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Abstract
This paper synthesizes faunal data from medieval archaeological sites in the Iberian Peninsula, aiming to identify zooarchaeological evidence that can improve our understanding of socio-economic status and cultural identities. The main zooarchaeological indicators for social differentiation are explored: food procurement and cuisine (taking into account different types of sites -high status, urban and rural), and different socio-political systems (Islamic and Christian regions), from a diachronic perspective.

Keywords: fauna, diet, hunting, Middle Ages, Christian, Islamic, Spain

1. Introduction
The Iberian Peninsula was a cultural melting pot in the medieval period (broadly, between the 6th and the 15th centuries), not only because it was a highly hierarchical complex society, but also because three main faiths intermingled there: Christianity, Islamism and Judaism co-existed in Iberia for most of the Middle Ages. Studying how this complex identities were constructed and negotiated in medieval Iberia is of central interest, but also very challenging. Human-animal relationships in all their forms can be very revealing about identity. How animals were engaged in life, attitudes to their death, meat processing and redistribution, cooking and animal consumption are all aspects that signal different cultural attitudes and belief systems, including social and economic differentiation (i.e. Pluskowski et al. 2010; Arbuckle & McCarty 2014; Fagan 2015). All these areas that can be explored by zooarchaeology. In this paper, zooarchaeological evidence from the medieval Iberian Peninsula is examined in order to understand different broad social, economic and religious identities, considering two main strands of evidence: what people ate and how they procured food. The potential of zooarchaeological evidence for the identification of social hierarchies and social dynamics is a topic that has received attention by many scholars. There are three main areas that have been tackled for the study of the Middle Ages: food as a way of reflecting social status and defining social and cultural boundaries (Thomas 2007; Curet & Pestle 2010; Holmes
2015), the definition of what constitutes luxury food (Ervynck et al. 2003; Van der Veen 2003), and feasting and communal celebrations (McCormick 2002). Food systems are in fact one of the main ways of social differentiation and have therefore been analyzed by anthropologists, economic historians and archaeologists (i.e. Lev-Tov & DeFrance 2010, DeFrance 2009, Twiss 2007 and 2012) and, in the last two decades, a way of understanding foodways as complex systems composed of aspects such as production, preparation, distribution, consumption and disposal has become widespread (Woolgar 2010). This new view has facilitated the development of new research questions; among others, social and cultural differentiation is perhaps the most important (Woolgar 2010; Ashby 2002), as “eating is both a social experience and an activity that is socially divisive and socially indicative” (Grant 2002:17).

Food systems are directly related to identity (Twiss 2007) and are therefore a particularly interesting topic to investigate archaeologically. Identity is here taken as a very broad concept meaning the distinction of different population groups among others; and it is understood as a multidimensional phenomenon (cultural, religious, economic, gender, etc.) (Twiss 2007: 2).

Most research dealing with these topics make the assumption that differences in diet and/or food activities correspond to different social groups, however, "this simple equation is complicated by the simultaneous relevance of multiple axes of social variation (e.g., gender and economics and religion), by individuals’ and groups’ strategic manipulation of foodways, and by diachronic change" (Twiss 2012). In fact, class-based dietary choices vary slightly from one time and place to other (DeFrance 2009) and, therefore, zooarchaeological markers for social differentiation are situational and shifting. Although presumed social markers may not apply to different areas, certain markers are sufficiently general to be applied to a variety of cultural contexts, both geographically and chronologically. For instance, meat-eating tends to have a greater social significance than the consumption of vegetables (Grant 2002: 17) and, therefore, archaeological faunal remains seem to be particularly well suited to the analysis of social differences.

Diet has received a great deal of attention from Spanish medievalists who have examined this topic through historical written sources (i.e. López Ojeda 2011). However, the use of these documents for exploring socio-economic status and cultural identities is problematic. For example, groups with lower socio-economic status are rarely represented and what and how people ate in the past were often treated as anecdotes of daily life. Available documents are less numerous and less precise for the beginning of the medieval period. Also, in the medieval context, the archaeologists’ frequent lack of awareness of the written sources has been highlighted (Quirós 2013).

For understanding social complexity, medieval archaeology in Spain has traditionally relied on material culture (such as grave goods, fine pottery, etc.). In the last two decades, Spanish
medieval archaeology has experienced a remarkable development, mainly thanks to the adoption of new approaches that had traditionally been used in prehistoric archaeology, such as isotopic analysis (Alexander et al. 2015; Quirós 2013; Quirós et al. 2012). Among other disciplines, zooarchaeology has been greatly developed; however, most works are case-studies and synthesizing works are still rare. Some work has dealt with the possibility of identifying certain social groups in the Spanish medieval zooarchaeological record. The attempt has mainly relied on the comparison of different religious identities, such as Christian and Islamic (Morales et al. 2011) or Christian and Jewish (Valenzuela et al. 2014). The possibility of identifying certain socio-economic groups (wealthy/poor or religious observants), where foodways may have played an important role, remains, however, largely unexplored. We now have a remarkable amount of medieval faunal assemblages which have been studied. In this paper, for the first time, the possible markers for the identification of both socio-economic status and religious identity in the Iberian Peninsula during the Middle Ages (broadly, between the 6th and the 15th centuries) are explored through a review of the zooarchaeological evidence. The major aim of this work is to highlight the main patterns in order to contribute to the discussion over issues of status, identities, hierarchies and inequalities during the Middle Ages.

2. Materials and methods

This account considers published and unpublished zooarchaeological data, taking into account Iberian archaeological sites with well dated medieval faunal assemblages. Their location is shown in Figure 1. Two different types of information were recorded: NISP (Number of Identified Specimens)\(^1\) of the main domesticates (cattle, sheep/goat and pig) and the presence/absence of wild taxa.\(^2\) These data are available in the form of tables in the on-line supplementary materials: NISP is shown in Table S1, with the list of assemblages where more than 100 NISP are reported; information about wild taxa is shown in Tables S2 (mammals) and S3 (birds other than chicken). In all tables, the chronology of the site is shown, and the categories for type of site (rural, urban or castle) are used broadly and are based on the archaeologists’ interpretation of each site, in order to identify general trends. Moreover, notes about butchery and ageing were taken, where available. In order to carry out this analysis from a diachronic perspective, data have been grouped in three main chronological periods: Early Middle Ages (6th-10th c.), High Middle Ages (11th-12th c.) and Late Middle Ages (13th-15th c.).

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\(^1\) The methods for calculating the NISP may have differed between authors, and therefore we suggest checking the original publications for details on the methodology.

\(^2\) Fish have not been recorded due to problems related to recovery techniques and to the patchy data available.
The bibliographic references for these sites are shown also provided in the supplementary materials. In the tables, the categories for type of site (rural, urban or castle) have been adopted in a broad sense based on the archaeologists' interpretation of each site. Also, the sites have been classified as Christian or Islamic following more a political division than an actual religious one: by Christian we mean sites that were under the control of a feudal kingdom and by Islamic we refer to sites that were under the territory controlled by the Muslim state. However, it must be noticed that this does not necessarily mean that (all) population within a given site was Christian or Muslim. We know, for instance, that there were important Christian and Jewish minorities living in sites under Islamic rule, and Muslim and Jewish minorities in settlements under Christian rule (Meyerson & English 2000).

In total, data have been gathered for 60 archaeological sites and 85 period-assemblages with more than 100 NISP. 53 sites and 62 period-assemblages have provided remains of wild mammals, while birds were reported only in 36 sites and 40 period-assemblages.

Figure 1.

3. Results

Although much variation occurs between earlier and later medieval sites, between urban and rural sites, and between sites of different social status, some patterns emerge from the analysis that we present here. Domesticates predominate in every medieval faunal assemblage in the Iberian Peninsula, though species proportions vary significantly between different sites. Wild species are rare and only appear at specific sites. These may constitute trends related to the social status or the cultural identities of the inhabitants of the site. For this reason, in the following sections, two of the main potential zooarchaeological markers for socio-economic and cultural differentiation will be discussed: hunting evidence and meat consumption.

3.1. Food procurement - hunting

In Figures 2 and 3 the number of wild mammal taxa and birds (respectively) per number of sites are illustrated. Available evidence\(^3\) suggests that wild animals constituted a very marginal contribution to all faunal assemblages and the most common species are always the red deer, the rabbit and the goose. In general, there is no visible association of a particular species to a particular type of site, but some patterns emerge regarding the diversity of species. The

\(^3\)The complete list of sites used for this analysis is offered as supplementary on-line material; Table S2 provides the list of sites used to assess the presence or absence of wild mammals and Table S3, of birds other than chicken.
emerging pattern is different for mammals and birds. It seems that the diversity of wild mammals tends to be greater in Islamic than Christian sites. The diversity of birds is greater in both Christian and Islamic urban settlements, and specially high in Islamic towns, such as Silves, Santarém and Beja.

Peasants had marginal access to forest resources, as some wild mammals (and less often, birds) are found in most rural sites. High status social groups consumed wild mammals and birds more often, and had access to a wider range of species. At peasant sites such as El Pelícano, La Indiana or Zornoztegi, red deer and rabbit are the most common (and often the only) wild mammals. These two species are the predominant wild resources at high status sites too, but other wild mammals are also found: for example, remains of Spanish ibex (Capra pyrenaica) were found in the castles of Aitzorrotz, Ambra, Petrer and La Mola. Other wild species sporadically found at high status sites include roe deer (Capreolus capreolus) (the castles of Aitzorrotz and Peñafulerruz), wild boar (Sus scrofa) (Aitzorrotz, Desolado de Rada or El Pelíciano 4) and badger (Meles meles) (the castles of Albarracín and Ambra).

Further remains of wild mammals include various fragments of cetaceans that have been reported at La Solana, Santarém, the castle of Paderne, Ribat de Arrifana and Silves. Dolphin bones were retrieved at medieval Pontevedra (López 2012: 368-369) and a whale rib at medieval Górliz (pers. comm. J.A. Quirós). With the exception of the latter, the association between cetacean remains and high status sites seems clear. Moreover, the importance of water resources in medieval diet in Spain remains unclear from a zooarchaeological perspective: fish remains have not been included in this review, due to the scarcity of available evidence. This is due to various factors including the paucity of specialists and the rarity of sieved medieval faunal assemblages in Spain.

Regarding birds, the most common species are goose (Anser) (Peñafulerruz, Estavillo or Silves) and partridge (Alectoris) (Estavillo, La Torrecilla or La Solana), but other species also occur. Archaeological remains of raptors are fairly scarce, and include evidence uncovered from early medieval contexts at Buzanca (an articulated female goshawk -Accipiter gentilis) and at Begastri (a tibiotarsus of the same species) (Llorente et al. 2010). Other remains of raptors have been found in later contexts in the Basque Country and include golden eagle (Aquila chrysaetos) at late medieval Desolado de Rada and the castle of Aitzorrotz, and black kite (Milvus migrans) dated to the 15th-16th centuries at Clarisas (Salvatierra-Agurain). Of these, however, only the articulated female goshawk retrieved at Buzanca provides a strong indication of falconry.
Remains of terrestrial chelonians have been reported from a number of sites, such as Prado de los Galápagos, La Huelga, El Pelícano 9, Besalú or Paderne. This type of remains have not received much attention until now and their number is still insufficient to infer anything about their consumption. The presence of wild animals is not the only possible indicator of high social status. In the following section, other dietary markers for socio-economic and cultural differentiation are examined.

3.2. Cuisine - Meat consumption

In the following graphs (Figures 4 to 8), the proportions (by NISP) of the main domesticates are examined. The chronological divisions made are as follows: Early Middle Ages (6th-10th centuries AD), High Middle Ages (11th-12th centuries AD) and Late Middle Ages (13th-15th centuries AD).

In Figure 4, the relative proportion of sheep/goat compared to cattle and pig is shown. The most frequent taxon in most sites is sheep/goat. These animals constituted a valuable resource, especially in rural settlements. They provided wool and milk during their life and, once they were old, they were slaughtered and consumed. During the Early and High Middle Ages, this taxon was more frequent in urban areas. During the Late Middle Ages, sheep/goat reached similar proportions at the three types of sites. A possible interpretation of the generalized importance of sheep/goat is related to the importance that sheep/goat (but especially sheep) animal husbandry acquired in the Iberian Peninsula for wool production and exportation.

Figure 4

In Figure 5, the relative proportion of cattle compared to other domesticates is shown. In most sites cattle is the second most frequent taxon. During the Early and High Middle Ages, it appears to be especially common in rural sites, where it was mainly used because of its traction power, for ploughing. We can observe, however, a progressive increase of cattle remains in urban sites during the Middle Ages, where beef probably contributed more to the diet than in rural settlements.

Figure 5

A comparison of the relative proportions of pig remains with cattle and sheep/goat from a number of medieval sites from the Iberian Peninsula (excluding Islamic sites) (Figure 6), shows that the consumption of pork differed substantially between the different types of sites and through time. However, the proportion of pig in rural and urban sites remained low (in comparison with other domesticates) throughout the Middle Ages. The consumption of pig was higher in rural sites than in urban settlements during all the medieval period. In high social status sites, such as castles, the consumption of pig was especially high during the High Middle
Ages, when it can really be considered a clear social status marker. In the Iberian Peninsula, the consumption of pig was not a clear status social marker during the Early and Late Middle Ages - as it is visible in Figure 6, the proportion of pig in castles is not remarkably higher than in rural sites. It is also clear that the consumption of pig was not a characteristic of urban diets during all the Middle Ages.

When comparing the relative frequencies of the main domestic taxa, significant differences between Islamic and Christian sites are expected, mainly due to the different dietary requirements of each religion, but also due to differences in their respective economic systems. In Figures 7 and 8, the relative frequencies of domesticates from a number of Islamic and Christian sites dated to the High Middle Ages (Figure 7) and Late Middle Ages (Figure 8) is compared. As mentioned in section 2, ‘Islamic’ and ‘Christian’ are not here used as religious categories, but political instead. By ‘Islamic’ we mean those sites that belong to the Andalusian state, while by ‘Christian’ we mean those settlements that were inside Christian Kingdoms in the Iberian Peninsula; indeed, different religious communities were living in both regions. During the High Middle Ages, the percentages of cattle and sheep/goat in rural sites, both Christian and Islamic, are quite similar, probably as a consequence of productive diversification and the importance of bovine traction in agriculture. Despite the much lower frequency of pig remains on Islamic sites, the similar proportion of cattle and sheep/goats is perhaps reflecting similar economic approaches among people of lower status, regardless of their religion. Suid remains at Islamic settlements are marginal, especially in urban sites. Very high frequencies of sheep/goat have been identified in Islamic urban areas and castles.

Some changes are visible when data from high and late medieval Islamic sites are compared. The proportion of pig remains increased in Islamic sites over the later period. Also, the high proportion of cattle remains in the only late medieval rural site (Alquería de Arge) indicates a possible shift in animal husbandry practices towards a more specialized economy and intensive farming in the Islamic rural economy.

4. Discussion
We have mentioned in section 1 the inherent difficulties of determining markers for social differentiation that are valid for a variety of times and locations. However, a great deal of zooarchaeological literature dealing with the Middle Ages has been dedicated to identifying 'high-status' patterns of consumption, and most authors agree that the main zooarchaeological markers for identifying these are the following: a high number and variety of species, the
presence of game and wild birds, the presence of certain species that are related to high status by regulations and/or fashions, the presence of rare and/or expensive species, a high proportion of young animals, and a high proportion of selected meaty body parts (Crabtree 1990; Grant 2002; Ashby 2002; Ervynck et al. 2003; Serjeantson 2009; Woolgar et al. 2009; Bartosiewicz et al. 2010; Kuehtreiber 2010; Rehazek & Marti-Graedel 2010; Kuechelmann, 2012: 88-89). The relevance of these markers for the medieval Iberian Peninsula is examined in the following sections.

4.1. Food procurement - hunting

In the early medieval period, hunting was an important economic activity for people of different social status, as a supplementary meat contribution to diet. This has been explained as a consequence of the generalization of the exploitation of uncultivated areas that followed the end of the Roman Empire (Montanari 1993). In fact, the Visigothic law codes did not restrict hunting to the nobility (Salisbury 1994). Progressively, hunting became one of the most important elements for social differentiation of the secular elites (Ashby 2002; Sykes 2005; Pluskowski 2010). This association has been found in most European countries, such as England (Albarella & Davis 1996; Sykes 2004), Italy (De Venuto 2007), France (Clavel 2001), Germany, Switzerland and Austria (Kühtreiber 2010) and Scandinavia (Andrén 1997). In the Iberian Peninsula, some authors have suggested that this association between hunting and high status did not occur until the Late Middle Ages, due to the progressive restriction to access forest resources (Caro 2006). There were various reasons for this, such as the progressive strength of social elites, the demographic increase, the extension of cultivated lands, and the increasing control that cities had on their hinterlands (Montanari 1979), all of which limited the access of peasantry to communal lands for hunting.

In zooarchaeology, hunting is normally examined indirectly - in many cases, it is not wild animals themselves what were elements of high status, but the methods to procure them (hunting and hawking, for instance). In any case, available evidence in the Iberian Peninsula suggests that, although wild resources played a secondary role in the diet of all social groups, they are more frequent and varied at those sites where there is evidence of social hierarchies. In fact, it seems that wild mammals and birds did not substantially contribute to the diet of low status communities in the medieval Iberian Peninsula (Grau 2014), where the main wild animals were red deer and rabbit. It also seems that the diversity of wild mammals tends to be greater in Islamic than Christian sites. This confirms a trend that had already been identified for early Islamic sites (Morales et al. 2011). Our results also suggest that a high diversity of bird species was present in urban settlements, both Islamic and Christian.
The earliest archaeological evidence for falconry in Europe is dated to late Roman times (Prummel 1997), but the high frequency of wild birds in general, and birds of prey in particular, during the 7th-9th centuries suggests that this practice became more widespread later on in Britain and northern Europe (Murphy et al. 2000). The possession of birds of prey was not restricted to high status social groups (Montanari 1979), but these were undoubtedly more likely to be able to afford the costs of keeping and training a bird for hawking (Cherryson 2002). Available evidence in the Iberian Peninsula is scarce so far, but it seems to support the trend suggested for northern Europe: falconry arrived to the Iberian Peninsula in Visigothic times, when it was also practiced in rural sites, and perhaps it became a more common practice in the later centuries of the Middle Ages.

The occurrence of cetacean fragments in medieval contexts from the Iberian Peninsula has been reported, but it has not received much attention yet. This is surprising, considering the importance of the consumption of cetaceans as high status food (Gardiner 1997) in the medieval period, as well as the importance that whale hunting and the commercialization of its products had, especially during post-medieval times in the Basque Country (Azkárate et al. 1992). The scarce evidence reported so far seems to confirm, in general, that the occurrence of cetaceans in the faunal assemblages may be related to 'high status sites'.

4.2. Cuisine-meat consumption

4.2.1. Socio-economic differences in Christian settlements

Our analysis shows the central role of sheep and goat in the medieval economic system of the Iberian Peninsula. In rural sites, these animals were of key importance for wool, milk, meat and dung production (Davis 2002: 57-58). Moreover, their small size made them ideal for domestic consumption, unlike cattle, that required special preservation techniques or communal celebrations in order to use the large amount of meat produced by a single animal. It has also been observed here that the overall frequencies of sheep increased through time, perhaps in relation with the key role of wool production and trade in medieval Iberia. Our results also show that the consumption of mutton was important in urban settlements.

The ratio between sheep and goat could potentially be an interesting indication of status or wealth, as Ribeiro has suggested for modern Portugal (Ribeiro 1995: 404). The same author also noted that the ratio is also linked to the nature of the terrain. However, the available evidence to explore this subject in medieval times in Iberia is still too scarce. For now, it remains a topic worthy of future exploration.

Regarding cattle remains, they seem to be specially common in rural sites, where they were of key importance as traction animals for agricultural purposes and transport. We can also observe a progressive increase of cattle remains in urban sites during the Middle Ages, where beef
probably contributed more to the diet than in rural settlements (as mentioned above, dealing with the meat yield of a complete carcass of cattle in a rural settlement is complicated). This is perhaps related to the concentration of wealth in medieval cities for the later centuries and to the efficient redistribution system in urban areas (Albarella 2005).

The consumption of pig was higher in rural sites than in urban settlements during all the medieval period. We must consider the possibility of pork being consumed as preserved food by social groups of low social status (Albarella 2006: 86). However, it is also visible that pigs predominate in high status sites dated to the High Middle Ages; nonetheless, it is quite likely that this high frequency is not really reflecting an increased amount of pork consumption, but rather a higher consumption of meat in general in this type of sites. The consumption of pork decreased in later high status sites; perhaps the consumption of pork lost its social significance for the aristocracy (Albarella 2006: 80) or the spread of enclosing techniques for raising pigs probably contributed to keep these animals at a more domestic level (for example, being kept in sties or fed with domestic refuse). It is also possible, however, that pork was never considered high status food. In an economy based mainly on raising animals for meat, meat producing livestock such as pigs would be proportionally better represented in the faunal assemblages (Albarella & Davis 1996: 20). In this case, the high social status marker would be the consumption of meat, but not specifically of pork and recent isotopic analysis confirmed this idea: analysis of stable isotopes conducted on human and faunal remains from the Basque Country has pointed out that the consumption of meat was a high social status marker, with a higher protein consumption identified at elites sites (Quirós 2013), and a differential access to proteins has also been seen between men and women at some of these sites (Quirós 2013: 28).

Evidence from other European regions, such as England (Grant 2002; Ashby 2002; Thomas 2007) and France (Durand & Leveau 2004), suggest that the consumption of pork could be considered as a high social status marker during the Middle Ages. However, as mentioned above, we suggest that the characteristic of high social status would be the consumption of meat in general, and not of pork in particular, as meat producing animals, such as pig, would be more frequent in meat producing economies. In words of Ashby (2002), “the rich could afford the luxury of non-working livestock”, such as the pig, while peasants rarely kept livestock solely for meat. Eating meat had, per se, a great social significance (Dyer 1983), and this has been supported by isotopic analyses in Spain (Quirós 2013).

Other species of domestic animals may have been considered as high status food during the Middle Ages. This is the case of rabbits, which were domesticated in French monasteries around 600 AD (Carneiro et al. 2011). They were considered luxury foodstuffs in several European regions (Ervynck et al. 2003). In the Iberian Peninsula, where they were native, remains of rabbits (and lagomorphs in general) are generally not especially numerous, but are
present in most of the sites shown in our survey. It is also possible that some of these rabbits are intrusions from later layers, due to their burrowing habits. Thus, it is not clear if the rabbit was considered a high status foodstuff in the Iberian Peninsula during the Middle Ages.

Other two aspects related to meat consumption may be central to the study of identity through zooarchaeological remains: the kill-off patterns and the butchery patterns (anatomical distributions and cut marks). A detailed comparative analysis of butchery techniques and kill-off patterns has not been made here, as data are not always available and methods vary between authors. Butchery techniques and the predominance of certain anatomical parts can be useful indicators of cultural differences, as it has been explored when comparing medieval Christian, Muslim and Jewish populations from the Iberian Peninsula (Morales 1988; Valenzuela et al. 2014).

Moreover, the consumption of certain anatomical parts or cuts of meat can be an indicator of socio-economic differentiation. However, particular patterns for the selection of certain anatomical elements have not been pointed out in the literature. Killing animals at a young age may be an indicator of high social status. The meat of young animals is more tender, but its consumption also implies not very profitable animal husbandry strategies. The use of different ageing techniques by Iberian zooarchaeologists, unfortunately, does not allow to directly compare data from different sites. However, zooarchaeological evidence shows that domesticates were killed at a younger age at some of the sites where there is clear archaeological evidence of high social status. Domesticates were generally raised in medieval sites in the Iberian Peninsula because of their value in providing secondary products (traction, wool, milk), rather than for the consumption of their meat, although they were consumed when they were no longer useful for this main purpose (Grau 2014).

### 4.2.2. Religious identity

Dietary differences are to be expected between different religious communities; as it is well known, both Islam and Judaism have a strict dietary code (i.e. kosher, halal) that regulates what people can, must not and should not eat (for example, pig), and therefore particular markers could be expected in the zooarchaeological evidence, such as the lack of particular species (e.g. absence of pig bones in Islamic and Jewish communities) or certain butchery practices (e.g. absence of hind limbs in Jewish assemblages) (Armitage 1984; Insoll 1999; Morales et al. 2011; Valenzuela et al. 2014). Jewish consumption patterns are beyond the scope of this paper: zooarchaeologically they are difficult to identify, because they always constituted minorities within broader communities of a different religion. But, differences in meat consumption between settlements under Christian and Islamic rules have been analysed here.
Mundee (2010) showed that there were no substantial dietary differences between Islamic and Christian populations in the north-eastern and eastern Iberian Peninsula that she examined. However, these results were only considering the bulk protein contribution to their diet, and not more specific dissimilarities, while zooarchaeology can certainly contribute to clarify this aspect, by offering species specific information.

Very similar economic patterns emerge in the zooarchaeological assemblages from rural sites, regardless of their religious identity. This fact suggests that social and economical factors may have played a more important role than religious factors in the consumption patterns among rural communities.

The most significant difference is that related to the consumption of pork. Pigs always had a marginal role in Islamic sites. However, a few number of suid remains are always found at these settlements; it is possible that suid remains (or a percentage of them) belong in fact to wild boars, which may be consumed according to Islamic religion (Morales et al. 2011). Perhaps populations at rural sites and castles had greater access to forest resources and could consume some wild boar. It is also possible that this small percentage of pork was consumed by mozárabes (Christians that remained unconverted in Al-Andalus). In fact, biometrical analysis carried out in the suid remains from Santarém proved that both pigs and wild boars were present in the Islamic contexts (Davis 2006), and the same was suggested too for Silves (Davis et al. 2008). The increase of pig proportions in later Islamic periods shows an apparent relaxation on the prohibition against pork consumption is shown by the greater proportion of suid remains in Islamic sites of the later period. It could also reflect an increase of Christian population under Islamic rule. However, it should also be noticed that the data derive from a small number of sites. As such, these important questions are in need of further exploration.

The high frequencies of sheep/goat in Islamic urban areas and castles are probably related to the great importance of mutton and lamb in the Muslim diet. Indeed, mutton and lamb are given a high esteem in the Islamic world also nowadays (i.e. Khayat & Keatinge 1959).

Moreover, “luxury foods are also products derived from animals that are killed before their optimal slaughter age (defined as the point in life in which the balance between the cumulative costs of food input versus the value of meat weight gained has reached its optimum)” (Ervynck et al. 2003: 433). A marked consumption of young animals, especially pigs, was considered a characteristic of aristocratic diets. In Italian medieval castles, young domesticates and a wide variety of wild resources have been recorded (Baker & Clark 1993). In early medieval France, the consumption of suckling pork and lamb was considered a luxury (Durand & Leveau 2004). Although the Iberian evidence is still scarce, it seems to point in the same direction.
5. Conclusion

Summing up, data from medieval Iberia suggest that the main zooarchaeological markers for socio-economic differentiation were the following: the consumption of meat, the consumption of young domesticates, and the consumption of a wide variety of food. Moreover, this review has showed that the concept of aristocratic food probably changed throughout the medieval period.

It has been noted that results from bulk carbon and nitrogen isotopic data can fall short on enabling nuanced interpretations of faith differences in diet (Alexander et al. 2015). The zooarchaeological data presented here, on the other hand, provides species specific information that can shed further light on this issue. Both techniques or approaches have therefore a great potential when used in combination. Our analysis suggest that there is in fact a significant limited consumption of pork in Islamic settlements (perhaps substituted by mutton in Islamic urban and high status sites, where sheep reaches very high proportions). However, this work has also shown that internal socio-economical variability within populations of differing faith exerted a great influence on the local diet, and therefore dietary differences cannot only be interpreted from a cultural perspective.

This paper synthesizes published and unpublished faunal data from medieval archaeological sites in the Iberian Peninsula, aiming to identify zooarchaeological evidence that can help understanding socio-economic status and cultural identities. Such evidence is certainly partial and incomplete and need to be considered together with documents and other archaeological evidence. Nonetheless, there is now a remarkable body of zooarchaeological data enabling the exploration of these important research topics. This paper has shown that dietary differences cannot be explored merely on the basis of different religious identities; socio-economic status also played a great role in foodways. Of course, variations occur, but it is the focus of this paper to highlight the main trends in order to contribute to the increasing academic discussion over issues of status, identities, hierarchies and inequalities during the Middle Ages.

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through zooarchaeology and taphonomy. Two examples from Medieval Catalonia (North-


Figure captions

Figure 1. Location of the medieval sites mentioned in the text.

Figure 2. Number of medieval sites in the Iberian Peninsula with wild mammal taxa (from 0 to
7 taxa).

Figure 3. Number of medieval sites in the Iberian Peninsula with wild bird taxa (from 0 to
more than 7 taxa).

Figure 4. Average relative frequency (%) of sheep/goat NISP compared to cattle and pig in
various sites from the Iberian Peninsula (Islamic excluded). Only faunal assemblages larger
than 100 NISP (cattle+sheep/goat+pig) have been used. Inside the columns, number of sites.

Figure 5. Average relative frequency (%) of cattle NISP compared to pig and sheep/goat in
various sites from the Iberian Peninsula (Islamic excluded). Only faunal assemblages larger
than 100 NISP (cattle+sheep/goat+pig) have been used. Inside the columns, number of sites.

Figure 6. Average relative frequency (%) of pig NISP compared to cattle and sheep/goat in
various sites from the Iberian Peninsula (Islamic excluded). Only faunal assemblages larger
than 100 NISP (cattle+sheep/goat+pig) have been used. Inside the columns, number of sites.

Figure 7. Average relative frequency (%) of cattle, sheep/goat and pig NISP from various high
medieval sites from the Iberian Peninsula, comparing Islamic and Christian settlements. Only
faunal assemblages larger than 100 NISP (cattle+sheep/goat+pig) have been used. "N": number of sites.

Figure 8. Average relative frequency (%) of cattle, sheep/goat and pig NISP from various late medieval sites from the Iberian Peninsula, comparing Islamic and Christian settlements. Only faunal assemblages larger than 100 NISP (cattle+sheep/goat+pig) have been used. "N": number of sites.