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FAUNAL REMAINS MANIPULATION DURING THE CHALCOLITHIC IN PITS 13, 16 AND 54 FROM MONTE DAS CABECEIRAS 2 (BEJA, SOUTHERN PORTUGAL)

Manipulación de restos faunísticos durante el Calcolítico en las fosas 13, 16 y 54 de Monte das Cabeceiras 2 (Beja, Sur de Portugal)

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Abstract: The Chalcolithic time is a period widely debated in Southwestern Iberia Late Prehistory. During the last few decades, the number of contexts known has grown, especially with the discovery and publication of several ditched enclosures from Southern Portugal. To contribute to ongoing discussions, three Chalcolithic pits –13, 16, 54– from the Complex of ditched enclosures of Monte das Monte das Cabeceiras 2, in Beja, were analysed from a zooarchaeological and taphonomical perspective. The results are combined with information from the material culture, human remains and stratigraphy in order to discuss infilling sequences. Hypothesis on the possible meaning of social practices related to the management of animals are addressed.

Bovine, caprine, swine, cervids, leporids and canids were identified with different abundances. A possible feasting or offerings of bovine –including auroch– and to a lesser extent red deer, wild boar and domestic species is suggested for pit 13, where a burial was also identified. Pottery and animal depositions were recorded in this pit, and the contiguous pit 54 that also had human remains. Pit 16 had a possible selection of horns and antlers from bovine, caprine and cervids, as well as a deposition of canid limb bones inside a large pot. The pits analysed can be framed in the wider Southwestern Iberian Peninsula phenomena of ditched enclosures where structured deposits including animal remains are recurrent.

Key words: Ditched Enclosures; Chalcolithic; Southwestern Iberian Peninsula; Zooarchaeology; Taphonomy.

Resumen: El Calcolítico es un periodo de la Prehistoria Reciente sobre el que, para el so ibérico, se ha discutido ampliamente. La cantidad de contextos conocidos ha aumentado durante las últimas décadas, especialmente con el descubrimiento y publicación de varios recintos de fosos del s de Portugal. Para contribuir a esta discusión general, se presenta el análisis zooarqueológico y tafonómico de tres fosas calcolíticas –n.os 13, 16, 54– del recinto de fosos de Monte das Cabeceiras 2, en Beja. Los resultados se combinaron con la información del estudio de la cultura material, restos humanos y estratigrafía para discutir las secuencias de su colmatación. Se discuten, además, las hipótesis relativas al posible significado de las prácticas sociales relacionadas con la gestión de la fauna.

Bovinos, caprinos, cerdos, cérvidos, lepóridos y cánidos se han identificado en distintas frecuencias. Un posible banquete u ofrenda de bovinos –incluido el uro– y en menor cantidad ciervo, jabalí y especies domesticadas parece una interpretación razonable para la Fosa 13, donde también se documentó un enterramiento. Se registraron deposiciones de cerámica y restos de animales en esta fosa y en la contigua Fosa 54, que también contenía restos humanos. La Fosa 16 presenta una posible selección de cuernos y cornamentas de bovinos, caprinos y cérvidos, así como una deposición de huesos de un miembro anterior de cánido dentro de un gran recipiente cerámico. Las fosas analizadas se pueden encuadrar en el fenómeno más amplio de los recintos de fosos del so de la Península Ibérica, en los cuales las deposiciones estructuradas incluyen de forma recurrente restos de animales.

Palabras clave: recintos de fosos; Calcolítico; so de la Península Ibérica; Zooarqueología; Tafonomía.

1. Introduction[1]

The Iberian Chalcolithic is a period that has been intensively present in discussions with different perspectives and research aims. A focus has been paid to the Southwestern area, mainly due to its value in understanding the appearance and development of complex societies through Chalcolithic (Cruz-Berrocal *et al.*, 2013), but also to comprehend a different social perspective to the transition to the Early Bronze Age (Valera, 2015: 409-427).

A particular highlight goes to the growth seen in the last two decades, due to identification and research of the Ditched Enclosure's phenomenon (Valera and Pereiro, 2013: 315-327), in which Monte das Cabeceiras 2 –MCB2– fits, characterised by the existence of complexes of negative features (pits and/or ditches), also common in the surrounding Spanish regions (Sanjuán *et al.*, 2013). In Southern Portugal, this phenomenon's appearance was traced to the Late Middle Neolithic, while its end, or abandonment, is being pointed to the beginning of the Early Bronze Age (Valera, 2018). Several ditched enclosures are known in Southern Portugal and they have been addressed in the scope of regional and supra-regional discussions (e.g., Márquez and Jiménez, 2010; Valera, 2013; Valera and Pereiro, 2013: 345-350; 2015: 315-327). The number of studies focusing the Southwestern Iberia Chalcolithic has also increased exponentially in the last few years, varying from the more common analysis of artefacts or funerary practices and behaviours to questions of chronology, climate and human-environment interactions, subsistence and diet, mobility, or genetics, among others.

Regarding zooarchaeological data, the Chalcolithic in Portugal has historically been focused on some large sites from the Estremadura region (Valente and Carvalho, 2014: 226-240), but the comparison of these assemblages with others from Southern Portugal is being achieved more recently with the publication of important data (Costa, 2010: 53-74; Davis and Mataloto, 2012: 47-85; Moreno-García, 2013; Almeida and Valera, 2021: 75-106) that can now be assessed together with other Southwestern Iberia assemblages (Castaños, 1992a: 127-146; 1992b: 11-45; Morales and Cereijo, 1992: 87-104). Differences in the main domestic species' abundances and wild/domestic ratios

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were recognised but while other smaller assemblages have been published, animal management and exploitation dynamics are far from understood in the fine-grain chronology. Besides this, the important study of human-animal relations during Late Prehistory has been addressed (Valera, 2012; Valera and Costa, 2013: 263-275; Costa *et al.*, 2019: 602-612; Valera *et al.*, 2020: 11-33), but more data is needed to further compare interpretations on animal remains manipulation during the Chalcolithic.

This paper focuses animal exploitation and management and their possible meaning in relation to social practices in Southwestern Iberia, specifically through the analysis of faunal remains from three Chalcolithic pits –13, 16, 54– from the unpublished ditched enclosure of MCB2 (Beja, Southern Portugal).

2. Materials

Monte das Cabeceiras 2 –MCB2– was identified during the environmental impact studies made in the Alqueva dam project's scope (Fig. 1a-b), located near Cabeça Gorda's village, Beja, in the Lower Alentejo peneplain. This area has been subjected to agricultural activities, and the terrain is slightly undulated in the South and West area; the latter crossed by the Barranco dos Almadas brook. The main lithology of the region comprises conglomerates, sandstone, and marls with limestone concretions and clays. The site is situated at this lithological unit's limit and is neighbouring the Ossa-Morena formations that are primarily composed of a gabbro substrate (Fig. 1c).

The site was subjected to archaeological surveys, with the initial focus on identification and analysis of surface materials, the realisation of diagnostic test pits (Valera and Pereiro, 2013: 345-350; 2015: 315-327), and posterior integral excavation of the area affected under the responsibility of one of us –NB–[2]. At least seven ditches were identified through aerial photographs (Fig. 1d) (Valera and Pereiro, 2013: 345-350), to which another ditch was added during the excavation (Fig. 1e), mainly raising the area of the site. Most often identified through different non-intrusive techniques (aerial images or geophysics) these contexts are rarely the subject of excavations, hence MCB2 is of particular interest. Due to the lack of published data and the limited intervention area (Fig.1f-g) several questions remain unanswered. It is unclear if the identified ditches correspond to generally linear features or if MCB2 presents a combination of linear and sinuous ditches, as already proposed for this site (Valera and Pereiro, 2015: 315-327) and detected regionally (Valera, 2020).

The pits 13, 16, and 54 were subjected to preliminary material analysis[3]. They were surrounded by other negative features and located in a second enclosure, and were not part of the central ring defined by the inner ditch. The intervention area did not allow for a comprehensive spatial reading of these features' context and their relations. Six radiocarbon dates were obtained (Fig. 2), with one of the samples –Sac-3059– coming from the top layer of pit 16. The results are concordant with the material culture indicators, positioning this site in the regional Chalcolithic, making it contemporaneous with some neighbouring sites. Contexts dated from the 1st half of the 3rd millennium BC, more specifically from the 2nd quarter, seem predominant, even if both earlier and later contexts and/or materials not mentioned in this work were occasionally identified.

2.1. Pit 13

Pit 13 has a circular mouth with strangulation in the transition from the clay to the substrate (Fig. 3). It presented a troncoconic profile and a flat bottom. The top deposit [1300] had a significant amount of

[2] Borges, N.: *Relatório Final: Monte das Cabeceiras 2.* Unpublished technical report deposited in 2015 in Abrantes: Abran-Ark.

[3] Silva, C.: *O Povoado do Monte das Cabeceiras 2. O estudo dos interfaces negativos e análise da componente artefactual das Fossas 13, 16 e 54.* MSC dissertation presented in 2015 at the University do Trás-os-Montes and Alto Douro.

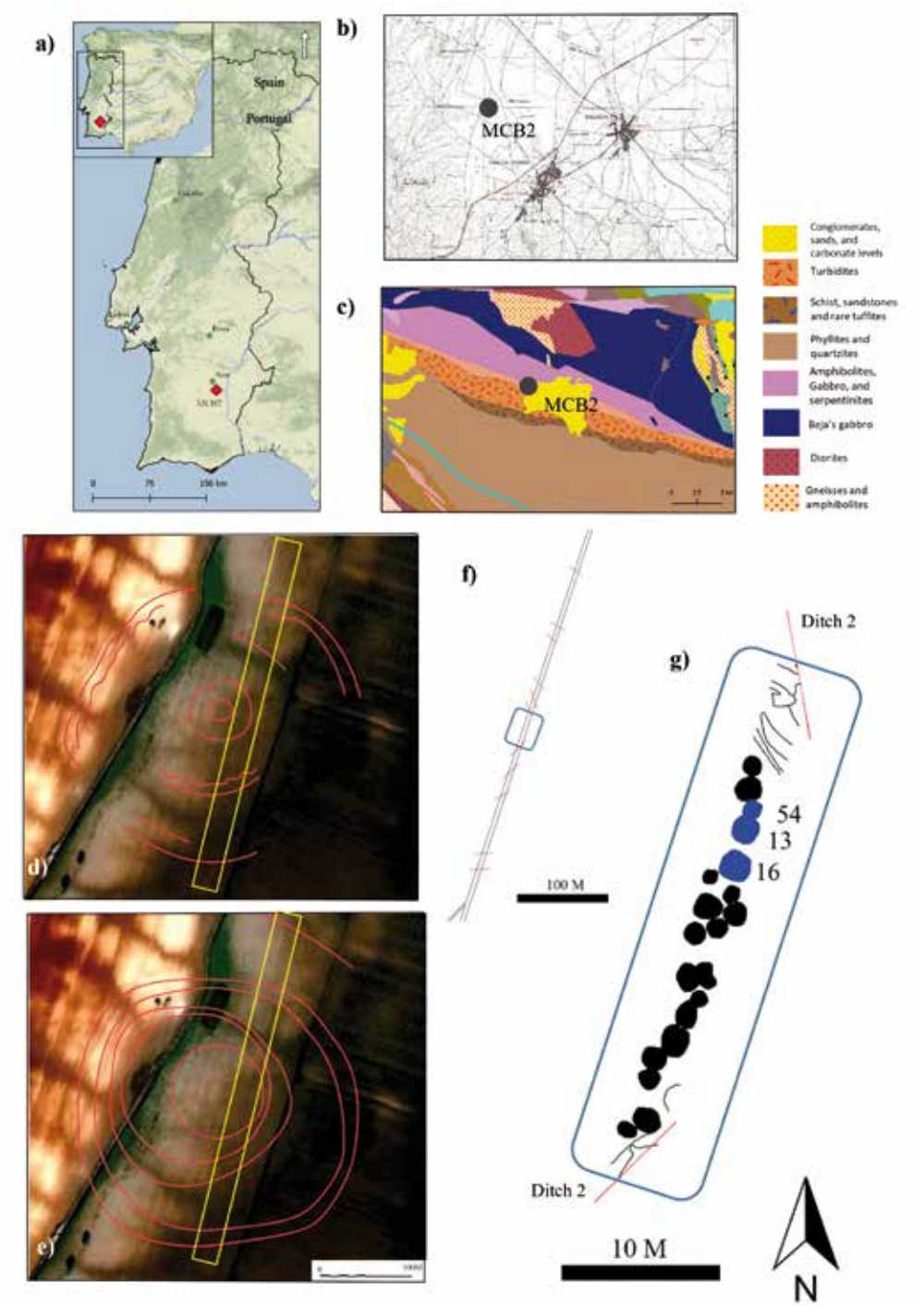

Fig. 1. *The location of Monte das Cabeceiras 2: a) Iberian Peninsula and Portugal; b) Portuguese 25K Military topographic survey maps #531 and #532; c) Geologic survey map* 500K *(WMS from LNEG); d) first interpretation of MCB2 plan (Valera and Pereiro, 2013: 350) with the location of the archaeological excavation; e) second interpretation of MCB2 plan with the location of the archaeological excavation; f) general view of the 'strip' excavated with the location of different ditches in red, and area under study; g) detail of the location of pits 13, 16, and 54 in relation to surrounding pits (black) and ditch 2 (red).*

Lab. Ref.	bp date	cal bc (1σ)	cal bc (2 σ)	Context	Sample	Reference
Sac-3036	4030 ± 60	2661-2655 (1.3 %) **2631-2467 (66.9 %)**	2865-2803 (8.0 %) 2766-2717 (4.1 %) **2706-2447 (80.9 %)** 2423-2405 (1.0 %) 2378-2350 (1.4 %)	Ditch 4	wood	Valério *et al.*, 2016
Sac-3052	4090 ± 45	2847-2811 (13.9 %) 2744-2730 (4.4 %) 2694-2686 (2.4 %) **2678-2573 (45.2 %)** 2512-2504 (2.4 %)	2870-2800 (19.6 %) **2779-2561 (66.7 %)** 2539-2492 (9.2 %)	Ditch 5 N	bone	
Sac-3054	3980 ± 70	**2580-2401 (60.2 %)** 2382-2347 (8.0 %)	2848-2811 (2.5 %) 2744-2729 (0.7 %) **2695-2285 (91.6 %)** 2248-2235 (0.6 %)	Ditch 4 N	bone	
Sac-3055	4010 ± 45	**2573-2471 (68.3 %)**	2840-2815 (1.5 %) **2670-2452 (91.9 %)** 2421-2406 (0.8 %) 2376-2352 (1.2 %)	Survey 3	bone	
Sac-3058	4150 ± 45	2871-2835 (13.8 %) 2819-2799 (7.3 %) **2781-2666 (43.7 %)** 2646-2636 (3.5 %)	**2881-2619 (91.3 %)** 2607-2582 (4.1 %)	Ditch 4 N	bone	unpublished
Sac-3059	3990 ± 60	2620-2607 (2.7 %) **2582-2454 (60.6 %)** 2418-2409 (2.0 %) 2372-2357 (2.9 %)	2842-2814 (1.9 %) **2671-2296 (93.5 %)**	Pit 16	antler	

Fig. 2. *Absolute dates obtained for several contexts of Monte das Cabeceiras 2. Calibration of 14C dates using IntCal20 calibration curve (Reimer* et al.*, 2020) and the OxCal v4.4.3 program (Bronk Ramsey, 2009).*

faunal remains, some pottery, and scarce number of lithic materials. [1301] transitioned from the interface excavated in the clay to the substrate, and was followed by a compact deposit, containing limestone nodules, construction clay, fauna, some rare pottery, and lithic industry. A primary inhumation of an adult female in a prone position was identified in [1303] with a W-E orientation[4] (Fig. 3b). This is an uncommon position but only a few faunal remains were associated to this individual. [1304] had some pottery and fauna, the same was found in the base deposit [1305] that also contained a red deer antler, construction clay, ceramics, and lithic materials. A small connection to pit 54 was identified at a depth of 98 cm. This 'entrance' was filled with sediment, small stones and horizontally deposited schist slabs in two successive rows [1307] (Fig. 3a).

Loom weights (n = 3), grinding elements (n = 4) or knapped industry (n = 11) are fewer in comparison with amorphous (n = 301) or other pottery fragments (n = 87). Besides a fragment with a suspension hole from [1300], no other decorated elements were recovered. Plates are predominant (58.6 %), followed by spherical (14.9 %) and deeper (13.8 %) bowls. Among plates, open shallow shapes (n = 18) and externally thickened rims (n = 12) are common; deeper bowls are almost circumscribed to open shapes with simple rims (n = 11) and spherical bowls to slightly closed mouths (n = 12).

2.2. Pit 54

Pit 54 presents a troncoconic shape. It had a closed mouth (1.05 m), followed by strangulation, and a large –1.70 m–, semi-circular and flat bottom. A small superficial deposit [5400] was followed by the larger infilling [5401], with some limestone nodules, occasional pottery, and fauna. [5402] had limestone blocks with sizes around 30

[4] Fernandes, D.: *Relatório antropológico dos trabalhos de campo decorridos no Monte das Cabeceiras 2 (Beja)*. Unpublished Tecnical Report deposited in 2015 at Beja.

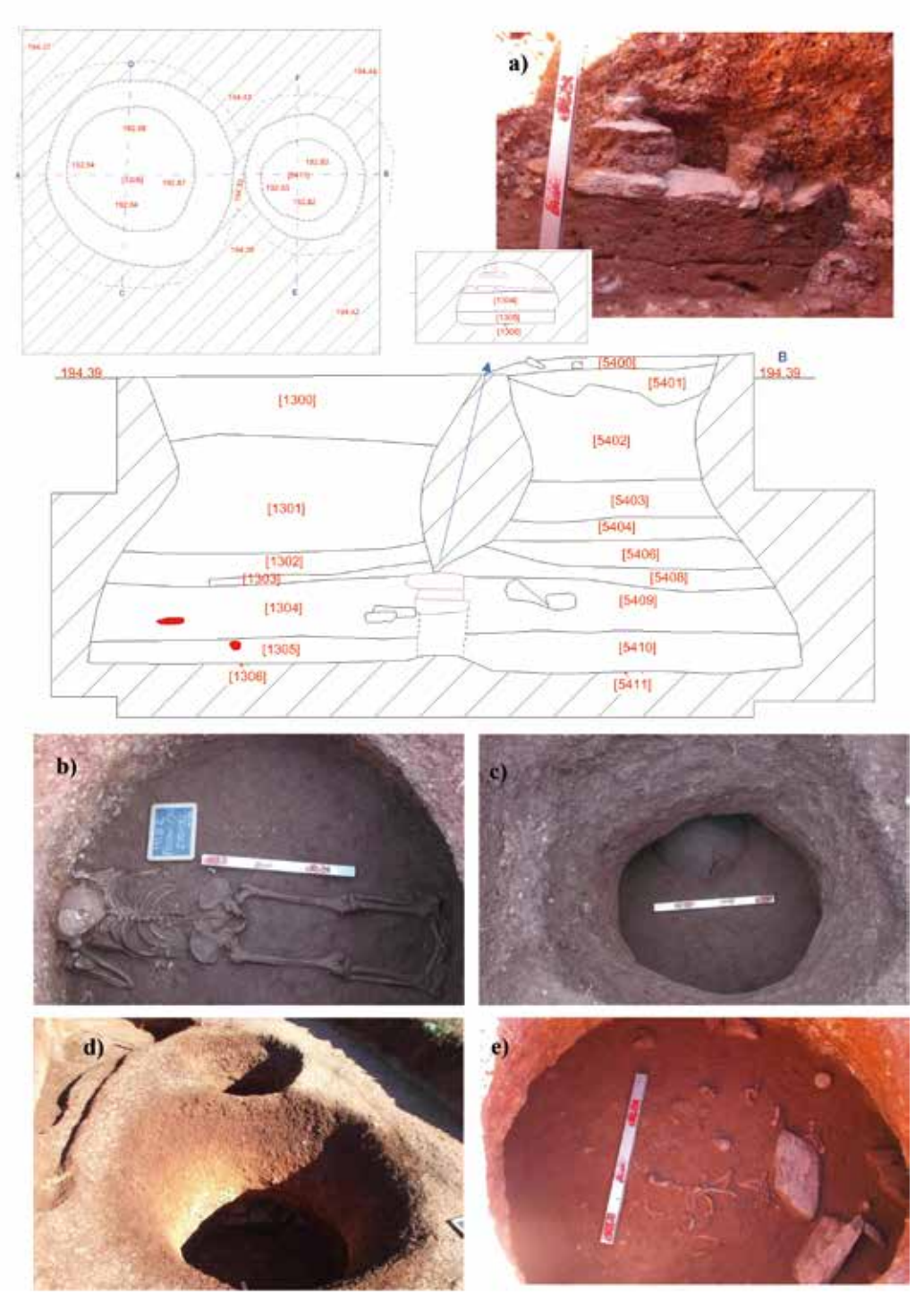

Fig. 3. *Plan and section of pits 13 (left) and 54 (right) 16 with some of the most relevant contexts: a) section and detailed photo of the structure that covered the connection between both pits; b) detail of the prone inhumation [1303]; c) detail of [5404] and the globular vessel [5405]; d) final plan of pits 13 and 54; e) detail of [5408] where some human remains were found dispersed associated with a limestone mortar.*

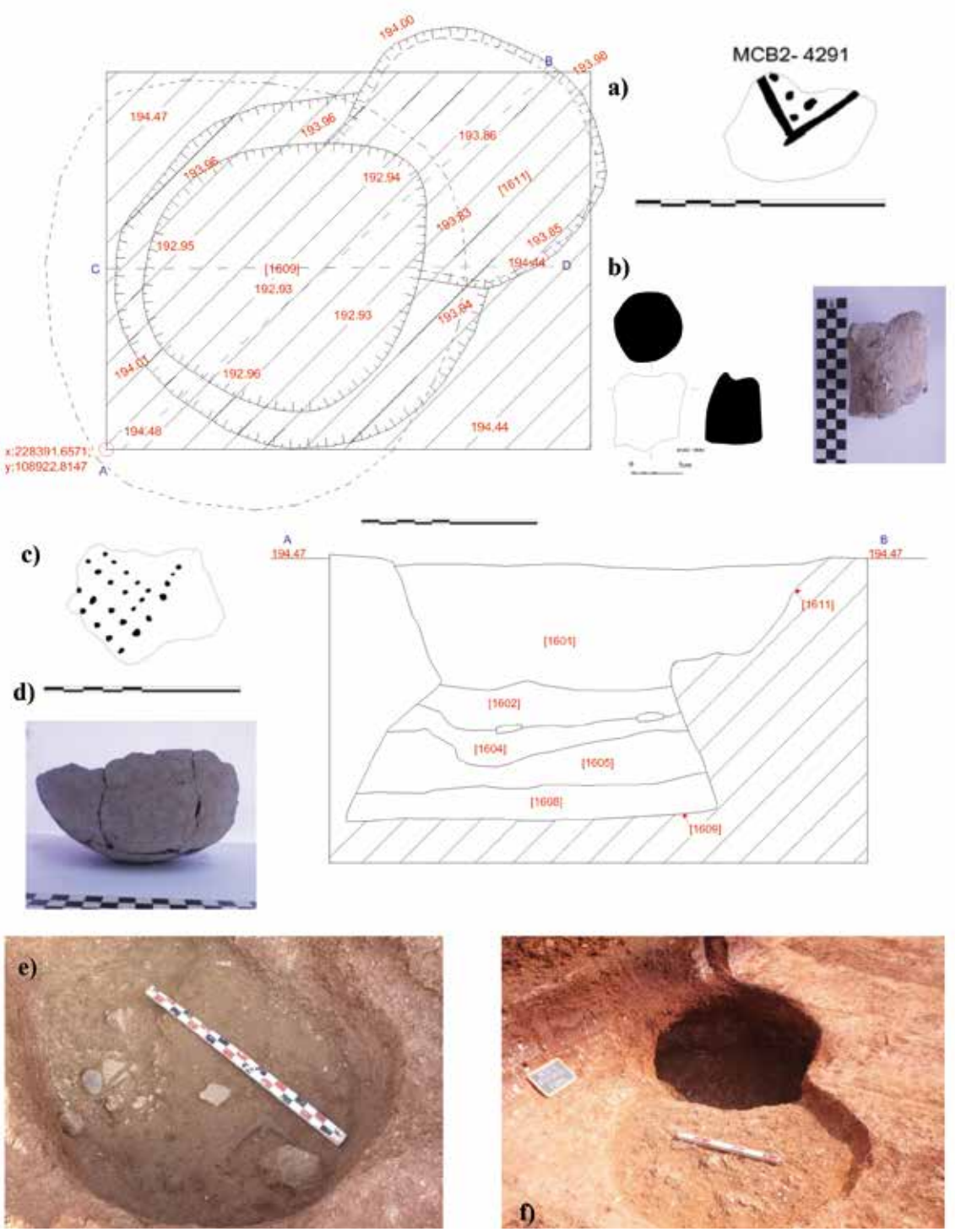

Fig. 4. *Plan and section of pit 16 with some of the most relevant contexts and materials: a) decorated sherd with symbolic motifs from [1600]; b) undecorated 'horned idol' from [1602]; c) decorated sherd with geometric motifs filled with white paste from [1600]; d) ceramic vessel (bowl) [1607]; e) plan of [1600] with* Cervus elaphus *antler; f) plan of pit 16 [1609] and [1611].*

cm, and ceramics, including a multiple perforated vessel locally interpreted as a possible colander or *queijeira*. Smaller deposits followed with scarce materials, namely [5403] and [5404], the latter with one crescent-shaped loom weight. A sizeable globular vessel with strangulation in the rim was deposited with the mouth overturned to the west wall [5405] (Fig. 3c), containing a very loose fine-grain sediment [5407]. [5408] is of particular interest: a small limestone mortar was associated with some dispersed human remains from at least one adult, including possible anatomical connections in a right foot and thoracic vertebrae[5] (Fig. 3e). [5409] had a concentration of stones with sizes around 30 cm in the West area, a few knapped lithic elements, one grinding element, quartzite pebbles, and pottery, including a flat-based plate, a fragment with a suspension hole, another one with an incised line in the lip, and a piece with two parallel lines and one zigzag line. The bottom deposit [5410] was very compact. It had a large pottery quantity, one fragment with a circular incised line, lithic industry, and fauna, including a *Glycymeris bimaculata* shell.

This pit had a smaller assemblage that comprised amorphous (n = 143) and identifiable (n = 98) pottery fragments, construction clay (n = 4), one loom weight fragment, knapped industry (n = 12), grinding elements (n = 12), and other lithics (n = 7). Plates are predominant (47.4 %), followed by deeper bowls (26.3 %) and spherical bowls (15.8 %).

2.3. Pit 16

This pit had a depth of 1.52 m, with 2.16 m of width in the base and 2.48 m in the mouth, with a troncoconic section and a flat bottom (Fig. 4). Pit 16 presented structured levels where stones and construction clay were recovered. The negative interface [1611] was excavated in clay, and the substrate had a circular shape and a flat base, with a niche in the mouth (Fig. 4f). The upper thick [1600/1601] had an important quantity of pottery, construction clay, lithic materials, and fauna. An 'almeriense idol', a blade, and a red deer antler were recovered (Fig. 4e). Decorated ceramics were scarce (Fig. 4a-c): one fragment had impressed and incised decoration, with dots and triangles filled with white paste; one had incisions with impressed triangles and dots; another piece had plastic decoration –large nipple–. The idol was placed on top of a structure composed of quartzite pebbles with a large blade near the pit walls. One fragment of *Patella vulgata* and one of *Scrobicularia plana* were recovered, as well as six indeterminate molluscs fragments.

[1602] had a large number of artefacts, including grinding elements, fauna, pottery, knapped lithics, four *Pecten maximus* shells, and a fragment of a horned idol –*ídolo de cornos*– (Fig. 4b). There was a lenticular clayish deposit circumscribed to the southern and western walls [1603]. [1604] had less material when compared to the following [1605], where a large quantity of pottery was recovered, including a fragment with a suspension hole. In the latter, *Ostrea edulis*, *Ruditapes decussatus*, and *Scrobicularia plana* are represented by one fragment each; other six indetermined mollusc shell fragments were recovered. A large spherical pot's deposition [1606] with a slightly closed mouth was identified near the northern wall of the pit, and another bowl [1607] in the southern area, near the pit wall (Fig. 4d). A very compact deposit [1608], with some pottery, had one decorate fragment with dots and triangles and remnants of a filling white paste.

In comparison to the other pits, a more significant number of artefacts was recovered in pit 16, comprising construction clay fragments (n = 97), loom weights (n = 3), amorphous (n = 545), and classifiable (n = 290) pottery fragments, knapped (n = 31) and grinding (n = 23) elements, and pebbles with indicators of use (n = 16) among other lithics (n = 26).

3. Methods

Analysis followed standard methodologies in zooarchaeology and taphonomy (Lyman, 1994; Reitz and Wing, 2008). Acknowledging their limitations in these types of contexts (Liesau, 2017:

[5] Fernandes, *op. cit*. n. 4.

107-128), we will use common indexes: Number of Specimens –NSP–, Number of Identified Specimens –NISP–, Minimum Number of Elements –MNE–, and Minimum Number of Individuals –MNI– (Binford, 1984a; Grayson, 1984).

Distinction of bovine, caprine and swine was attempted by using a reference collection, published morphological criteria (Zeder and Lapham, 2010: 2887-2905; Zeder and Pillar, 2010: 2887-2905) and metrical data (Driesch, 1976; Payne and Bull, 1988: 27-66). Demographic profiling was based on bone development, tooth eruption and use wear (e.g., Lemoine *et al.*, 2014: 179-193; Zeder *et al.*, 2015: 135-150; Sutton *et al.*, 2017: 151-163). Remains were classified according to age groups, i.e., foetal/neonate, infant, juvenile, sub-adult, adult, and senile. Taxonomically unidentified remains were grouped according to generic weight groups –WG–: 1 (<20 kg), 2 (20-100 kg), 3 (100-300 kg), and 4 (>300 kg).

An assessment of the type of breakage was attempted after Villa and Mahieu (1991: 27-48) by considering the completeness of shaft length and circumference, and differences in fracture planes outline, angle, and edge. Remains surface were macroscopically and microscopically analysed for modifications related to butchering, preparation, and consumption (e.g., Binford, 1981; Blumenschine *et al.*, 1996: 493-507). These were recorded according to location, morphology and intensity. A similar approach was attempted for other indicators. Weathering was classified after Behrensmeyer (1978: 150-162), and trampling, vermiculations, precipitation of oxides, concretions and corrosions were recorded after Almeida (2017).

4. Results

4.1. Pit 13

Around 80 % of the remains are from [1300], while the remaining SUS have abundances oscillating between 0.3 and 4.6 %. Almost 61 % of the assemblage has <5 cm in maximum dimension, with 5 % having >10 cm. Complete remains correspond to 4.3 %, while recent breakage occurs in 36.4 %. Taxonomic identification was possible in 24 % of the remains (Figs. 5-6). Undetermined fragments seem to correspond to mammals, 39 % of them lacking characteristics that could allow identification to a weight group. The others correspond mostly to WG3.4 (16 %) and WG4 (23 %), followed by WG2 (13 %).

The most common group are bovine, with remains specifically identified as *Bos primigenius*. The lack of measurable portions hindered the specific identification of *Bos* sp.; however, their general large size is suggestive of auroch. Bones from at least two differentiable individuals were recovered based on fusing data: one adult –>48 months–, and sub-adult/adult –<36 months–.

Swine are the second largest group. Wild boar and pig were identified but due to the superimposition of measurements or high breakage numerous *Sus scrofa* ssp. remains were impossible to assess further. A maxilla portion with milk dentition points to one juvenile individual –8-14 months– with the remaining being sub-adults/adults.

Caprine are represented by cranial and appendicular elements, generally, maxillae portions that indicate a MNI of three individuals: two sub-adults/adults –<48 months– and one adult –>48 months–. Hunting practices are also attested by the presence of cranial and appendicular portions of adult *Cervus elaphus*, and eventually some leporids –*Oryctolagus cuniculus* and *Lepus* sp.–.

Completeness analysis in 51 diaphysis demonstrates the abundance of <25 % (65 %) and 25-50 % (35 %) of the shaft length and of <25 % (80 %) of the circumference. Breakage planes in cortical tissue (n = 140) have mainly longitudinal (46 %) and curved (31 %) outlines, mixed (73 %) angles, and smooth (61 %) edges. A small shaft fragment –needle?– was polished and with use wear. Cutmarks and tooth marks are absent, but anthropogenic breakage (2 %) was recorded: isolated impacts on a WG2 and *Sus scrofa scrofa* humerus, one cortical extraction in a WG2.3 diaphysis, stigma in a *Bos primigenius* humerus and a possible counterblow in another shaft fragment. A WG4 percussion flake was also identified.

	NISP per Stratigraphic Unit										All Stratigraphic Units					
	Surface	[1300]	[1301]	[1302]	[1303]	[1304]	[1305]	[1306]	[1307]	?	NISP	NISP%	MNE	MNE%	MNI	MNI%
Bos primigenius		18									18	4.6	16	25.0	2	8.7
Bos sp.		14				1	1				16	4.1	11	17.2	2	8.7
Cervus elaphus		5				1	1		1		8	2.0	8	12.5	4	17.4
Ovis/Capra		5					1	3			9	2.3	7	10.9	3	13.0
Sus scrofa scrofa		1									1	0.3	1	1.6	1	4.3
Sus scrofa cf. *domesticus*						1					1	0.3	1	1.6	1	4.3
Sus scrofa ssp.		8			1	2	1	1			13	3.2	11	17.2	5	21.7
Canis sp.							1				1	0.3	1	1.6	1	4.3
Oryctolagus cuniculus						2					2	0.5	2	3.1	1	4.3
Lepus sp.		1									1	0.3	1	1.6	1	4.3
Leporidae								1			1	0.3	1	1.6	1	4.3
Bufo bufo					4						4	1.0	4	6.3	1	4.3
Undetermined	1	264	8	8	6	10	13	6		2	318	80.9				
WG0	*1*	*109*	*1*	*2*	*2*	*2*	*5*	*2*			*124*	*39.0*				
WG1 (<20 kg)				*2*							*2*	*0.6*				
WG1.2 (<100 kg)		*1*	*2*								*3*	*0.9*				
WG2 (20-100 kg)		*16*	*5*	*2*	*1*	*8*	*6*	*4*			*42*	*13.2*				
WG2.3 (20-300 kg)		*11*		*1*	*2*					*1*	*15*	*4.7*				
WG3 (100-300 kg)		*7*			*1*		*2*				*10*	*3.1*				
WG3.4 (>100 kg)		*48*		*1*						*1*	*50*	*15.7*				
WG4 (>300 kg)		*72*									*72*	*22.6*				
Total	1	316	8	7	11	17	18	11	1	2	393	100	64	100	23	100

Fig. 5. *Absolute and relative number of identified specimens (NISP), minimum number of elements (MNE), and minimum number of individuals (MNI) for pit 13 per Stratigraphic Unit and for the total assemblage. Remains only identified to weight groups are also presented.*

Three remains had burning damage: one WG2 –degree 3– and WG3 –degree 4– long bone fragments, and one undetermined WG3.4 –degree 5–.

Weathering (4 %), corrosion (5 %), and manganese oxide (<1 %) are not influential and generally appear in initial degrees. Chemical corrosion is more widespread, also occurring in degree 3 (24 %). Vermiculations (17 %) and concretions (30%) are more relevant. The former was recorded in degrees 3 (28 %) and 4 (18 %), and the latter in degrees 3 (15 %) and 4 (5 %).

4.2. Pit 54

The NSP = 67 is dispersed in the SUs identified, with a higher relevance of [5402] (16 %), [5409] (18 %), [5410] (24 %), and undetermined SU (19 %). Around 60 % of the remains have <5 cm, and 30 % between 5-10 cm. Only two elements (3 %) are complete, with recent breakage being significant (58 %). Taxonomic identification was achieved in 21 remains (31 %), with the other 69 % being from undetermined (50 %) or WG2 (28 %) (Figs. 7-8). Bovine are represented by sub-adult/adult tooth fragments, and *Ovis/Capra* by adult cranial and appendicular remains. *Cervus elaphus* has a low NISP, but all remains are consistent with sub-adults/adults.

Swine are the most relevant group. A complete left and right mandible from an adult *Sus scrofa* cf. *domesticus* –30-52 months– was recovered in

	B	BP	CE	O/C	SS	SCFD	S	CAN	ORC	L	LEP
Horn/antler	6(1)		1(1)								
Cranium				4(2)			1(1)				
Mandible			1(1)								
Loose incisor				1(1)			4(3)				
Loose molar	1(1)	1(1)					2(1)				
Hyoid	1(1)										
Vertebra				1(1)					1(1)		
Scapula			1(1)								
Humerus	1(1)	2(2)	1(1)	1(1)	1(1)	1(1)			1(1)		
Radius		2(2)	1(1)	1(1)				1(1)			
Ulna							1(1)				
Metacarpal		1(1)									
Pelvis							2(2)				
Femur		3(3)									
Tibia		1(1)									
Metatarsal			1(1)								1(1)
Astragalus		3(3)					1(1)				
Calcaneus		3(2)		1(1)						1(1)	
Carpal/tarsal	7(7)	2(1)									
Phalange 1			2(2)				2(2)				
TOTAL	16(11)	18(16)	8(8)	9(7)	1(1)	1(1)	13(11)	1(1)	2(2)	1(1)	1(1)

	BB	WG0	WG1	WG1.2	WG2	WG2.3	WG3	WG3.4	WG4
Cranium		15			3			2	
Vertebra				1	2	2	1		
Rib					16	2		1	2
Scapula						1			
Humerus	2(2)								1
Ilium	1(1)								
Femur								1	1
Tibio-fibula	1(1)								
Metapodial						1			
Carpal/tarsal									1
Phalange					2				
Long bone					17	5	9	5	28
Flat bone		38		2	2	2		8	7
Undetermined		71	2			2		33	32
TOTAL	4(4)	124	2	3	42	15	10	50	72

FIG. 6. *NISP (MNE) values for pit 13.* *B* = Bos *sp.*; *BP* = Bos primigenius; *CE* = Cervus elaphus; *SS* = Sus scrofa scrofa; *SCFD* = Sus scrofa *cf.* domesticus; *S* = Sus scrofa *ssp.*; *CAN* = Canis *sp.*; *ORC* = Oryctolagus cuniculus; *L* = Lepus *sp.*; *LEP* = *Leporidae*; *BB* = Bufo bufo; *WG* = *Weight Group*.

[5410], lacking taphonomical indicators from the nutritive phase. Other cranial and appendicular remains lacking measurable portions add one infant –3-12 months– and four sub-adults/adults to the swine MNI.

A limited sample allowed for completeness (n = 11) and fracture planes (n = 32) analysis. More complete bones were recorded, but the majority have <25 % of their original shaft length (64 %) and circumference (64 %). Outlines are frequently curved (41%) and longitudinal (38 %), with right angles (78 %) and smooth edges (84 %). An isolated impact in a WG2 shaft fragment is the only indicator of anthropogenic breakage (2 %). Cutmarks, tooth marks, and boiling are absent, with burnt damage (9 %), mostly in degree 3 –6 out of 7– in

	NISP	NISP %	MNE	MNE %	MNI	MNI %
Bos sp.	2	3.0	2	9.5	2	13.3
Cervus elaphus	4	6.0	4	19	4	26.7
Ovis/Capra	4	6.0	4	19	3	20.0
Sus scrofa cf. *domesticus*	2	3.0	2	9.5	1	6.7
Sus scrofa ssp.	9	13.4	9	42.9	5	33.3
undetermined	46	68.7				
WG 0	23	50.0				
WG 2 (20-100 kg)	13	28.3				
WG 2.3 (20-300 kg)	4	8.7				
WG 3.4 (>100 kg)	3	6.5				
WG4 (>300 kg)	3	6.5				
Total	67	100	21	100	15	100

NISP per Stratigraphic Unit

	[5401]	[5402]	[5403]	[5404]	[5406]	[5409]	[5410]	?
Bos sp.			1	1				
Cervus elaphus				1	1	1	1	
Ovis/Capra	1	2					1	
Sus scrofa cf. *domesticus*							2	
Sus scrofa ssp.		3		2		2		2
undetermined	1	6	2	3	2	9	12	11
TOTAL	2	11	3	7	3	12	16	13

FIG. 7. *Absolute and relative number of identified specimens (NISP), minimum number of elements (MNE), and minimum number of individuals (MNI) for pit 54 per Stratigraphic Unit and for the total assemblage; remains only identified to weight groups are also presented.*

	B	CE	O/C	scfD	S	WG0	WG2	WG2.3	WG3.4	WG4
Cranium									1	
Mandible			1(1)	2(2)	3(3)					
Loose canine					1(1)					
Loose molar	1(1)	1(1)	1(1)							
Loose tooth	1(1)									
Rib							5			
Scapula		2(2)								
Humerus		1(1)	1(1)		1(1)					
Ulna					1(1)					
Femur					3(3)					
Tibia			1(1)							
Phalange								1		
Long bone						1	8	2	2	3
Flat bone						1				
undetermined						21		1		
TOTAL	2(2)	4(4)	4(4)	2(2)	9(9)	23	13	4	3	3

FIG. 8. *NISP(MNE) values for pit 54.* B = Bos *sp.;* CE = Cervus elaphus*;* O/C = Ovis/Capra*;* scfD = Sus scrofa *cf.* domesticus*;* S = Sus scrofa *ssp.;* WG = *Weight Group*.

taxonomically undetermined remains, the exception being a *Cervus elaphus* humerus. Weathering (8 %) and corrosion (12 %) are not significant if compared to concretions (49 %). Initial degrees are prevalent (55 %), but degrees 3 (30 %) and 5 (13 %) were recorded.

4.3. Pit 16

This pit has an NSP = 364, of which 37 % are from [1600], 19 % from [1605], 13 % from [1602], and 11 % from [1604], with the remaining spread by other SUS. Almost 68% of the assemblage

	NISP	NISP %	MNE	MNE %	MNI	MNI %
Bos sp.	5	1.4	4	4.1	3	9.7
Cervus elaphus	11	3.0	5	5.2	3	9.7
Capreolus capreolus	1	0.3	1	1.0	1	3.2
Cervidae	2	0.5	0	0.0	0	0.0
Capra hircus	1	0.3	1	1.0	1	3.2
cf. *Ovis aries*	1	0.3	1	1.0	1	3.2
Ovis/Capra	9	2.5	9	9.3	3	9.7
Sus scrofa cf. *domesticus*	4	1.1	4	4.1	4	12.9
Sus scrofa ssp.	47	12.9	40	41.2	5	16.1
Canis sp.	16	4.4	15	15.5	3	9.7
Oryctolagus cuniculus	15	4.1	14	14.4	5	16.1
Lepus sp.	1	0.3	1	1.0	1	3.2
Leporidae	2	0.5	2	2.1	1	3.2
undetermined	249	68.4				
WG 0	*75*	*30.1*				
WG 1 (<20 kg)	*3*	*1.2*				
WG 1.2 (<100 kg)	*13*	*5.2*				
WG 2 (20-100 kg)	*89*	*35.7*				
WG 2.3 (20-100 kg)	*33*	*13.3*				
WG 3 (100-300 kg)	*13*	*5.2*				
WG 3.4 (>100 kg)	*17*	*6.8*				
WG4 (>300 kg)	*6*	*2.4*				
TOTAL	364	100	97	100	31	100

NISP per Stratigraphic Unit									
	[1600]	[1601]	[1602]	[1603]	[1604]	[1605]	[1606]	[1608]	?
Bos sp.	3					1		1	
Cervus elaphus	6		4			1			
Capreolus capreolus						1			
Cervidae	2								
Capra hircus					1				
cf. *Ovis aries*					1				
Ovis/Capra	6				1	1			1
Sus scrofa cf. *domesticus*	3				1				
Sus scrofa ssp.	20		13	2	2	10			
Canis sp.		2					13	1	
Oryctolagus cuniculus	1		2		3	6		3	
Lepus sp.			1						
Leporidae			2						
undetermined	95	4	24	19	31	50	14	10	2
TOTAL	136	6	46	21	40	70	27	15	3

FIG. 9. *Absolute and relative number of identified specimens (NISP), minimum number of elements (MNE), and minimum number of individuals (MNI) for pit 16 per Stratigraphic Unit and for the total assemblage; remains only identified to weight groups are also presented.*

	B	CE	CC	CER	CH	cfOA	O/C	scfD	S	CAN	ORC
Horn/antler	1(1)	8(2)	1(1)	2	1(1)	1(1)					
Cranium							1(1)	3(3)	2(1)		
Mandible									3(2)		3(3)
Loose incisor		1(1)							4(4)		
Loose canine									6(4)		
Loose molar							5(5)	1(1)			
Vertebra							1(1)			2(2)	
Scapula									3(2)		2(2)
Humerus	1(1)	2(2)							4(4)	2(1)	1(1)
Radius							1(1)				
Ulna	1(1)								5(4)	1(1)	1(1)
Metacarpal									3(3)	6(6)	
Pelvis	2(1)						1(1)		3(3)		4(4)
Femur									1(1)	1(1)	3(2)
Tibia									2(2)		
Metatarsal									6(6)		1(1)
Metapodial									2(1)		
Carpal/tarsal										1(1)	
Phalange 1									1(1)	3(3)	
Phalange 2									1(1)		
Phalange 3									1(1)		
TOTAL	5(4)	11(5)	1(1)	2	1(1)	1(1)	9(9)	4(4)	47(40)	16(15)	15(14)

	L	LEP	WG0	WG1	WG1.2	WG2	WG2.3	WG3	WG3.4	WG4
Horn/antler			4							
Cranium			2							
Mandible							1			
Loose tooth			1						1	
Vertebra					1	4	7		1	
Rib					3	22	6	2		
Sacrum						1				
Scapula				1	1	3				
Humerus				1		1		1		
Radius	1(1)					2				
Ulna						1	1			
Femur		2(2)				1	1			
Tibia						1				
Metatarsal									1	
Metapodial						5				
Long bone					7	39	14		2	3
Flat bone			22	1		9	3	10	8	
undetermined			46		1				4	3
TOTAL	1(1)	2(2)	75	3	13	89	33	13	17	6

FIG. 10. *NISP (MNE) values for pit 16.* B = Bos *sp.;* CE = Cervus elaphus*;* CC = Capreolus capreolus*;* CER = *Cervidae;* CH = Capra hircus; *cf.* OA = *cf.* Ovis aries*;* S *cf.* D = Sus scrofa *cf.* domesticus*;* S = Sus scrofa *ssp.;* CAN = Canis *sp.;* ORC = Oryctolagus cuniculus*;* L = Lepus *sp.;* LEP = *Leporidae;* WG = *Weight Group.*

has <5 cm and 28 % between 5-10 cm, with 10-15 cm (4 %) and >20 cm being vestigial (<1 %). This sample has around 6% complete elements but recent breakage is significant (33 %). Taxonomic identifiability was achieved in 32% of the cases, with the remaining 68 % consisting mostly in undetermined WGS (30 %), WG2 (36 %) and WG2.3 (13 %) (Figs. 9-10).

Bos sp. is represented by a horn fragment and some appendicular elements. The relevance of horn/antlers is evidenced in the cases of *Capreolus capreolus*, *Capra hircus* and cf. *Ovis aries* because they have a specimen each, hence one adult individual per species. *Ovis*/*Capra* are more numerous, but this is mainly due to the number of tooth fragments.

Swine include maxillary portions and a loose M^3 classified as *Sus scrofa* cf. *domesticus* due to their small size, corresponding to a rather large MNI of four individuals: one infant –6-12 months–, one sub-adult/adult –12-30 months–, and two adults –30-52 and 52-96 months–. The numerous *Sus scrofa* ssp. lacked measurable portions but included cranial and appendicular remains that add one infant –<8 months–, two juveniles –14-16 and 15-17 months– and two sub-adults –18-36 and 18-30 months–.

Cervus elaphus is present by antler fragments from [1600/1601] (n = 5) and [1602] (n = 3), one loose incisor, one left and one right humerus that correspond to sub-adult/adult individuals. Of particular interest is the case of the *Canis* sp.; an axis and cervical vertebra were recovered in [1601], one femur in [1608], and some anatomically compatible bones from a right anterior limb (humerus, ulna, scapholunate, metacarpals and first phalanges) from the sediment [1606] inside the large pot from pit 16. These bones were very corroded; thus, the amount of information acquired is limited. The humerus was badly preserved hindering its ageing; the distal epiphysis was not fused –<6-8 months– or recently fused; the femur fusion line was visible –9-12 months–. A MNI of 3 *Canis* sp. is calculated, with all identified remains corresponding to individuals with <12 months.

Shaft completeness (n = 56) show a high breakage with <25 % (63 %) and 25-50 % (32 %) in length, and <25 % (71 %) in circumference. The fracture planes (n = 141) have mostly longitudinal (51 %) and curved (33 %) outlines, right (71 %) angles, and smooth (75 %) edges. Anthropogenic breakage (2 %) comprises impact notches –including one in a swine humerus –, one cortical extraction in a *Bos* sp. humerus, one percussion flake, and other stigmas, mainly in WG2 and WG3. Cutmarks, tooth marks and boiling indicators were not identified. Burnt damage (4 %) was recorded in taxonomically undetermined remains, largely in degree 3 –9 out of 13, 69 %–. Other indicators had comparatively higher abundances. Weathering (6 %) is limited to initial degrees, but manganese oxide (7 %) also had degree 3 (21 %) and 4 (8 %). Corrosion (10 %) is generally in degree 4 (53 %). More usual are vermiculations (17 %) or concretions (45 %). The former has initial degrees (69 %) but also degrees 3 (20 %) and 4 (12 %). The latter occurs in degree 1 (42 %) and while scarce in degree 2 (4 %) is of relevance in degrees 3 (32 %) and 4 (22 %).

5. Discussion

5.1. Pits 13 and 54

One of the most distinct characteristics of pits 13 and 54 is the stone structure that sealed the connection between both and their possibly shared base deposit. This occurrence has been explained due to both features' closeness, which might have led to the collapse of the shared wall between the two pits and the small stone wall's construction to overcome that contingency. However, it is necessary to ask if the structures were contemporaneous or not, something that only further radiometric dates might help understanding. If so, why would these groups build two structures so close to each other? Could the role of both pits somehow be connected? If they are not contemporaneous, could this 'wall' have been used to replace unstable sediment wall from the already existing pit? While these questions remain, the materials suggest that the pits were used simultaneously. The small stone clearly indicates intention of extending the structures' usage and increasing their architectonical stability.

Pit 13 had an important SU where large bovine remains are abundant (Fig. 11). Except for a hyoid bone from [1304] and a lower molar from [1305], all bovine remains provenance is [1300],

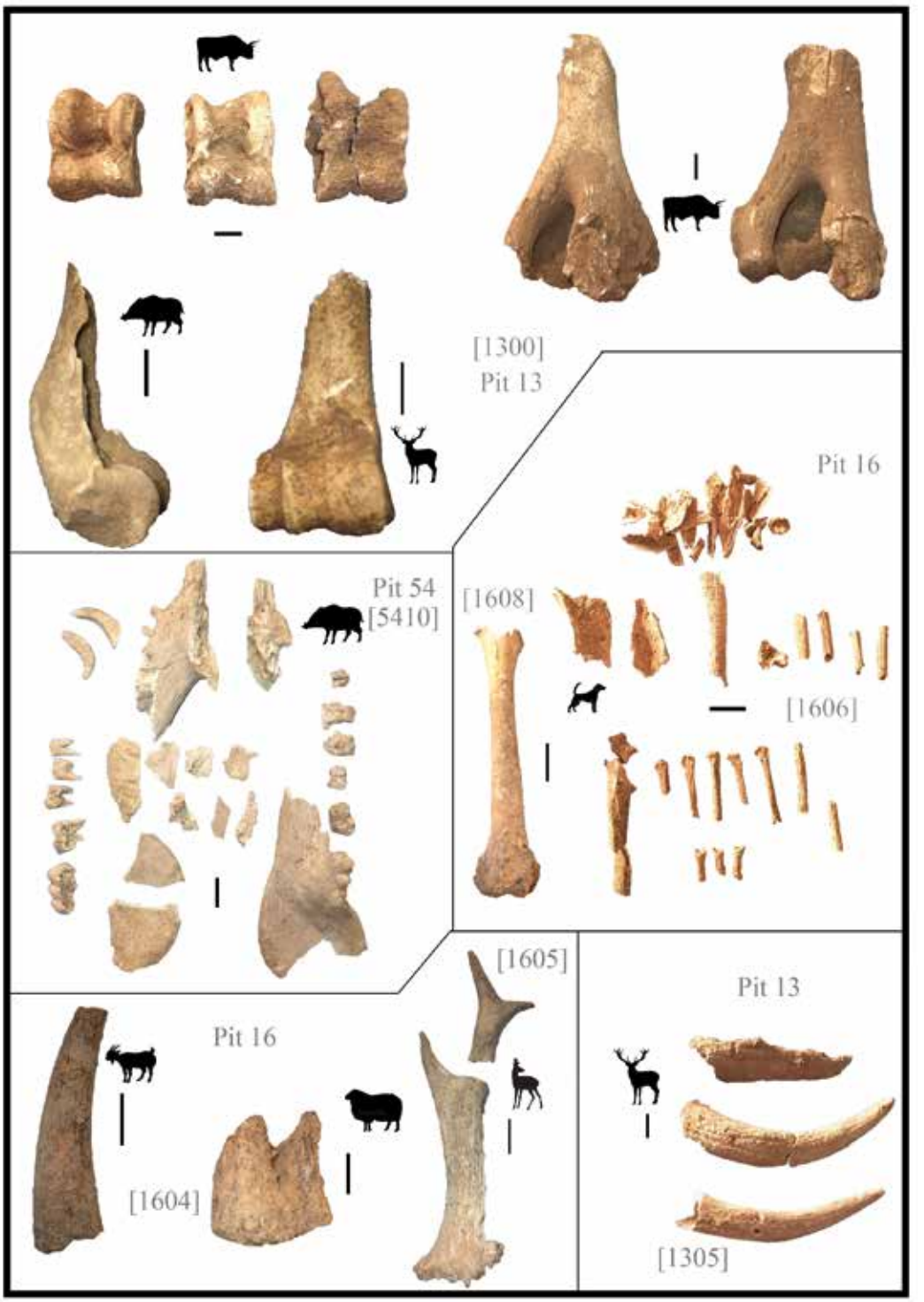

Fig. 11. *Different remains of auroch, wild boar and red deer from pit 13; probable pig mandible deposited in the base of pit 54; canid femur recovered in the base of pit 16, canid remains from inside the ceramic pot, goat and probable sheep horns and roe deer antler from pit 16.*

thus corresponding to 94 % of the total bovine remains. 63 % of red deer, 56 % of caprine, and 60 % of swine remains are from [1300]. Wild species are prevalent in [1300] even if we only consider auroch and red deer. Caprine are represented mainly by cranial elements, but the opposite is true for swine, red deer and bovine, particularly if horn fragments are not considered. This SU had some pottery and scarce lithic industry. The remaining SUs had fewer faunal remains even if some ceramics, lithic industry and clay were recovered. [1303] presented a prone inhumation lacking associated material besides a few bones, including all the *Bufo bufo* remains. A fragmented red deer antler was excavated from the base deposit [1305], the same level where a canid radius shaft was found.

Humeri are significant in terms of NISP and MNE. Besides an anatomical connection between a left scaphoid and semi-lunar bones from bovine, no other connections were identified. However, some bones are anatomically compatible, mostly from bovine forelimbs, including long bones and carpal bones, with phalanges being absent. Fragmentation was recorded but green breakage also, especially in bovine. Meat filleting of large portions could have occurred even if cutmarks are absent. No evidence of carnivore secondary access was identified. The reduced weathering suggests that the exposure of the remains was limited, suggesting intentionality of deposition/closure of the structure. [1300] has 59 % of the weathered remains, but all are taxonomically unidentified and mainly in initial degrees. One must consider the possibility that weathered material could also have been included with the infilling matrix.

Pit 54 does not have a clear pattern that could allow the individualisation of a specific unit among the infillings based on fauna abundances. Of relevance is the pig mandible in the base deposit [5410] (Fig. 11) where a *Glycymeris bimaculate* shell was recovered, as well as incised pottery. This SU is bellow [5409] and its concentration of stones, where decorated pottery fragments were identified. [5409] had a connection between pits 13 and 54 filled with stones [1307], with the human remains identified in [5408] –accompanied by a limestone mortar– right above [5409]. Fresh breakage indicators are minimal, and cutmarks, tooth marks, and evidence of boiling were not identified. Burnt damage is observable in carbonised small fragments and is more abundant in [5410] (67 %). Weathering is frequent in this pit but not relevant. Only concretion is common and in higher degrees implying a different sedimentary environment, mainly on the bottom deposits [5409, 5410] (33 %). This pit had fewer materials, but the large vessel with the mouth overturned to the west wall [5405] is noteworthy, as well as the colander fragment from [5402].

In both pits, human remains were recovered in the SUs immediately above the ones where the two pits were connected. [1305] is equivalent to [5410], [1304] to [5409], and to some extent due to the deposition of human remains (although spatially separated), [1303] is 'equivalent' to [5408] with both deposits having opposed orientations towards the corresponding far walls of the pits. After the deposition of a pig mandible in the base of pit 54 and a red deer antler in the bottom of pit 13, the connection between both pits is sealed with horizontally deposited schist slabs in two successive rows [1307]. One inhumation occurs in [1303], and human bones were recovered from [5408]. The two pits derive (possible due to their different sizes), with the top of pit 13 having the large sample of faunal remains from a possible feasting or offering. Summing up, sequenced and shared practices highlight that these structures' biography might have changed through time, with possibly different rhythms and roles. To detect these other functionalities, further studies are necessary, which, in many cases, do not occur in contexts identified by rescue archaeology.

5.2. Pit 16

Pit 16 presents a more standard profile than pits 13 and 54, having been interpreted as a storage pit, latter used to throw away refuse, although some structured levels were recognised with stones and

clay. That is the case of the quartzite pebbles and a large blade that were identified in [1600/1601] with an 'almeriense idol', a flint blade, a red deer antler, some decorate ceramic and malacofauna. Two pottery depositions [1606] and [1607] are of relevance. Due to the fact that this pit is near pits 13 and 54, it was suggested that these depositions could be related to the nearby funerary contexts.

The faunal spectrum is dominated by swine, common in Southern Portugal during the Chalcolithic (Valente and Carvalho, 2014: 226-240). The majority of swine were not specifically identified, but some cranial portions are probably from pig due to their small size. The infra-representation of axial postcranial bones can partly be explained by the large number of vertebrae and ribs identified as WG2 and WG2.3. [1600] contains 45 % of the swine remains and 67 % of the caprine. One goat left horn from [1604], one cf. sheep horn fragment from [1604], and one roe deer antler from [1605] where a flint blade was recovered are of interest (Fig. 11). Red deer is represented by several antler fragments in [1600] (n = 5) and [1602] (n = 3), with two Cervidae antler fragments in [1600]. [1602] had several artefacts, *Pecten maximus* shells and a horned idol fragment. Finally, a bovine horn fragment was recovered in [1600]. Focusing antlers and horns, from the bottom to the top of the pit infilling, we identified roe deer [1605], goat and sheep [1604], red deer [1602, 1600] and bovine [1600].

The identification of *Canis* sp. is of significance: one axis and a cervical vertebra from the top [1601], one distal femur portion from the bottom [1608], and several bones from a right forelimb (humerus, ulna, scapholunate, metacarpals and proximal phalanges) were recovered in the middle of the stratigraphy in the interior of the large spherical pot deposited near the northern wall [1606] (Fig. 11). All of the latter showed corrosion damage and correspond to 63 % of this indicator in pit 16, hence demonstrating a different taphonomical history from the other remains. The forelimb is very incomplete and altered, eventually due to previous exposition. Interesting is that the more commonly recovered cranium and mandible are absent, although cervical vertebrae are present.

Anthropogenic breakage was identified dispersed through the stratigraphy, but the fragmentation of the remains in a dry or semi-dry state is better represented. The absence of cutmarks, tooth marks or boiling indicators is once more noted, as well as the identification of burned bones, mainly carbonisation in small bone fragments from [1600] (54 %) and [1605] (31 %). This, together with the low incidence of weathering, suggest fast sedimentation of the remains.

5.3. MCB2 faunal depositions in a broader context

In some of the discussed cases, the intentionality associated with the deposition of faunal remains, similarly to the deposition of the complete vessels, assumed a complexity and protagonism in constructing social relations and practices. Material culture can have meanings other than the obvious functional ones (Hodder, 1989: 250-269), and animals' depositions can go beyond the economic meaning (Russell, 2012), assuming local variants but also larger common social and symbolical practices (e.g., Márquez, 2006; Liesau, 2012: 219-257). As Hodder (1989: 257) advocated, "… the event of doing is eclipsed by the significance of what is done…". Animals can have different meanings as *economic resources* and *resources of a symbolic nature*; they can also be considered agentic entities that engage in human-non-human social relationships (Hill, 2011; Overton and Hamilakis, 2013: 111-136). The relation between humans and animals is dynamic and changes between societies and cultures over time and space (Ingold, 1988).

The contexts under analysis can be chronologically positioned in the transition between essentially animist conceptions – not of believing *about* the world but a condition of being *in* it – Ingold, 2006: 9-20), and the development of the first conceptions of transcendence (Valera, 2012). Assemblages are generally not formed by a single event since deposition can be a long-term process where

different individual or collective actions can occur, resulting in palimpsests of overlapping events (Marciniak, 1999: 293-320) of different types (Bailey, 2007: 198-223). This also applies to the pit deposits under analysis. We must consider the 'tempos' of digging and infilling and the possibility that variability might not be intended or meaningful; thus, a critical overview of evidence is needed (Garrow, 2012: 85-115). One must consider the possibility that remains that were recovered from the pit's infillings could have been included by accident while others were deposited, nevertheless some clear patterns were observable.

Neolithic-Bronze Age bovine depositions in negative features have been published for Iberian contexts, ranging from entire skeletons to specific elements (e.g., horns, skulls) (Baquedano *et al.*, 2000; Liesau *et al.*, 2004; Liesau and Blasco, 2006: 81-92; Cámara *et al.*, 2008: 55-90; 2016: 145-174; Cardoso, 2009: 357-370; Calvo *et al.*, 2015: 243-276; Liesau, 2017: 107-128; Valera, 2018; Valera *et al.*, 2020: 11-33; Albizuri *et al.*, 2021)[6]. These are commonly interpreted as a ritual behaviour associated with foundation rites or economic relevance. Occasionally, remains can be placed in opposite directions (Cardoso, 2009: 357-370), as occurs with other species (Valera, 2019; Valera *et al.*, 2020: 11-33). The deposition of auroch remains is less common, but horns depositions are recorded.

Pit 13 had an important amount of bovine remains, largely identifiable as auroch. The absence of cutmarks, existence of anatomical connections, and the type of contexts can allow us to infer the deposition of portions with meat (Liesau and Blasco, 2006: 86). However, this is not clear here because we cannot confirm the existence of anatomical connections, and some of the long bones had green breakage. Cattle only gains a higher symbolic prominence during the Bronze Age (e.g., Porfírio and Serra, 2010: 49-66; Costa *et al.*, 2019: 602-612)[7], and auroch is not commonly found in such frequencies in Portuguese Late Prehistory (Davis and Mataloto, 2012: 47-85; Valente and Carvalho, 2014: 226-240; Almeida and Valera, 2021: 75-106), and in Central Iberia these cases are rare (Liesau *et al.*, 2013; Liesau, 2017: 107-128). Auroch, red deer and wild boar are 41 % of the medium and large-game from pit 13 (65 % if bovine remains are included). Wild species appear at higher frequencies here than in the majority of other sites in the region. Perdigões cairn 1 contained a pit with a large fauna collection with 57 % of red deer, burning damage (71 %), anthropogenic breakage and cutmarks (Cabaço, 2017). This assemblage was interpreted as a feasting event, as there were abundant taphonomical indicators of butchering, processing and consumption. Wild species were predominant, and yet contrary to our case, no auroch remains were identified.

One must consider that the deposit [1300] is the top infilling of pit 13 where the inhumation [1303] was found. By not comprising the more ordinary food waste expected to consist mostly of domesticated animals, it might be indicating a specific event, as it would be the case of a food-sharing episode (Binford, 1984b: 235-257). When these episodes were extended beyond the nuclear family, they assumed the character of feasting, which might have involved particular social, identitarian, economic and political aspects, with the food being generally distributed after cooking (Russell, 2012). Another possibility, considering that some high meat content elements were identified but cutmarks are absent and other indicators of anthropogenic action are scarce, is that they could correspond to an offering as is suggested for other cases (e.g., Albizuri, 2011: 7-26; Martín *et al.*, 2019: 6615-6637). The lack of anthropogenic indicators as boiling or cutmarks must be understood in light of the relevance of the corrosions and especially the important concretions that affect the assemblage from this

[6] Valera, A. C.: "Emerging Inequalities at Animal Farm: Tracing the Symbolic Use of Cattle from the Late Neolithic to the Middle Bronze Age in Southern Portugal". In Wright, E. and Ginja, C. (eds.): *Cattle and People: Interdisciplinary approaches to an ancient relationship*. Atlanta: Lockwood Pres, in press.

[7] Valera, *op. cit.* n. 5.

pit that definitively hindered taphonomical analysis due to poor preservation of bone surfaces.

Considering the infilling of pit 13, its morphology, and the sealed connection to pit 54, where an ossuary was identified, other possibilities might be considered, not necessarily discordant. It has been discussed that humans could have conceived animals as sentient and social individuals. Thus, their capture and killing would require a different conceptualisation and eventually a different meaning "… other than as a means to an end…" (Overton and Hamilakis, 2013: 126). The abundant remains of large wild game, mainly auroch –MNI = 2–, but also red deer and wild boar, predominant over domesticated animals are of interest. Even if only hunting or hunting and butchering occurred, it must have been impactful in the sphere of interspecies interaction. One must also consider the possibility that the lack of relevant weathering in the top deposit of pit 13 [1300] and the absence of carnivore damage could be an indicator of special disposal of these remains, preventing them from gnawing on the remains, something more common in larger taxa as is our case (Russell, 2012: 58).

Depositions of horns and antlers are known in Late Prehistory negative structures, with bovine, cervids or caprine specimens being recovered complete or fragmented in several contexts (e.g., Márquez and Jiménez, 2010; Valera, 2018; Valera *et al.*, 2010; 2020: 11-33; Calvo *et al.,* 2015: 243-276). Red deer and roe deer antlers can be collected after annual shedding, from a dead animal or after hunting episodes, which can have different motifs behind them (Russell, 2012). These could result in antlers with an incomplete growth cycle, thus different properties or even meanings. Animal's defences can function as trophies, either by a respectful treatment of the remains of a game or as a way of appropriating animal power, but displays of domestic animals' elements, usually skulls or horns, may commemorate feasts and/or sacrifices (Russell, 2012). The reason for the significance of antlers in pit 16 is not clear, especially considering the variety of reasons behind behaviours involving antlers. Nonetheless, the presence of antlers and horns from different species, some of which only identified based on these elements, is remarkable. One could interpret this as a simple discard, but their quantity, variety, and the contexts where they were found might suggest otherwise.

The most easily acknowledgeable faunal deposition are the canid remains. Dogs dynamics and roles in the scope of human-animal relations are more diverse than the majority of other species, even resulting in a blurring or permeability of the human-animal boundary (Russell, 2012). Depositions of canids' complete skeletons or articulated limbs/parts of limbs is recurrent in Iberian Late Prehistory (e.g., Baquedano *et al.*, 2000; Cámara *et al.*, 2008: 55-90; Albizuri, 2011: 7-26; Valera, 2008a: 19-78; Valera *et al.*, 2010; Liesau *et al.*, 2013: 277-286; Valera and Costa, 2013: 263-275; Porfírio and Serra, 2014: 47-56; Calvo *et al.*, 2015: 243-276; Lomba and Haber, 2016: 349-364; Delicado *et al.*, 2017: 28-55; Martín *et al.*, 2019: 6615-6637). Cynophagy has been identified (e.g., Sanchis and Sarrión, 2004: 161-198; Martín *et al.*, 2014: 153-169) but was not a systematic practice. This case where the remains were found in a pot is an unusual occurrence but a dog in anatomical position was recovered from inside a pot in Molinos de Papel, in Caravaca (Lomba and Haber, 2016: 349-364). Could the pit 16 deposition relate to the animal's position as conceived within a zoontology and interspecific relationship developed between human and non-human animals while the specimen was alive, which later impacted the treatment it received after death?

This deposition raises questions of segmentation since there was a partition of this specimen and then a deposition inside a human-made recipient. However, its different preservation could relate to a previous manipulation of the remains, eventually even its exposure prior to the deposition in the pot. The reasons for the lack of certain elements are also not clear. We cannot attest if they were part of the deposition, if they disappeared due to specific taphonomical reasons or recent events. This case does not fit within common typologies of dog depositions in archaeological contexts, which can be of

difficult classification, identification and interpretation due to the variety of possibilities (Liesau *et al.*, 2014: 89-115). The practice identified gives these remains a significance beyond consumption waste (Russell, 2012). Through the principle of participation, these remains could represent the whole body of the animal, specific events or an existing bond that led to its deposition (Valera, 2008b: 19-78; 2019; Valera and Costa, 2013: 263-275). The idea behind social practices of segmentation, increasingly being discussed, must be considered even if this specific case can have other motivations.

6. Conclusions

The faunal remains from the ditched enclosure of Monte das Cabeceiras 2 allowed an initial glimpse of the communities that visited or lived in this archaeological site during the 3rd millennium BC. The main conclusions to be pointed out are:

1. The most common wild and domestic species are present in different abundances, with taphonomical indicators of butchering, processing, and consumption having low frequencies.
2. A possible feasting or offering was suggested, based on bovine, including auroch, and to a lesser extent, red deer, wild boar, and domestic species.
3. Depositions of animal parts, namely horns/antlers and mandibles, were isolated, near ceramic depositions and occasionally related to human remains.
4. A deposition of canid anterior limb bones inside a large pot was identified.

Summing up, MCB2 seems to match and replicate what has been suggested and identified in other Southwestern Iberian ditched enclosures, materialising repetitive and normative depositional practices with what can be seen as a 'script'. These shared behaviours highlight that there might be an almost supra-regional identity, visible not only in the materials and architectures shared but also in the social practices and economic elements. Still, some of the results suggest that MCB2 might illustrate local/regional behaviours that need to be further investigated in future publications. In this sense, MCB2 seems to be one among other Southern Portuguese ditched enclosures, with specificities that might reflect the acting communities' identities.

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