo 1997).

Not far from the limits of the *Meseta*, in the upper Júcar valley, is the debated site of Verdelpino, near Cuenca, where the existence of a very old, pre-cardial Neolithic was proposed as the result of the presence of nineteen pottery sherds in a layer dated to the last third of the eighth millennium cal BC, or the first half of the seventh (CSIC-153B: 7950±150 BP; 7300–6480 cal BC) (Fernández-Miranda and Moure 1975; Moure and Fernández-Miranda 1977). Many scholars have been rather sceptical on the reliability of the data from this site, and it has been proposed that the ceramics might be an intrusion from the upper layers of the cave (Fortea and Martí 1984–5); yet, a recent revision of the site (Rasilla *et al.* 1996) shows that there is no evidence of disturbance. However, without discussing the problem (which is difficult to address with the current data) of whether the ceramics are coeval to it or not, this context, where lithics of Palaeolithic/Mesolithic tradition and only wild faunas have been found, might be evidence of the presence of Mesolithic hunter-gatherers. Certainly, the date might be the result of the average of the ages of bones of Palaeolithic and Neolithic chronology, but, as cited above, no evidence of such a severe disturbance is available, and it would have resulted in the presence of domestic faunas in layer IV, which has not been reported.

In south-eastern Spain, it is likely that Mesolithic layers exist in El Molino de El Vadico, a site for which, unfortunately, only preliminary reports are available (Córdoba and Vega 1988; Vega 1993). Yet, it seems clear that it was occupied by Mesolithic hunter-gatherers, since four Holocene layers, superposed above a probably final Palaeolithic layer, have provided industrial remains. Another interior site with geometric, probably Late Mesolithic, lithics is the cave of El Lagrimal, in Alicante (Soler 1992). In eastern Andalusia there are a couple of sites that have provided evidence for the presence of Holocene hunter-gatherers: the above-mentioned site of Cueva del Nacimiento, dated to the seventh millennium cal BC (Asquerino and López 1981) and Valdecuevas (with Geometric Mesolithic) (Sarrión 1980).

We may cite another Andalusian cave site that poses problems similar to those discussed for Verdelpino: Cueva Chica de Santiago, a site attributed to a very early, pre-cardial Neolithic (Acosta 1986) on very dubious bases. However, as in Verdelpino, there are two radiocarbon dates corresponding to the eighth to seventh millennium cal BC (7890±180 BP: 7310–6430 cal BC; 7240±230



BP: 6560–5660 cal BC) that might point to a Mesolithic settlement. Unfortunately, the information on the precise origin and the characteristics of the samples that were dated is very poor in the excavation reports.

Finally, in a recent archaeological survey in the Guadalete valley (Cadix) an open-air site has been discovered that has provided lithic industries described as Late Mesolithic ('Tardenoid') (Giles *et al.* 1997). In southern Portugal, the open-air site of Barca do Xarez de Baixo, in the Guadiana valley, has yielded an eighth-millennium radiocarbon date (Beta-120607: 8640±70 BP; 7850–7540 cal BC) for a context where lithic remains similar to those described for El Conejar and some other Portuguese coastal sites, and bones of horse and red deer, have been found (Almeida *et al.* 1999). Possible evidence of pre-Neolithic activity has also been recorded at the site of Xarez 12 (Gonçalves 2003).

Finally, in NW Iberia, there is some problematic evidence in the Portuguese province of Tras-os-Montes, such as the open-air settlement at Prazo (Monteiro-Rodrigues 2000), with quartz tools associated with problematic sixth millennium cal BC dates (see Zilhão's comments in Carvalho 2003). Radiocarbon dates of the seventh millennium cal BC have been obtained for the bottom of layer 3 of Fraga d'Aia (Jorge 1991), but their significance is not yet sufficiently clear.

In the Spanish region of Galicia, the occupation of interior mountain areas during the Mesolithic is attested in sites such as Pena do Pé (Criado 1991). This could also be the case with the site of Vega do Muin, in the upper Sil valley (Bernaldo de Quirós *et al.* 1997). We might add some possible indirect evidence of the activities of hunter-gatherer groups – for example some changes recorded in pollen diagrams for Serra do Xistral in the second half of the seventh millennium cal BC (Ramil 1993).

The archaeological information presented above shows that there is reasonable evidence for the presence of Holocene hunter-gatherers in Iberian locations that are so far from the coast that regular visits to the seaside can be discarded (more than a 12-hour walk). It is true that for the central area (especially the *Meseta*) evidence is still very scarce and generally dubious. However we must emphasize that it is also the region where research efforts have been the lowest.

From a diachronic point of view, there is an increase in the number of Late Mesolithic sites. It is not possible with the current state of research even to attempt to justify it. Amongst others, we might consider hypotheses such as the natural increase of populations, migration from the coastal areas, or a higher archaeological visibility of the Late Mesolithic geometric lithics.

### ***The ethnographical evidence***

Ethnographical and ethnohistorical evidence might be a relevant approach for this discussion. As a very general statement, we might say that real deserts are quite an unusual feature in the recent past. Hunter-gatherers tended to occupy all the available space, in part due to their adaptability, in

part to the importance of maintaining low densities among band societies (Bates 1998). Really inhospitable regions such as Siberia, the Sahara (or Spanish central *Meseta* in the Late Pleniglacial) were indeed settled by human groups. It can certainly be argued that some ethnohistorical evidence would favour an opposite view. For instance, hunter-gatherer settlement in Tasmania tended to concentrate on the coastal strip (Tindale 1974). Nevertheless, we believe that this is not a good reference for the Iberian case. Tasmania is a relatively small island (68,000 km<sup>2</sup>), and the interior resources could occasionally be exploited from a coastal network of settlements. From our point of view, a region such as Iberia, a peninsula of some 583,000 km<sup>2</sup>, is better compared to larger landmasses, such as Australia. There, the whole continent, including some of the harshest areas in the world, such as the Gibson Desert, was settled when the Europeans arrived (Gould 1969; Myers 1991; 1999). For us, it is difficult to imagine why the Iberian case should have been substantially different.

### ***Conclusions***

The information presented in this paper shows that the presence of post-Palaeolithic hunter-gatherers in interior areas of the Iberian Peninsula can be confirmed. Whether we are dealing with permanent settlements, or just an occasional frequentation from the much more densely populated coastal regions, is difficult to elucidate for most sites with the current data. However the evidence for regions where systematic programs of archaeological survey have been developed (the Ebro valley, the southern slopes of the Cantabrian and Pyrenees ranges, the Guadiana valley) suggests that it is more likely that groups of hunter-gatherers were established in a permanent, or at least semi-permanent way in the interior areas of the Iberian Peninsula, although their densities would have been much lower than in the coastal areas. The distribution of the sites in three major sub-periods (10,000–8000, 8000–7000, and 7000–5500/5000 cal BC) also suggests a continuous presence of human groups, and possibly even a progressive increase in the density of their activity (Figure 46.2), although the low quality of the archaeological information for many sites has prevented further conclusions thus far.

Certainly, the case of central *Meseta* is still debatable, since the archaeological evidence is too scarce, and in many cases very doubtful. More research is required before claiming that this region was a desert during a large part of the Holocene, or whether we are just dealing with a problem of low archaeological visibility, or lack of an adequate survey. However, we find it very difficult to accept the existence, in middle latitudes, of empty areas in the Holocene. Even in regions apparently less suitable for hunter-gatherers than the centre of Spain (e.g. in central Europe) there are signs of the presence of these groups, and even of some type of influx in the processes of Neolithisation, as recent studies have pointed out, both from the archaeological (e.g. Whittle 1996; Jeunesse 1997; Gronenborn 2004; Zvebil 2004) and genetic points of view

Chronology	10000–8000 cal BC	8000–7000 cal BC	7000–5500/5000 cal BC	Indeterminate
Direct evidence	La Uña El Nispero Berniollo Atxoste Zatoya Peña 14 Ángel 1 Forcas I Chaves El Parco Balma Margineda El Molino del Vadico	El Nispero Fuente Hoz Mendandia Atxoste Zatoya Peña 14 Legunova Ángel 1 Ángel 2 Forcas II Costalena El Pontet Balma Margineda Canaleja II El Conejar Barca do Xarez de Baixo	Vega do Muin El Espertín Socuevas Fuente Hoz Mendandia Montico de Charratu Kanpanoste Goikoa Kanpanoste Atxoste La Peña de Marañón Aizpea Zatoya Padre Areso Peña 14 Forcas II El Parco Costalena El Pontet Secans Botiquería del Moros Los Baños de Ariño Ángel 1 Ángel 2 El Lagrimal El Nacimiento Valdecuevas Frailles	
Dubious or indirect evidence	La Dehesa La Ventana La Lámpara	Fraga d'Aia Fuentepecina II La Lámpara	Verdelpino Anta da Cabeçuda Rebolledo 2 Valdemuriel 2 Revilla del Campo La Lámpara Cueva Chica	El Parral La Higuera Los Enebrales La Talayuela

Figure 46.2. Table of interior sites where indices of Holocene hunter-gatherer activity have been found.

(Haak *et al.* 2005). The ethnographic evidence also suggests that it is not very likely that such a vast area as central Iberia would have been unpopulated during the Holocene. However, the previous information stresses that it is urgent to develop a systematic program of archaeological survey oriented towards the documentation of the extent and the significance of that elusive Mesolithic settlement that has provided so little direct information so far.

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### References

- Acosta, P. 1986. El Neolítico en Andalucía Occidental: estado actual, in *Homenaje a Luis Siret (1934-1984)*, 136–51. Sevilla, Consejería de Cultura de la Junta de Andalucía.
- Alday, A. 2002. Las unidades industriales mesolíticas en la Alta-Media Cuenca del Ebro. *Complutum* 13, 19–50.
- Alday, A. 2005. *El campamento prehistórico de Mendandia: Ocupaciones mesolíticas y neolíticas entre el 8500 y el 6400 bp*. Vitoria, Diputación Foral de Álava.
- Almeida, F., Mauricio, J., Souto, P. and Valente, M. J. 1999. Novas perspectivas para o estudo do Epipaleolítico do interior alentejano: noticia preliminar sobre a descoberta do sítio arqueológico da Barca do Xerez Baixo. *Revista Portuguesa de Arqueologia* 2 (1), 25–38.
- Álvarez Fernández, E. 2003. Die Reise der Schnecke *Columbella rustica* während des Mesolithikums und zu Beginn des Neolithikums in Europa. *Archäologisches Korrespondenzblatt* 33, 157–66.
- Álvarez Fernández, E. 2006. Los objetos de adorno-colgantes del Paleolítico Superior y del Mesolítico en la Cornisa Cantábrica y en el valle del Ebro. Una visión europea. Unpublished PhD thesis. Universidad de Salamanca.
- Arias Cabal, P. 2005–6. Determinaciones de isótopos estables en restos humanos de la región Cantábrica. Aportación al estudio de la dieta de las poblaciones del Mesolítico y el Neolítico. *Munibe* 57 (III), 359–74.
- Arias Cabal, P. 2007. Neighbours but diverse: Social change in NW Iberia during the transition from the Mesolithic to the Neolithic (5500–4000 cal BC), in A. Whittle and V. Cummings (eds.), *Going over: the Mesolithic-Neolithic transition in North-West Europe*. Proceedings of the British Academy 144. Oxford, Oxford University Press.
- Asquerino, M. D. and López, P. 1981. La cueva del Nacimiento (Pontones). Un yacimiento neolítico en la Sierra del Segura. *Trabajos de Prehistoria* 38, 107–38.
- Barandiarán Maestu, I. 1978. El abrigo de la Botiquería dels

- Moros. Mazaleón (Teruel). Excavaciones arqueológicas de 1974. *Cuadernos de Prehistoria y Arqueología Castellonense* 5, 49–138.
- Barandiarán Maestu, I. and Cava Almuzara, A. (eds.) 1989a. *El yacimiento prehistórico de Zatoya (Navarra). Evolución ambiental y cultural a fines del Tardiglacial y en la primera mitad del Holoceno*. Trabajos de Arqueología Navarra 8. Pamplona, Institución Príncipe de Viana.
- Barandiarán Maestu, I. and Cava Almuzara, A. (eds.) 1989b. *La ocupación prehistóricas del abrigo de Costalena (Maella, Zaragoza)*. Zaragoza, Diputación General de Aragón.
- Barrio, J. and Rubio, I. L. 2002. El Yacimiento Neolítico del Covacho de la Higuera (Patones, Madrid). Su valoración en el contexto de la Meseta. *Estudios de Prehistoria y Arqueología madrileñas* 12, 23–56.
- Bates, D. G. 1998. *Human adaptive strategies: Ecology, culture and politics*. Boston, Allyn and Bacon.
- Bernaldo de Quirós Guidotti, F., Neira Campos, A. and Fernández Rodríguez, C. 1997. Panorama del Paleolítico Superior y del Epipaleolítico en el Norte de la Cuenca del Duero, in R. de Balbín and P. Bueno (eds.), *II Congreso de Arqueología Peninsular. Tomo I-Paleolítico y Epipaleolítico*, 367–82. Zamora, Fundación Rei Afonso Henriques.
- Cacho, C. 1999. El poblamiento de la Meseta durante el Paleolítico Superior, in S. Ripoll and L. Municio (eds.), *Domingo García. Arte rupestre paleolítico al aire libre en la Meseta castellana*, 237–43. Valladolid, Junta de Castilla y León.
- Carbonell, E. 2003. Atapuerca: los primeros pobladores. El poblamiento antiguo de Europa y de la Península Ibérica, in *Actas IV Jornadas de Historia en Llerena*, 13–31. Llerena, Sociedad Extremeña de Historia.
- Carvalho, A. F. 2003. A emergência do Neolítico no actual território português: pressupostos teóricos, modelos interpretativos e a evidência empírica. *O Arqueólogo Português* IV, 21, 65–150.
- Cerrillo Cuenca, E. 1999. La cueva de El Conejar (Cáceres): avance al estudio de las primeras sociedades productoras en la penillanura cacereña. *Zephyrus* LII, 107–28.
- Corchón, M. S. 1988–9. Datos sobre el Epipaleolítico en la Meseta Norte: la cueva del Níspero (Burgos: España). *Zephyrus* XLI–XLII, 83–100.
- Córdoba de Oya, B. and Vega Toscano, L. G. 1988. El Paleolítico en la sierra del Segura: proyecto de investigación, in *I Congreso de Historia de Castilla-La Mancha. Tomo II: Pueblos y culturas prehistóricas y protohistóricas (I)*, 79–85. Toledo, Junta de Comunidades de Castilla-La Mancha.
- Criado Boado, F. 1991. *Arqueología del paisaje. El área Bocelo-Fureles entre los tiempos paleolíticos y medievales. (Campanas de 1987, 1988 y 1989)*. Santiago de Compostela, Xunta de Galicia.
- Delibes de Castro, G. and Fernández Manzano, J. 2000. La trayectoria cultural de la Prehistoria reciente (6400–2500 BP) en la SubMeseta Norte española, in P. Bueno, J. L. Cardoso, M. Díaz-Andreu, V. Hurtado, J. Oliveira, S. O. Jorge and V. O. Jorge (eds.), *Pré-história recente da Península Ibérica. 3º Congresso de Arqueologia Peninsular. Actas, vol. IV*, 95–122. Porto, Associação para o Desenvolvimento da Cooperação em Arqueologia Peninsular (ADECAP).
- Delibes de Castro, G. and Rojo Guerra, M. A. 1997. <sup>14</sup>C y secuencia megalítica en la Lora burgalesa: acotaciones a la problemática de las dataciones absolutas referente a yacimientos dolménicos, in A. A. Rodríguez Casal (ed.), *O Neolítico Atlántico es as orixes do megalitismo*, 391–14. Santiago de Compostela, Universidade de Santiago de Compostela.
- Estremera Portela, M. S. 2003. *Primeros agricultores y ganaderos en la Meseta Norte: el Neolítico de la Cueva de La Vaquera (Torreiglesias, Segovia)*. Valladolid, Junta de Castilla y León.
- Fabián García, J. F. 1997. La difícil definición del Paleolítico Superior en la Meseta. El yacimiento de *La Dehesa* (Salamanca) como exponente de la etapa Magdaleniense Final, in R. de Balbín and P. Bueno (eds.), *II Congreso de Arqueología Peninsular I*, 219–37. Zamora, Fundación Rei Afonso Henriques.
- Fernández-Miranda, M. and Moure Romanillo, A. 1975. El abrigo de Verdelpino (Cuenca). Un nuevo yacimiento neolítico en el interior de la Península Ibérica. *Noticiario Arqueológico Hispánico. Prehistoria* 3, 189–236.
- Fortea Pérez, J. and Martí Oliver, B. 1984–5. Consideraciones sobre los inicios del Neolítico en el Mediterráneo español. *Zephyrus* XXXVII–XXXVIII, 167–99.
- Giles, F., Gutiérrez, J. M., Santiago, A. and Mata, E. 1997. Avance al estudio sobre el poblamiento del Paleolítico Superior en la cuenca media-alta del río Guadalete (Cádiz). *Boletín del Museo de Cádiz* VII, 37–62.
- Gonçalves, V. S. 2003. Comer en Reguengos, no Neolítico. As estruturas de combustão da Área 3 de Zares 12, in V. S. Gonçalves (ed.), *Muita gentes, poucas antas? Origens, espaços e contextos do Megalitismo. Actas do II Colóquio Internacional sobre Megalitismo (Reguengos de Monsaraz, 3 a 7 de Maio de 2000)*, 81–99. Lisboa, Instituto Português de Arqueologia.
- Gould, R. A. 1969. *Yiwara: Foragers of the Australian Desert*. New York, Charles Scribner's Sons.
- Gronenborn, D. 2004. Comparing contact-period archaeologies: the expansion of farming and pastoralist societies to continental temperate Europe and to southern Africa. *Before Farming* 2004 (4). Online version at [www.waspress.co.uk](http://www.waspress.co.uk) (accessed 11/2007).
- Guilaine, J. and Martzluff, M. (eds.) 1995. *Les excavacions a la balma de la Margineda (1979–1991)*. Andorra, Govern d'Andorra.
- Haak, W., Forster, P., Bramanti, B., Matsumura, S., Brandt, G., Tänzer, M., Villems, R., Renfrew, C., Gronenborn, D., Alt, K. W. and Burger, J. 2005. Ancient DNA from the first European farmers in 7500-year-old Neolithic sites. *Science* 310, 1016–18.
- Hernando, A. 1999. *Los primeros agricultores de la Península Ibérica*. Madrid, Síntesis.
- Jeuneuse, C. 1997. *Pratiques funéraires au Néolithique ancien. Sépultures et nécropoles danubiennes 5500–4900 av. J.-C.* Paris, Errance.
- Jiménez Guijarro, J. 1998. La neolitización de la Cuenca Alta del Tajo. Nuevas propuestas interpretativas para el Neolítico de la Meseta. *Complutum* 9, 27–47.
- Jiménez Guijarro, J. 2001. El Parral (Segovia). Caracterización del Epipaleolítico del interior peninsular. *Estudios de Prehistoria y Arqueología Madrileñas* 11, 37–44.
- Jiménez Guijarro, J. and Sánchez Marco, A. 2004. La Cueva de la Ventana: datos arqueológicos y faunísticos para la interpretación paleoecológica del Neolítico Interior, in *Miscelánea homenaje a Emiliano Aguirre, Volume 4: Arqueología*, 253–63. Alcalá de Henares, Comunidad de Madrid-Museo Arqueológico Regional.
- Jorge, V. O. 1991. Novos datos sobre a Fraga d'Aia (Paredes da Beira-S. Joao da Pesqueira). *Trabalhos de Antropologia e Etnografia* 31, 1–4.
- Juan Cabanilles, J. and Martí Oliver, B. 2002. Poblamiento y procesos culturales en la Península Ibérica del VII al V milenio



- A.C. (8000–5500 BP): Una cartografía de la neolitización, in E. Badal, J. Bernabeu and B. Martí (eds.), *El paisaje en el Neolítico mediterráneo*, 45–87. Saguntum extra 5. Valencia, Universitat de València.
- Kalb, P. 1989. Überlegungen zu Neolithisierung und Megalithik im Westen der Iberischen Halbinsel. *Madrider Mitteilungen* 30, 31–54.
- Kunst, M. and Rojo Guerra, M. A. 1999. El Valle de Ambrona: un ejemplo de la primera colonización neolítica de las tierras del interior peninsular, in J. Bernabeu and T. Orozco (eds.), *Actes del II Congrés del Neolític a la Península Ibèrica*, 259–70. Saguntum extra 2. Valencia, Universitat de València.
- Mangado, X., Bartolí, R., Calvo, M., Nadal, J., Fullola, J. M. and Petit, M. A. 2002. Evolución de los sistemas de captación de recursos entre el Magdalenense superior final y el Epipaleolítico geométrico de la Cueva del Parco (Alòs de Balaguer, La Noguera, Lleida). *Zephyrus* LV, 143–55.
- Mazo Pérez, C. and Montes Ramírez, L. 1992. La transición Epipaleolítico-Neolítico antiguo en el abrigo de El Pontet (Maella, Zaragoza), in *Aragón/Litoral mediterráneo: intercambios culturales durante la Prehistoria*, 243–54. Zaragoza, Institución Fernando el Católico.
- Monteiro-Rodrigues, S. 2000. A estação neolítica do Prazo (Freixo de Numão – Norte de Portugal) no contexto do Neolítico Antigo do Noroeste peninsular. Algumas considerações preliminares, in P. Arias, P. Bueno, D. Cruz, J. Enriquez, J. de Oliveira and M. J. Sanches (eds.), *3º Congresso de Arqueologia Peninsular. Actas. Vol. 3: Neolitização e megalitismo da Península Ibérica*, 149–80. Porto, Associação para o Desenvolvimento da Cooperação em Arqueologia Peninsular (ADECAP).
- Montes Ramírez, L. 2005. El Neolítico en el Alto Aragón. Últimos datos, in P. Arias, R. Ontañón and C. García-Moncó (eds.), *Actas del III Congreso del Neolítico en la Península Ibérica. Santander, 5 a 8 de octubre de 2003*, 445–54. Monografías del Instituto Internacional de Investigaciones Prehistóricas de Cantabria I. Santander, Servicio de Publicaciones de la Universidad de Cantabria.
- Moure Romanillo, J. A. and Fernández-Miranda, M. 1977. El abrigo de Verdelpino (Cuenca). Noticia de los trabajos de 1976. *Trabajos de Prehistoria* 34, 31–68.
- Myers, F. R. 1991. *Pintupi country. Pintupi self: Settlement, place and politics among Western Desert Aborigens*. Berkeley, University of California Press.
- Myers, F. R. 1999. Pintupi-speaking aboriginal of the Western Desert, in R. Lee and R. Daly (eds.), *The Cambridge Encyclopedia of Hunters and Gatherers*, 348–52. Cambridge, Cambridge University Press.
- Neira, A. 1997. Prehistoria, in *Historia de León I*, 7–155. León, La Crónica 16 de León.
- Oliveira, J. 1997. Datas absolutas de monumentos megalíticos da Bacia Hidrográfica do Rio Sever, in R. de Balbín and P. Bueno (eds.), *II Congresso de Arqueologia Peninsular. Tomo II-Neolítico, Calcolítico y Bronce*, 229–39. Zamora, Fundación Rei Afonso Henriques.
- Pastor, F. J. 1999. Ocupaciones prehistóricas en el curso final del río Sorbe, provincia de Guadalajara, (comunidad de Castilla-La Mancha). (I). *Wad-al-Hayara* 25, 7–49.
- Ramil, P. 1993. Evolución climática e historia de la vegetación durante el Pleistoceno Superior y el Holoceno en las regiones montañosas del Noroeste Ibérico, in A. Pérez, L. Guitián and P. Ramil (eds.), *La evolución del paisaje en las montañas del entorno de los caminos jacobeos*, 25–60. Santiago de Compostela, Xunta de Galicia.
- Rasilla, de la, M., Hoyos Gómez, M. and Cañaveras Jiménez, J. C. 1996. El abrigo de Verdelpino (Cuenca). Revisión de su evolución sedimentaria y arqueológica. *Complutum Extra* 6 (1), 75–82.
- Reimer, P. J., Baillie, M. G. L., Bard, E., Bayliss, A., Beck, J. W., Bertrand, C. J. H., Blackwell, P. G., Buck, C. E., Burr, G. S., Cutler, K. B., Damon, P. E., Edwards, R. L., Fairbanks, R. G., Friedrich, M., Guilderson, T. P., Hogg, A. G., Hughen, K. A., Kromer, B., McCormac, F. G., Manning, S. W., Ramsey, C. B., Reimer, R. W., Remmele, S., Southon, J. R., Stuiver, M., Talamo, S., Taylor, F. W., van der Plicht, J. and Weyhenmeyer, C. E. 2004. IntCal04 terrestrial radiocarbon age calibration, 0–26 kyr BP. *Radiocarbon* 46/3, 1029–58.
- Rodanés, J. M., Tilo, M. A. and Ramón, N. 1996. *El abrigo de Els Secans (Mazaleón, Teruel). Campañas de excavación de 1986 y 1987*. Al-Qannis 3. Alcañiz, Taller de Arqueología de Alcañiz.
- Rojo Guerra, M. A., Kunst, M., García Martínez de Lagrán, I., Garrido, R. and Morán Dauchez, G. 2003. La neolitización de la Meseta Norte a la luz del C-14: Análisis de 33 dataciones absolutas de dos yacimientos domésticos del valle de Ambrona, Soria, España. (Paper presented at the III Congreso del Neolítico en la Península Ibérica. Santander).
- Rubio, I. 2002. Las cerámicas neolíticas de la colección Bento en el contexto de la Meseta, in C. Blasco (ed.), *La colección Bento del Museu d'Arqueologia de Catalunya. Una nueva mirada a la Prehistoria de Madrid*, 131–58. Barcelona, Museu d'Arqueologia de Catalunya.
- Rubio, I. and Blasco, C. 1988–9. Análisis cerámicos de la cueva de la Vaquera (Torreiglesias, Segovia). *Zephyrus* XLI–XLII, 149–60.
- Sarrión Montaña, I. 1980. Valdecuevas. Estación Meso-Neolítica en la Sierra de Cazorla (Jaen). *Saguntum* 15, 23–56.
- Soler, J. M. 1992. *La cueva del Lagrimal*. Alicante, Institut Juan Gil-Albert.
- Stuiver, M. and Reimer, P. J. 1993. Extended <sup>14</sup>C data-base and revised CALIB 3.0 <sup>14</sup>C age calibration program. *Radiocarbon* 35 (1), 215–30.
- Tindale, N. B. 1974. *Aboriginal tribes of Australia*. Berkeley, University of California Press.
- Utrilla Miranda, P. 2002. Epipaleolíticos y neolíticos del Valle del Ebro, in E. Badal, J. Bernabeu and B. Martí (eds.), *El paisaje en el Neolítico mediterráneo*, 179–208. Saguntum extra 5. Valencia, Universitat de València.
- Utrilla Miranda, P. and Mazo, C. 1997. La transición del Tardiglaciario al Holoceno en el Alto Aragón: los abrigos de Las Forcas (Graus, Huesca), in R. de Balbín and P. Bueno (eds.), *II Congreso de Arqueología Peninsular. Tomo I-Paleolítico y Epipaleolítico*, 349–65. Zamora, Fundación Rei Afonso Henriques.
- Utrilla Miranda, P. and Rodanés, J. M. (eds.) 2004. *Un asentamiento epipaleolítico en el valle del río Martín*. El abrigo de los Baños (Ariño, Teruel). Zaragoza, Universidad de Zaragoza.
- Vega Toscano, G. 1993. Excavaciones en el Molino del Vadico (Yeste). El final del Paleolítico e inicios del Neolítico en la sierra del Segura. *Jornadas de Arqueología Albacetense de la Universidad Autónoma e Madrid*, 3–32. Madrid, Universidad Autónoma de Madrid.
- Whittle, A. 1996. *Europe in the Neolithic. The creation of new worlds*. Cambridge, Cambridge University Press.
- Zvelebil, M. 2004. The many origins of the LBK, in A. Lukes and M. Zvelebil (eds.), *LBK dialogues. Studies in the formation of the Linear Pottery Culture*, 183–205. British Archaeological Reports, International Series S1304. Oxford, Archaeopress.