

# COPPER WEAPONS, GOLD AND IVORY: LONG-DISTANCE EXCHANGES AND EMULATION AMONG THE ATLANTIC BEAKER GROUPS

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**Abstract:** The Bell Beaker complex is one of the most pan-European horizons in Later Prehistory. It is characterized by a distinctive assemblage of items that show a strong uniformity. However, the processes leading to the emergence and expansion of the Bell Beaker complex are still to be explained. In addition to the Beaker items themselves, social elites all over Europe managed to acquire prestige goods, i.e., products that were valuable because of their exotic origin or high degree of craftsmanship (*Fig. 1–2*). In this paper we focus on the procurement of prestige goods by Beaker groups from Central Iberia. Recent analyses have revealed that they obtained ivory either from Africa or from local fossil resources (*Fig. 4*). Long-distance exchanges are also evidenced by certain copper weapons and gold objects whose prototypes are not local, suggesting connections to the British Isles and Central Europe (*Fig. 3*). All this highlights the interaction between European elites in the 3rd millennium BC.

**Key words:** Bell Beaker, Central Iberia, exchange of prestige objects

## 1. Introduction

The main topic of the 2014 annual meeting of the Archéologie et Gobelets Association held in Bratislava and Vienna was the 3rd Millennium inter-regional relations in the recent research perspective. For this reason our paper will focus on the archaeological evidence of long-distance interaction between Beaker groups of Central Iberia and other European regions, mainly Central Europe and the British Isles. Rather to pay attention to the Beaker pottery itself, we will look at the procurement of some prestige items found in Beaker graves from Central Iberia that illustrate contacts with distant regions, since either their typologies or their raw materials are non-local.

In the last few years our knowledge of these grave goods has dramatically improved due to two reasons: First, the significant increase of the Bell Beaker tombs that have been recently excavated in Central Iberia; second, the application of a wide variety of archaeometric techniques to the study of the Beaker assemblages (*Guerra –Liesau (eds) 2016*). On the other hand, non-funerary contexts are providing important information about exploitation of flint, processing of salt and metallurgical activity in the settlements.

## 2. Prestige items in the Beaker grave assemblages

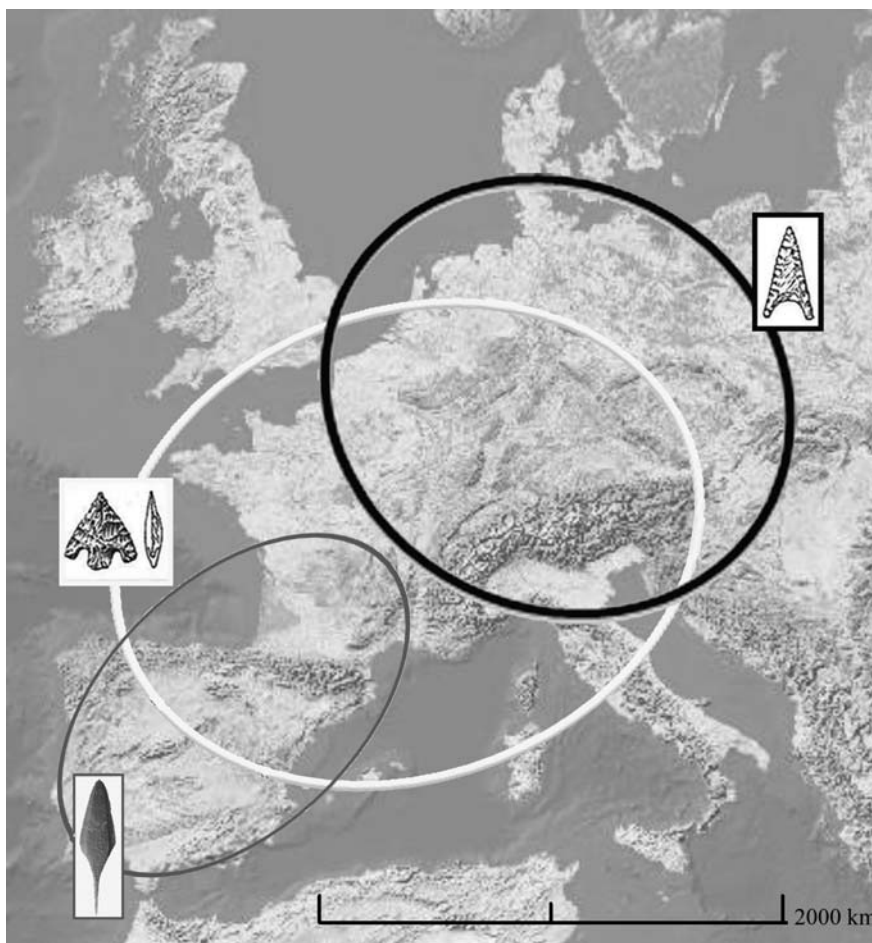
The difference in the level of wealth between Bell Beaker graves, that is suggested not only by the number of pottery vessels but also for the presence or absence of certain objects (such as weapons or gold ornaments among others), is an indicator of inequality. Besides, the access to the latter objects was restricted, because of their exotic origin or high degree of craftsmanship. For these reasons, they were considered prestige items and eventually they became symbols of status and power (*Guerra – Delibes 2013, 79*).

## 2.1 Weapons

The practice of including weapons among the grave goods in a normalized way was first set up by Bell Beaker societies. It is commonly accepted that weapons are prestige items of social relevance, linking their owners to activities related to power, danger and social capacity of coercion. This idea is well displayed in the iconography of the Alpine stelae, some of which show Beaker warrior leaders (*Vaquier – Maillé 2011*, 103–120). However, this warrior image has recently been questioned, considering that weapons could also have been used for hunting activities (*Guilaine – Zammit 2002*, 175–176). This new interpretation would explain the reduced number of flint arrowheads (usually one or two) that occur in Beaker tombs (*Lemercier 2011*, 141).

Probably the procurement of weapons involved different distribution channels: donations, barter with other products, control of the centres of production, etc. In any case, they are an example of fluid exchanges, as suggested by their “family resemblance” in almost all European Bell-Beaker groups, from the Atlantic to the low Danube. Nevertheless, Beaker weapons differ in their distribution areas. Copper daggers and wristguards are found all over Europe; on the contrary flint arrowheads and Palmela points tend to concentrate in Iberia and southern France.

*Bailly (2014)* considers that flint arrowheads might have been replaced by copper Palmela points in Iberian Beaker tombs due to their relevance and social prestige. Our studies carried out to date in Central Iberia reflect that arrowheads were not distinctive objects among the Bell Beaker grave assemblages, but they were important objects in the domestic equipment, with evidence of specialized production and therefore susceptible to be exchanged (*Ríos 2011; Liesau et al. 2014*). Why was the distribution of Palmela points restricted to south-western Europe? Certainly it was not due to the lack of raw material if we bear in mind the abundance of copper mines in the Alps and Danube regions, but probably a question of a unique item linked to south-western European burials containing prestige goods (*Fig. 1*).



**Fig. 1.** Approximate distribution of the types of arrowheads from Bell Beaker burials (modified from *Lemercier 2011: 133*).

Concerning copper daggers, the exchange mechanisms remain largely unknown as the majority of the production centres have not been located. The results of the archaeometallurgical analyses aiming to provenance copper items back to the mineral veins through compositional or isotopic measurements are not conclusive, due to the great variability, even in the same mine, of the minor elements present in the copper ores. Therefore it is difficult to determine if the circulation of these items were as finished products in local, regional or superregional circuits.

With the aim to obtain more data about the Bell Beaker dagger technology, a recent metallographic analysis was done. Two similar copper daggers in size and shape were compared: one copper dagger found in a Bell Beaker inhumation at Ciempozuelos, Madrid (*Rovira – Montero 1994*) (*Fig. 2d*), and another one recovered in the Hungarian cemetery of the Csepel group, now exhibited at the Museum of Budapest (*Fig. 2b*). In this case the comparison turns out to be especially interesting if we bear in mind that this type of dagger is exceptional in Iberia, but common for the Hungarian Bell Beaker contexts. The dagger from Madrid was obtained after cold working, as it was habitual in the copper metallurgy of Iberia since pre-Beaker times, whereas the Hungarian weapon from the Budapest Museum shows evidence of annealing, as usual in the forge of this zone (*Reimanyi et al. 2006*). Thus, despite the formal similarities between these daggers, the metallographic analyses have failed to prove the existence of long distance exchanges. Perhaps the imitation of types was more frequent than the acquisition of certain metallurgical technologies.

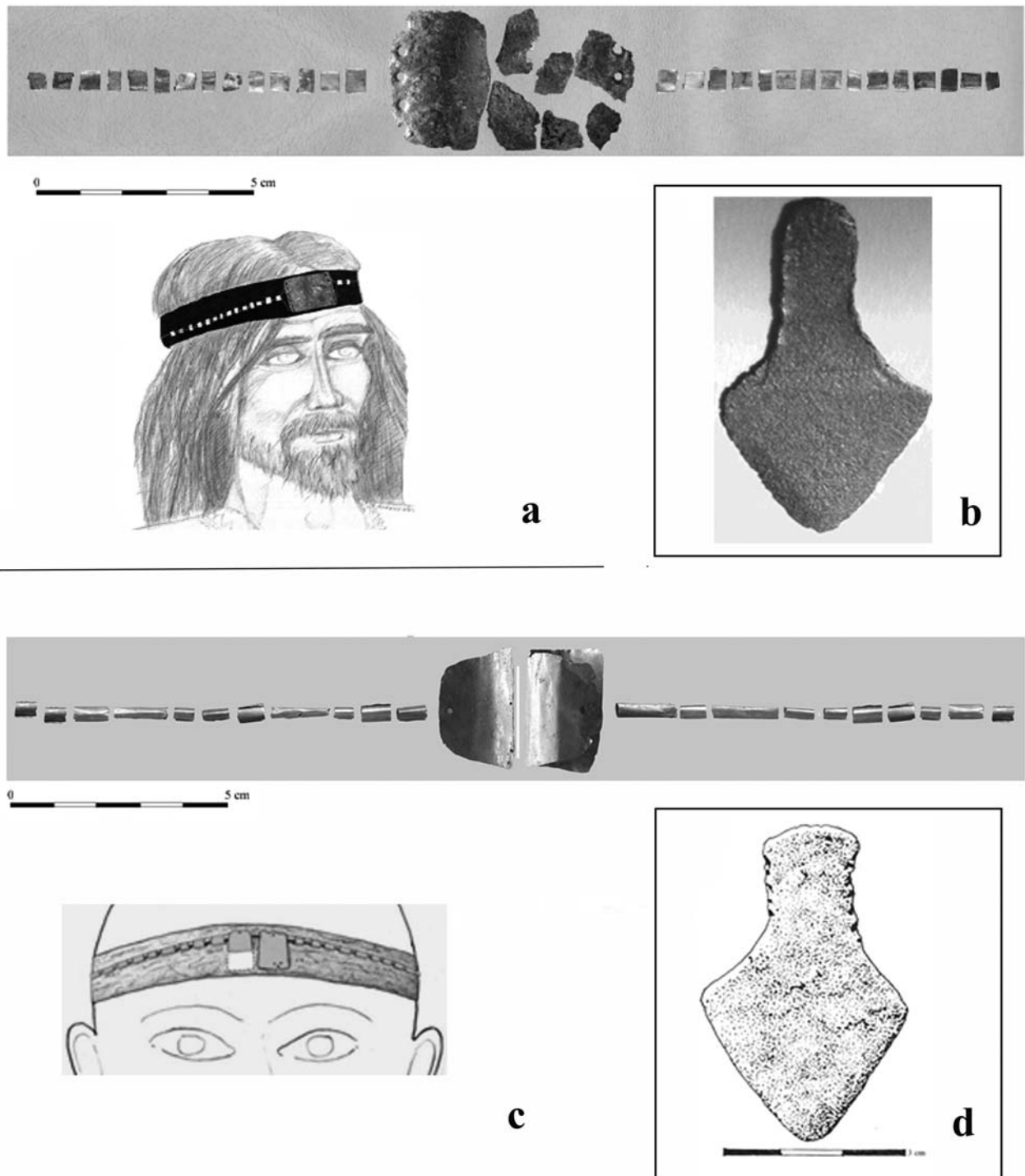
Other metal types highlight the interaction with Atlantic groups. This is the case of the few halberds found in Beaker contexts from Central Iberia. Typologically they point to the British Isles, since their shaft system, based on rivets, might be related to the early Irish metallurgy or to similar objects from Great Britain corresponding to a later stage in the development of the British metallurgy, but we do not discard the existence of local workshops in central Iberia (*Blasco et al. 2016*).

## 2.2 Gold ornaments

Gold ornaments represent a different case, as they do not occur so frequently in Bell Beaker graves. Therefore they constitute a good example of prestige items (*Blasco – Ríos 2010*). Ten years ago only about 40 Beaker gold ornaments were recorded from Central Iberia (*Garrido et al. 2005*), but that figure has increased significantly thanks to recent findings from burial contexts in the Southern Meseta (*Rovira et al. 2011*). Ornaments are rather simple and small (tubular beads, thin rolled sheets, plaques) -only the sheet gold diadem from Fuente Olmedo and that from Entretérminos escape this trend-, and they might have been part of more complex jewels, as occurred at Camino de las Yeseras (*Blasco et al. 2009; Blasco – Ríos 2010*) (*Fig. 2c*). Neither the types nor the technology of Beaker pieces differ from those in the inception of gold working in Iberia, which took place in pre-Beaker times, around the beginning of the 3rd millennium cal BC (*Perea 1991*). As there are currently no gold mines dated to the 3rd millennium BC in Iberia consequently Beaker gold work is thought to have been produced from native gold that was obtained through the panning technique. However the lacking of data about the composition of most of these ornaments, along with the relatively small number of gold sources sampled make it very difficult to relate Beaker gold items to any source. As in in the previously mentioned copper daggers, it is remarkable the similarity of the gold diadem or head ornament recovered from Szigetszentmiklós-Üdülősor and from Camino de las Yeseras (*Fig. 2a,c*).

The occurrence of a pair of gold basket-shaped ornaments from Tablada de Rudrón, in Burgos is rather exceptional in Iberia (*Fig. 3*). At the non-megalithic burial mound of El Virgagal, which was used by a Beaker group during the second half of the 3rd millennium BC and re-used several centuries later, in the Middle Bronze Age, these gold ornaments – which were initially interpreted as finger bands– were found among the Beaker materials (*Campillo 2004*). An ongoing research project conducted by one of us (Prof Germán Delibes de Castro) is re-examining this site, and the isotopic and DNA analyses of the human remains are still in progress. While we cannot be sure at the moment of the provenance of the Beaker individuals, it seems clear that those gold ornaments are similar to finds from England, thus reflecting the nature of the Bell Beaker networks along the Atlantic façade (*Fitzpatrick et al 2016*).

Therefore the Tablada de Rudrón gold jewels clearly illustrate the existence of contacts between Iberia and the British Isles by the end of the 3rd millennium BC, as also evidenced by some copper objects from Scotland, made of the



**Fig. 2.** Comparison of: gold ornaments from BB burials found in Szigetszentmiklós-Üdülősor (Csepel-Island) (a) (Endrődi, 2011, 80) and in Camino de las Yeseras (Central Iberia) (Blasco et al. 2009; Blasco-Ríos 2010, Fig.10) (c) and, copper daggers from a Hungarian BB cemetery of the Csepel group (Museum of Budapest) (b) and from a BB tomb of Ciempozuelos (Central Iberia) (Blasco et al. 1998, 107) (d).

so-called Bell Beaker metal (BB-metal), the composition of which is consistent with copper from Asturias, in northern Spain (Needham 2002). It is interesting to note that Beaker pottery, corresponding to both, the Maritime and Ciempozuelos styles, has recently been found at one of the copper mines in Sierra del Aramo, Asturias (Blas Cortina et al. 2013). This mining area has been suggested as a possible provenance for the copper dagger and knives deposited in the Amesbury Archer's grave (Needham 2013a). Is it a coincidence that both the Amesbury Archer himself and his Companion were buried with a pair of gold basket ornaments each? (Needham 2013b).

### 2.3 The “bone” buttons

Traditionally, in spite of their frequency, minor importance has been given to the study of different ornaments made of “bone” from the Bell Beaker tombs. The small size of many pieces, the lack of sieving in old excavations, the difficulty to recognise and differentiate them from the filling sediments in the tombs, are some of the circumstances that probably explain that they often have been unnoticed. The pieces of bigger size were conventionally defined as “buttons”, which in Bell Beaker contexts have distinctly V perforations. Their function was widely discussed as buttons, spacing beads for necklaces, sewn ornaments on clothes, etc. (Uscatescu 1992, 19–22). Siret – Siret (1890) already identified several buttons and beads made of ivory in argaric sites (Early and Middle Bronze Age), but the procurement of ivory was proved to have started in pre-Beaker times (Leisner – Leisner 1943). In Beaker times, ivory was traded from North Africa to the Iberian Peninsula, as incipient stratified societies demanded this raw material for producing prestige items (Gilman – Harrison 1977, 19; Harrison 1977, 39–40; Pascual 1995).

Recent studies based on archaeometric methods – FTIR, Raman spectroscopies, Microcomputer tomography – have focused on the study of the different types of animal dentins from which these ivory items (V shaped buttons and different types of beads) were produced (Banerjee 2002; Schuhmacher 2012). A great variety of raw materials has been revealed. It is interesting to note that a Beaker grave from Central Iberia provided ornaments made of both ancient elephant ivory (*Elephas (Palaeoloxodon) antiquus*) as well as the African elephant material (*Loxodonta africana*) (Liesau – Moreno 2012). As the forest elephant was an extinct species at the time, Beaker groups might have used the well-preserved fossil ivory that can still be found in the Madrid area. Otherwise the occurrence of this type of ivory would imply the existence of a long distance exchange of African ivory reaching Central Iberia. In any case, these ivory pieces are present only in tombs containing relevant prestige items as gold objects and cinnabar (Liesau – Blasco 2012).

Regarding their typology, their shapes are very similar in all of them (Tortuga buttons and buttons with small appendages). As these types are particularly abundant in the Tagus valley, we do not discard more or less intensive contacts along the Tagus valley to the Madrid region (Ríos – Liesau 2011) (Fig. 4).

Therefore it seems that the V shaped buttons and other ornaments as beads are also objects of high value since their acquisition needs a long distance interaction. It would be interesting to carry out similar studies on bow-shaped pendants from Continental Europe in order to determine if they were all made of boar tusks, or if ivory was also used and, in that case, what kind of possible exchange routes were involved (Liesau 2016).

### 2.4 The use of cinnabar in Beaker tombs

Cinnabar also represents a good case of valuable commodity that circulated through the exchange networks in Beaker times. Probably used as powder, this red mineral was applied to certain parts of the corpses from the Neolithic onwards. A number of megalithic tombs and collective burials from the Neolithic and Copper Age have provided traces of cinnabar. It is also present in some Beaker tombs, corresponding to relevant individuals. Later on, cinnabar was used more often

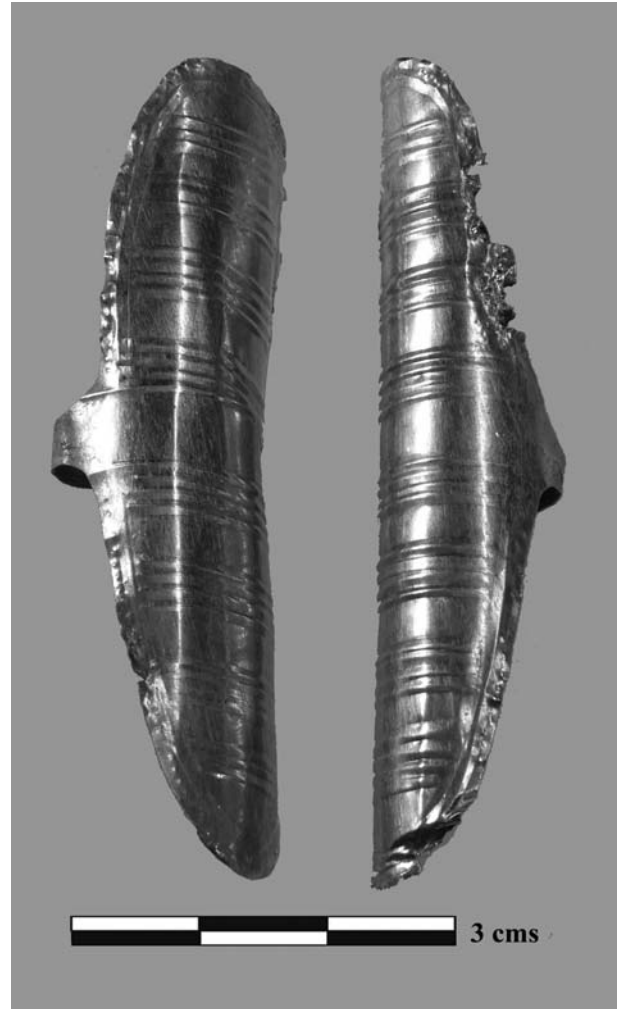
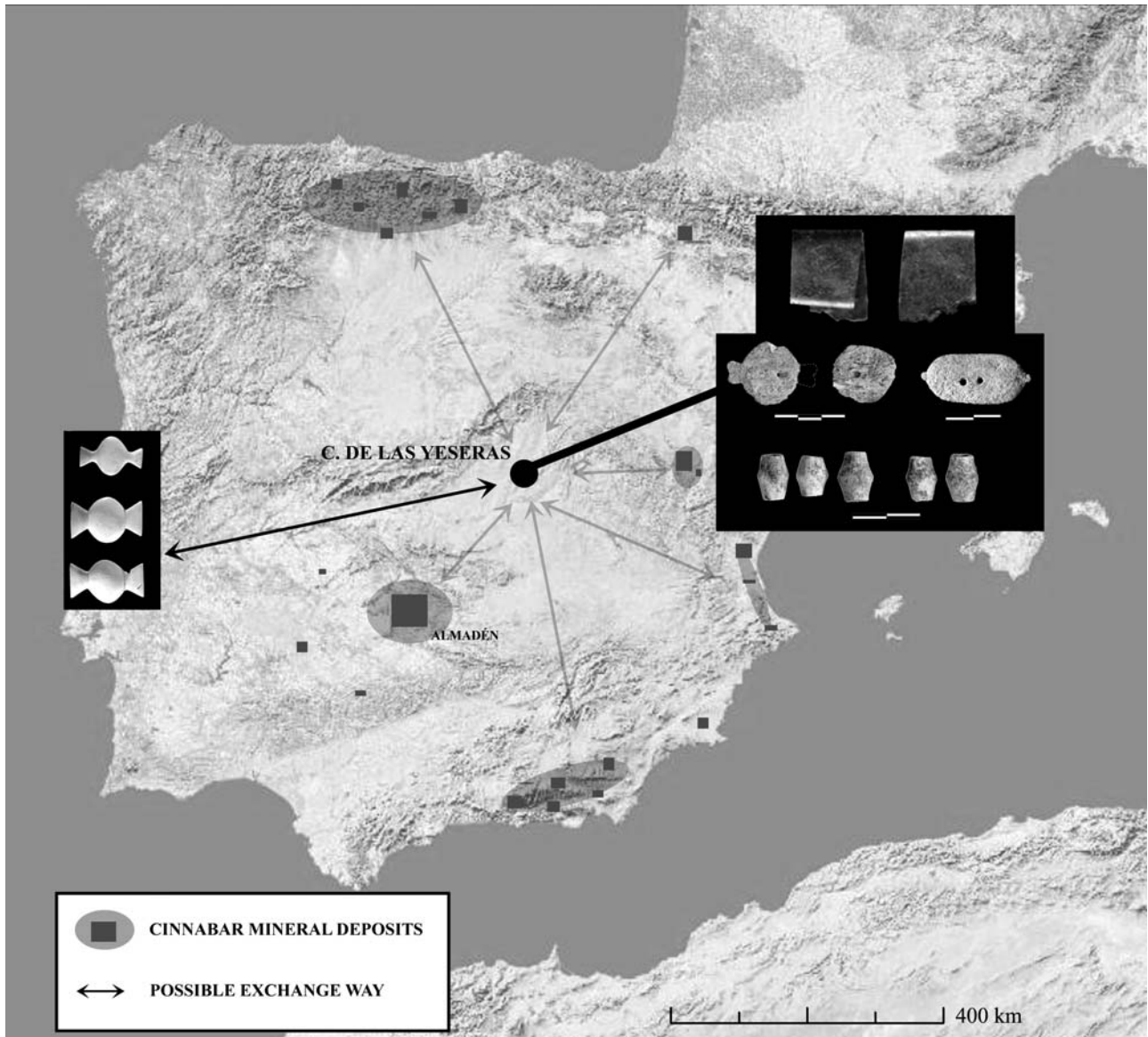


Fig. 3. Gold basket-shaped ornaments from the non-megalithic burial mound of El Virgatal, Tablada de Rudrón (Burgos).



*Fig. 4.* Possible exchange networks through the Tagus valley where prestige goods as ivory buttons could circulate and cinnabar mineral deposits (mines and other known outcrops) in relation to the Central Iberian Bell Beaker tombs that included cinnabar in their funerary rites.

in the burial ceremonies of the Bronze Age culture of El Argar, for painting the funerary structures and the human skeletons themselves (Siret – Siret 1890; Martín Gil *et al.* 1995; Delibes 2000).

In Central Iberia the earliest evidence comes from the Early Neolithic flint mines at Casa Montero, Madrid (Hunt *et al.* 2011). However its use as part of the burial rites dates to the Middle Neolithic, around the 4th millennium BC, as indicated by the megalithic tomb of La Velilla, Palencia (Martín Gil *et al.* 1994a; 1994b; 1995). The presence of red pigments in the Bell Beakers tombs of Central Iberia has been referred in many works but has not been analyzed until recent times, enabling distinguished pigments made from ferric oxides and those made with cinnabar (Ríos – Liesau 2011; Liesau – Blasco 2012).

Although cinnabar resources in Iberia are limited to a few geological contexts, the isotopic composition analysis carried out to date in order to locate potential catchment points are not conclusive. However, the area of Almadén, in Ciudad Real, being the richest cinnabar mining area in the world (Hunt *et al.* 2011) seems to be one of the most suitable candidates. In any case, primary sources are quite distant from the Beaker tombs containing this pigment, implying therefore the existence of contacts on a regional scale (Fig. 4).

### 3. Concluding remarks

Beaker tombs from Central Iberia reveal the existence of long-distance contacts that, ultimately, would reach as far as the British Isles and the Hungarian groups. This is evidenced by certain copper weapons and gold objects whose prototypes are non-local, suggesting connections to the British Isles and Central Europe. Basket-shaped gold ornaments are an established British type of ornament, and a sign of high status, as the gold discs were in Ireland. Recent analyses have revealed that the V-perforated buttons and similar ornaments are also important in their symbolic value, either for their exotic origin or for the exclusivity of the raw material.

Therefore, all this supports the existence of exchange networks through which prestige goods circulated, and Beaker groups all over Europe participated in them actively. In the case of Iberia, not only the coastal areas, such as the Tagus estuary, or the Pyrenees, close to southern France, were involved in such networks but also the Ciempozuelos Beaker groups from Central Iberia.

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#### Resume

Der Glockenbecher-Komplex ist einer der wichtigsten pan-europäischen Horizonte in der rezenteren Vorgeschichte. Seine Charakteristika sind verschiedene Grabbeigaben, die sich in Grundzügen in Europa ähneln. Jedoch sind die Vorgänge, die das Auftauchen und die Entwicklung dieses Glockenbecher-Komplexes ermöglicht haben, noch nicht endgültig erfasst worden. Zusätzlich zu den charakteristischen Grabbeigaben ist bemerkenswert, dass die Gräber der aufsteigenden Eliten in ganz Europa gewisse Prestigeobjekte beinhalten, d. h. Rohstoffe oder Objekte, die wegen ihres exotischen Ursprungs oder hochgradigen Arbeitsaufwands wertvoll waren (*Fig. 1–2*). In dieser Arbeit konzentrieren wir uns darauf, wie einige dieser Prestigeobjekte von Glockenbechergruppen des iberischen Hochplateaus beschafft wurden. Rezente Analysen haben erwiesen, dass Elfenbein aus Afrika, aber auch fossiles Elfenbein, wahrscheinlich lokaler Herkunft, als Rohstoff für Schmuckstücke benutzt wurde (*Fig. 4*). Weiterer Austauschhandel über Langstrecken wird auch durch Kupferwaffen, wie auch durch Goldornamente erwiesen, deren Prototypen nicht-lokaler Herkunft sind, sondern auf Verbindungen zu den britischen Inseln und Zentral-Europa hindeuten (*Fig. 3*). Diese neuen Funde zeigen, dass die Glockenbechergruppen von Europa während der Kupferzeit miteinander in Kontakt standen.

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