

# ANIMAL REMAINS ENCLOSED IN OVAL CLAY OBJECTS FROM THE “BURNT VILLAGE” OF TELL SABI ABYAD, NORTHERN SYRIA

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## Summary

Remains of ovicaprid and bovid bones enclosed in large oval clay objects were recovered from one of the houses in the so called “Burnt Village” of Tell Sabi Abyad, in northern Syria. The village corresponds to the level 6 settlement and is dated to 5300-5200 bc. This settlement was destroyed by a violent fire conflagration. This circumstance led to the exceptional preservation of the clay objects. The remains are described and the identification criteria are analysed. Comparison with other sites and possible explanations for these finds are discussed. The remains seem to be related to some sort of ritual activity, most probably related to the cult of the dead.

## Résumé

*Vestiges animaux découverts dans des objets ovales en argile du “Village brûlé” du Tell Sabi Abyad, Syrie du nord.*

*Des restes osseux de caprinés et de bovins inclus dans des objets ovales en argile ont été découverts dans l'une des maisons du “Village brûlé” de Tell Sabi Abyad, en Syrie du Nord. Le village correspond au niveau 6 et est daté de 5300-5200 bc. Le site a été détruit par un violent incendie. Ces circonstances ont permis une conservation exceptionnelle des objets en argile. Les restes sont décrits et les critères d'identification analysés. Une comparaison avec d'autres sites est faite et différentes explications sont discutées. Les restes semblent être apparentés à une activité rituelle, très probablement liée au culte des morts.*

## Zusammenfassung

*Tierknochen in Lehmpackungen aus der “Burnt village” von Tell Sabi Abyad, Nordsyrien.*

*Während der Ausgrabungen in der sog. “Burnt Village” auf dem Tell Sabi Abyad, Nordsyrien, wurden in einem der Häuser Knochenfragmente von Ovicapriden und Boviden entdeckt, die in ovalen Lehmpackungen eingeschlossen waren. Die Siedlung entspricht der Schicht 6 und datiert um 5300/5200 v. Chr. Diese Siedlung fiel einem heftigen Großbrand zum Opfer, wobei die ungewöhnlichen Lehmformen konserviert wurden. Die Knochenfunde werden beschrieben und die Bestimmungsmerkmale ausgewertet. Vergleiche mit anderen Fundstellen und mögliche Erklärungen werden diskutiert. Die Tierreste spielten vermutlich eine Rolle im Rahmen einer rituellen Handlung, die wahrscheinlich mit dem Totenkult zusammenhing.*

## Key Words

*Sheep, Bovid, Animal remains, Ritual context, Northern Syria, Neolithic.*

## Mots clés

*Ovins, Bovins, Restes animaux, Contexte rituel, Syrie du Nord, Néolithique.*

## Schlüsselworte

*Schaf, Boviden, Tierknochen, Ritueller Kontext, Nordsyrien, Neolithikum.*

## Introduction

During the campaigns of excavation conducted between 1986 and 1992 by the Rijksmuseum van Oudheden, Leiden, under the direction of Peter M. M. G. Akkermans at Sabi Abyad, remains of a settlement completely destroyed by a violent fire were discovered. This settlement, the so called “Burnt Village”, is dated to around 5300-5200 bc (uncalibrated) on basis of radiocarbon dates and corresponds to level 6 of the sequence of the eleven super-imposed levels of occupation distinguished at the site (Akkermans and Verhoeven, 1995). This level is the first

level of the so called Transitional Period and is related to a Late Neolithic occupation, preceding the appearance of the Halaf culture at the site.

Due to the circumstances of destruction of the village a large amount of well-preserved and exceptional finds and deposits were recovered *in situ*. In addition to the more common finds such as ceramic and stone vessels, ground-stone implements, flint and obsidian tools, there were also human and animal figurines of unbaked clay as well as labrets, axes, personal ornaments, small tokens and hundreds of clay sealings with stamp-seal impressions (Akker-

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mans and Verhoeven, 1995). In particular, in several rooms of two of the multi-roomed rectangular houses, eleven large and rather curious bomb-shaped clay objects were recovered (fig. 1). They are more or less oval in shape with a flat base and a rounded convex body. They are 29-62 cm in length, 16-41 cm in width and 10-28 cm in height. Along each of the long sides are one or two shallow holes while another hole is often present on top.

Two of these oval-shaped clay objects broke during the excavation. In both, animal bones were included, respectively the skull of a sheep in one and bovid femur and rib in the other.

### Description of the faunal remains

The skull found in one of the oval-shaped objects belongs to a male ovicaprid. It lacks completely the teeth and the mandible.

One of the horncores is almost completely preserved but the tip, which has been more recently broken. The other horncore is preserved to a length of ca. 33 mm from its base. The two horncores are quite massive, especially compared to the rest of the skull (figs. 2, 3). The shortest of

them is preserved at a length at which the sinus (cavity) is still visible. The other horncore is almost complete and the length of the outer curvature should have been slightly more than 120 mm. The tip is partly lost and spongy bone had been exposed. The horns leave at 45° from the frontal bone in a rather large curve. The torsion outwards is almost insignificant on the basal portion as well as in the apical portion. This could however be attributed to the rather young age of the animal (see below).

Of the cranium, the frontal and parietal bones are well preserved. The condyles of the occipital bone show a recent erosion and the external occipital protuberance, to which the *ligamentum nuchae* was attached, is strongly pronounced. The bones are in general rather thick. The *processi pterigoidei* are missing and the body of the sphenoid is present (fig. 4). The *processi zygomatici* and the inferior part of the orbits are completely absent. The facial part is not present, while only the frontal part at the basis of the horncores is preserved.

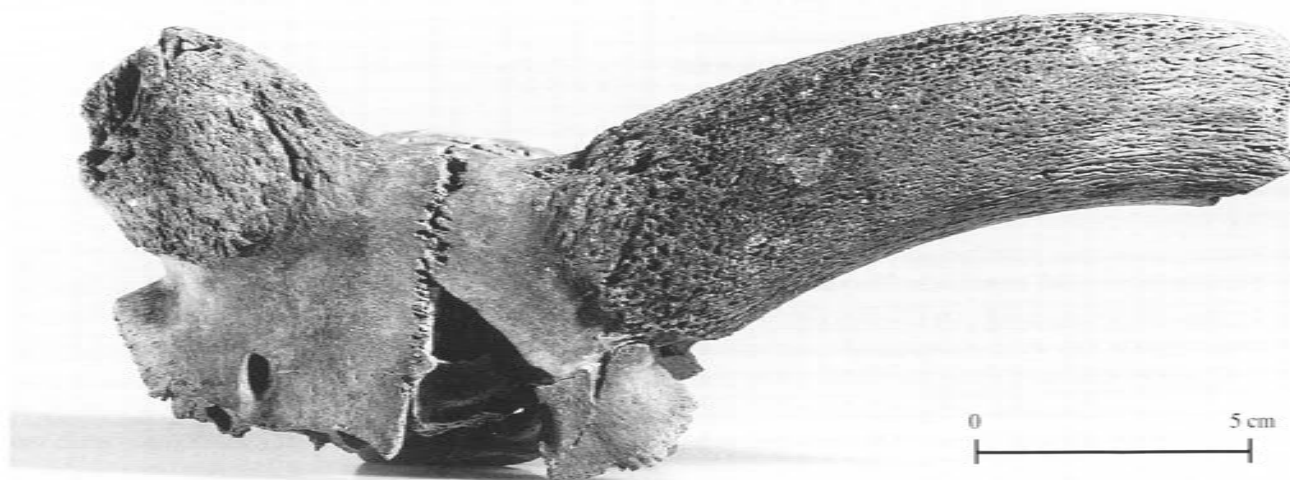
The specimen belongs to a relatively young animal, probably aged between 2 and 5 years, as deduced from the condition of the sutures. The different parts of the occipital



Fig. 1: Curious bomb-shaped clay objects discovered in two of the multi-roomed rectangular houses of the "Burnt Village" (level 6) at Tell Sabi Abyad.



**Fig. 2:** Skull of male sheep (dorsal view) as found in one of the oval clay objects.  
The almost complete left horncore should originally have been visible through the hole on the top of the object.  
The rest of the skull should have been completely hidden in the clay object.



**Fig. 3:** Skull of male sheep (frontal view).

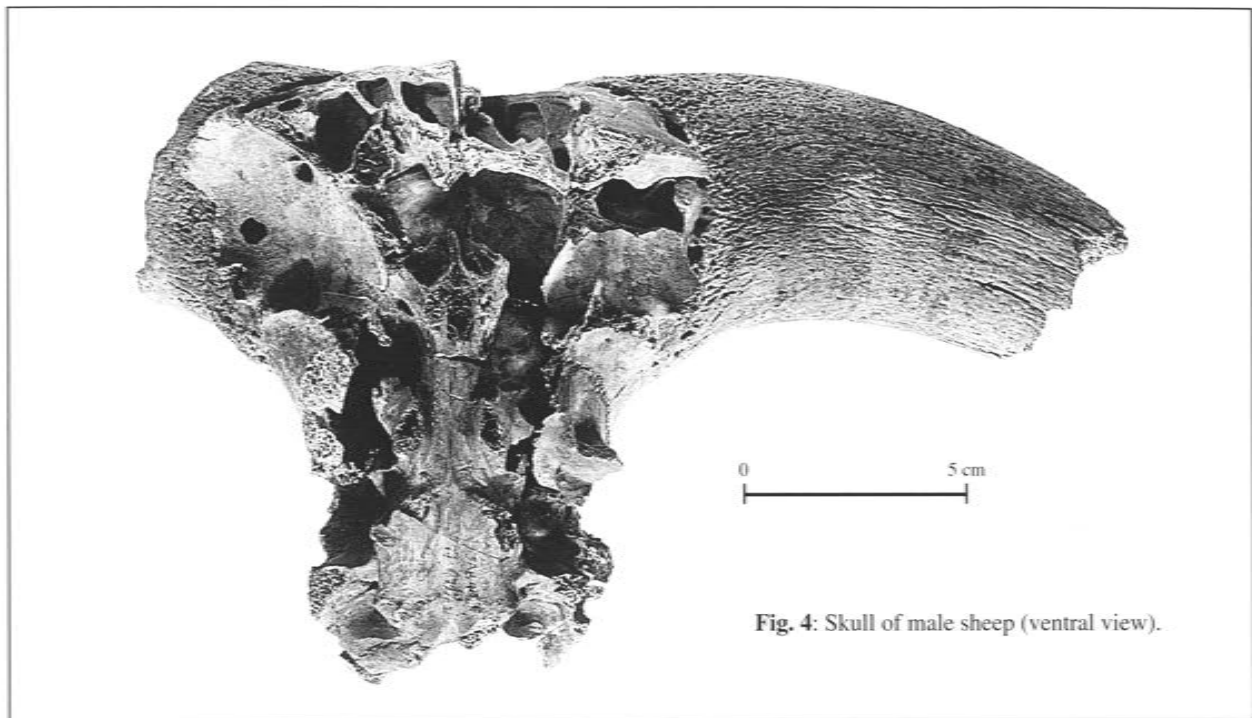


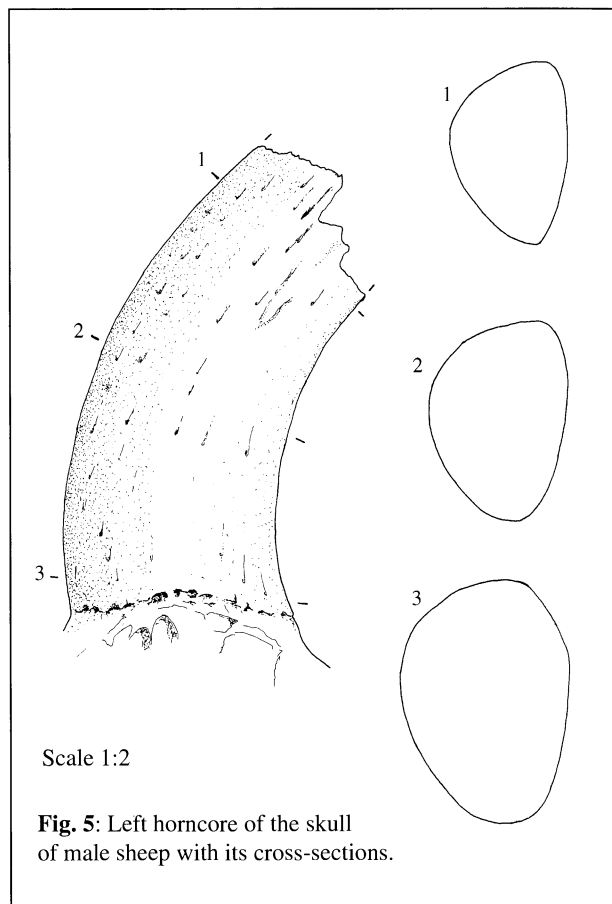
Fig. 4: Skull of male sheep (ventral view).

are already fused (fig. 2). The exoccipitals fuse with the squama of the occipital between 2-3 years in late mature domestic sheep (Ellenberger and Baum, 1943: 67). The suture between the sphenoid and the presphenoid is not yet fused (fig. 4) and this occurs in domestic sheep at about 4 and 5 years (Ellenberger and Baum, 1943: 67).

The shape of the cross-section at the base of the horncores is subtriangular, almost almond shaped, with the point on the nuchal side (fig. 5). The medial profile is almost completely flat and the lateral one is convex. The frontal profile is represented by a large curve, the nuchal one by a more narrow curve. The surface on the fronto-lateral side is smooth whereas shallow grooves are present on the fronto-medial side, the most frontal of which is wider and more pronounced.

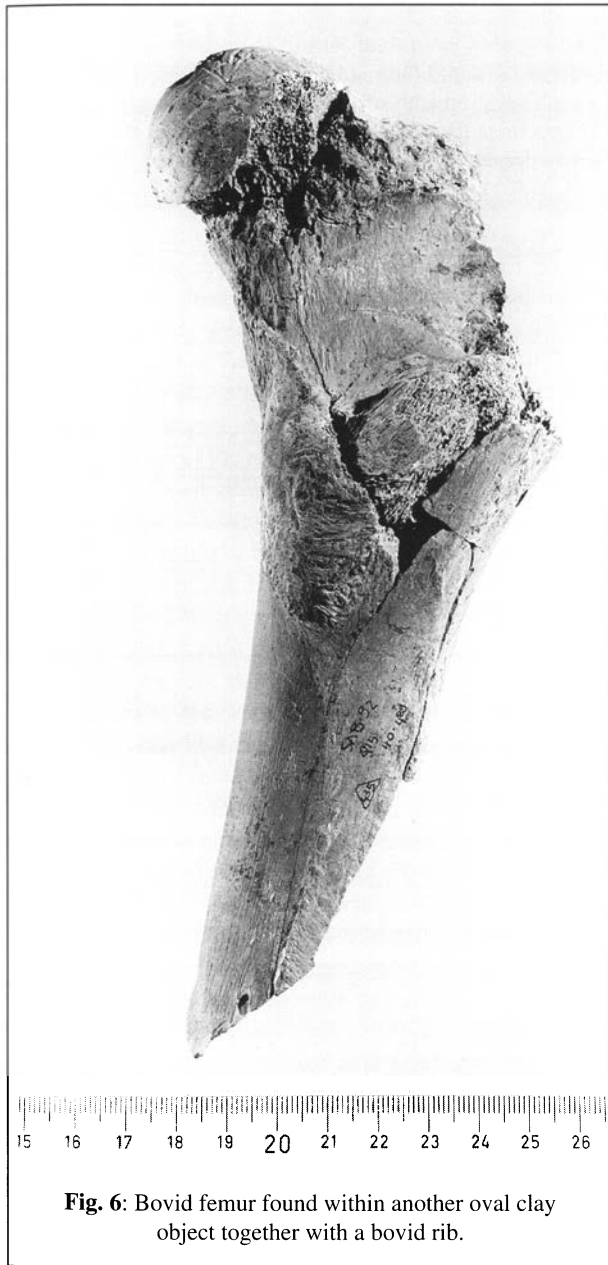
The faunal remains found in the other oval-shaped clay object consist of a proximal part of a femur of *Bos* (fig. 6) and a fragment of a bovid rib. The spatial relationship between the two specimens within the clay object is not known because they were not recognized as fragments of two different bones.

The femur shows typical pitting and furrowing marks due to dog gnawing. They are located on the neck and on the basis of the greater trochanter, which has been entirely removed. The shaft, preserved until the level of the nutrient foramen, shows a fracture with a spiral shape and a rather smooth surface. Cutmarks are present on the basis of the *caput* and of the *trochanter minor* in the form of a few



Scale 1:2

Fig. 5: Left horncore of the skull of male sheep with its cross-sections.



**Fig. 6:** Bovid femur found within another oval clay object together with a bovid rib.

repeated small linear traces left by a lithic instrument in order to remove the tendinous attachments of the muscles. The specimen belongs to a fairly large animal, with rather developed muscular attachments. It was probably older than 3 years, the age around which the *caput femoris* fuses with the rest of the bone (Silver, 1969).

The fragment of rib is a rather flat portion of the body probably belonging to one of the first *costae* of a bovid.

The colour of the skull is uniformly brownish-red, while the femur and the rib are grey with small calcinated white parts. It is difficult to decide whether the bones were already burnt before they were included in the clay or, alternatively, if the burning was effected by the general fire of the village. Moreover level 6 shows a much higher percentage of burnt remains (ca. 20%) compared to the ca. 3% of the other levels (Cavallo, in press: fig. 3). The differences in colour could be related to differences in the degree of heating, which affected the bones. The bovid bones could have been more directly reached by fire. The hole on top, through which it was possible to see the bone even before it was opened, is relatively larger than those of the other objects and the fire could probably reach the bones more easily. A similar pattern of colour was observed on other bones of the site coming from the same level.

### Identification

Some problems arised to ascribe these remains - in particular of the skull and femur - to the wild or domestic form respectively of *Ovis* and *Bos*.

The shape of the ovicaprid horncores is often one of the elements used in this distinction. Its modification, as well as the reduction in size or even the absence of them, is regarded as one of the major transformations due to domestication (Zeuner, 1963; Hole *et al.*, 1969; Bökönyi, 1977). In addition, a great variability in both wild and domestic counterparts is present and the possible presence of intermediate forms and cross breeding as well as different factors as diet, individual variability etc. have to be taken into account (Stampfli, 1983; Meadow, 1989).

The analysis of the bone material from the site has shown that the majority of the ovicaprid bones belong, to a quite uniform domestic species. So far, a few heavily fragmented male horncores, showing typical characters of the domestic form, as well as hornless skulls of ewes have been found. The presence of some larger sized bones, however, suggests the occurrence of remains of wild sheep in the sample (Cavallo, in press).

The size, the morphology and the shape of the horncores of the skull found in the clay object from the "Burnt village", however, point to the identification of this animal as a wild sheep, the Asiatic mouflon (*Ovis orientalis*<sup>1</sup>).

(1) This name has been adopted for purposes of clarity, referring to the Asiatic mouflon of western Asian mountains (Taurus and Zagros; Clutton-Brock, 1987: appendix I). For more information about the complex and unstable taxonomy and nomenclature of the wild sheep, see Meadow (1989: 28-29), which summarizes the question, and Wilson and Reeder (1993: 408-409), in which the various and different synonyms are reported.

**Table 1:** Comparisons of the measurements (in mm) of horncores of sheep from Sabi Abyad with those of wild sheep. (1) Greatest diameter of the horncore base; (2) Least diameter of the horncore base; (3) horncore basal circumference; (4) Width between the basis of the horncores; (5) Cranial width (6) Greatest breadth of the foramen magnum; (7) Greatest breadth of the occipital condyles; (a) *Ovis orientalis vignei*; modern specimen from the Moscow zoo present in the Nationaal Natuurhistorisch Museum Leiden, The Netherlands, n. 12826; (b) Kussinger, 1988. (c) *Ovis ammon*, juvenile, Rauh, 1981. (d) Boessneck and von den Driesch, 1975. (e) *Ovis ammon*, Bökönyi, 1977; the measurements of Asiab are averaged; (f) Ali Kosh phase, Hole *et al.*, 1969.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Saby Abyad	r. 63.2 l. 63.4	43.3 42.8	172.5 171.1	36.2	82.9	18.8	48.8
Modern (a)	71.6	49.9	(204.0)	44.5	94.3	21.5	53.5
Lidar Höyük (b)	(74.5)	(52.5)	(200)				
	70	49	198				
Demircihüyük (c)	52	34.5	140				
Korucutepe (d)	67	54	190				
Asiab (e)	71.5	46.2	192				
Sarab (e)	67	42	177				
	70	52.5	188				
Tepe Ali Kosh (f)	(55)	(32)					

The cross-section at the base resembles those of modern wild sheep as well as wild sheep found at different sites of the Near East. Striking similarities are found with the cross-sections of a modern *O. orientalis* from northern Iran, published by Uerpmann (1987: fig. 59) while similar in size, though less so in shape, with those (*O. o. vignei* and *O. o. hodgsoni*) published by Ducos (1968: figs. 15-5, 3). It is also comparable to the find from Tepe Ali Kosh (Ali Kosh phase; Hole *et al.* 1969: fig. 121, a), even if less compressed medial-laterally, and to the specimens from Asiab (Bökönyi, 1977: fig. 15, above). The measurements, especially the greatest and the least diameters of the horncore base, are also similar to specimens of wild sheep found in south-eastern Turkey (tab. 1).

For the femur, it is also difficult to decide whether it comes from domestic or wild cattle. Both species have been identified in the total assemblage from Sabi Abyad. However, the bulk of bovid remains belong to domestic cattle of large size while the aurochs (*Bos primigenius*), identified on the basis of metrical analysis of the postcranial elements, represents a small percentage (ca. 0.01%; Cavallo, in press).

In addition, comparisons on the basis of the measurements are not very reliable because the specimen is burnt and only one measurement could be taken, the greatest depth of the *caput femoris* (DC), which is usually not reported in other faunal reports. Taking into account a possible shrinkage of the bone due to burning (Shipman *et al.*, 1984), the specimen is comparable to the other remains

from the site and to those from other sites of the area confirming the large size of the bovids at Sabi Abyad (tab. 2).

## Discussion and interpretation

The destruction of the village by a violent conflagration led to the exceptional preservation of the clay objects, which would not have survived otherwise. This exceptional preservation of the objects in which the bones were enclosed led us to the comprehension of these bones as manifestations of human activities beyond those of economy or subsistence.

It has been suggested that these objects would have represented a kind of stylized clay "animal" (Akkermans and Verhoeven, 1995). The shallow holes along the sides of the oval-shaped clay objects might have carried wooden sticks representing legs, or, alternatively, served as a grip

**Table 2:** Comparison of the measurements of the greatest depth of the *caput femoris* (DC). (1) Buitenhuis, 1988.

Sabi Abyad	46.0	found in the oval clay object
	53.5	from the rest of the sample
	47.4	from the rest of the sample
Bougras (1)	56.6	<i>Bos</i> sp. probably domestic
Hayaz Höyük (1)	38.6	<i>Bos taurus</i> , Byzantin period
	39.6	<i>Bos taurus</i> , Byzantin period
Jebel Aruda (1)	48.1	<i>Bos taurus</i>

for the transport. Part of the bone was probably visible from the hole on top, or something could have been put on it, reminiscent of a head.

The remains might be related to some sort of ritual activity, most probably to the cult of the dead. The objects were found concentrated in a small part of the village, in one house (in rooms 3, 6 and 7 of building V; only two were found in the upper filling of rooms 11 and 13 of building IV). On the basis of their stratigraphic position it is deduced that they were probably originally placed on the roof of the house as they were found in the fill of the house sometimes high above the floor and among the charred roof beams and the impression of reed mats. Among the objects, in the fill of one of the room (7) of the house, human skeletal remains of two adults, completely crushed and burnt, were also found. As suggested for the 6<sup>th</sup> millennium site of Çatal Hüyük, it might be that these persons were already dead at the moment of the conflagration and laid on the roof for defleshing, awaiting secondary burial (Mellaart, 1967).

Comparisons with other sites are difficult to find. No similar clay objects, or clay "animals", are known. Somewhat similar are the pair of skulls, probably of wild sheep, which were attached, one above the other, to the plastered interior wall of a small niche in Level D at Ganj Dareh and dated to the 8<sup>th</sup> millennium (Smith, 1972: 166, Pl. Ib). Although two millennia later, this arrangement is reminiscent of the well known "shrines" of Çatal Hüyük, in which the skulls of bulls were used in a decorative and ritual situation (Mellaart, 1967). Finally, the shape of the supposed stylized "animals" could have been similar to that of the small animal containers, found at Bouqras, not far from Sabi Abyad on the Euphrates (6<sup>th</sup> millennium; Clason, 1993: figs. 4-7). Here, a hare and a bull are represented lying down with the legs folded under the body, following the flat profile of the base of the containers.

The importance of these finds consists mainly in the detection of the context and the manner in which the bones were deposited. The zooarchaeological analysis of the bones let us to understand that, even if they were remains of funeral meals or if they had a ritual or cult related importance, they were not treated with a particular care, because (1) they were already partly broken when enclosed in the clay objects, (2) the animals from which they came had probably already been dead for some time as there is evidence that the horns had already been lost or removed before inclusion of the horncore in the clay object and (3) a "final touch" has been given by dogs which have partly eaten them.

The full comprehension of the meaning of these objects is, of course, impossible. If they were representation of animals, and if they were actually connected with the human skeletal remains, they might be probably considered as a kind of "offering" to the dead. Future investigations on the other unbroken objects might provide an answer to these and other questions such as whether a preference for certain elements or effectively the difference between wild or domestic animals played a role on the bone selection.

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