C. R. Palevol 11 (2012) 463–472

Contents lists available at SciVerse ScienceDirect

Comptes Rendus Palevol

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Human palaeontology and prehistory (Prehistoric archaeology)

Tools for production, goods for reproduction. The function of knapped stone tools at the Neolithic necropolis of Can Gambus-1 (Sabadell, Spain)

Des outils pour la production, des biens pour la reproduction. La fonction de l'outillage en silex de la nécropole néolithique de Can Gambús-1 (Sabadell, Espagne)

Juan F. Gibaja*,[1], Xavier Terradas

CSIC - IMF Department of Archaeology and Anthropology, C/Egipcíaques, 15, 08001 Barcelona, Spain

ARTICLE INFO

Article history:
Received 27 June 2011
Accepted after revision 25 May 2012
Available online 12 July 2012

Presented by Yves Coppens

Keywords:
NE Iberian Peninsula
Neolithic
Burials
Grave Goods
Lithic tools
Use-wear analysis

ABSTRACT

This article presents the results of a functional study of the stone tools found with the burials at the Neolithic necropolis of Can Gambús-1 (Sabadell, Spain). In this study we aim to reconstruct the activities carried out with the stone tools, made from several raw materials, among which the so-called "honey flint" is especially important at this site. Although this is an interim report, we identify a double trend in the preparation of the grave goods for the buried individuals. Whereas in some cases tools were specifically produced to be deposited as offerings without any previous use, on other occasions implements that had been used in everyday activities were recycled and given a final funerary function.

Mots clés :
Nord-Est de la Péninsule ibérique
Néolithique
Tombes
Mobiliers funéraires
Outillage lithique
Tracéologie

RÉSUMÉ

Cet article présente les résultats de l'étude fonctionnelle de l'outillage lithique associé aux sépultures de la nécropole néolithique de Can Gambús-1 (Sabadell, Catalogne, Espagne). Cette étude vise à identifier les activités réalisées avec les outils taillés sur différentes matières premières, parmi lesquelles le silex « blond » tient une place prépondérante. Malgré le caractère préliminaire de cette étude, deux tendances se distinguent dans la constitution des mobiliers déposés à côté des individus inhumés. Tandis que dans certains cas on constate une production spécifique d'outils en vue de leur dépôt comme offrandes, sans usage préalable, dans d'autres cas des outils utilisés antérieurement dans des activités quotidiennes sont recyclés pour une dernière fonction, funéraire.

* Corresponding author.
E-mail addresses: jfgibaja@imf.csic.es (J.F. Gibaja), terradas@imf.csic.es (X. Terradas).

[1] Researcher under contract from Ministry of Science and Innovation - Ramón y Cajal Sub-programme.

1631-0683/$ – see front matter
doi:10.1016/j.crpv.2012.05.002

1. Introduction

Since the mid 1990s, use-wear analysis has been slowly applied to Neolithic sites in the Iberian Peninsula. Stone tools found at settlements (such as Ca n'Isach. Cueva del Toro, Cabecicos Negros, and Valada do Mato), at burials (for example, at Bòbila Madurell, Camí de Can Grau, and Sant Pau del Camp), and even in contexts with a specialised function such as mines exploiting flint (Casa Montero Mine) and variscite (Gava Mines) have been studied in order to know what they were used for and what activities Neolithic communities performed. These analyses have taken place within a wider context aimed at reconstructing the production and use of knapped flint tools during the Neolithic in the Iberian Peninsula (Bosch et al., 2010; Gibaja, 2003; Gibaja et al., 2002, 2005; Rodríguez, 1999, 2004; Terradas and Gibaja, 2001, 2002).

In recent years, one of our priorities has been to study the function of stone tools found in burials. With this aim, we have studied the implements from the Neolithic necropolises at Sant Pau del Camp, Bòbila Madurell and Camí de Can Grau, all located in the Province of Barcelona (Spain). These sites are attributed to the end of the Early Neolithic and the Middle Neolithic, dated between the late fifth millennium and the middle of the fourth millennium cal BC (Martí et al., 1997; Molist et al., 2008; Pou et al., 1996). This is an especially interesting period because a significant change is seen in the funerary practices of the Neolithic communities that inhabited northeastern Iberia. The few tombs at the start of the Early Neolithic and their absence in the Mesolithic contrast with the presence of burials and necropolises in the final centuries of the Early Neolithic and above all during the Middle Neolithic. These burials were placed in pits, in cists and dolmen chambers, and have been found in several places in northeastern Iberia. In most cases they are individual burials, and therefore the grave goods can be related to the age and sex of the deceased, so issues such as the organisation of labour or the social structure of the group can be approached.

2. The Necropolis of Can Gambús-1 within the "Pit Grave Culture"

The present study examines the function of the stone tools deposited together with the deceased in one of large necropolises that have been excavated in the northeast Iberian Peninsula: Can Gambús-1 (Roig and Coll, 2007, 2010; Roig et al., 2010). Located in the municipal district of Sabadell (Barcelona, Spain), it is in the Vallès-Penedès tectonic rift, between the littoral and pre-littoral mountain ranges (Fig. 1). This rift forms a natural corridor allowing this part of Catalonia to be crossed, following a northeast–southwest direction parallel to the coast.

During construction of a large urban development, preventive archaeological work in the Can Gambús-1 sector uncovered a large necropolis, attributed to the Middle Neolithic so-called "Pit Grave Culture" (Muñoz, 1965). This necropolis forms part of a larger archaeological complex,

Fig. 1. Location of Can Gambús-1. Aerial photograph of Bòbila Madurell-Can Gambús showing the different archaeological work carried out and the researchers who directed the excavations.
Fig. 1. Localisation de Can Gambús-1. Vue aérienne de Bòbila Madurell-Can Gambús, sur laquelle sont mentionnés les différentes campagnes archéologiques réalisées et les archéologues qui ont dirigé ces fouilles.

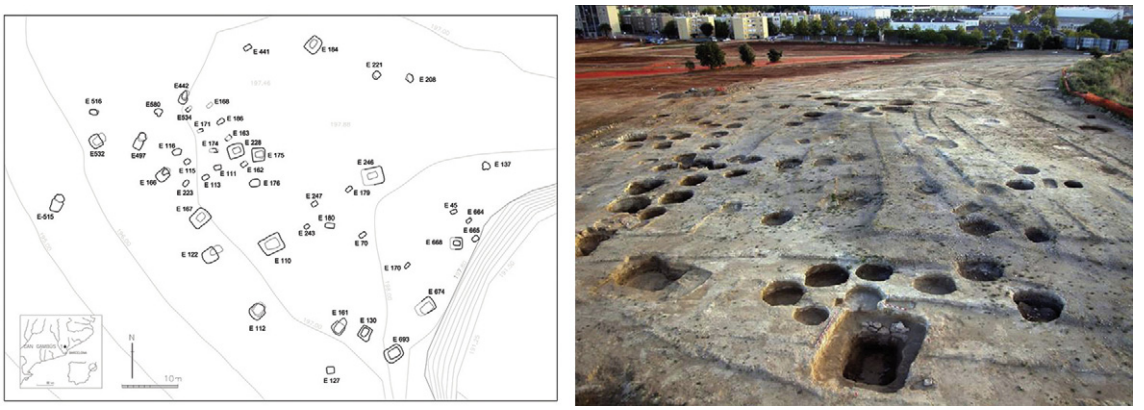

Fig. 2. Plan and photograph of the necropolis of Can Gambús-1 (Photo J. Roig).
Fig. 2. Plan et photographie de la nécropole de Can Gambús-1 (Photo J. Roig).

known as Bòbila Madurell - Can Gambús 1-2, where some 180 burials have been found to date.

The excavations in the Can Gambús-1 carried out by the company Arrago S.L. in 2003 and 2004 were able to document 47 funerary structures (Fig. 2), of which 43 are individual burials and four are double burials (Fig. 3). In these four cases, some of them were simultaneous burials and others were carried out at different times, and the remains of the first body were put on one side of the pit (Roig et al., 2010; Roig and Coll, 2010).

Therefore, a total of 51 individuals have been documented: 44 adults, six subadults and one of an indeterminate age, both male and female (Table 1). This high proportion of adult individuals (86.27%) is surprising if we take into account that at the Necropolis of Bòbila Madurell, which as stated above is linked to Can Gambús, many of the graves also contain infants (Gibaja, 2003; Pou et al., 1996; Ripoll and Llongueras, 1963).

The excellent state of preservation of most of these funerary structures has enabled a new and complete classification of these tombs, with novel contributions about the building process, their structure and shape, their covers, periods of use and closure. In this way, it is possible to propose or identify the existence of covers made both with perishable material, like wood and skins, and with large stone slabs placed horizontally to seal the access to some of the burial chambers (Roig et al., 2010; Roig and Coll, 2010).

In addition, this is one of the necropolises in northeastern Iberia that has yielded the most numerous and varied grave goods. In 47 tombs, 51 burials, abundant archaeological material of various kinds has been found: ceramic vessels (59), grinding stones (4), knapped lithic tools (203), polished tools (18), bone artefacts (244), macrofaunal remains (41) and shells (5), as well as an impressive number of variscite (620) and schist beads (1640), which formed part of necklaces and bracelets. These are without doubt burials where the deceased have received special treatment, taking into account not only the quantity and quality of the grave goods but also the fact that all the individuals are adults or subadults.

The radiocarbon determinations carried out to date (Roig et al., 2010; Roig and Coll, 2010) show that this necropolis was in use in the early fourth millennium, particularly between 3766 and 3644 cal BC at 2σ, although some of the burials could be 300 years more recent (Table 2).

3. The knapped stone tools

A total of 203 knapped lithic artefacts have been recovered from 39 of the 47 tombs at Can Gambús-1. All these implements were made from siliceous stones except a single item made from obsidian. This is a whole bladelet, 31 mm long, which was obtained by the technique of pressure flaking. The presence of this raw material in the

Table 1
Classification of the individuals at Can Gambús-1 according to sex and age (Roig et al., 2010; Subirà, pers. comm).
Tableau 1
Classification des individus de Can Gambús-1 selon leur sexe et leur âge (Roig et al., 2010; Subirà, com. pers.).

		Males	Females	Undeterminable	Indeterminate	*n*	%
Young	13–25 years	1	3	1	1	6	11.77
Total subadults						6	11.77
Youth adult	26–35 years	7	5		1	13	25.49
Adult	36–45 years	6	6		1	13	25.49
Mature	46–60 years	1	3	1		5	9.80
Senile	Over 61 years	3			1	4	7.84
Adults indeterminate		5	2		2	9	17.65
Total adults						44	86.27
Indeterminate					1	1	1.96
n (%)		23 (45.10)	19 (37.25)	2 (3.92)	7 (13.73)	51	100

Fig. 3. Photographs of a male burial (E-137) and a female one (E-180) at Can Gambús-1 (Photo J. Roig).
Fig. 3. Photographies d'une tombe masculine (E-137) et d'une tombe féminine (E-180) de Can Gambús-1 (Photo J. Roig).

northeast of the Iberian Peninsula in the Neolithic is exceptional because its probable provenance is on distant islands in the western Mediterranean: Sardinia, Pantelleria, Lipari or Palmarola. However, there are precedents of similar finds: a small core in the burial at Bòbila Padró (Ripoll and Llongueras, 1963), two fragmented blades in tomb MS17 at Bòbila Madurell (Gibaja, 2003), a blade in the burial discovered in Mine 83 at Gavà (Bosch et al., 2010), and a blade fragment in tomb E-60 at La Serreta (Esteve et al., in press).

The raw materials used for the other knapped lithic tools found at Can Gambús-1 are siliceous stones. Although there is a general tendency to consider most siliceous raw material found in funerary contexts dated in this period as "honey flint" with a provenance in Provence, a more detailed examination shows that other varieties of siliceous stones are present. For example, 25 items (12.3% of the 203 knapped lithic artefacts) are from flints of different origins, all of them from nearer sources than that proposed for "honey flint." However, the methods of production of this tool kit do not show any difference, either qualitative or quantitative, with the one used with "honey flint," because both of them share the same knapping methods and techniques.

As to so-called "honey flint," we have already expressed our opinion in favour of an origin in Provence as the most plausible hypothesis based on the data currently available (Binder, 1998; Blet et al., 2000; Briois, 2005; Gibaja, 2003; Gibaja et al., 2005; Léa, 2005; Terradas and Gibaja, 2001, 2002). Because the flint would have been transported from some 450 km away, this claim needs to be tested by the appropriate analytical techniques.

Table 2
Radiocarbon determinations for four individuals buried in different tombs at the necropolis of Can Gambús-1 (Roig et al., 2010).
Tableau 2
Datations réalisées sur quatre individus inhumés dans des tombes différentes de la nécropole de Can Gambús-1 (Roig et al., 2010).

Tomb	Sex and age	Laboratory	Date BP	Date cal BC
E-110	Young male	UBAR-900	4850 ± 80 BP	3800–3495
E-167	Adult male	UBAR-901	4980 ± 40 BP	3812–3656
E-246	Adult female	UBAR-902	4865 ± 40 BP	3714–3628
E-515	Adult male	UBAR-903	4570 ± 60 BP	3385–3090

The lithic assemblage at Can Gambús-1 comprises: 20 cores, 110 blades, two flakes, 20 arrowheads, 50 geometric microliths and an indeterminate fragment (Gibaja and Terradas, 2008).

The study of the cores and the blanks produced by working them shows that the blade production technique was pressure flaking, with the systematic use of thermal treatment to shape out the cores. This knapping method was probably carried out at workshops near the source areas (Léa, 2005; Terradas and Gibaja, 2001, 2002). The reconstruction of the procedures and technical knapping operations has shown great homogeneity in their design and production. At the same time, great variability can be seen in the ways of exploiting the cores and in the management of their volumes, depending on the morphological characteristics of the original blanks.

These cores show great similarities to the evidence of preform shaping documented in some specialized production contexts from the Chassey culture in Southern France (Gassin et al., 2010; Léa, 2005).

These affinities are related to the technical procedures developed as well as to the morphotechnical features of the preforms, showing in both a high degree of technological complementarity.

The characteristic attributes displayed by the cores show that the original blanks were relatively thick flakes. These attributes include remains of the original ventral face on one of the sides of the cores and/or remains of the original cortex on the other. We can also see the butt of the original flake, whose marks indicate that it was obtained by direct percussion, using a hard hammer-stone.

These cores were exploited from a single flaked surface, generating a characteristic conical section whose apex

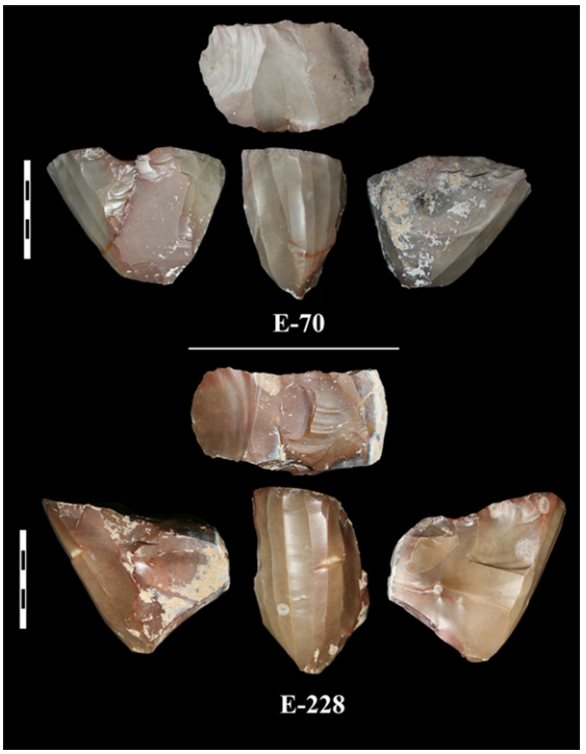

Fig. 4. Honey flint cores used to extract blades. They are from the tombs E-70 and E-228.
Fig. 4. Nucléus de silex blond exploités pour la production de lames, provenant de la tombe E-70 et E-228.

exhibits a single unifacial or bifacial crest (Fig. 4). The blade production was carried out from a single striking platform that was created by a large removal which was similarly achieved by direct percussion with a hard hammer and whose counter-bulb is visible in some of these cores.

It is important to point out that none of the cores have exhausted their productive capacity. Therefore, at the time they were deposited as grave goods, they could still have been exploited and a large amount of raw material was left unused. In the graves of certain, generally male, individuals, two or three cores were found grouped together near the skull or in the upper part of the grave, never by the feet.

4. Use-wear analysis of the knapped stone tools

The use-wear analysis made of the assemblage from Can Gambús-1 combines macro- and microscopic observation of the stone tools to document and define the traces produced during their use (Gibaja, 2003). The lithic implements from Can Gambús-1 are extraordinarily well-preserved although the thermal gloss, caused by the heat treatment of the cores to aid knapping particularly affects the observation and determination of the micropolish produced by working with soft animal matter, such as meat, fresh skins and fish. It is therefore possible that thermal gloss has stopped us identifying some tools used on those substances.

Fig. 5. Refitted blades – and core and blade- from tombs 167, 668 and 243.
Fig. 5. Remontage de lames – et d'un nucléus et une lame- des tombes 167, 668 et 243.

We have studied a group of 183 artefacts (the cores were not studied in this respect) of which 96 had been used (52.4%), 73 (39.9%) had not been used, and we were unable to determine whether the other 14 objects (7.7%) had been used or not.

Of the 110 blades in the assemblage, 53 were unused. We have succeeded in refitting some of the blades with no evidence of use (in tombs 70, 122, 167, 497 and 515) as well as a core and a blade in tomb 668 (Fig. 5). Unfortunately, so far we have not been able to refit any artefacts from different tombs. This suggests that on occasion, blades were specifically produced to form part of the grave goods for an individual, who could be either male or female. However, as we shall see below, many of the lithic implements deposited in the tombs had been used previously in subsistence or technical activities.

The most common activities represented are the harvesting and processing of cereals or a use as a projectile. A smaller percentage of tools were used to cut meat or work with hide. Finally, we have documented a few utensils used to work with bone. However, no blades have been found that were used with hard or semi-hard matters like wood, antler or stone (Fig. 6).

4.1. Processing of cereals and other non-woody plants

Two working processes connected with processing cereals have been documented in the assemblage from Can Gambús-1:

- tools used for harvesting (Fig. 7: 1);
- tools used on the ground to separate the roots and/or the ears from the stalks, or to cut the stalks themselves on the ground (Clemente and Gibaja, 1998; Gibaja, 2003) (Fig. 7: 2).

Six whole blades or slightly fragmented blades at their distal end were used on one of their edges for reaping. The edges are usually retouched as a result of being

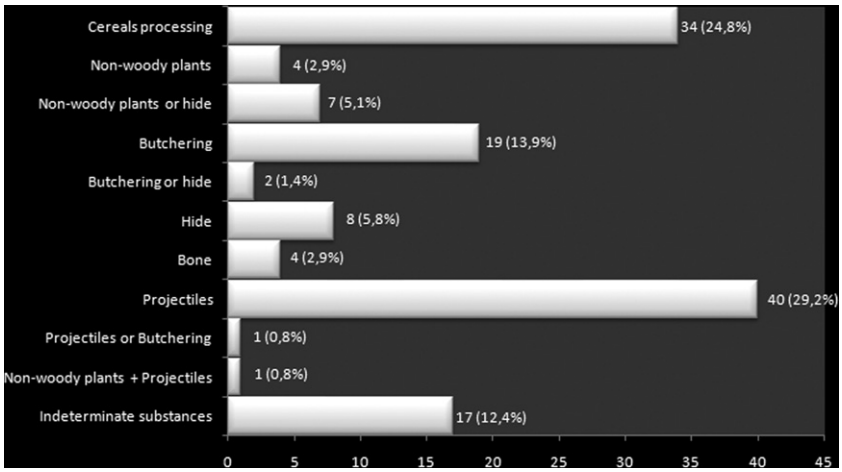

Fig. 6. Stone tools grouped according to their type of use. The number of areas used has been counted; as many of the blades were used on both edges, this means that the 96 used implements possess a total of 137 used areas.
Fig. 6. Outils regroupés par type d'usage. On indique le nombre de zones utilisées ; des nombreuses lames ont été utilisées par les deux bords, donc il y a 96 outils qui possèdent 137 zones utilisées.

resharpened. This was to surmount the intense rounding caused by prolonged working.

As occurs at many other Neolithic contexts in north-eastern Iberia (Bòbila Madurell; Camí de Can Grau; Cova del Frare; La Draga; Plansallosa, etc.) the distribution of the micropolish indicates that these implements were inserted in sickles, parallel to the handle of the sickle (Gibaja, 2002, 2003; Ibañez et al., 2008).

The 11 tools used to cut the stalks on the ground, or to separate roots, stalks and ears, also tend to be whole blades or fragmented at the distal end. Nine of them were used along both edges, which give a total of 20 used edges, half of which were retouched as a consequence of being resharpened. On some of these blades we have recorded possible residues of a haft, which should be analysed to determine their composition.

A further six tools, two of which had been used along both edges, seem to have been used in both processes; first to reap and then to cut cereals near or on the ground. As in the previous cases, the blades are practically whole and many of them were retouched to sharpen the edges.

On four blades (both edges had been used on three of them) the use-wear traces are not sufficiently clear to be able to differentiate whether they were caused by cutting plants on the ground or to cut dry hide with some type of abrasive. In our experiments, we have found that it is not always possible to differentiate these activities if the traces are weak.

Finally, three blades exhibit some slight evidence of cutting indeterminate plant matter and one blade appears to have been used to cut and scrape hide with the right-hand edge, and to scrape a non-woody plant with the left-hand edge (Fig. 7: 3). In this case, perhaps it was a tool used for a craft activity such as basketry or to make other objects and tools such as hafts, shafts or ropes. Although these kinds of objects made with plant matter are not usually preserved, in the northeast of Iberia we have some outstanding examples from the early Neolithic lakeside site of La Draga (Bosch et al., 2006).

4.2. Hunting and butchery activities

Some of the most numerous and characteristic artefacts from Can Gambús-1 are the geometric microliths. These are trapezes (40) and triangles (10), as well as arrowheads (20), often used in hunting activities, or possibly for defence.

Among the geometric microliths, the position and direction of the fractures, scars and striations have enabled us to determine they were hafted in different ways, some of them as barbs, hafted along the lateral edge (*barbelures*), or on the transverse edge (*flèches tranchants*) (Fig. 8).

The arrowheads vary in size and shape, although types with well-developed tang and wings predominate. It is likely that their size is a consequence not only of the size of the blanks they were made from but also of possible repairs after breaking during their manufacture or use. In these arrowheads small fractures can be seen at the apex, and in the tang and/or wings, caused by their use as projectiles.

It is important to point out however that the geometric microliths as well as the arrowheads are generally in a perfect state of conservation for their use. The exceptions are four geometric microliths that have lost one of the vertices and two arrowheads that have suffered serious damage: one has lost a wing and the other only preserves the tang.

In certain cases (seven geometric microliths and two arrowheads), we have identified possible residues of the shafts. These are always the central ridge or the shortest edge in the case of the microliths, and on the tangs of the arrowheads. In addition, we have recognised distinct rounding on some vertices of the geometric microliths and on the wings of the arrowheads. This is similar to the effect produced by contact with hide, which we associate with the rubbing that would occur in those places inside a quiver. Indeed, the finding of several of these projectiles in tombs like E-176, grouped together and perfectly in line on one side of the deceased is another argument in favour of the hypothesis that the arrows were kept sometimes in a quiver.

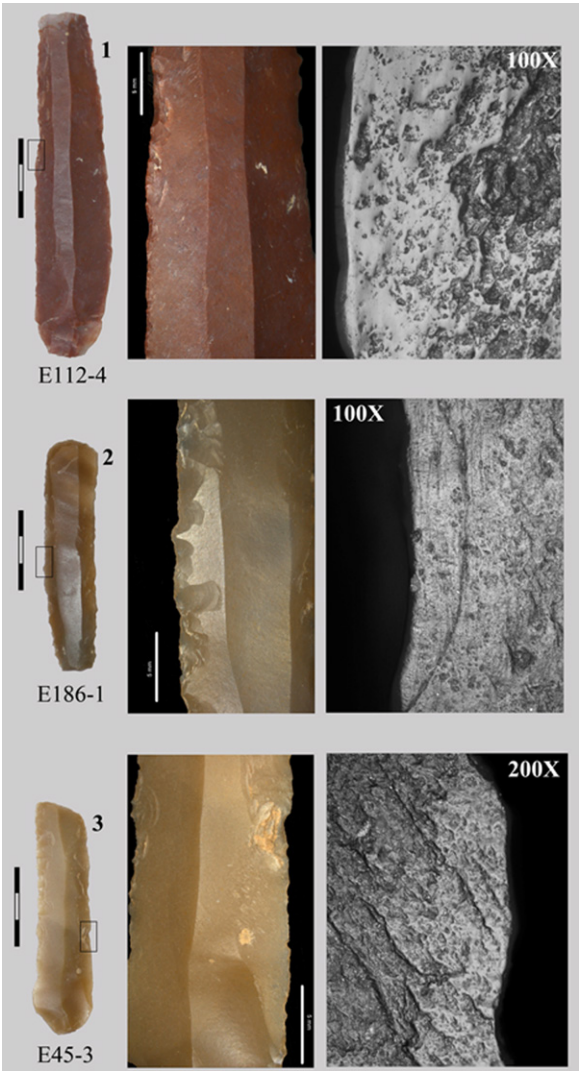

Fig. 7. Blades used to harvest grain (1), separate the roots and/or the ears from the stalks or cut the stalks on the ground (2) and to scrape plant matter (3).
Fig. 7. Lames utilisées pour moissonner (1), séparer sur le sol les racines et/ou les épis des tiges ou recouper les tiges, en appui sur le sol (2) et pour racler une matière végétale (3).

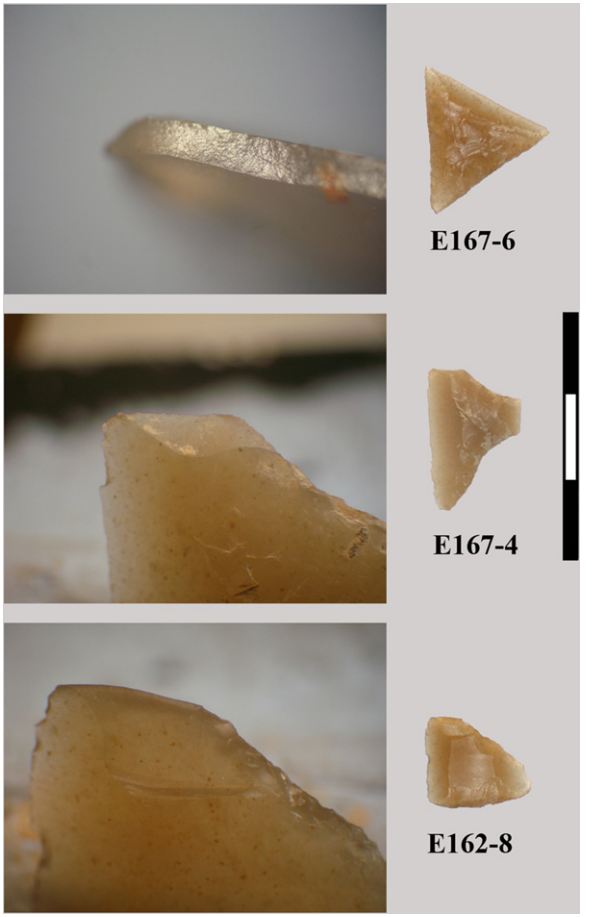

Fig. 8. Geometric microliths with impact fractures caused by their use as projectiles (Photo 35X).
Fig. 8. Géométriques avec fractures d'impact résultant de leur utilisation comme armatures de projectiles (Photo 35X).

Additionally, 19 geometric microliths and nine arrowheads are intact or exhibit small macro- and microscopic modifications, particularly small fractures which may or may not have been caused by their use. The problem is that this type of fracture may also occur during manufacture or storage or by actions such as unintentional trampling. In our own experiments, some geometric microliths and arrowheads have not been fractured despite being shot at prey several times (Gibaja and Palomo, 2004). The fact is that if they do not hit the skeletal part, impact traces are not generated. In any case, it would not be strange if some of the artefacts had not been used, if we take into account that many of the blades in this necropolis were also unused.

A large number of whole blades were used for butchery tasks – 12 blades with a total of 19 used edges. These are often quite large (between 75 and 120 mm long), are always unretouched and have very sharp edges (Fig. 9: 1). Although their morphology makes these blades very effective tools, the fact they are whole or have few scars shows that had been used for a short time and selected *ex professo* to be deposited in the tombs.

Among the retouched and unretouched blades used to work animal skins, three of them – with five edges – were used to cut, two to scrape and one with a double cutting and scraping movement. The scarce development of use-wear has not allowed us to know the state in which the hides were worked. Only in two cases have we been able to determine that they were used to work dry hide.

Finally, two small fragments of retouched blades and one whole blade with a retouched distal part show some faint evidences that can possibly be associated with scraping bone (Fig. 9: 2). The whole blade is a reused tool as the left edge was used for defleshing. The shortness of the active area suggests the implement was used to finish off certain objects such as handles, hafts or points. This kind of utensil with small retouched areas has also

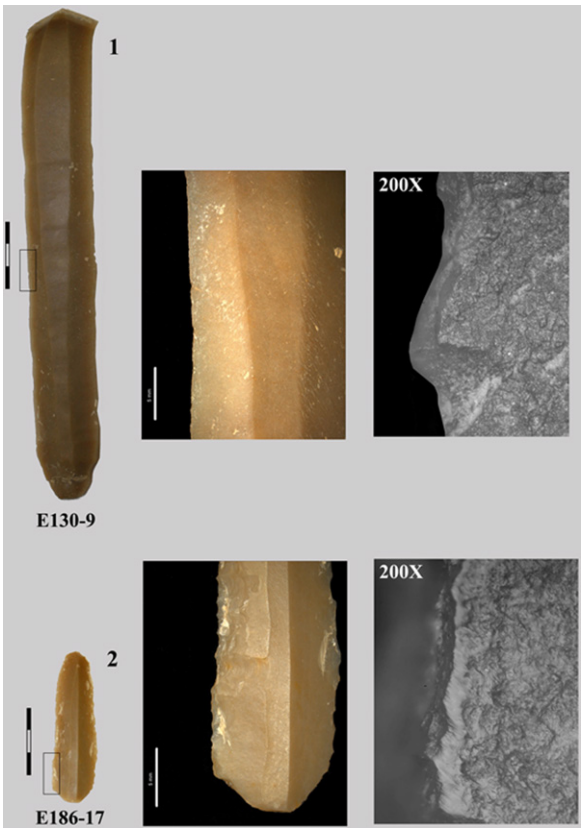

Fig. 9. Blades used for defleshing (1) and to scrape bone (2).
Fig. 9. Lames utilisées pour la décarnisation (1) et pour le raclage de l'os (2).

been documented at other sites in northeast Iberia, such as Bòbila Madurell and Sant Pau del Camp (Gibaja, 2003).

4.3. Working with indeterminate matters, and unused implements

To conclude, it should be noted that 11 blades were used to cut indeterminate substances, particularly soft material. Once again, this difficulty in determining the use is due to the effects of thermal gloss and the faintness of the traces, probably because they were used for a short time. These are all blades, about half of them are whole, while six of them were used along both edges, and only one is retouched. However, a large number of blades (53) do not appear to have been used at all. Most of these are whole implements or exhibit small distal fractures. In other words, they are tools in perfect operating conditions. Some of these blades are quite large, in certain cases over 80 mm long.

5. Conclusions

In short, the conclusions that can be drawn from this study are:

- the raw materials used to manufacture the stone tools are allochthonous. The research that should be able to determine the geological and geographical provenance of the obsidian and honey flint needs to be carried out within a framework of international collaboration. This would enable a proper study and characterisation of the raw materials and their possible sources, as well as monitor their reduction processes on a wide temporal and spatial scale. Together with these allochthonous materials, an occasional use of siliceous stones with a local provenance has been noted;
- the technical knapping procedures and operations were carried out in a recurrent way, which allows us to conclude that the raw material systematically reached northeast Iberia in the format of core preforms that had been treated thermally. The refits and technological data have been able to confirm that these cores were knapped in situ with the technique of pressure flaking;
- a double tendency can be seen in the lithic implements found in the grave goods: a specific production of blades to be used as offerings, together with the recycling of tools used previously in subsistence activities which were later reused as grave goods. However, these previously used implements are usually in perfect condition. These are not utensils that had been exhausted through their use or knapping waste, but whole blades, occasionally with some small scars, whose edges are still perfectly effective. Therefore, the grave goods in the burials at Can Gambús-1 consist of a considerable number of used and still useable stone tools which in some cases can be refitted together, and cores which could still be exploited. This means there was a clear selection of artefacts for the grave goods, some of which were knapped *ex professo* to be deposited in the tombs. This interpretation refutes the idea previously suggested by some researchers that until the Iron Age there was not specific production of goods with an exclusively funerary intention (Bailly and Plisson, 2008);
- the functional study of the knapped stone tools has been able to determine that the blades were used above all for harvesting cereals and cutting soft animal matter like meat and skin. The large number of implements associated with harvesting and processing cereals shows the importance of cereal agriculture amongst the economic activities of this community. This has also been documented in domestic contexts, for example at Bòbila Madurell (Gibaja, 2003);
- many of the geometric microliths and arrowheads were used as projectiles. Their shape and way of fastening them to he shaft show some variation. Both at Can Gambús-1 and at the other two sectors where funerary structures have been found (Bòbila Madurell and Can Gambús-2) we have documented different geometric microliths and arrowheads grouped together in some tombs (Gibaja, 2003). Consequently, it can be proposed that Neolithic communities at that time carried different types of arrows in their quivers to be selected depending on the prey they aimed to shoot. In this respect, our experiments (Gibaja and Palomo, 2004) have shown that tanged arrowheads and geometric microliths hafted as points or barbs have greater penetration power than those used as transversal points, which above all produce

a hard impact and tearing effect if they penetrate into the animal;

- these projectiles, both the geometric microliths and the arrowheads, are usually associated with male individuals (in 16 of the 23 male tombs). This relationship is not exclusive, because microliths but not arrowheads have been found in two of the 19 female graves. This means that they were tools especially associated with men and with hunting or war. However, if we take into account the faunal data from the neighbouring sites of Bòbila Madurell and Camí de Can Grau, these societies rarely hunted, because only 2% of the faunal remains belong to wild species. We therefore wonder to what extent these types of tools represent masculine symbolism. In fact, in the burials from Bòbila Madurell, 70% of the 30 geometric microliths and four arrowheads that have been retrieved were used as projectiles and 30% were not used. A similar situation is documented in the necropolis of Camí de Can Grau, where 79% of the 13 geometric microliths and six arrowheads that were retrieved were used as projectiles, whereas the rest were not used at all. In both necropolises the geometric microliths and arrowheads with evidences of use are usually in good conditions because they only present small impact fractures. It is obvious again that these tools were selected in order to be deposited in the burials. Besides, these items are poorly represented in domestic contexts;
- these data generally agree with the results obtained at other contemporary necropolises, such as Bòbila Madurell and Camí de Can Grau, although slight differences exist in the state of conservation of the artefacts or in the activities in which the stone tools had been used before being deposited in the graves (Gibaja, 2003; Gibaja et al., 2005; Terradas and Gibaja, 2001, 2002).

The results presented here are a first step towards a better understanding of the Neolithic societies that inhabited northeast Iberia in the early fourth millennium cal BC. When all the anthropological studies have concluded, statistical analysis will allow us to establish whether any relationship exists between the sex and age of the individual, their tomb, grave goods and uses of the stone tools deposited with them.

Acknowledgements

This study could not have been undertaken without the valuable information provided about the site of Can Gambús-1 by the directors of the excavation Jordi Roig and Joan Manel Coll. We are equally grateful for the data supplied by the team which has carried out the anthropological study: M. Eulàlia Subirà and Jordi Ruiz. This paper is supported by projects: “Approach to early Neolithic communities in the Northeast of Iberian Peninsula through their burial practices” (HAR2011-23149) and “Lakeshore occupations and resource management among first farming societies from Northeastern Iberia: Technology of material productions and tool uses” (HAR 2009-13494-C02-01), of the Spanish Ministerio de Economía y Competitividad.

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