

# TEXTILES AND RITUALITY IN THE LATE TARTESSIAN CULTURE OF THE GUADIANA VALLEY

LUIS BERROCAL-RANGEL<sup>1</sup>, SEBASTIÁN CELESTINO PÉREZ<sup>2</sup>, ESTHER RODRÍGUEZ GONZÁLEZ<sup>2</sup>

(1) Universidad Autónoma de Madrid. luis.berrocal@uam.es

(2) Instituto de Arqueología. CSIC - Junta de Extremadura. scelestino@iam.csic.es, esther.rodriguez@iam.csic.es

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## ABSTRACT:

*After the downfall of the Guadalquivir's Tartessian Culture at the end of the sixth century BC, the Tartessian core located along the Middle Guadiana Valley continued its cultural and economic development as a type of hybrid response, having a unique, prosperous period throughout the fifth century BC. The archaeology of this complex society is represented in Tartessian lowland buildings covered by tumuli, like the well-known examples at Cancho Roano (Zalamea de la Serena, Badajoz) and La Mata (Campanario, Badajoz). In the case of the former, remnants of textile activities such as spinning and weaving are plentiful, including loom weights, spindle whorls, metal and bone needles, as well as pins. Textile fibres were not recovered; however, recent finds provide insight into the technical and ritual meanings of textiles in these unique contexts. An example of this are the discoveries at the Casas del Turuñuelo site (Guareña, Badajoz), a newly-excavated building under a tumulus that produced fabrics and textile tools. These new discoveries are presented herein, along with a review of prior finds to permit us new interpretations.*

**Key words:** *Tartessian Culture, Guadiana Valley, Loom Weights, Spindle Whorls, Flax, Basketwork.*

## RESUMEN:

*Tras el final de la Cultura tartésica en el Guadalquivir, a finales del s. VI a.C., el núcleo tartésico localizado a lo largo del Valle medio del Guadiana continuó su desarrollo cultural y económico como una respuesta híbrida con una prosperidad singular a lo largo de todo el s. V a.C. La Arqueología de este ámbito cultural está representada por los conocidos edificios tartésicos en llano, posteriormente cubiertos por túmulos como los conocidos de Cancho Roano (Zalamea de la Serena, Badajoz) y La Mata (Campanario, Badajoz). En el primer caso, los restos de actividades textiles como el hilado y el tejido fueron abundantes, incluyendo pesos de telar, fusayolas y agujas de metal y de hueso, e incluso alfileres. No se recuperaron fibras textiles, pero recientes hallazgos han incrementado nuestros conocimientos sobre el significado técnico y ritual de los textiles en estos contextos tan singulares, como aquellos procedentes de Casas del Turuñuelo (Guareña, Badajoz), un edificio bajo túmulo recién excavado, lleno de restos de tejidos y de herramientas textiles. Estos nuevos hallazgos se presentan en esta publicación junto a una revisión de los antiguos para permitirnos nuevas interpretaciones.*

**Palabras clave:** *Cultura Tartésica, Valle del Guadiana, Pesas de Telar, Fusayolas, Lino, Cestería.*

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## INTRODUCTION

During the last thirty years, the Early Iron Age in the Guadiana Valley has gradually been revealed as a period in which the inhabitants of the central river basin developed a flourishing and prosperous culture, linked to the presence of Phoenician and Greek colonies on the shores of the Spanish Mediterranean and, especially, in the Gulf of Cadiz. This development, until a few years ago, was interpreted as a consequence of the peripheral effects of a single, main core, located on the coasts of Huelva and identified with the mythical *Tartessos* (Rodríguez Díaz and Enriquez 2001; Celestino 2014 with references) – a phenomenon that was discovered to be much more complex than the “Orientalizing” process that had been proposed previously (Almagro-Gorbea 1977). However, recent research undertaken at important Portuguese sites has allowed us to not only re-evaluate the supposed hinterland of the Guadiana but also recognize, in fair measure, a process of Phoenician colonization along Portugal’s Atlantic coast (Arruda 1999-2000). It is for this reason that the authors of the present article defend the existence of an *Atlantic Tartessos*, which allows us to understand the endurance over more than a century (the fifth century BC) of the traditional *Tartessos* (Pellicer 2000; Celestino 2005; Álvarez Martí-Aguilar 2005).

The settlement structure of those interior populations seems to have revolved around certain ‘central’ sites located at strategic heights for territorial control, such as El Tamborrío-Entrerríos and Mértola (Labarthe *et al.* 2003; Rodríguez Díaz *et al.* 2011; Rodríguez González 2018). As has been suggested for Medellín, Lobón, and Badajoz (Almagro-Gorbea *et al.* 2008), the most important aspect of settlement in these contexts has been revealed to be a certain type of flat construction, which is monumental in character and has complex features (Jiménez Ávila 1997; Almagro-Gorbea *et al.* 2008: 159 ff; Rodríguez Díaz 2009) (fig. 1).

The paradigmatic excavations at Cancho Roano have demonstrated that the origin of these buildings can be dated to the beginning of the Iron Age in the region, and this has been confirmed by subsequent excavations at La Mata (Rodríguez Díaz 2004; Celestino 2014: 228 ff). However, the more complete view of these sites focuses on their last phase of use, typically developed throughout the fifth century BC with material parameters that were essentially similar.

For this reason, the archaeological remains attributed to this *Late Tartessian Phase* are particularly rich and abundant and this includes those remains which relate to the textile industry. Textile production activities were previously documented, in the case of Cancho Roano, by the authors in a work of synthesis and interpretation (Berrocal-Rangel 2003), in which they assessed the methodological difficulties that the excavation of this exceptional site involved – a work from which numerous interpretations of the site’s specific function stem.

## CANCHO ROANO: THE IMPORTANCE OF AN “ONLY PARADIGM”

Cancho Roano A, dated throughout the fifth century BC, is a site consisting of a set of bipartite structures, each considered to be part of a single building. Its organization is centripetal in nature, with a central, compact rectangular module whose sides are projected in the form of wings to cover a square area. This area acts as an access courtyard, with a peripheral module composed of a series of small, rectangular rooms which surround the central area on all sides, with an eastern door that provides access to the aforementioned courtyard (Celestino 2001: 30-31).

Leaving aside the highly debated issue of the building’s interpretation, we wish to make it clear that all of the textile tools studied can be considered contemporary, in terms of use or possible use, at the time of Building A’s decline (Celestino *et al.* 1996: 341). However, the occupation of this building and those that preceded it was consecutive in nature and of a short duration, perhaps little more than a century – a period that is not longer than the traditional service life of textile tools (fig. 2). The following conclusions concern the various types of tools present at the site (Berrocal-Rangel 2003).

## SPINDLE WHORLS

Spindle whorls are the most numerous textile tools at the site. In all the rooms and northern and western areas, nearly 500 items were found, although only in the latter area there were groups or associations that allow for them to be connected with closed contexts. These sets seem to correspond with the use traditionally accepted for spindle whorls throughout time: real whorls as well as stoppers of a manual distaff. Therefore, as

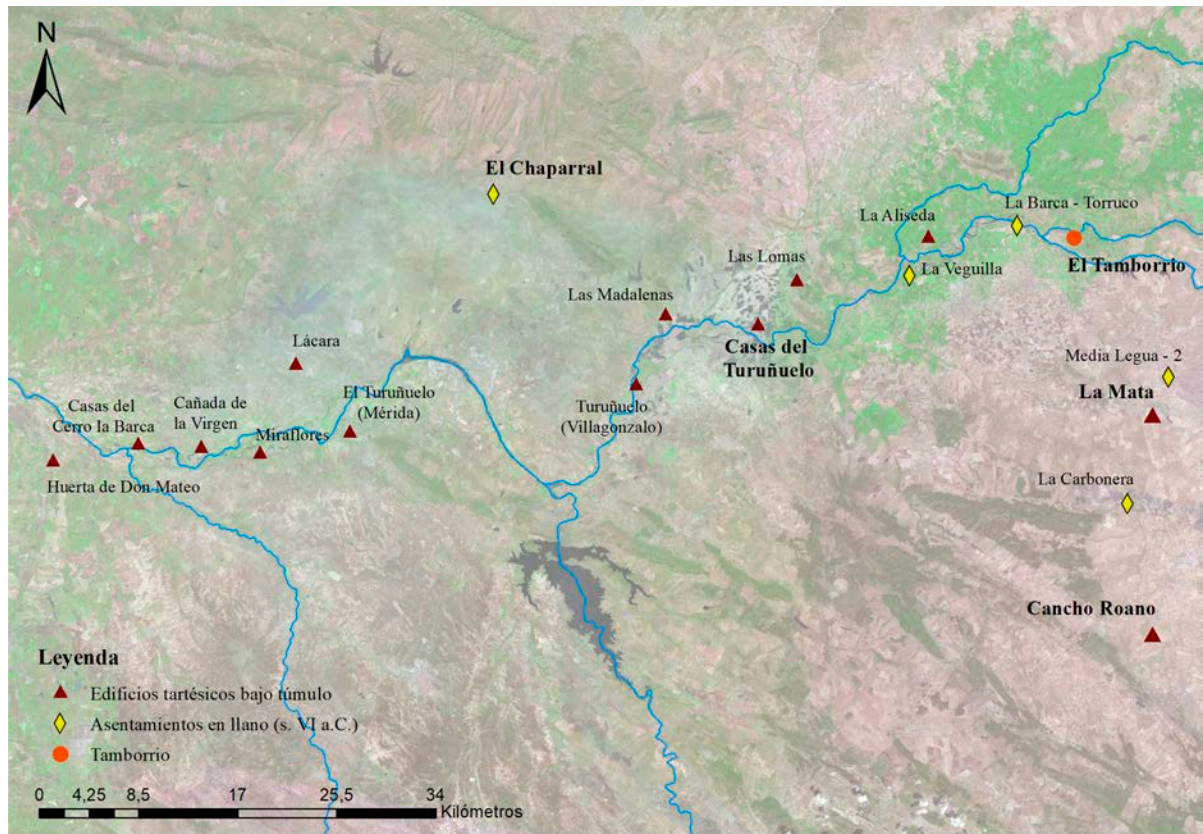


Fig. 1: Territory map of the middle valley of the Guadiana river (Image: E. Rodríguez González).

hypotheses, there would be two possible uses for a whorl, one in the bottom of a drop spindle and, another, on the upper top of a distaff, according to Spanish ethnographical modern testimonies (González-Hontoria and Timon 1983: 39-41).

Detailed morphological analysis of the spindle whorls confirmed that they are homogeneous in nature, both in shape and external appearance, as well as in terms of manufacturing techniques and the ceramic pastes used. They reflect standardized production – a response to widespread, controlled demand – designed to meet the needs of the local and regional market. These conclusions are based on an exhaustive analysis of a set of 343 complete items: 98% were made of ceramics, with a variety of shapes encompassing five major groups: three with a simple shape (conical, cylindrical, spherical) and two with combined shapes (biconical and biconical truncated). 54 % of all the whorls are strictly of the bitronconical shape, with that number increasing to 70.81 % if variations of this shape are factored in. Therefore, the

study of these pieces demonstrates the success of the bitronconical shape, which may be explained by the ease with which it maintained inertia from rotary propulsion, yielding better results when compared with simpler shapes, such as conical or cylindrical. Another interesting aspect was the fact that the decorated pieces only accounted for 4.7 % of the total, something that markedly contrasts with the 45.7 % of decorated spindle whorls amongst the 127 found at the Sanctuary of Capote, dated between the fourth and second century BC and part of a clearly sacred context (Berrocal-Rangel 2003: 225). That fact, and some secondary evidence, allows one to defend the theory that most spindle whorls were meant for simple manufacturing use. They had weights ranging between 1 and 34 g and, therefore, they must have been used for spinning flexible fibres of varying consistency and size – within the limited repertoire available at the time: wool, flax and, possibly, some other fibre that was probably like what Pliny referred to as *carbusus* (NH, XIX, 1, 2, and 10)<sup>1</sup>.



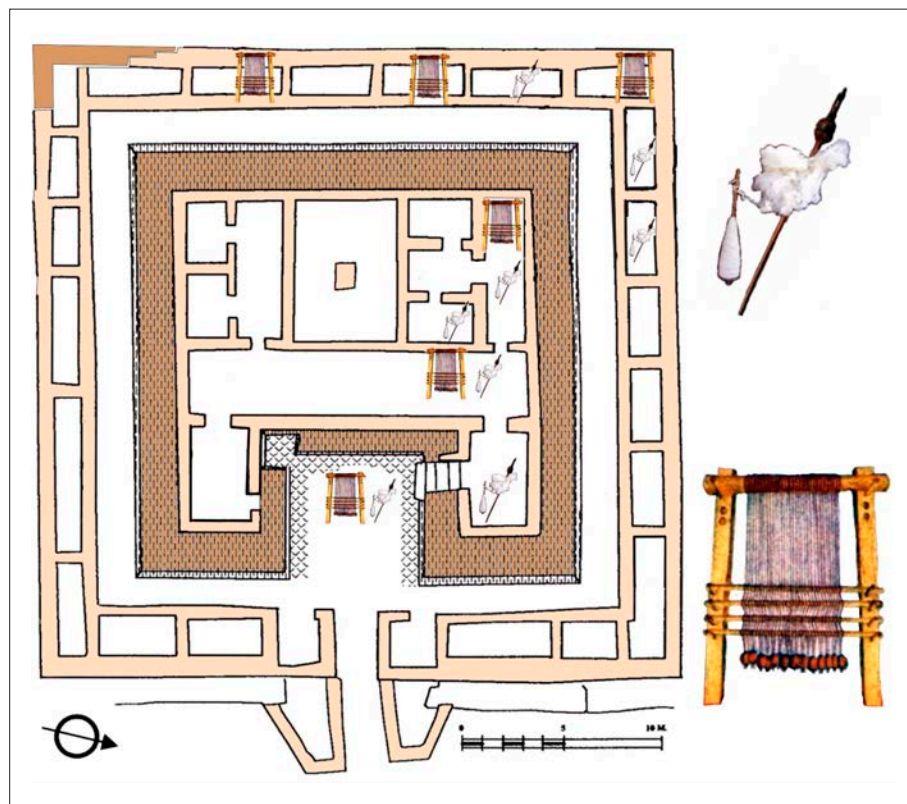
Fig. 2: Loom weights, whorls and bronze needles in a bone box, from Cancho Roano A site (Image: Authors).

The idea of a standardized set of tools gains force when observing the clustering of the spindle whorl weights around four values: 3.5 g, 7.5 g, 12.5 g, and 17 g. These values are common at prehistoric Peninsular sites, but the set at Cancho Roano has the particularity of having 48 % of its weights under 12 g, and even 10 g, and this is a peculiarity that we consider remarkable as the weight of the spindle whorl played an important role in the manufacturing of thread, influencing its thickness (Castro 1980: 142; Olofsson *et al.* 2015). Values and attributes so regularly distributed bring us to propose the production of spindle whorls with the use of moulds and templates. The analysis of the relationship between the maximum diameters and maximum heights allowed this possibility to be verified, and to be reinforced through comparison of the visual appearance and regularity of the

shapes, profiles, and surface treatments (Berrocal-Rangel 2003: fig. 10). Thus, we were able to distinguish three groups of spindle whorls: irregular items; items with a regular circular shape when viewed from the side, and regular pieces.

The first group, at first sight, were probably hand-made pieces, while the third would most likely originate from the use of moulds for their manufacturing and the second group could have been the result of the use of rigid templates to standardize the size and circular shape. Of the 336 objects analyzed, the distribution between the first and the third group is almost identical: 43.4 % and 41.7 %, respectively. These two groups, which are at first sight surprising when considering the uniqueness of the weights, may reflect two types of manufacturing or spinning tradition: one which was regulated and standardized, and another which

Fig. 3: Proposed location of vertical looms and hand distaffs in the floor plan of Cancho Roano according to Berrocal-Rangel (2003).



was more open to improvisation. Regarding the first group, the regularity in terms of the diameter is surprising (54.6 % of the pieces in this group measure between 20 and 32 mm), something that brings us to believe that we are faced with specific types of spindle whorls manufactured with moulds or templates, using reduction firing, well-leigated pastes and careful surface finish – being polished and even burnished, with very scarce decoration. The analysis of the diameter/height variables presented a regression in the form of uniform linear development, which allows us to draw out an equation of correlation whose coefficient, “r,” is 0.80 (Berrocal-Rangel 2003: 240 and figs 10.1, 10.2). Additionally, it is a good idea to observe the accumulation of pieces with identical diameters that are distributed in the form of continuous ranges along consecutive heights: pieces measuring 16 mm; and measuring from 20 to 37 mm. As height/diameter regression does not just provide a higher concentration of points, approximating a clear “cloud” silhouette, the diameter variable’s operation as independent with respect to the height is clearly demonstrated.

These diameter/weight/diameter regressions yielded, additionally, a novelty in the performance of the lower values. In terms of the predominance of diameters, those

that are below 20 mm are dependent upon the weights. In this sense, we believe that it is more difficult to control the weight of such small pieces than their diameters, unless we are talking about very precise production that is monitored with a very well-defined technical interest.

With regard to the spatial distribution of spindle whorls, we observe a series of clusters. Thus, five sets can be selected from the exterior module, in the northern wings (rooms N3 and N6) and western wings (rooms O1, O2, and O3), associated or not with looms: 14, 6, 14, 24, and 8 spindle whorls. All are, as can be seen, even numbers, which may reflect, therefore, a certain duality for each spindle (fig. 3; Berrocal-Rangel 2003).

#### LOOM WEIGHTS

The second set of textile tools consists of loom weights – the weights of vertical warp-weighted looms with a single warp beam (Hoffmann 1974: 297ff; Alfaro 1984: 124; Wild 1988: 31-33; Gleba 2008; Andersson *et al.* 2015). Many loom weights were found at Cancho Roano forming sets, which has allowed us to propose the

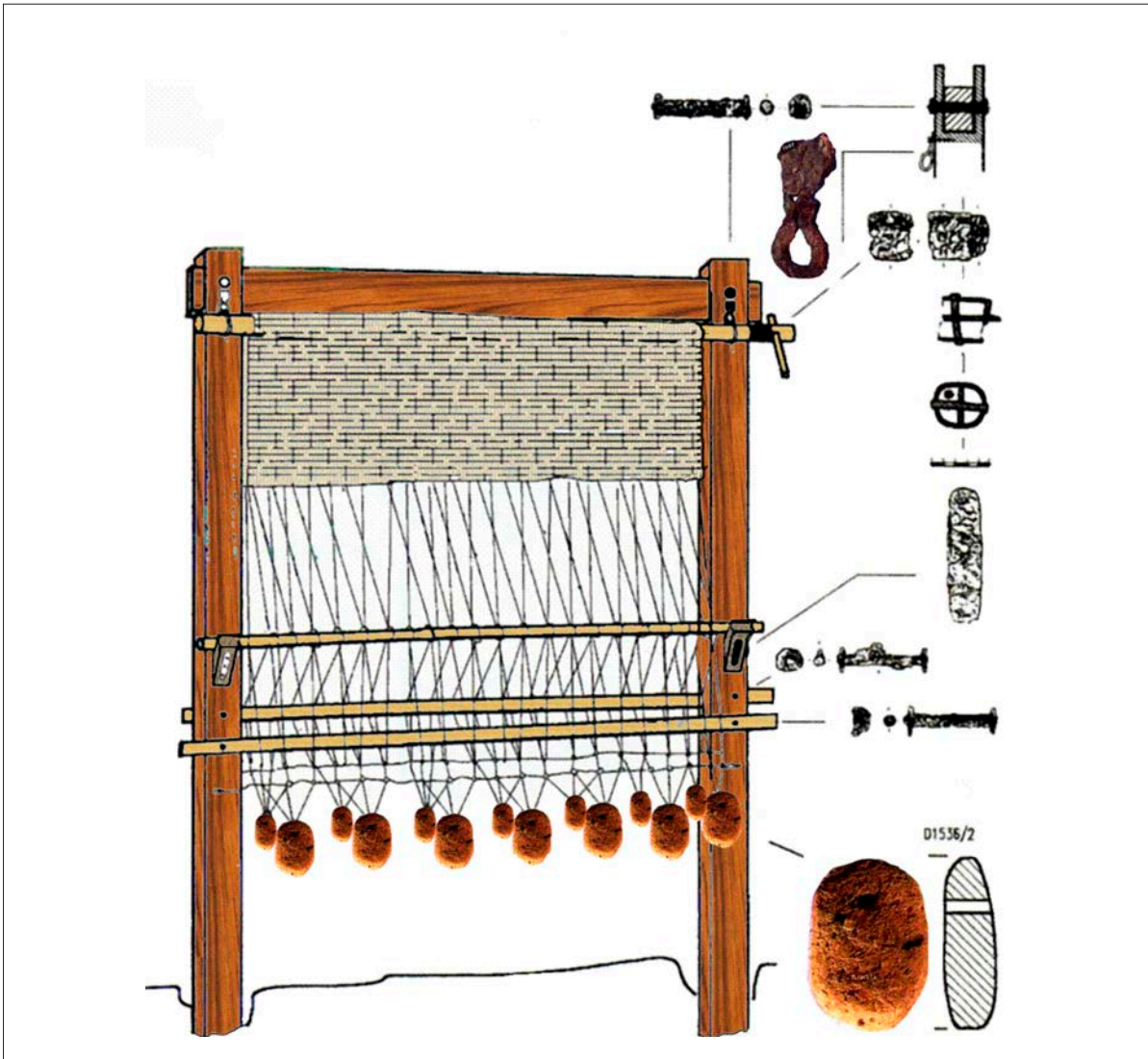


Fig. 4: Proposed construction of a vertical warp-weighted loom at Cancho Roano that includes the various iron and ceramic elements found at the site (L. Berrocal).

presence of looms (Maluquer de Motes 1983: pl. XXX; Celestino and Jiménez Ávila 1996: 134-135). Nonetheless, we must keep in mind that alternative explanations of the function of these objects have been proposed (Castro Curel 1984: 150; 1986).

Ignoring isolated cases that are easily ruled out due to their specific features, we studied these weights by following the morphological guidelines used by other researchers. The number of complete pieces, 128 units, was enough to come to important conclusions, especially if we take into account that, since the first archaeological

campaigns, concentrations of numerous pieces were located in high-traffic or access areas, leading the excavator Juan Maluquer to consider the existence of looms. The fragile nature of these pieces, due to low firing they were subjected to, allows us to explain the fact that many of these objects broke after their excavation – if they were not already clearly in pieces (Celestino 1996: 110).

In more recent archaeological campaigns, however, more careful recovery allowed for the identification of complete sets which, nevertheless, also included many damaged weights. Such differences allow us to understand

the difficulties of identifying possible looms. Fortunately, in rooms O1, O3, and O5 we were able to document a significant amount of wood fragments and pieces of iron that have allowed us to identify the presence of looms with certainty and to subsequently reconstruct them with a high degree of fidelity (Celestino 1996: 345-346; Berrocal-Rangel 2003) (fig. 4). A similar conclusion could be reached for the concentrations of weights found in rooms N1 and H3. Lastly, the clusters of weights in the building's central module, in H5 and H11, could correspond to looms, but also to post-depositional accumulations, as Maluquer himself also considered.

The analysis of this material yielded interesting conclusions, such as the poor material quality of the pastes used, scarcely levigated, and the firing at such a low temperature that the weights can hardly be considered ceramic. Their shapes are of simple types: prismatic, ovoid/pyriform, and rounded-rectangles. That is to say, basic shapes, spread in a similar layout, from which seven truncated pyramidal weights stand out. In terms of the dimensions and weights, the most interesting results are inferred from the study of the latter weights. In this case, we were able to observe that, although there are some pieces of up to 2000 g, a smaller weight of 1000 g is more common, with regular staggering of values around 300, 450, 600, 700, 800, and 1075 g. These must have corresponded to the different fibres and qualities of thread used.

The most interesting aspect of this study is the homogeneity of certain concentrations, such as the case of room O1, with seven similar weights, all of which were prismatic. Similarly, in H2, we could speak of two possible looms judging by the concentration of many loom weights of around 140 and 680 g respectively. These two categories, with low and medium weight values, are repeated in the other full sets: in the case of O1, the seven weights studied are all prismatic, with weights of around 270 g and measuring 85 mm in height, like in H12 (H3-H5), and with stelliform weights of 325 g and measuring 90 mm in height. In contrast, in H2 and O3, we find medium-size weight concentrations, with prismatic and stelliform shapes in the former, averaging 680 g and 140 mm in height, and ovoid shapes in the latter, weighing around 780 g and measuring 145 mm in height. These groups seem to reflect different sets of loom weights, while the appearance of some individual weights that are heavier could correspond to specific, unknown functions, such as acting as a counterweight for the thread guide or a reed for a two-beam loom (Gil 1990: 252).

In summary, it can be argued that these weights functioned as loom weights for warp-weighted looms, to provide regular tension for the warp threads, with similar weights and shapes (Castro Curel 1984: 105). The number of weights per loom could range between 13 and 21, possibly odd numbers to facilitate the dual separation of the warp threads. Likewise, we cannot rule out looms of larger or smaller size, such as those made up of nine weights found in Biskupin (Grossmann 1991: 29).

#### OTHER TEXTILE TOOLS

The third set of textile instruments is made up of other tools and possible remains of looms: needles, threads, shuttles, etc. Although some tools are missing, such as combs, spacers, shears, there is a good collection of needles and threaders, especially the spectacular group of four identical bronze needles found inside their case in room O2 (Celestino and Jiménez Ávila 1996: 113: fig. 29.2), a space which would have had distaffs and spindles (fig. 3). The needles correspond to one of the two basic types found at Cancho Roano: they are made of bronze or copper, with a circular cross-section and single eye that is oval in shape, ranging 6-10 cm in length. They were likely used for sewing and joining different pieces of fabric (Wild 1988: 53 ff). The other type of needle is made of bone, spindle-shaped, with a flattened oval cross-section, and with one to three holes and 8-12 cm in length. This type is appropriate for stitching thick fibres, as esparto, or for non-woven techniques, such as looping or netting.

Another documented tool is an elongated piece of iron with a forked end that has been identified as a bobbin or shuttle and was found on the floor of room O4, a room in which there were no loom weights or spindle weights. However, this is not the case for a set of iron bolts that was found in room O5, where the greatest number of loom weights were found. These bolts, as well as a rolling drum, grommets, and platens provide some idea as to why the presence of one or more looms was considered (Celestino and Jiménez Ávila 1996: 84 and 148, figs. 21-22; Kurtz 2003: 308-309). This interpretation is based on the identification of items like six double flat-head bolts whose length is 10 cm, inherent to a fastening system made up of an upper beam and two bars to separate the warp threads, at the right foot of a vertical loom; and the identification of items like two rolling drums, with nails crossing inside their interior to hold a piece of

wood, of which parts remain intact. We identify this as an end of the warp beam, which most likely would have worked as a barrier, preventing the movement of the loom from interfering with the beam. As we are proposing a complex vertical loom model, basically intended for serial production, the warp beam must be independent from the frame's lintel or top. This is a solution in which the loom runs the risk of coming undone each time the freshly-woven fabric is removed.

In summary, based upon the definition of homogeneous sets of similar weights and their association with other material remains, the existence of vertical looms in perimeter rooms O1, O3, and O5 is proposed. They were also very probably in existence in rooms H3 and H2 of the central building, but we cannot say how many there were nor the number of weights that each one had. By way of approximation, based on the best-preserved sets, we propose sets of 13 to 21 weights, with the most representative values being around 14 units. The homogeneity of weights, shapes, and measurements allows us to differentiate between these sets: some with higher weights, around 700 g, and others that are lighter, under 400 g. These differences could be due to the use of different types of fibres, like wool and flax. However, we know that in H12, both types were together and perhaps placed on the same loom as needed. The pieces of iron with associated remains of wood from room O5 allowed us to reconstruct a basic type of vertical loom that we think had a single warp beam (fig. 4), along the lines of the traditional vertical looms known as "high-warp" looms (González-Hontoria and Timón 1983: 47, fig. 38). A loom of this type is capable of generating fabrics of 1 m in width, and it would reach 3 m in height (Castro 1984:109). In terms of the thread production, distaffs and spindles are also located in the northwestern half of the center and perimeter modules of the building, like the looms. Regarding the spindles, they seemed to occupy rooms interspersed with the rooms that housed the looms, as if the two activities, spinning and weaving, had separate spaces – at least in terms of their storage. In O1, nevertheless, stoppers and spindle whorls were next to a set of light loom weights (250 g).

This diversity of looms and distaffs confirms the importance of the textile industry in this privileged context, acting as proof of products that surely stood out because of their nature and variety and due to their exquisite nature – in line with the degree of social and technical development demonstrated by these late Tartessian societies.

The different areas, whether they are open like H12 and H2 or closed like the perimeter rooms, have enabled us to differentiate between the presence of workshops and storerooms. Workshops seem to have been located in high-traffic areas that were open and communal in nature, as is to be expected for settlements of the Bronze Age and Early Iron Age in the Iberian Peninsula and Europe, and as can be seen in Peñalosa de Baños de la Encina (Jaén), Lloma del Betxí (Paterna, Valencia) (Contreras *et al.* 1992; De Pedro 1998: 75 and 181) or even Biskupin (Grossman 1991: 29; Grossman and Woiciech 2011). In terms of the storerooms, we consider these perimeter rooms to be like warehouses, too small and seemingly too dark to allow for tasks that require visual precision and space. This interpretation is reinforced by the confirmation that distaffs and looms were kept in neighboring rooms, yet interspersed amongst each other – indicating a particular storage pattern.

#### LA MATA AND OTHER SITES

Cancho Roano's *paradigm status* developed during its publication as preliminary results of excavations undertaken at similar sites also began to come to light, especially at La Mata de Campanario (Rodríguez Díaz 2004). Although the stratigraphical contexts of this archaeological site support functional interpretations that are different, there is no doubt about the similarities between both complexes, which are contemporaneous and spatially close to each other. This is true, at least, in terms of the construction similarities and of the common materials. Thus, La Mata is a single building with a plan that closely resembles Cancho Roano A and B, as well as being occupied from the end of the sixth to the end of the fifth century BC (Rodríguez Díaz and Ortiz 2004: 297-301). The materials found at the time of La Mata building's demise can be considered contemporary to Cancho Roano A. However, delving deeper into the two contexts, the differences between the two sites become apparent. At La Mata, the household functional nature is much more prominent in the interpretations undertaken by the researchers studying the site. This is, without a doubt, based on the presence of elements such as the coterminous and central hearths of rooms 1, 2, and 3, and on the nature of the majority of the materials found therein, especially spindle whorls and loom weights (Rodríguez Díaz and Ortiz 2004: 265-266). Still, to this



end, the consideration of textile tools as being inherent to the domestic production environment of the building (rooms E1 and E2) (Rodríguez Díaz and Ortiz 2004: 265) does not stray that far away from our conclusions in connection with Cancho Roano. Rather, they reinforce these findings, as we insist on the manufacturing functions of the materials from the site (Berrocal-Rangel 2003: 237, 255, 268).

Nevertheless, the similarities between both sets of materials do not go much further: neither in terms of the wealth of artefacts, nor in terms of the degree of conservation thereof does La Mata yield data comparable to that of Cancho Roano. The number of spindle whorls and, especially, the number of loom weights are significantly lower. The poor quality of the textile tools, particularly loom weights, is apparent, as is the poor state of conservation of the later (Rodríguez Díaz and Ortiz 2004: 263). The 89 spindle whorls found do not appear to reflect the careful production and serial nature that is recognized over a large part of the Cancho Roano site. Furthermore, complete sets are not recognized beyond what is deduced from the weights and spindle whorls found in Area C, which is located on the upper floor of the building. The excavators note: «In fact, we believe that if there was a loom somewhere in the building, it was precisely in this area» (Rodríguez Díaz and Ortiz 2004: 265). Indeed, the nine loom weights and 28 spindle whorls found in the Area C supports this interpretation. Likewise, the fact that 28 spindle whorls were recovered from the lower floor (especially from Room 2, scattered over the entire surface of the room), compared with three loom weights, makes the possibility of the existence of a second loom in this space unlikely.

The presence of bolts similar to those found at Cancho Roano – both in the above-mentioned Room E2 and in Area C of both floors of La Mata – would support the existence of a second loom, along with nails (3), spindle whorls (9), and loom weights (2) at the northern end of Corridor E4 of the bottom floor, around the wine press identified there. The excavators specify: *We do not rule out the fact that some of these pieces could come from the upper floor* (Rodríguez Díaz and Ortiz 2003: 265). To this end, it is possible that Area E of the floor was the location of looms. From the available clues, one could argue the presence of two vertical looms similar to those of Cancho Roano located on the upper floor of the building, in the better-lit areas: Areas C (central) and E (hall-corridor). In addition, the spinning work could have also been undertaken in Rooms E1 and E2, where household life was carried out.

La Mata did provide some exceptional evidence related to basketwork, in the form of esparto grass fibres (Rodríguez Díaz and Ortiz 2003: 295-296), a generic term unless dealing with imports, as esparto grass (*Stipa tenacissima*) is not found in the southwest Iberian Peninsula (Rivera and Obón 1997: 1071ff; García Hotal 2007; Watson *et al.* 2008)<sup>2</sup>. Using fibres of similar grass species, at least two vessels were braided whose bases were found more or less well preserved in Room E8 and on the threshold between Room E2 and Corridor E4. In the first case, it was a vessel of a considerable size, as its base measures 35 cm in diameter, while the second artefact was probably similar. Remains of cereal grains were found near both vessels, as well as the remains of legumes and grape seeds – foods that clearly should not have been mixed. Archaeologists were not able to reconstruct the contours of these vessels, but they proposed, with a good degree of certainty on the basis of the preserved braids, that they were probably something like bassinets without handles, similar to what we know as *escrifa*, manufactured in Las Hurdes with woven or bundled rye straw and stitched with tender stems of briars (*Rubus idaeus*) (Rodríguez Díaz and Ortiz 2004: 124, 296, fig. 122). Judging from the photograph published of the base of E8 (Rodríguez Díaz and Ortiz 2004: fig. 122), the object was likely made using coiled basketry technique – as mats, baskets, and chests were traditionally made – usually with rush or galingale (*Cyperus longus*).

The rest of the contemporary sites, including those occupied throughout the sixth century BC, are certainly sparing with textile artefacts. This is what is understood in the so-called Caserío de Cerro Manzanillo (Villar de Rena, Badajoz), a rural settlement abandoned in the middle of the sixth century BC. The textile-related material is limited to an incomplete loom weight of a prismatic shape and five spindle whorls (Rodríguez Díaz *et al.* 2009: 38; 115-117). The spindle whorls have spherical and biconical shapes, and they are very irregular, like their firing (Rodríguez Díaz *et al.* 2009: fig. 48), standing in stark contrast with the regular shapes found at Cancho Roano and, even, with some of those found at La Mata.

A similar picture is obtained from the publication of El Chaparral (Aljucén, Badajoz), where three spindle whorls were recovered, one being spherical and two bitroncoconical, all being plain and having irregular firing. They were found not in primary context (Sanabria 2008: 93, 102; Jiménez Ávila and Ortega 2008: 274). Likewise, in the lands of Alentejo in Portugal, contemporary archaeological sites

offer the same picture: a single spindle whorl with a spherical profile and bitroncoconical trends was found at Herdade da Sapatoa (Redondo, Alto Alentejo) – a site dated to the first half of the fifth century BC that could be compared with Cerro Manzanillo (Mataloto 2004: 98, fig. XXXVII, 88). Two spindle whorls found at Mingens 10, more to the southeast (Calado and Mataloto 2008: 193, fig. 4), seem to be a bit older and their profiles reflect greater irregularity in comparison with the aforementioned finds. That is why the regular profile of a spindle whorl found in Abul A1 (Phase II, second half of the seventh century BC; Silva 2005: 759) has a dual significance: it is a piece that is not only more ancient than any of those mentioned previously, but it also presents a bitroncoconical profile that moves the regularity of Cancho Roano back by two centuries.

### THE MOST RECENT EVIDENCE: THE CASAS DEL TURUÑUELO BUILDING

The Casas del Turuñuelo site (Guareña, Badajoz) site is located in the Vegas Altas, Guadiana Valley – the region where a large part of the archaeological sites discussed above are located. This site was known for some of the incidental finds, which enabled its identification as a *Tartessian building hidden under a tumulus* like Cancho Roano, La Mata, and Turuñuelo in Mérida (Jiménez Ávila 1997: 146; Rodríguez Díaz and Ortiz 1998: 243-244, Rodríguez González 2018). In 2013, two of the present authors (S. C. and E. R.) began a prospection project, which resulted

in the excavation of the site. After three archaeological campaigns, the existence of a huge building, contemporary to those of Cancho Roano and La Mata, was dated to the end of the fifth century BC (Rodríguez González and Celestino 2017a). Inside, a large room has been documented (called Room 100), with a surface area of more than 60 m<sup>2</sup> and in a state of preservation that can only be qualified as exceptional (Rodríguez González and Celestino 2017b) (fig. 5). It is a rectangular room, with an entrance from the east, and the rest of the building probably likewise facing east, according to the common custom of contemporary buildings. Beautifully preserved, the door has a 1.7 m span and is located in the centre of the eastern wall, at the end of a room with walls that were plastered with lime and decorated with raised motifs. In its interior, the furniture highlights its uniqueness: a semicircular basin is open in the floor and finished off with the same lime plaster as the walls. The basin is located at the other end of the room, facing the door. An extensive bench runs along the northern wall and, opposite this, a tiered pedestal made of adobe coated with thin slate slabs emphasizes the southern wall. This pedestal serves as the base for a large vessel – perhaps a bath, sarcophagus, or basin – sculpted or constructed with the same lime plaster as the walls. Finally, in the centre of the room, a great low-lying altar clearly sets the ritual tone inherent to this construction, an *eschára*, similar to others found in Tartessian sanctuaries (Escacena and Coto 2010; Gómez Peña 2010). Formed by a series of small slate slabs that provide it with its basic shape, and filled with an adobe base,



Fig. 5: Aerial view of the main room of Casas del Turuñuelo (Image: Building Tartessos Project).

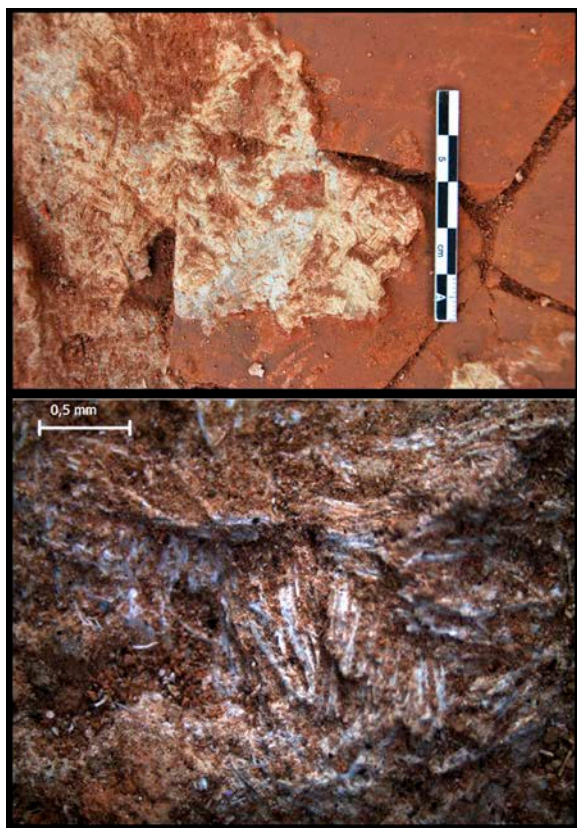


Fig. 6: Textile preserved on ceramic fragments / Detail photography (Image: Building Tartessos Project).

combustion residues are not present but instead there is the skin of an animal. Room 100 has provided a set of extraordinary materials consistent with the exceptional nature of its construction techniques and furnishings. Most importantly, the constant humidity provided by the massive adobe construction, as well as its location next to the banks of the Guadiana River, allowed for the excellent conservation of fabrics, seeds, and charcoal.

Opposite the door, in the interior of the room, remains of woven plant fibres were found whose location and method of construction allowed to identify them as mats (Marín-Aguilera *et al.* 2019). These fibres are similar to many others found on the paving slabs made of fired adobe that were located at the opposite end on the western side of the room – clear remains of mats. Thanks to a fossilization process, part of these fibres were preserved on ceramic fragments, enabling the recognition and recovery of part of the braid used in the manufacturing of mats (fig. 6). Flax, esparto grass and the earliest remains of wool in the Iberian Peninsula



Fig. 7: Remains of textile fibres located in the UE 108. The fibres are carbonized (Image: Building Tartessos Project).



Fig. 8: Fragment of cloth adhered to a grey ceramic urn located in the vestibule from the archeological site of Casas del Turuñuelo (Guareña, Badajoz, Spain) / Detail photography (Image: Building Tartessos Project).

have been identified so far (Marín-Aguilera *et al.* 2019). The same mat, or another one if there were several, was located under UE108, a stratum of coal that, near the

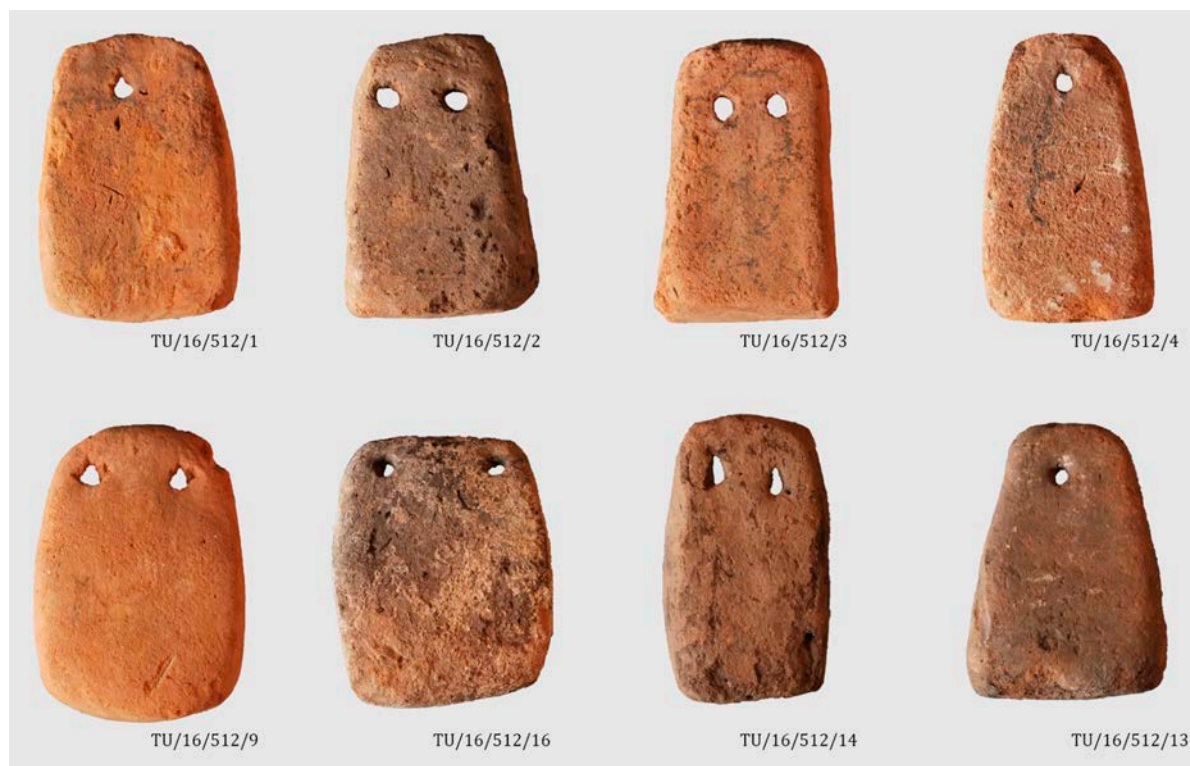


Fig. 9: Loom weight set from the archaeological site of Casas del Turuñuelo (Guareña, Badajoz, Spain) (Image: Building Tartessos Project).

centre of the northern wall, charred these fibres, allowing, in this case, for the type of plaiting to be identified (fig. 7). In this case, the mat's knotting appears to have a perpendicular nature and to have a checkerboard pattern (Alfaro 1980: 112).

Lastly, outside Room 100, in its entrance hall, a grey vessel was found containing a fragment of cloth made of fine, compact fibres identified as flax, and woven in a balanced plain weave or tabby (fig. 8). The presence of seeds at its side lead us to suggest that the cloth could be from a small sack, which most likely contained these seeds, perhaps inside the ceramic vessel. In addition, this area also yielded another spectacular find during the archaeological campaign of the summer of 2016. Next to the south wall of this space, numerous small pieces of charcoal and charred wood were documented in an elongated arrangement, parallel to the wall, in between numerous (43) loom weights. This association led us to suppose that these remains corresponded to a textile device, possibly one or more looms, judging by the large number of loom weights and by the variety of their shapes. In this case, the fire that brought about the end of

the building also preserved the loom weights, which were lightly fired (fig. 9).

In terms of their shape, loom weights are similar to those of Cancho Roano, the majority of them being pyramidal in shape, although at Casas del Turuñuelo they have a clear truncated pyramidal trend (with nine complete examples). In contrast, ovoid and rectangular shapes are present in much smaller numbers, with 3 intact examples. Considering the precariousness in the manufacturing of these pieces, we do not believe that a relevant conclusion can be drawn from any of those differences. Conclusions cannot be drawn from their weights, which have a wide range like the examples found at Cancho Roano, ranging between 250 g and 1200 g (compared to 300-1075 g at Cancho Roano). This wide range, however, confirms that they may correspond to different loom sets.

Along with these loom weights and remains of charred wood, another very interesting set of weights was documented: of discoid shape and measuring more than 10 cm in diameter. Judging by their size and weight, somewhat less than 900 g (with some specimens close to 600 g),

Fig. 10: Discoid weights from the archaeological site of Casas del Turuñuelo (Guareña, Badajoz, Spain) (Image: Building Tartessos Project).



they could be considered loom weights. However, their shape, unusual for loom weights and similar to spindle whorls and distaff stoppers, suggest they could be anything from weights for hand nets (the discoid shape could have helped with their throwing; Mayoral *et al.* 2000: 188-189) to weights for thatched roofs. Similar discoid weights are known from the Late Bronze Age Spanish South-eastern Levante coast (Jover and López 2013: 160-161; Hernández Pérez *et al.* 2014). They are cylindrical rather than discoid, have diameter under 10 and thickness between 7 and 8 cm, and have a central hole (Barciela *et al.* 2014: 125). The weights found at Casas de Turuñuelo have a diameter of 12 cm or greater, thickness of 5 cm and a central hole. The pieces numbered 30 and 31, the best preserved of all, additionally present various shallow cavities on one of the flat faces of these disks (fig. 10), perhaps an indication of their use as a different type of tool, such as weights for braces and lathes that belonged to goldsmiths and those who worked with ivory (Ambruster 1993: 274: 11).

## CONCLUSIONS

The textile technology based on a hand spindle with a spindle whorl and a warp-weighted loom is not documented archaeologically in the southwest of the Iberian Peninsula until relatively late in comparison with the southeast. The first spindle whorls do not appear in the archaeological record until the beginning of the Iron Age, in contexts that are clearly Oriental or Orientalizing. In the interior of the Guadiana Valley, the materialisation of this technology cannot be extended earlier than the sixth

century BC, and its evidence is quite scarce (Almagro-Gorbea 2008: 947; Jiménez Ávila and Ortega 2008: 274). Amongst these materials, spindle whorls present shapes that tend to be spherical, highly irregular, in contrast with the later types and the isolated biconical specimen from Abul. Only at the archaeological sites of the fifth century BC, are spindle whorls and loom weights represent sufficiently to indicate that this textile technology was fully developed. Likewise, in the case of Cancho Roano, this development manifests traits of complex, standardized production.

The archaeological contexts in which textiles tools have been found indicate that textile technology was used in all contexts, from the domestic to the ritual or ceremonial levels. However, clear differences are observed in the specimens from the fifth century BC. Thus, in La Mata, the most feasible locations for spinning activities were Rooms E1 and E2 – of a clearly domestic character. Likewise, the only possible looms were probably located on the upper floor of the building, Area C (central) and E (hall-corridor), locations that were supposedly well lit and appropriate for textile manufacturing. A very different situation is the one deduced from the textile tools at Cancho Roano, a site whose materials indicate a special end purpose. Although not necessarily implying a religious nature, the looms in operation in the central building of Cancho Roano, or those stored in the perimeter rooms, appear to have been used for the manufacturing of fine, delicate fabrics. This production could have been aimed at supplying clothing for the Tartessian elite or for rituals. The ritual nature seems much clearer at Casas del Turuñuelo, both due to the low-lying altar and the exceptional ergology of the furnishings in Room 100.

The combination of a large number of loom weights and remains of wood and iron anchoring elements seem to indicate the existence of looms at Cancho Roano and La Mata. From the study of the loom weight concentrations, one can observe the variety of weights and shapes, always recurring, and the poor quality of their manufacturing. This variety of loom weights would most likely suggest the existence of different sets – sets varying in number and type of loom weights that could have been used on the same loom frame depending on the cloth type to be woven (Olofsson *et al.* 2015).

Loom weights were not fired, except for brief *baking* by sunlight. This seems plausible since weights were usually at risk when changing the shed or warp beams. They could be hit, or broken, changing their original weights; thus, it was opted to use raw, *recyclable* weights.

## NOTES

1. From Sansk. *Karpása*, was an Eastern product... superior in beauty and quality to the wool of sheep, according to *Herodotus*, 3.106" (Smith *et al.* eds. 1890: Word CARBASUS): <http://www.perseus.tufts.edu/> consulted on January 2, 2017.
2. To this end, the *Spanish Plant Information System* (Anthos, 2017. Real Jardín Botánico – CSIC, [www.anthos.es](http://www.anthos.es), consulted 09-01-2017) includes, amongst a dozen species of *Stipa*, two with presence in the Iberian southwest, *S. bromoides* and *S. capensis*.

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