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Zooarchaeological evidence for domestic rituals in the Iron Age communities of north-eastern Iberia (present-day Catalonia) (6th-2nd century BC)				
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Revista	Oxford Journal of Archaeology. Volume 32, Issue 2 , May 2013, Pages 163-186			
DOI	http://dx.doi.org/10.1111/ojoa.12008			
Disponible en línia	8/4/2013	Data de publicació	5/2013	
Per citar aquest document: Belarte, M. C. and Valenzuela-Lamas, S. (2013), Zooarchaeological Evidence for Domestic Rituals in the Iron Age Communities of North-Eastern Iberia (Present-Day Catalonia) (Sixth–Second Century BC). Oxford Journal of Archaeology, 32: 163–186. doi:10.1111/ojoa.12008				
Aquest arxiu PDF conté el manuscrit acceptat per a la seva publicació.				

Summary

Many socio-economic changes occurred in southern Europe during the first millennium BC. In north-eastern Iberia societies evolved from the small-scale local groups of the Late Bronze Age to the more complex societies of the Iron Age. Together with a diversity of material changes (detected in pottery, agricultural techniques, architecture, etc.), a new ritual manifestation is attested in the Ancient Iberian Period (about 550 BC), lasting until some time after the Roman conquest. This consisted of sheep and goats (among other species) being carefully deposited below the floors of some domestic buildings. In this article the characteristics of these associated bone groups are described and their significance is discussed.

Introduction

Ritual practices involving animals are common in many different cultures and are characteristic of different cultural groups. Consequently, they can be used as indicators of cultural changes.

In north-eastern Iberia (present-day Catalonia), a process of increasing social complexity is attested during the Iron Age (Sanmartí [2001a](#); [2004](#); [2009a](#); Sanmartí *et al.* [2006](#)). Beginning around 550 BC major material changes are evidenced in the archaeological record, originating what is known as the Iberian culture, which developed until the Roman conquest (second–first century BC). These changes included the spread of iron tools, as well as wheel-thrown pottery and rotary quern stones (Sanmartí and Santacana [2005](#)). In ritual practices, a new kind of manifestation is attested that coincides with the period during which the Iberian culture developed. This consisted of associated bone groups (thereafter ABGs, *sensu* Morris [2010](#)) involving mainly sheep and goats, but also pigs, dogs and domestic fowl, placed below the floor in domestic contexts. This paper aims to:

- Assess the kind of site and archaeological context in which these ABGs are identified.
- Analyse the faunal remains in order to characterize these deposits in relation to the species involved, the age at death and the butchery pattern.
- Develop a hypothesis that helps to understand these ABGs in the context of a growing social complexity attested during the Iron Age in the north-eastern Iberian Peninsula.

Ritual and feasting

The concept of ‘ritual’ has been the subject of much discussion among anthropologists and archaeologists. For some, such as Durkheim ([1912](#)), ritual is linked to religious or symbolic practices and is seen as the opposite of the practical activities of daily life. For them there is a ritual vs. secular or sacred vs. profane dichotomy as universal categories of human thought. Other researchers from both anthropology (Rappaport [1999](#), 24–5) and archaeology (Brück [1999](#), 317–20; Bradley [2003](#), 11–12) claim that the ritual is not only linked to religious beliefs, but is also related to daily life and the secular sphere.

In this paper, the authors consider rituals to be repeated actions following a regular pattern (Bradley [2003](#), 8). Such practices are not easily detected at archaeological sites, as there is no evidence of the ritual itself, although specific finds may allow us to reconstruct at least part of the ritual process. The indicators of ritual activities may be similar to those

of domestic activities and may even be deposited in domestic spaces. Nevertheless, they can be differentiated from other activities, as they were performed with a certain formality (Merrifield [1987](#); Grant [1989](#); Bradley [2003](#); [2005](#)).

After identification in the archaeological record, a second difficulty is the interpretation of the intentionality of the ritual; even though it may be recognizable, it may not be easily explicable (López Bertran and Vives-Ferrándiz [2009](#), 164). As a rule, we will consider that ritual practices were carried out in order to obtain a beneficial result for the household or the community.

Ritual actions may be performed in a public or domestic context; they may be conducted by a restricted group or involve the majority of the community, particularly when consumption is included (Dietler [2001](#)). They may be specific to a cultural group and differ substantially from one region to another. Thus, their study can be useful for defining cultural groups or social identities and they can be used to track the extent and progression of acculturation processes.

Recent research into rituality has paid particular attention to commensality and feasts as types of ritual activity centred on food and drink consumption as part of special occasions (Dietler [1996](#); [2001](#); Hayden [2001](#); Diloli and Sardà [2009](#); López-Bertran and Vives-Ferrándiz [2009](#); Aranda-Jiménez *et al.* [2011](#)). Eating is a daily practice that may be emphasized at specific times and 'ritualized' as a way of reinforcing social cohesion (Dietler [2001](#); Halstead [2004](#)). Moreover, sacrifice and feasting appear to be strongly related (Wilson [1992](#)). It is from this insight that the ABGs located within the Iberian domestic buildings are interpreted in this paper.

The Iberian societies

The Iberian culture (sixth–second century BC) developed in the eastern Iberian Peninsula. Iberian populations were the result of the evolution of the small-scale societies of the Late Bronze Age into more complex ones, organized in political entities of a certain territorial extent (Sanmartí [2001a](#); [2004](#); [2009a](#); Sanmartí *et al.* [2006](#), among others).

According to recent research, each Iberian territory contained settlements with different categories and functions (towns of different sizes, villages, fortified sites and rural settlements) that were organized following a hierarchical pattern and according to a proto-state structure, at least by the Classical Iberian Period (fourth–third century BC) (Asensio *et al.* [1998](#); Sanmartí [2002](#)), but also probably from the sixth to the fifth century BC (Sanmartí *et al.* [2006](#), 153). The hierarchical structure of the settlement patterns is also reflected in the internal organization of the different types of settlement (Belarte [2008](#)). Based on territorial studies (Grau [2003](#); Sanmartí [2001b](#); [2002](#), 31–2; [2004](#), 23; Sanmartí and Santacana [2005](#), 31–73), the proposed boundaries between the different proto-states appear to correspond approximately to the different ethnic groups, as indicated by ancient sources such as Ptolemy (*Geographia*, II, 6) and Pliny the Elder (*Naturalis Historia*, III, 4, 20), as already suggested by Bosch Gimpera ([1932](#)).

The archaeological record reveals close trade links with other Mediterranean populations – Phoenicians and Greeks (Sanmartí and Asensio [2005](#); Sanmartí [2009b](#); Rouillard [2009](#)) – as well as an economy based on intensive cereal farming and animal husbandry, at least in the coastal zone (Sanmartí [2001a](#); Iborra [2004](#); Pérez-Jordà *et al.* [2007](#); López *et al.* [2011](#)). As far as mammal remains are concerned, sheep and goats were the most consumed species, followed by pigs and cattle (Albizuri and Nadal [1999](#); Franquesa *et al.* [2000](#); Valenzuela-Lamas [2008a](#); Albizuri *et al.* [2010](#); López *et al.* [2011](#)). Game is represented by

red deer and rabbits in very small proportions (usually less than 5% NISP), while equids and dogs did not form part of the usual meat diet, although they were eaten occasionally (Albizuri *et al.* [2010](#); López *et al.* [2011](#)).

Religion and ritual practices in the Iberian culture

Religion is one of the lesser known aspects of the Iberian culture (Almagro-Gorbea and Moneo [2000](#); Tortosa and Celestino [2010](#)). Several natural caves were used as shrines, where votive offerings have been documented (Aranegui and Prados [1998](#), 137). Urban shrines are also attested in the most important settlements. They are mainly identified by a particular architectural pattern, as well as by offerings and objects of worship, particularly terracotta figurines. We still know very little about the Iberian deities or the rituals performed at the shrines, although several specific practices have been interpreted as the result of ritual or religious activities (Belarte and Sanmartí [1997](#); Belarte and Chazelles [2011](#)).

In the northern area of the Iberian culture (present-day Catalonia) the majority of the buildings in the settlements appear to have been for domestic use, with shrines and other public buildings being largely absent. On the other hand, the practice of depositing ABGs in domestic contexts – whose religious purpose has often been proposed – is particularly well recorded in this area (Miró and Molist [1990](#); Casellas [1995](#); Belarte and Sanmartí [1997](#); Valenzuela-Lamas [2008b](#); Codina *et al.* [2009](#)).

Materials and methods

The sites containing ABGs in a domestic context are distributed throughout the Iberian territory. In the Catalan region, and according to the published data, we can count up to 14 sites where such practices have been attested (Fig. [1](#)). The types of settlements where these practices have been identified belong to different categories: main towns of more than 5 ha and with a complex urban layout (e.g. Puig de Sant Andreu, Girona), secondary towns between 2 and 3 ha (e.g. Turó de Ca n'Oliver, Barcelona), and sites of less than 1 ha, with possible diverse functions: fortified citadels (e.g. Alorda Park, Tarragona), villages (e.g. Penya del Moro and Puig Castellar, Barcelona), and rural settlements with specialized economic functions (e.g. Pontós, Girona). These ABGs seem, however, to be absent in dispersed small rural settlements or farms.

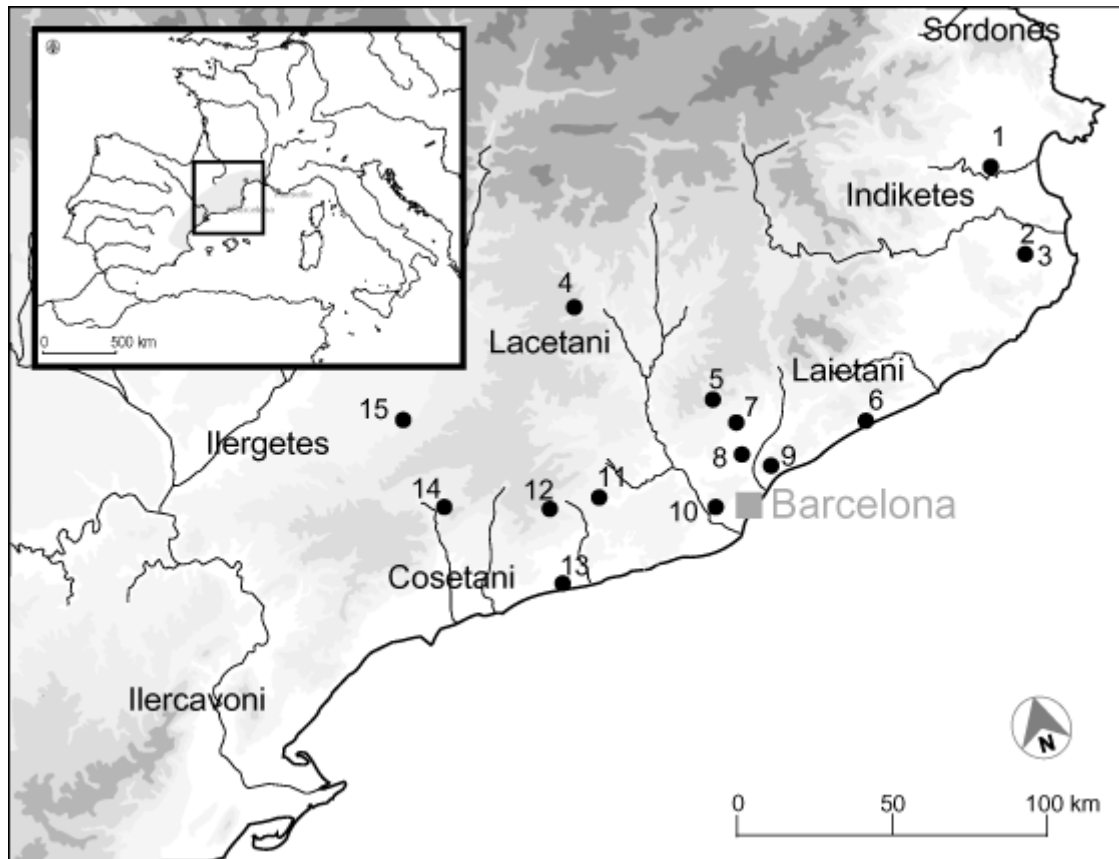


Figure 1.

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Situation of the zone studied and location of the sites named in this study. 1. Mas Castellar de Pontós; 2. Puig de Sant Andreu; 3. Illa d'en Reixac; 4. Sant Esteve d'Olius; 5. Turó del Montgrós; 6. Burriac; 7. Torre Roja; 8. Ca n'Oliver; 9. Puig Castellar; 10. Penya del Moro; 11. Turó de la Font de la Canya; 12. Olèrdola; 13. Alorda Park; 14. El Vilar de Valls; 15. Molí d'Espígol.

Of all the 15 sites shown in Figure 1, seven from the coastal area of Catalonia were chosen because of the quality of their evidence (level of preservation and chronological reliability) and the availability of data. We analysed three of them – Puig de Sant Andreu, Olèrdola and Alorda Park –, and compiled the other data from the literature, as follows: Illa d'en Reixac (Casellas [1993](#)), Turó de Ca n'Oliver (Albizuri [2011](#)), Puig Castellar (Nadal and Estrada [2003](#)) and Penya del Moro (Miró and Molist [1990](#)). These sites together provide a representative sample of this ritual practice.

In order to characterize the ABGs, we took into account their location, chronology, archaeological context and characteristics (species, age and anatomical representation). The presence or absence of anthropic marks (burning, cuts, etc.) was also considered.

A short description of the settlements

Starting from the north, the settlement of Puig de Sant Andreu (Ullastret, Girona) was occupied from the seventh to the second century BC. The site covers about 9 ha and is considered to be the main town of the *Indiketia* area. The recent research carried out by A. Martín focused on the excavation of a complex aristocratic dwelling with multiple rooms covering about 800 sq m (Martín *et al.* [2004](#)). The foundation layers of this house, which date from the fourth century, contained up to 73 ABGs (Codina *et al.* [2009](#)).

Four hundred metres from Puig de Sant Andreu, another site, Illa d'en Reixac (also in the municipality of Ullastret), covered about 6 ha and was occupied from the seventh to the second century. The houses were somewhat simpler than those of Puig de Sant Andreu, and a complex building devoted to ritual activities was identified (Martín *et al.* [1997](#)). Both the houses and the sacred building contained several ABGs.

In *Laietania* (the area of present-day Barcelona), Turó de Ca n'Oliver is an important town covering more than 1 ha on the top and slopes of a hill, with rows of houses staggered at different levels. The site was inhabited from the end of the sixth century to the first century BC and underwent several reconstructions and dwelling refurbishments (Barberà *et al.* [1960–1961](#); Francès *et al.* [2005](#)). A large number of ABGs corresponding mainly to the fourth and third centuries BC – the Classical Iberian Period – have been detected (Albizuri [1990](#); Francès *et al.* [2005](#); Albizuri [2011](#)).

Near the modern city of Barcelona, Puig Castellar is a rural settlement of 4000 sq m that was occupied from the middle of the fifth century to the third century BC (Ferrer and Rigo [2003](#)). The site consisted of different types of houses, all of which had a rather simple structure and small surface areas. Much of the excavation was carried out in the early twentieth century, but in the later excavations two ABGs were recovered (Nadal and Estrada [2003](#)).

In the same region, about 20 km from Puig Castellar, Peña del Moro is a site dating from the end of the fifth century and the fourth century BC. The excavated area (about 2000 sq m) suggests that it was a village of a few thousand square metres consisting of several rows of houses built on the slopes of a hill. Many of them contained either one or several ABGs under their earthen floors, sometimes in the room containing the hearth. Twenty-seven ABGs have been documented at this site (Barberà [2000](#)).

Further to the south, Olèrdola, in the *Cosetania* area, is an important 3.5 ha settlement on the top of a rocky mountain. The site was occupied from the Neolithic to the Middle Ages. The remains belonging to the Iberian period were considerably altered by the medieval occupation, although several structures from the fourth to the second century have been preserved and analysed (Molist [2009](#)), and in one of them an ABG was found (Valenzuela-Lamas [2009](#)).

Finally, Alorda Park, in the same region, has been defined as a fortified citadel with residential function. It has a surface area of 3000 sq m and was occupied from the end of the sixth century to the second century BC, with several occupational phases and rebuildings (Asensio *et al.* [2005](#)). The site has been completely excavated and a large number of ABGs (a total of 51) have been documented; they belong to all the occupation phases, although the majority date from the fourth and third centuries (Valenzuela-Lamas [2008b](#)).

Zooarchaeological analysis

Three sites – Puig de Sant Andreu, Olèrdola and Alorda Park –, totalling a number of 178 ABGs, were analysed directly by us. The species were determined with the help of the reference collection of the Laboratory of Archaeology at the University of Barcelona. Discrimination between sheep and goats was based on the characters described in Boessneck [1980](#), Halstead *et al.* [2002](#) and Helmer [2000](#). The age at slaughter was determined using both tooth eruption and wear, as well as epiphyseal fusion, on the basis of the works by Barone [1976](#), Gardeisen [1997](#) and Payne [1973](#). Burning and butchery marks were recorded as well, and interpreted following Vigne [1988](#).

Results

Location within buildings

Iberian ABGs are usually found in a small pit (about 30 cm in diameter and 30 cm deep) below an earthen floor, near a wall or the door (Figs. 2, 3 and 4). The animal is carefully deposited within (Fig. 5), sometimes in the room containing the hearth.

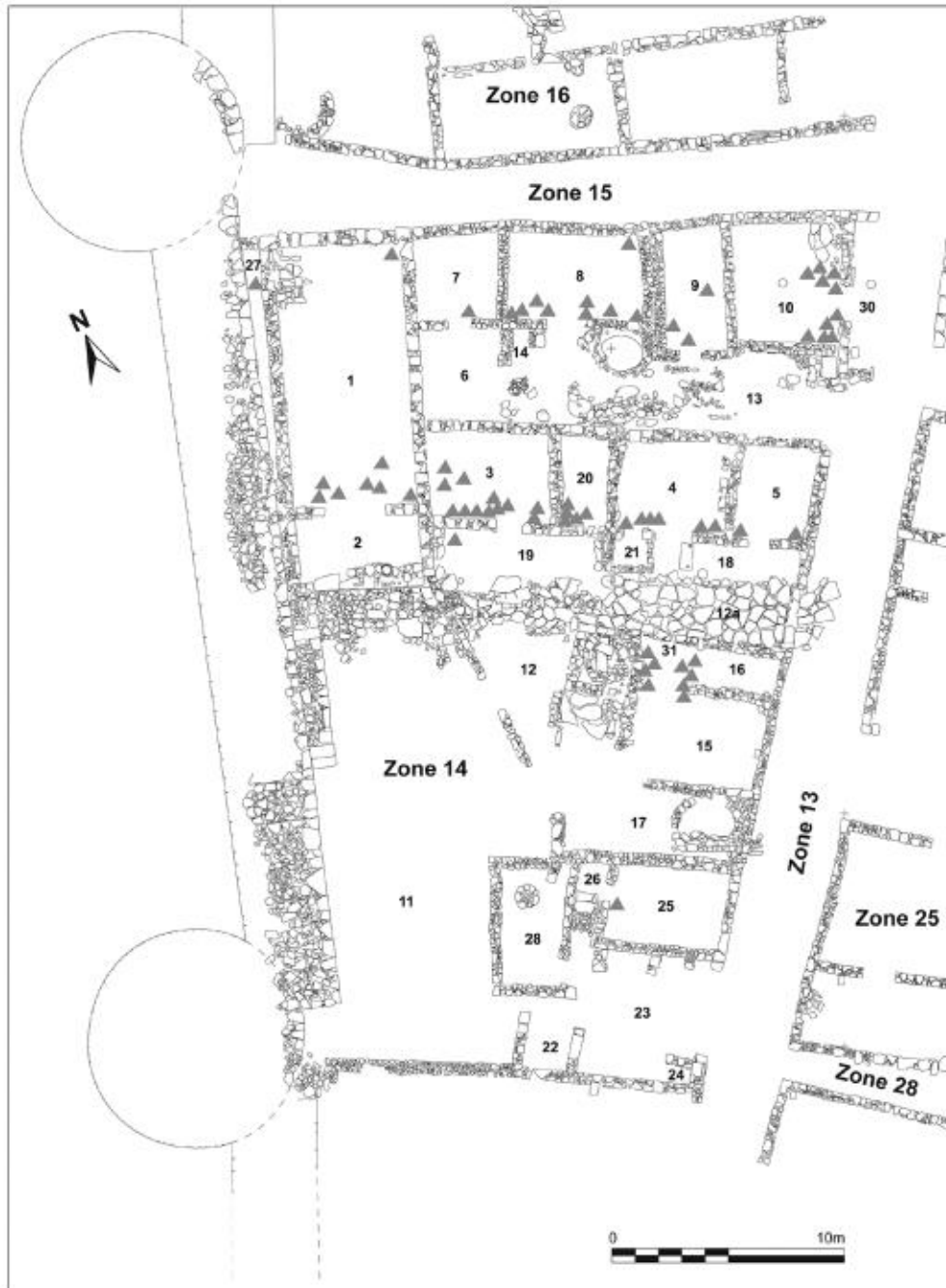


Figure 2.

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Location of the faunal deposits at the site of Puig de Sant Andreu (Ullastret, Girona) (after Codina *et al.* 2009, 140, fig. 3, modified).

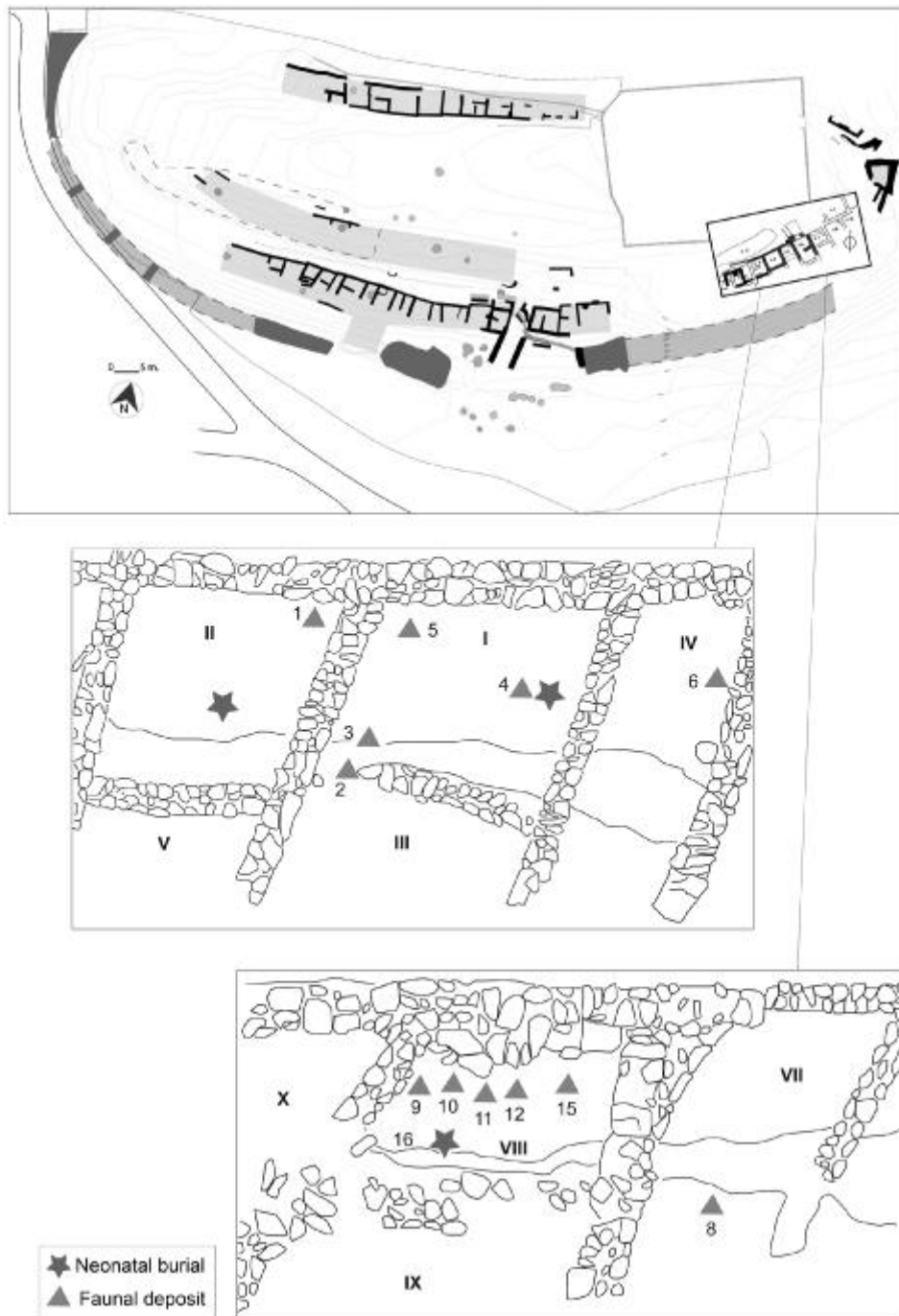


Figure 3.

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Plan of the site of Turó de Ca n'Oliver (Cerdanyola del Vallès, Barcelona) (after Joan Francès and Marc Guàrdia, unpublished) and location of the faunal deposits identified at the site during the excavations conducted by Josep Barberà (after Albizuri [1990](#), modified).

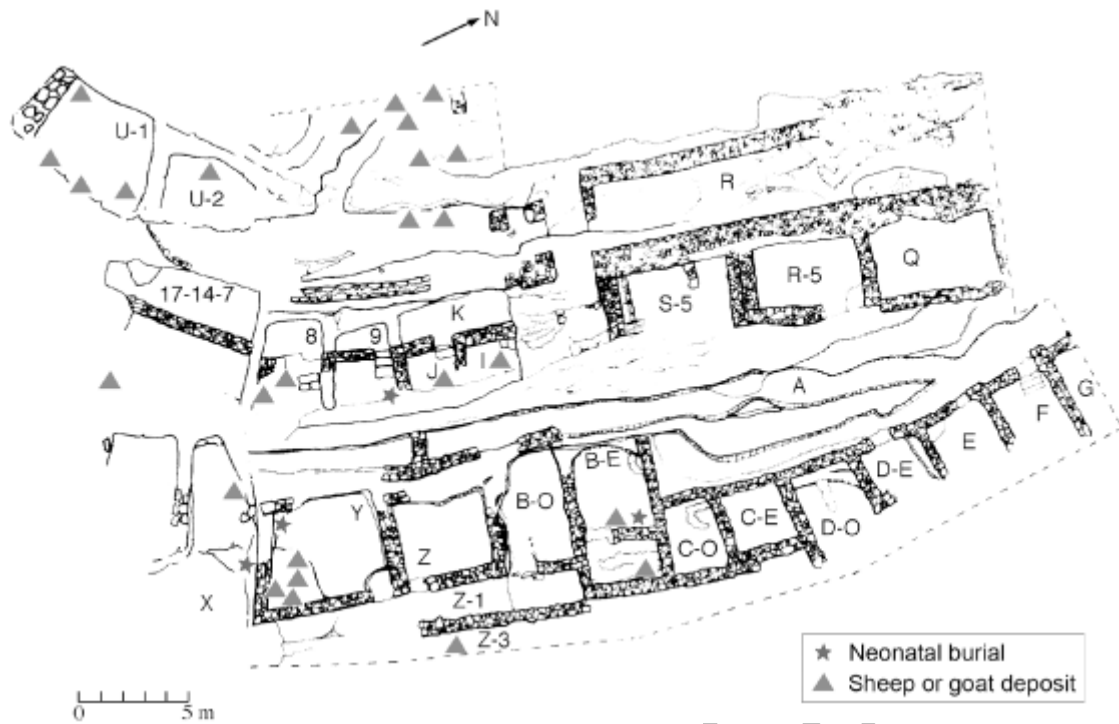


Figure 4.

[Open in figure viewer](#)

Location of the faunal deposits at the site of Peña del Moro (Sant Just Desvern, Barcelona).



Figure 5.

[Open in figure viewer](#)

Example of sheep deposits from Alorda Park. The animal is carefully deposited within a small pit, about 30 cm in diameter.

At most of the sites considered, with the exception of Puig Castellar and Olèrdola, there is more than one ABG in the same room. This is the case with Puig de Sant Andreu, where there are as many as 13 per room, or Peña del Moro, with four ABGs in one room, or even Alorda Park in Phase 2b, in which seven ABGs were recovered in Room AB (Fig. 6).

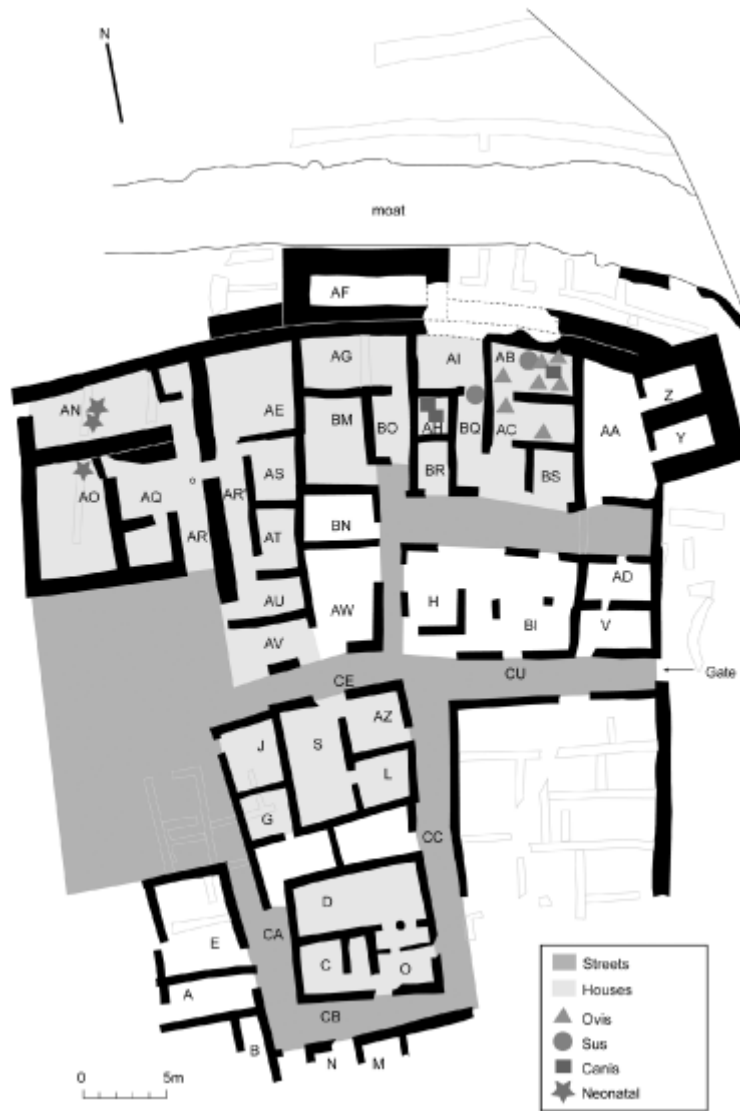


Figure 6.

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Location of the faunal deposits at the site of Alorda Park (Calafell, Tarragona) (after Valenzuela-Lamas [2008b](#), 154, modified).

Species and anatomical parts deposited

Table 1 lists the species and the total number of animals deposited at each site. Sheep and goats are by far the most common species, although pigs, domestic fowls and dogs were also buried in a similar way. Only Puig de Sant Andreu contains two ABGs composed of shells.

Table 1. Total number of animals deposited in the sites considered

Site/Species (MNI)	Sheep	Goat	OC	Dog	Fowl	Pig	Shells	Total	A	B	C	Total
1. Values in number of individuals. 2. OC = Ovis and Capra. 3. * Shells are counted per deposit (= two deposits represent about 40 shells each).												

Site/Species (MNI)	Sheep	Goat	OC	Dog	Fowl	Pig	Shells	Total	A	B	C	Total
Illa d'en Reixac	9	–	1	–	–	–	–	10	4	–	–	4
Puig de Sant Andreu	71	1	57	1	–	–	2*	130	37	3	1	41
Ca n'Oliver	24	1	4	2	2	–	–	33	5	1	6	12
Puig Castellar	1	–	–	–	1	–	–	2	1	–	–	1
Penya del Moro	6	6	1	–	–	–	–	13	3	2	8	13
Olèrdola	1	–	–	–	–	–	–	1	–	–	1	1
Alorda Park	39	–	–	4	–	4	–	47	2	5	32	39
TOTAL	151	8	63	7	3	4	2	236	52	11	48	111

Table 2 shows the anatomical representation of the Alorda Park ABGs, which are a good example of the whole. In the table, each column refers to one individual and each ABG is identified by a SU (stratigraphic unit) number. The anatomical elements present are represented by their MNE (Minimum Number of Elements, *sensu* Hesse and Wapnish 1985). It is apparent that a regular pattern is followed in the deposited anatomical parts, especially in the case of sheep. Most of them are represented only by the head (skull and mandible), together with the metapodials and phalanges (Table 2a and b; see also Fig. 5). In addition, two sheep carcasses (SU 10089 and 10432; Table 2c) were present with almost all their anatomical parts, including most of the carpal and tarsal bones, and three more (SU 8349, 10144 and 10158) were present with their long bones, vertebrae and ribs, but, significantly, both the skull and metapodials were absent. In general, the presence of carpal and tarsal bones was found to be rather erratic, probably due to taphonomic and recovery processes.

Table 2. Anatomical representation of the animals deposited in Alorda Park. Ovar = *Ovis aries* (sheep); sudo = *Sus domesticus* (pig); cafa = *Canis familiaris* (dog)

Species	ovar	ovar	ovar	ovar	ovar	ovar	ovar	ovar	ovar	ovar	ovar	ovar
Age (months)	6–9	3–4	>24	<24	3–4	3–4	48–72	18–24	9–18	3–4	60–96	48–72
Type	C	C	C	C?	C	C	C	C?	C	C	C	C
Chronology	6th–5th	6th–5th	6th–5th	6th–5th	6th–5th	6th	6th	5th–4th	5th–4th	5th–4th	5th–4th	5th–4th
SU	10135	10141	10143	10143	10145	8356	10160	8481	10004	10348	10361	10410
Skull	1	1	1		1	1	1		1	1	1	1

Mandible	2	2	2		2	2	2		2	2	2	2
Hyoid		2	2		2					2		2
Vertebrae												
Ribs												
Scapula												
Humerus												
Radius												
Ulna												
Carpals			1		2	1	1	1	5	2	4	2
Metacarpal	1	2	1	1	2	2	2	2	2	2	2	2
Pelvis												
Femur												
Patella												
Tibia												
Fibulae												
Talus		2										
Calcaneus		2										
Oth. tarsal		3				1			1	2	1	1
Metatarsal	1	2	1	1	2	2	2	2	2	2	2	2
1 phal.	1	8	2		8	8	6	7	6	8	5	7
2 phal.	1	6			7	5	4	6	2	8	4	7
3 phal.	1	6			6	7	5	8	3	8	4	8
TOTAL	8	36	10	2	32	29	23	26	24	37	25	34

Table 2b.

Species	ovar	ovar	ovar	ovar	ovar	ovar	ovar	ovar	ovar	ovar	ovar	ovar	ovar
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Age (months)	48-72	3-4	9-24	>24	>24	3-4	9-12	3-4	72-84	3-4	9-12	24-48	>24
Type	C	C	C	C?	C?	C	C	C	C	C	C	C	C
Chronology	5th-4th	5th-4th	5th-4th	5th-4th	5th-4th	5th-4th	3rd	3rd	3rd	3rd	3rd	3rd	3rd
SU	10412	10426a	10426b	10427	10434	10430	10109	10113	10122	10122b	10126	10129	10530
Skull	1	1	1			1	1	1	1	1	1	1	1
Mandible		2				2	2	2	2	2		2	2
Hyoid	1	2	1			2	1		2	1			
Vertebrae													
Ribs													
Scapula													
Humerus													
Radius													
Ulna													
Carpals	1	3	2	1			2		1	1		2	
Metacarpal	2	2	2	2	2	2	2	2	2	2	2	2	2
Pelvis													
Femur													
Patella													
Tibia													
Fibulae													
Talus													
Calcaneus													
Oth.	2	4	1				1			1	2		1

tarsal													
Metatarsal	1	2	1	2	2	2	2	2	2	2	2	2	2
1 phal.	5	7	3	8	8	6		3	8	7	8	7	6
2 phal.	4	7	4	2	7	1			5	4	5	4	4
3 phal.	4	8	5	2	6	1		1	4	8	3	3	4
TOTAL	21	38	20	17	25	17	11	11	27	29	23	23	22

Table 2c.

Species	ovar	ovar	ovar	ovar	ovar	ovar	sudo	sudo	sudo	sudo	cafa	cafa
Age (months)	3-4	2-3	>24	3-6	36-42	12-42	10-12	6-9	18-21	12-24	1-15	3-5
Type	A	A	B	B	B	B						
Chronology	3rd	5th-4th	6th	6th-5th	6th	5th-4th	3rd	3rd	5th-4th	5th-4th	3rd	5th-4th
SU	10089	10432	8349	10144	10158	10370	8434	10108	10393	10414	10121	10372
Skull	1	1					1	1	1	1	1	1
Mandible	2	2					2		2	2	2	2
Hyoid												
Vertebrae	9	32	7	32	27	4	10	7		9	4	1
Ribs	26	26	13	26	10	1	30	12		11	11	11
Scapula	2	2	2	1	2		1	2	2	2	1	2
Humerus	2	2	2	2		1	1	2	2	2	2	2
Radius	2	2	1	2	2	2	1	2	1	2	1	1
Ulna	2	1		2	2	2	1	2	1		2	2
Carpals	1	3		6	5					6		
Metacarpal		2					2			4		3

Pelvis	2	2	2	2	1		1	1	2	2		1
Femur	2	2	2	2	2		1	2	2	2		2
Patella					2					1		
Tibia	2	2	2	2	2	1	2	2	2	2	2	2
Fibulae										1		
Talus	2	2	2	1	2			1		2		
Calcaneus	2	2	2		2			1		2		
Oth. tarsal				2						1		
Metatarsal	1						2					2
1 phal.	2	4					1			6		
2 phal.		1					1			6		
3 phal.	1	1					1			6		
TOTAL	61	89	35	80	59	11	58	35	15	70	26	32

As far as pigs are concerned, two of the three have all their anatomical parts, and the absence of some carpal and tarsal bones is probably a consequence of post-depositional processes. In the third case, the skull is completely absent.

The anatomical representation of dogs is much more variable, probably due to the young age of the individuals, which has compromised bone conservation.

All kinds of ABGs, irrespective of the species and anatomical representation, are documented in the different phases of the Iberian occupation of the site (from the sixth to the second century BC).

A classification of the ABGs based on the anatomical representation of sheep and goats has been proposed (Miró and Molist [1990](#); see Fig. [7](#)):

- Type A: complete or sub-complete skeletons.
- Type B: skeletons with missing extremities (head, metapodials and phalanges).
- Type C: only heads (mandible and skull) and feet (metapodials and phalanges) present.

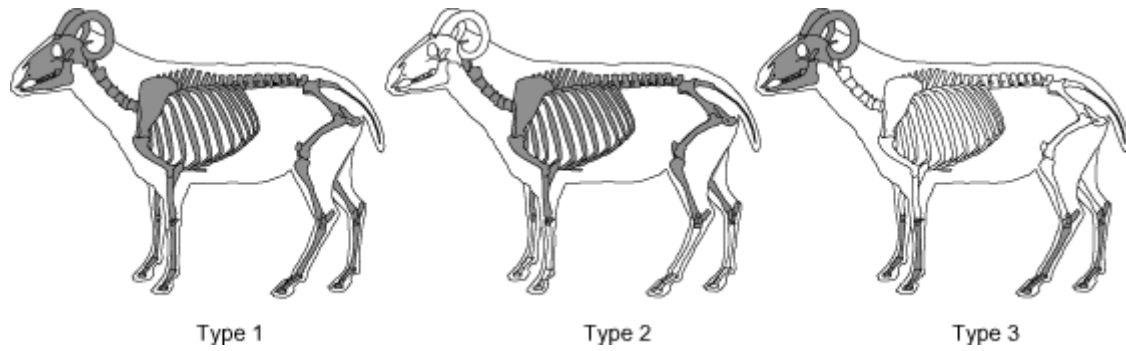


Figure 7.

[Open in figure viewer](#)

Typology of the faunal deposits. Type A (left), Type B (central) and Type C (right). See text for details.

Dogs and pigs are usually present with all their anatomical parts. They are not found in their original anatomical position but partially disarticulated. A selection of parts has also been attested at Alorda Park, where only the heads of two dogs were found behind a wall.¹

Table 3 summarizes the number of sheep and goat ABGs per type present at each site. At Puig de Sant Andreu, Type A is predominant, while at Alorda Park the most abundant is Type C. Both sites, together with Ca n'Oliver, have a high concentration of ABGs.

Table 3. Number and type of sheep and goat deposits recovered at each site

Site/Type	A	B	C	Total
1. Values in number of individuals.				
Illa d'en Reixac	10	–	–	10
Puig de Sant Andreu	51	3	1	55
Ca n'Oliver	5	8	15	28
Puig Castellar	1	–	–	1
Penya del Moro	3	2	8	13
Olèrdola	–	–	1	1
Alorda Park	2	5	31	38
TOTAL	72	18	56	146

Age at death

Figure 8 shows the age at death of the sheep and goats found in the small pits in the four main sites. Most were slaughtered within the first 12 months of life, especially those at Puig de Sant Andreu and Alorda Park. This is a feature distinct from the faunal remains

found in domestic waste, in which most of the sheep and goats were slaughtered between the first and second years of life (Valenzuela-Lamas [2008b](#); Albizuri *et al.* [2010](#)).

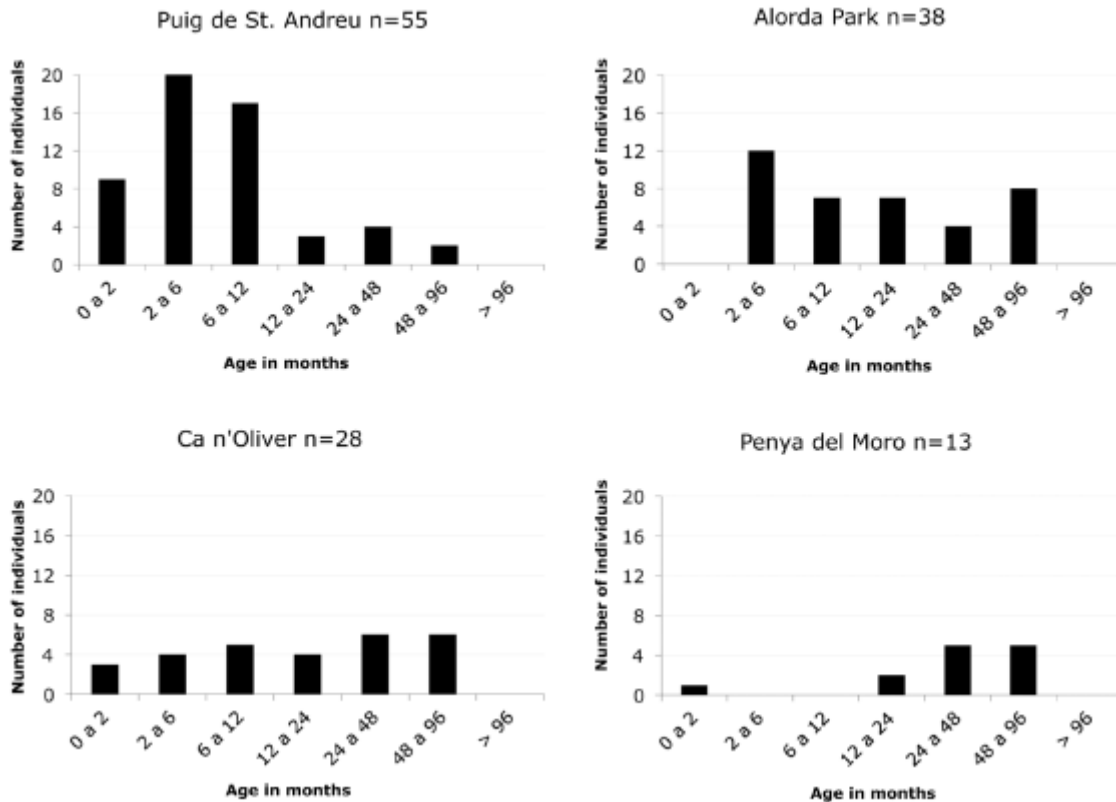


Figure 8.

[Open in figure viewer](#)

Ages at death at the four main sites analysed in this study. Values in number of individuals.

Anthropic marks

Chop marks on the bones are completely absent. Cut marks can be found on the inside of the ribs and the articular ends of long bones, pelvis and scapula, especially in Types A and B ABGs. They are all related to evisceration and disarticulation, rather than defleshing. In Type C ABGs, cut marks are usually absent. This suggests that the distal parts of the limbs were deposited in anatomical connection, with their skin and hair still attached. The head was also deposited in one piece, without skinning or disarticulation (see Fig. [5](#)).

The action of fire has been noted on some bones (Fig. [9](#)), mainly on the distal talus and scafo-cuboid. The bones showing signs of burning are very scarce (only five in total, all coming from Puig de Sant Andreu). Nevertheless, their presence suggests that fire could have been part of the ritual.



Figure 9.

[Open in figure viewer](#)

Example of bones showing signs of burning from Puig de Sant Andreu.

Chronology and geographical distribution

The time span in which these burials are well attested corresponds to that of the Iberian culture, i.e. from the sixth to the second century BC. No sheep or goat ABG is attested in the Early Iron Age (seventh century BC) and they decrease in frequency by the first century BC, when Romanization had already begun. Most of the ABGs date from the fourth and third centuries BC.

One exception is the site of Monteró (Lleida), dating from 125 to 75 BC (Bermúdez *et al.* [2005](#)), where a Type A ABG of a sheep was documented below the floor inside a room. This site is interpreted as a *castellum* linked to the Roman army, although its excavators believe it was occupied by indigenous auxiliary troops and therefore the deposition could be associated with surviving Iberian rituals within the Romanization context.²

In Roman times, ritual manifestations in domestic contexts involving animals were significantly different: galliforms are the most frequently documented and although sheep and goats are still present, they were deposited inside a jar together with eggs (Marí and Mascort [1988](#); Casas and Ruiz de Arbulo [1997](#); Pons [2003](#)), a practice that is not known for the previous period.

In terms of geographical distribution, the Iberian faunal ABGs are mainly concentrated on the central coast of present-day Catalonia, even though some examples can be found to the north, in southern France (e.g. Montlaurès – Chazelles [2000](#), 56; Martigues – Chausserie-Laprée [2011](#), 191), and to the south, in the area of the present-day Valencia region (e.g. Puig de la Nau – Oliver [1998](#), 101; [2006](#), 212–13; La Seña and Los Villares – Iborra [2004](#)). Consequently, these ABGs were a common practice among the Iberian groups living between the Xúquer and Hérault rivers (Edetani, Ilercavoni, Cosetani, Laietani, Lacetani, Indiketes, Sordones), but are also attested among the Ligures populations in the present-day eastern Languedoc and Provence regions, as well as in the Celtiberian area (Alfayé [2009](#)).

In summary, some general trends in the location, composition, bone preservation and the spatial and temporal span emerge from the evidence available:

- The ABGs invariably occurred below house floors, near a wall and generally – but not necessarily – in a small pit. One room could contain one or more ABGs. They are found in rooms with a residential or domestic function, as well as in spaces devoted to craft activities. We are therefore unable to establish any link between the specific function of a room and the existence of faunal ABGs.
- The chosen animal is usually a sheep, although goats, dogs, pigs and domestic fowls can follow similar depositional patterns. Generally, only one individual was deposited, although pits containing more are also known, especially at the largest sites (e.g. Puig de Sant Andreu).
- Most animals would be younger than two years of age when slaughtered.
- Most animals were deposited in partial anatomical connection. The bones were not broken before deposition (no chop marks are recorded) and post-depositional fragmentation did not occur in most cases. The presence of cut marks on ribs and several long bones indicates some manipulation of the carcass, aimed at its evisceration and disarticulation. Some bones show signs of burning (Fig. 2).
- Finally, the spatial and temporal span of this ritual practice seems particularly related to some Iberian groups from north-eastern Iberia and southern Gaul. The earliest ABGs date from the sixth century BC and they decrease significantly in frequency during the second century BC, coinciding with the Roman conquest and the subsequent acculturation of the region. Most of the recorded ABGs date from the fourth and third centuries BC, coinciding with the consolidation of the Iberian elites and the hierarchical organization of Iberian societies.

Discussion

Species and treatment

The zooarchaeological analysis indicates that only domestic animals were deposited under the house floors. Sheep and goats represent the most commonly eaten animals in the Iberian diet (Albizuri and Nadal [1999](#); Franquesa *et al.* [2000](#); Valenzuela-Lamas [2008a](#), among others). That these species were being privileged in under-floor deposits suggests they also had a strong conceptual meaning.

The number of individuals per ABG and the age at slaughter may be a reflection of wealth in this Iberian ritual. The richest sites – Puig de Sant Andreu and Alorda Park – exhibit a large number of ABGs. Young animals predominate at these two main sites, especially at Puig de Sant Andreu, in which most notably more than one individual is offered at the same time. On the other hand, we do not find any ABGs at the small rural sites, even though they may also have been involved in important economic activities such as metallurgy (e.g. Les Guàrdies; Rigo and Morer [2003](#)).

The signs of burning on some tarsal bones (although very few) suggest that fire could have been part of the ritual. This raises the question of ritual consumption and renunciation, and possibly sheds light on the meaning of these faunal ABGs.

The significance of the ABGs

Judging by their chronological and geographical spread, these burials are an element that differentiates some Iberian groups. Although there is a diversity among the ABGs, most of them share a similar depositional pattern, in which the bones were carefully selected and buried following a certain formality. This supports the idea of their ritual nature.

These Iberian ABGs contrast with preceding faunal burials dating from the Neolithic to the Early Iron Age (seventh century BC), in which powerful species such as equids and cattle, as well as dogs, were given privileged positions and sometimes associated with human burials. This is the case with the sites of Hort d'en Grimau (Albizuri and Nadal [1990](#)) and La Pedrera (Gómez-Flix [2003](#); Graells [2008](#)). In the Iberian period, burials of large, powerful species continue to be found in storage pits (e.g. the sites of Hereuet and Gou Batlle; Valenzuela-Lamas, unpublished data). Dogs are also attested, both in storage pits and domestic contexts (e.g. Alorda Park, Ca n'Oliver, Puig de Sant Andreu). This indicates that sheep and goat sacrifices did not replace this practice and probably had a different meaning.

The deposition of faunal remains is probably only part of a more complex ritual in which the previous and possibly subsequent steps remain unknown. The first part of the ritual would have included the slaughter of the animals. Several researchers have proposed that a banquet would have followed the sacrifice, as in many cases the whole animal was not buried (Types B and C), and some of the deposited bones belong to those parts with less meat, particularly in Type C (Albizuri [1990](#); Belarte and Sanmartí [1997](#)). The fact that sheep and goats are the most common animals in the Iberian diet (Albizuri and Nadal [1999](#); Franquesa *et al.* [2000](#); Valenzuela-Lamas [2008a](#); Albizuri *et al.* [2010](#); López *et al.* [2011](#)), together with finds of bones with burning marks, seems to support this hypothesis. This interpretation derives also from the comparison with other Mediterranean cultures, particularly the Greeks, who, when sacrificing animals to their deities, usually cooked and ate them (Durand [1987](#)).

While the reconstruction of the whole ritual remains very incomplete, we know even less about the purpose of such practices. One of the most commonly proposed interpretations (Belarte and Sanmartí [1997](#)) is the relationship between ABGs and the foundation or reconstruction of a building or room. The sacrifice and deposition of the remains could have been performed to purify the building and even to transmit the victim's life to it, as is attested in other ancient and modern cultures (Eliade [1981](#), 70–372, 380–1). Oral traditions and the myths surrounding building in Catalonia until the beginning of the twentieth century (Amades [1935](#), 9–10) considered that a human sacrifice was needed to satisfy the deities, even though an animal was usually used as a substitute. This idea supports the theory that the faunal ABGs under floors could represent the substitute for a human victim as part of a foundation ritual (Barrial [1989](#); Subirà and Molist [2008](#), 381). In the Iberian culture the practice of burying a newborn child under the floor of a house is well attested, and in some cases (Turó de Ca n'Oliver, Penya del Moro) they are in the same room as the faunal ABGs (Albizuri [2011](#); Barberà [2000](#)). However, the practice of burying newborns is more extensive from a geographical and chronological point of view.³ For this reason, we consider that human newborns and animals may well have shared spaces and similar kinds of deposition, but they cannot be considered only as foundation rituals.

At the same time the interpretation of ABGs under floors as foundation rituals cannot be proposed as a general rule. While it is true that on some occasions the ABGs coincide with the construction of a building (as is the case of Zone 14 in Puig de Sant Andreu), or with new floors and plastering (as in several houses in Alorda Park), it does not explain why at the smaller rural sites 'foundation rituals' do not seem to have existed at all. Conversely, the urban sites show a large concentration of them, sometimes in a single building, such as at Puig de Sant Andreu and Ca n'Oliver.

All the sites with ABGs were partially inhabited by the local elites (Barberà [2000](#); Ferrer and Rigo [2003](#); Martín *et al.* [2004](#); Asensio *et al.* [2005](#); Francès *et al.* [2005](#); Sanmartí and

Santacana [2005](#)). A possible explanation could be that the ABGs were related to work feasts or collective work events as defined by Dietler ([2001](#), 79–80; Dietler and Herbich [2001](#), 241). According to his theory, a group of people would have worked on a specific project for a day or more and in return they would have been given food and/or drink. In the case of Iberian ABGs, they could correspond to a collective work event, in which all or part of the community would have participated in the construction of a particular building or structure (e.g. the residence of an influential family, etc.).

Turning now to the spatial context, ABGs are located inside domestic spaces with different functions and are not regularly distributed in the settlement. However, as we have already mentioned, they are often concentrated in specific buildings – usually large, complex houses. This suggests a relationship between the size of the dwelling or the wealth of its occupants and the importance of the rituals performed in it. Similarly, not all settlements would have had the ability or the wealth needed to set up such celebrations; this is suggested by the absence of ABGs in the dispersed, smaller rural sites.

As Valeri ([1994](#), 107) points out, a major element in a sacrifice is the renunciation of part of the sacrificial victim, which makes the sacrifice a socially significant act (Jing and Flad [2005](#), 254). In Type A ABG, in which the whole animal is buried, the deposition would have meant a complete renunciation, while in Types B and C, the whole animal except for the buried parts could have been consumed. In the richest sites (Puig de Sant Andreu and Alorda Park), we find a high number of deposits, and we notice that the animals are younger than in the other sites. This suggests that the richness of this Iberian ritual may be reflected by the number of deposits, the anatomical parts deposited, and the age of the animal when slaughtered. The importance and quantity of the offered parts may not necessarily be related to the aim of the ritual (Cazeneuve [1971](#), 296). They might, however, be related to the wealth of the ritual's performers, and possess a strong ideological component.

We believe the Iberians performed the rituals in order to gain favours from gods or perhaps from the natural forces that were important to their lives, families or communities, making it a propitiatory ritual. But we also believe that this kind of faunal deposition could be the result of working feasts, particularly in consideration of the economic basis of Iberian society. These celebrations are fundamental to an agrarian economy, as they mobilize the essential communal inter-household labour flows that sustain domestic units (Dietler and Herbich [2001](#), 246). They encourage labour, but at the same time increase the reputation of the host for generous hospitality.

Conclusion

The deposition of faunal remains in domestic spaces was a regular practice during the Iron Age in the north-east of the Iberian Peninsula, particularly during the Iberian period. Although a certain variety is documented in the species involved and the features of such practices all over the Iberian territory, a large number of settlements located in the Catalan coastal area provide evidence of the deposition of faunal remains (mainly sheep, but also some goats, dogs, fowls and pigs) following a regular pattern. This regularity (the age of sacrifice, the anatomical parts deposited, their location inside a small pit, under a floor and near a wall) suggests that they were intentional deposits that should be considered as part of a ritual performance.

All the indicators point to these depositions as being the result of a sacrifice, followed in some cases by the consumption of the remains (or part) of those species most commonly bred by the Iberians. In the case of sheep and goats, the existence of different types of

depositions (A, B and C) seems to have been closely related to the meaning of the ritual and the steps taken following the sacrifice.

The different types observed may correspond to different purposes and imply different degrees of renunciation. This diversity, as well as the variations in the amount of deposits and the ages of slaughter attested in different buildings, could also have a social significance. The large number of animals slaughtered in some cases (particularly at Puig de Sant Andreu), as well as their ages (younger at Puig de Sant Andreu and Alorda Park), could indicate the wealth of the household organizing the celebration, in which other members of the community may have participated, perhaps contributing their labour in return. If we consider that a feast followed the sacrifice, it would have contributed to reinforcing social relationships (Jing and Flad [2005](#); Valeri [1994](#), 109), as well as enhancing the prestige of the organizers.

Together with the amount of ABGs, the scarcity of shrines or temples in the study area gives particular significance to these ritual practices held in domestic contexts. In the northern Iberian region a house was not only used for domestic tasks, but was also a place for economic activities and, particularly in the case of large dwellings, it had social functions (Belarte [2008](#), 182). As we have already indicated, the largest concentrations of ritual deposits have been documented in complex, wealthy residences belonging to the elites, and they may have reinforced their social identities. They are also attested in more humble houses, although in lower quantities. They were not performed at all types of sites, as they are significantly absent from smaller, rural settlements. Chronologically, most of them date to the Classical Iberian Period (fourth–third century BC), i.e. the period of elite consolidation. For all these reasons, we believe that, at least during this period, the ritual acquired a particular significance for the Iberian elites, perhaps as a means of showing their status or obtaining labour.

Acknowledgements

We thank Umberto Albarella for his useful comments on a previous version of this paper. We also thank Joan Francès and Marc Guàrdia for the plan of Turó de Ca n'Oliver, and Aurora Martin, Gabriel de Prado and Ferran Codina for the plan and the abundant information about Puig de Sant Andreu.

This paper was written within the framework of the project '*Pratiques rituelles et symboliques en Méditerranée nordoccidentale protohistorique, VIIIe – Ier siècle avant notre ère*' (ANR-09-JCJC-0143-01) and also as part of the project '*Cultural change and husbandry development in Europe: zooarchaeological evidence from the Iron Age – Roman transition in Iberia and Britain*' (Marie Curie IEF 2010 – project 271921). The work benefited from the support of the Grup de Recerca en Arqueologia Clàssica, Protohistòrica i Egípcia (GRACPE) and the Seminari de Recerques Prehistòriques (SERP) of the University of Barcelona.

Footnotes

1. These bones were not included as ABGs according to Morris ([2010](#)).
2. We wish to thank Jordi Principal and Pilar Camañes for this information.
3. Neonatal burials have been identified from the Bronze Age (e.g. La Pedrera (Gallart and Junyent [1989](#), 56–7) or Vincamet (Moya *et al.* [2005](#), 41)) to throughout the Roman period (Pérez [1998](#)) and the Middle Ages (Riu [1982](#)). From a geographical point of view, this practice is attested in the Mediterranean area of the Iberian

culture, as well as in the Celtic and Celtiberian areas of the interior of the Iberian Peninsula (Gusi and Muriel [2008](#), 258).

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