

**PARASITIC FREQUENTATION OR CULTURAL CONTINUITY?
 THE RE-USE OF MEGALITHIC MONUMENTS
 IN THE ANCIENT / MIDDLE BRONZE AGE
 OF THE MONDEGO'S PLATFORM**

*PARASITAGEM OU CONTINUIDADE CULTURAL?
 A REUTILIZAÇÃO DE MONUMENTOS MEGALÍTICOS NO BRONZE
 ANTIGO / MÉDIO DA PLATAFORMA DO MONDEGO*

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ABSTRACT

Reuse of the big dolmens, with long and well developed corridors, during the First Bronze Age (Early / Middle Bronze Age – EBA/MBA) has been, for some time, a well known situation in different areas of Portugal, namely in the Mondego's Platform. Regionally, this type of monuments were usually built in the Late Neolithic and their first use seems to terminate with that period's end, exceptionally reaching the regional Chalcolithic; in a few known cases the corridor's entrance was then ritually closed.

If the fact of the reuse of big dolmens in the EBA/MBA is well known and generally accepted, the reasons behind this fact remain otherwise very much open to discussion. Is the phenomenon a simple reuse of a funerary space whose functional memory has been preserved or are there, behind it, other reasons associated with the transformations and socio-cultural changes of the transition to the Bronze Age?

These and other questions that are raised by such re-uses are then discussed taking into account recent progresses in our knowledge of the transitional processes between the Chalcolithic and the EBA in Iberia.

KEY WORDS: Early/Middle Bronze Age, Mondego's Platform, Megalithism, Mentalities

RESUMO

A reutilização dos grandes dolmens, com corredores longos e bem desenvolvidos, durante a Primeira Idade do Bronze (Bronze Antigo/Médio – EBA / MBA) é, desde algum tempo, uma situação bem conhecida em diferentes áreas de Portugal, nomeadamente na Plataforma do Mondego. Regionalmente, esse

tipo de monumentos era habitualmente construído no Neolítico Final e seu primeiro uso parece acabar com o término desse período, chegando excepcionalmente ao Calcolítico regional; em alguns casos conhecidos, a entrada do corredor era então ritualmente fechada.

Se o facto da reutilização de grandes dolmens na EBA / MBA é bem conhecido e geralmente aceite, as razões por trás desse facto permanecem abertas à discussão. Consiste o fenómeno numa simples reutilização de um espaço funerário cuja memória funcional foi preservada, ou há por detrás outras razões associadas às transformações e mudanças sócio-culturais da transição para a Idade do Bronze?

Essas e outras questões, que são levantadas por tais reutilizações, são então discutidas, levando-se em conta os recentes avanços do nosso conhecimento dos processos de transição entre o Calcolítico e a Idade do Bronze na Península Ibérica. PALAVRAS-CHAVE: Bronze Antigo/Médio, Plataforma do Mondego, Megalítico, Mentalidades

INTRODUCTION

Between c. 2400/2300 and 1250 BC, the development of the first Bronze Age (Early/Middle Bronze Age – EBA/MBA) will bring to Western Iberia, along with important continuities, some archeographical ruptures which seem to indicate the growing of some social complexities (Senna-Martinez and Luis, 2016).

Particularly in Beira Alta, food economies – with a developed and stable, transhumant pasture component (with, in order of importance, sheep/goat and cattle – cf. Cardoso, Senna-Martinez and Valera, 1995, 1998) also incorporating plant gathering components (acorns), and agriculture seeming to have a minor role – really represent the permanence of markedly seasonal rhythms of activity, with few productivity gains regarding previous historical moments (Senna-Martinez, 2000).

In the realm of the dead and in addition to the systematic reuse of the great megalithic monuments built in the Final Neolithic – reuse which is, by itself, indicative of some cultural conservatism – the first individual funeral constructions arise, with burial in cist or pit under tumulus (Cruz, 2001).

In the funerary offerings, the first metallic objects to emerge regionally and some particular forms of pottery - from which bell-beakers are a first expression - hint at some differentiation in social statutes (Senna-Martinez and Luis, 2016).

Coming back to the reuse (or what V. Oliveira Jorge called “parasitic frequentation²” - JORGE, et al., 1997) of almost all of the large megalithic

monuments with developed corridor of Beira Alta in the EBA/MBA, let us explore how this notion, accompanying the regional EBA/MBA definition and characterization, comes into being:

(1) Vera Leisner first mentioned the idea in an article in which, a *propos* of a pottery vessel found in a Trás-os-Montes Dolmen (Leisner, 1958), she develops a series of considerations on the related artefacts found in similar situations in the Portuguese Beiras and Northwest. Later, in the publication of the megalithic necropolis of Carapito (Leisner and Ribeiro, 1968) she establishes, from the excavation of monument 3, the stratigraphic and temporal differentiation of a set of equivalent materials in relation to a lower level corresponding to a first (Middle Neolithic) use of the monument.

(2) Already in the seventies of the twentieth century, Konrad Spindler and O. da Veiga Ferreira formalized the designation Carapito Keramik (Spindler and Ferreira, 1974: 56 and Abb. 9), giving it an equivalent meaning to the concept of the Southwest Bronze created by Schubart (1975).

(3) In 1984, we produced a first synthesis of all the materials that, in the megalithic monuments of Beira Alta, we thought meant an EBA/MBA reuse of them (Senna-Martinez, 1984).

(4) Our subsequent excavations of the megalithic monuments of Outeiro do Rato and Fiais da Telha produced contexts that pointed to the reuse of the respective frontal areas with a similar chronology (Senna-Martinez, 1989).

(5) However, it was the excavation (between 1987 and 1989) of “Chamber 20” of Buraco da Moura de São Romão (BMSR-20³ – Senna-Martinez 1993b; Valera, Senna-Martinez and Estevinha, 1989) that allowed the first identification in Beira-Alta of an EBA/MBA habitat soil attributable to this cultural stage. Such identification was all the more important since the soil was clearly stratified between units attributable to the Chalcolithic bellow, and the Late Bronze Age (LBA) above.

(6) Finally the study by Antonio Valera of the sites of Linhares (Santa Comba Dão – Valera, 1994a, 1994b), Malhada (MALHADA) and Fraga da Pena (FPENA – in Fornos de Algodres – VALERA, 1995, 1997, 1999) complemented this panorama with new habitat contexts that seem to cover the transition III / II millennia cal AC (c.2300-1900 cal AC) and date, in FPENA case, and thus began to prove the long held idea about an EBA dating of most of Central Portugal Bell-beakers (Senna-Martinez, 1982, 1994; Senna-Martinez and Amaro, 1987).

Nowadays the Bell-beaker complex, earlier disputable beginnings not-

² A concept we personally tend to dislike as it implies an *a priori* negative view of such reuse that over-simplifies this cultural phenomenon.

³ After a first mention of a site like this we'll be using the acronym.

withstanding (Cardoso, 2014; Jeunesse, 2015), is currently accepted as representing a package of “*Status Symbols*” appropriated by a few individuals, and that in the Iberian area appears between the second half of the third millennium BC and the first quarter of the second (Guerra Doce and Lettow-Vorbeck, 2016; Guerra Doce and Lettow-Vorbeck, *Eds.* 2016), thus encompassing the Late Chalcolithic and the EBA.

So we think that in its later phase – comprising the Palmela/Geometric and Late Ciempozuelos Groups (Silva and Soares, 1976/77) – the bell-beaker phenomenon is an integral part of the process of the genesis of the peninsular cultural groups of the EBA. In some cases, and at least in the initial stages, it constitutes an important part of their respective material culture (Like in the Spanish Meseta Norte), while in others it will function as an intrusive element (even when copied and adapted regionally), continuing to represent, as in the initial moments of the phenomenon for other areas, the addition of ritual/prestige elements to areas of material culture, particularly poor in this elements, like Beira Alta (Senna-Martinez, 2002).

THE UPPER AND MIDDLE MONDEGO BASIN IN THE CONTEXT OF BEIRA ALTA: THE GEOGRAPHICAL AND GEOLOGICAL SETTING

The Mondego River basin upstream from the Penacova gorges (Fig.1) constitutes a transition zone in several and different ways. It has been, both culturally and geographically “the place where the Atlantic Portugal gives way to Mediterranean Portugal” (Ribeiro, 1986:152). Its southern limits are the Portuguese central highlands, the *Serras* of Lousã, Açor and Estrela. The Serra da Estrela has very good spring and summer pastures whose use seems to extend as far back as the Neolithic (Knaap and Van Leeuwen, 1994.). The western and northwestern boundary, the Maciço Marginal, separates the middle Mondego basin from the coastal lowlands. By going around the Serra do Caramulo the middle Mondego basin opens up to the Vouga and Paiva rivers’ upper basins, whose valleys constitute two natural passages. The first one of these is controlled by the Castro da Senhora da Guia, a Late Bronze Age fortified settlement. Looking east and north of the Celorico basin, the northern Meseta step divides the Mondego basin from north-central Iberia. Nevertheless there exist several natural paths as shown by medieval castles defending both sides of the border zone with Castile. In the North of our study area, the high basins of the Paiva and the Távora rivers link it to the Douro basin, which might explain some of the cultural contacts detected.

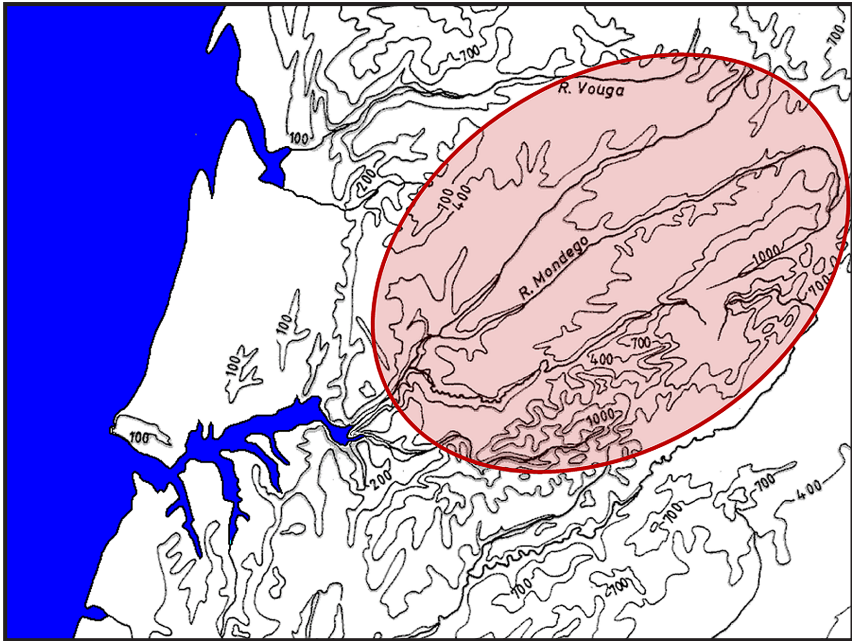


Fig. 1 – The Middle and Upper Mondego Basin (Gris Oval). The coastline represents the maximum of the flandrian transgression.

The central part of the upper and middle Mondego basin is a large platform tilted to the Southwest (Ferreira, 1978:141). Depressed between the Serras of Caramulo and Estrela, it is drained mainly by the Mondego. Hercynic granites constitute the bedrock, which accounts for its rigid and well-preserved profile. Strongly affected by tectonics (Ferreira, 1978:23-8), two NNE-SSW tardi-hercynic fault systems are responsible for the separation of the Beira-Alta central plateaux and the Mondego’s platform in relation to the Meseta to the east and to the Maciço Marginal, Gralheira and Montemuro highlands in the West (Ribeiro, Lautensach and Daveau, 1987:245). Other diversely oriented faults determine the formation of the Lousã, Arganil and Mortágua sedimentary basins near the limits of the Central and Montemuro highlands (Daveau, Birot and Ribeiro, 1985., 1986.; Ferreira, 1978: 174-97).

The “schist-grauwacke complex” forms a landscape that differs from the Mondego’s platform granites. It comprises part of the Central Highlands, most of the Alva’s basin and some patches in the Northeast of the area

studied.

The Serra da Estrela is the area's main hydric reservoir with an annual precipitation of over 1400 mm (Ribeiro, Lautensach and Daveau, 1988: 398, Fig. 67). The remaining part of the area considered also has an average annual precipitation between 1400-1200 mm, with fresh and cold winters and warm to mild summers (*ibid.*, 434, 440, and figs. 89, 94). Water availability and areas of A class soils form patches of great fertility, en-circled by others of class C and F soils (cf. *Atlas do Ambiente - Carta de Capacidade de Uso do Solo*).

Nevertheless, the post-Medieval transformation of the landscape, with marked forest degradation, soil alluviation and bottom valley deposition, makes it difficult to use modern data for reference and reconstruction of prehistoric soil availability. All the modern vegetation cover, with the possible exception of the Margaraça Reserve and a few other areas, is the product of human action. The principal vegetation cover for the period under consideration seems to have been a deciduous temperate oak forest (*Quercus pyrenaica* at altitudes over 600-800m and *Quercus robur* at lower altitudes - cf. Janssen, 1985.; Janssen and Woldringh, 1981.; Van Den Brink and Janssen, 1985. and Knaap and Van Leeuwen, 1994.). Palynological analyses of peat cores at Lagoa Comprida and other sites allow Janssen, Knaap and Van Leeuwen (Janssen, 1985.; Knaap and Van Leeuwen, 1994.) to develop a model of several episodes of degradation of this forest, which they attribute to human impact. They are marked by deforestation and bush fires at middle and high altitudes of Serra da Estrela and according to the authors quoted could be due to pastoralism. A main episode about 3500 BC can well be correlated with the principal phase of development of the megalithic necropoli studied here (Middle Neolithic - MN).

A second deforestation episode dated from about 1600-1500 BC (MBA) is associated with the first appearance of rye (*Secale cereale*). The process of deforestation intensifies again from 1000-900 B.C. onwards (Janssen, 1985.). All this, as we demonstrated (Senna-Martinez, 1989, 1995; Senna-Martinez and Ventura, 2008), is consistent with the archaeological data on cultural evolution at the lower altitudes.

Old paths, some of them subsequently followed by the Roman roads (Alarcão, 1988: 102-5 and fig. 20), surely criss-crossed the country. However, the principal access to our study area from the lower Mondego and littoral plains must have been the river until very recent times (Martins, 1940:164-6; Oliveira, 1972:1-5). According to Dias (1987.), following a

quick transgression in Early Holocene times (c.10000-8000 BP; Dias, 1987:330), the sea level stabilised near its present situation, invading deeply the lower river valleys (Daveau, 1980:24) between 5000-3000 BP (Dias, 1987: 334). Even if we cannot be very precise about its limits, the Mondego's flandrian estuary can be reconstructed in broad lines for the period under study, clearly establishing its importance as a waterway to access the more inland areas. Thus, the location of lower Mondego late prehistoric sites becomes significant in terms of their possible relations with the ones in our study area.

CONTEXTUALIZING AND DISCUSSING THE DATA

The basic data on the known sixteen Megalithic Tombs of Mondego's Platform Group (70%) and seven from Alto Vouga/Alto Paiva Group (30%) reused in the First Bronze Age (EBA/MBA – Senna-Martinez, 1989; Senna-Martinez, Garcia and Rosa, 1984), as well as seven other non-funerary sites can be found in Table-I. It includes their location by County, main diagnostic materials present, and main references available.

As we argued before, pottery types and metal artefacts are between the most distinctive items that can be used to characterize an EBA/MBA reuse of archaeological sites in Western Iberia and namely in Beira-Alta (Senna-Martinez, 1989, 1993a, 1994, 2000, 2009, 2013; Senna-Martinez, Garcia and Rosa, 1984; Senna-Martinez and Luis, 2016)

In the Iberian Atlantic facade, more elaborate and, sometimes, finer wares, preferentially dedicated to funerary use, are the rule during Early and Middle Bronze Ages in contrast to what happens previously during the Late Neolithic and most of the Chalcolithic, when all domestic ceramic types found their way into funerary use (Senna-Martinez, 2009: p.468). During the EBA, "2nd generation" beakers can be preferentially used in some regional areas, while different and new pottery types predominate in others (Senna-Martinez and Luis, 2016).

In North-Western Iberia and Beira Alta we can document new technical improvements in general use vessels during the Early and Middle Bronze Ages (Luis, 2013, 2010; Senna-Martinez, 1994, 1993a, 1993b). Namely, better clay and temper preparation, flat bottoms generalization, roll handles, and composite profiles appear.

All alongside Atlantic façade of Iberia, the transition for the EBA will see that all the diverse and complicated ritual collective arrangements (funerary or other – Senna-Martinez, 2014) collapse at the end of the Chalcolithic and are replaced by simpler settlement systems and an individual

treatment of the dead that concentrate some wealth and status display in very few masculine individuals (Senna-Martinez and Luis, 2016).

The elaborate female representations linked to Chalcolithic ritual and the agricultural cycle as a metaphor for the perception of life and death (Williams, 2003) will also dis-appear with the beginning of the EBA, and a new and very restricted status iconography will appear which is based on the male gender and on metallic weapons and jewellery (Senna-Martinez, 2014).

To put it simple, the higher communitarian investment in ritual and social regulation, which is in its maximum complexity in Middle Chalcolithic Western Iberia settlement systems, will collapse in the Late Chalcolithic and will be replaced by simpler, individualized systems.

It seems that what is in question in the beginning of the Bronze Age is, ultimately, the replacement of systems requiring a great collective effort in the construction and maintenance of various architectural types used for burial and ritual by more economic ones. That way, and in the new EBA systems, the larger collective investment of the Chalcolithic is replaced by a smaller one, now individualized and related to the first masculine power figures (Senna-Martinez and Luis, 2016).

Until 1992, the only habitat context known on the Mondego platform and attributable to the EBA was the intermediate occupation of BMSR-20 (Senna-Martinez, 1993b). When the “monumentalized” site of the FPENA was discovered, studied (Valera, 1994b, 1997, 2007) and complemented with the data of the habitat sites of MALHADA (Valera, 1994b, 1995) and Linhares (LINH – Valera, 1994a, 1999) the situation changed.

The analysis of funerary contexts in the reused megalithic monuments led to the characterization of a whole new series of types of pottery (Fig.2) which differed significantly from previously known regional neo-chalcolithic productions (Senna-Martinez, 1984 and 1993a: 72-74; Senna-Martinez, Garcia and Rosa, 1984). Among these, several of the newly identified pottery forms allowed inter-regional parallels with Southern Iberia, the Atlantic Estremadura and the Portuguese Northwest cultural areas (Senna-Martinez, 1993a), allowing the possibility of a study of inter-regional interactions.

As the study of BMSR-20 EBA/MBA occupation showed and was confirmed at Fraga da Pena, this pottery types, with preferential funerary use, were also present in these domestic contexts, being associated there with a whole set of pottery forms belonging to what we have been designating, since 1989, as a “neo-chalcolithic common pottery fund”

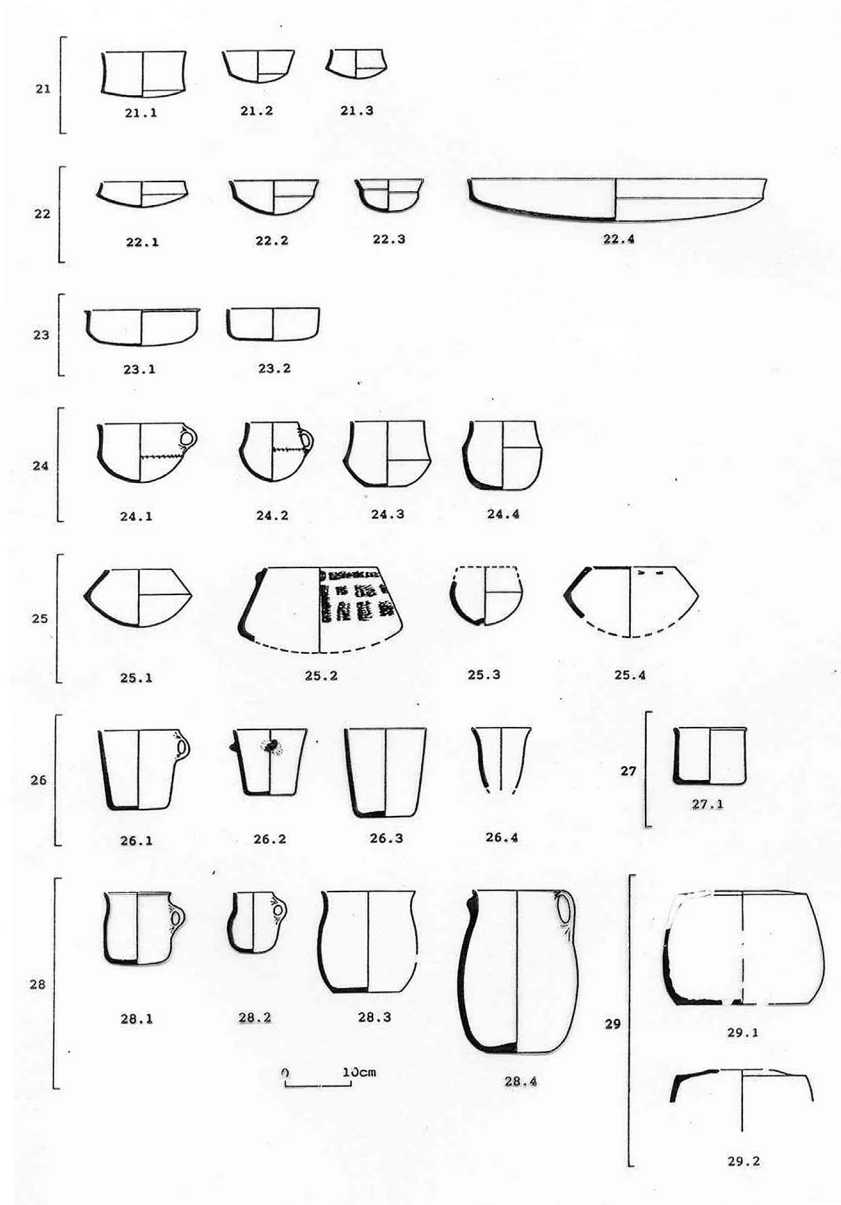


Fig. 2 – Beira Alta EBA/MBA pottery types (according to Senna-Martinez, Garcia and Rosa, 1984).

(Senna-Martinez, 1989). But, while EBA/MBA pottery types represented only 11% of the ones found at BMSR-20 (and similarly at FPENA – Valera, 2007), those of the “common fund” reached 89%, while the situation reversed completely in the megalithic monuments studied (Senna-Martinez, 1993b: 55-65). Instead of what happened in the regional Final Neolithic, only a few elements of the ceramic equipment then in use were thought to be adequate for preferential funerary deposition with the outcome of the EBA.

Because of its location, contexts and structures, we think that BMSR-20 occupational levels represent a human presence with eminently seasonal or even temporary contours. The EBA/MBA occupation complex habitat soil that was excavated in Room 20 may have resulted from frequent visits with such character (Senna-Martinez, 2000). The same interpretation can be proposed about the habitat site of Linhares (Valera, 2007) and probably also to the still unpublished collection of materials from S. Tomé (STOME – Travanca de S. Tomé, Carregal do Sal). So we think that only FPENA and MALHADA can thus correspond to more permanent types of habitat sites (Valera, 2007)

The nature of the reuse of megalithic monuments during the EBA/MBA in Beira Alta is the next question we want to address. We first thought (Senna-Martinez, Garcia and Rosa, 1983; Senna-Martinez, 1989) that a funerary utilization was the probable explanation here as in other Western Iberian Peninsula areas (Jorge, et al. 1997; Oliveira, 1995). This is surely a probable explanation when excavated contexts show the finds to be dispersed in the interior of the chamber and corridor of the monuments, as, for example, in the cases of Orca de Seixas (ORSEI – cf. the late Bell-beaker set in the top of the corridor sediments – Leisner, 1998: Abb.1; Senna-Martinez, 1994), Orca das Castenairas (ORCAST – Leisner, 1998: Abb.3), Orca do Outeiro do Rato (OROR – Senna-Martinez, 1989, 1994; Senna-Martinez and Amaro, 1987) and Dolmen 3 do Carapito (CARP3 – cf. the upper level of depositions – Leisner and Ribeiro, 1968). The two human bone C14 dates obtained for Arquinha da Moura (ARQM – which have a sum of probabilities of 2197-1978 cal BC, for a 2 σ probability (Cruz, 2001: 265), clearly situate the associated pottery vessels (Fig.3) in the EBA.

Otherwise, in other cases, some or all of the EBA/MBA materials are deposited at the entrance of the megalithic monuments in what can be called an atrium, for example in the cases of OROR (Senna-Martinez, 1989, 1994; Senna-Martinez and Amaro, 1987), Orca dos Fiais da Telha

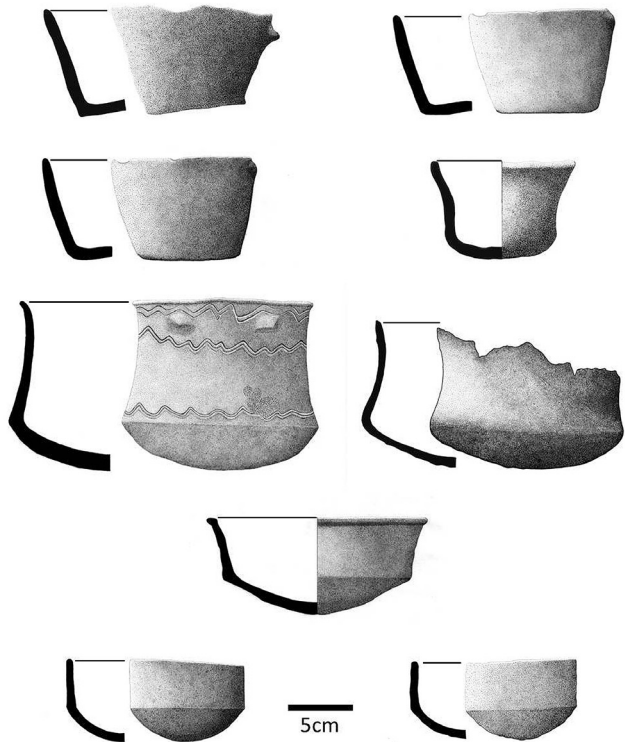


Fig. 3 - Arquinha da Moura EBA pottery (drawings courtesy J.A. Dias, montage J.C. Senna-Martinez)

(ORFI - Senna-Martinez, 1989; Ventura, 1998) and Orca do Pinhal dos Amiais (ORAMI - Pinheiro, 2012). In the case of ORCAST, the dating of charcoal patches in the atrium (fireplaces?) provided two C14 dates (OxA-7436 and GrA-9314) with a sum of probabilities of 1740-1438 cal BC, for a 2 σ probability (Senna-Martinez and Ventura, 2008), that fits well within the MBA reuse of the monument.

We think that this last type of reuse of the monuments demonstrates that the role of the atrium as a “scenic or representational space” which made this type of monuments to function like “temples”, in the full sense of the term, with closed spaces and reserved access (chamber and corridor) and open spaces (atriums) for a wide audience (Senna-Martinez and Ventura, 1999), maintained its function with the advent of the EBA, even in the cases of a previous condemnation of the corridors entrance (in the Late Neolithic) as in the cases of ORCAST and ORFI for example.

The pottery type that is the most represented in the EBA/MBA reuse of

the monuments under study is our type 26 (Figs.2 and 4), the so called vasos tronco-cónicos invertidos (inverted tronco-conical vessels). This vessel type which are now generally considered to mostly belong to the EBA/MBA, and, in the EBA, may occur in parallel or associated with late bell-beakers, for instance in the Iberian North-West (Prieto Martínez, 2011).

The demonstration that they were sometimes used in the consumption of beer (Id. Ibid.) may be part of the explanation why they seem to have had a preferential use as a grave good – eventually in a ritual role of commensality, followed by the offering of the vessel – namely in the northern half of the Portuguese territory (Senna-Martinez and Luís, 2016: 117).

We have proposed that the inverted tronco-conical vessels represent an early standardised system for volume measurement that arose in EBA (Senna-Martinez, 1984, 1993a). Up to now, no contradiction of the statistical basis of our model was advanced, despite some week criticism of the archaeological implications of our hypothesis, proposed by Vilaça (1995) and Valera (2007).

Recently our attention was called to an important paper by A. Valera regarding neo-chalcolithic salt production (Valera, 2017) in Western Iberia. In it the author reviews the available evidence for salt production in the lower Tagus and Sado rivers estuaries. We are here particularly interested in the site of Monte da Quinta 2 (Benavente) for which the complete process of production could be reconstructed (Valera, 2017: 106-111). The moulds used for salt crystallisation are specially produced for the effect locally in a standardized mode, resulting in inverted tronco-conical vessels (Fig.5 – cf. Valera, 2017:fig.4c-d).

The average capacity of Monte da Quinta 2 salt moulds is of 320 cm³ (Valera, 2017: 111, Table 2) which falls within the statistical interval we found for our EBA/MBA inverted tronco-conical vessels “cluster 2”: 289 ± 37 cm³ (Senna-Martinez, 1993a: 86). So it could be that an empirical system of volume measurement linked to salt circulation appeared in the lower Tagus basin area during the Final Neolithic and Chalcolithic. With the advent of the EBA the system could have been adopted northwards and extended to be used with other products.

The production of a more robust, long-lasting and, as we mentioned above, multifunc-tional type of container must be seen in the context of the transition for the EBA.

We recently acknowledged a deficit of information about EBA and MBA settlement systems in western Iberia (Senna-Martinez and Luis, 2016: 124).

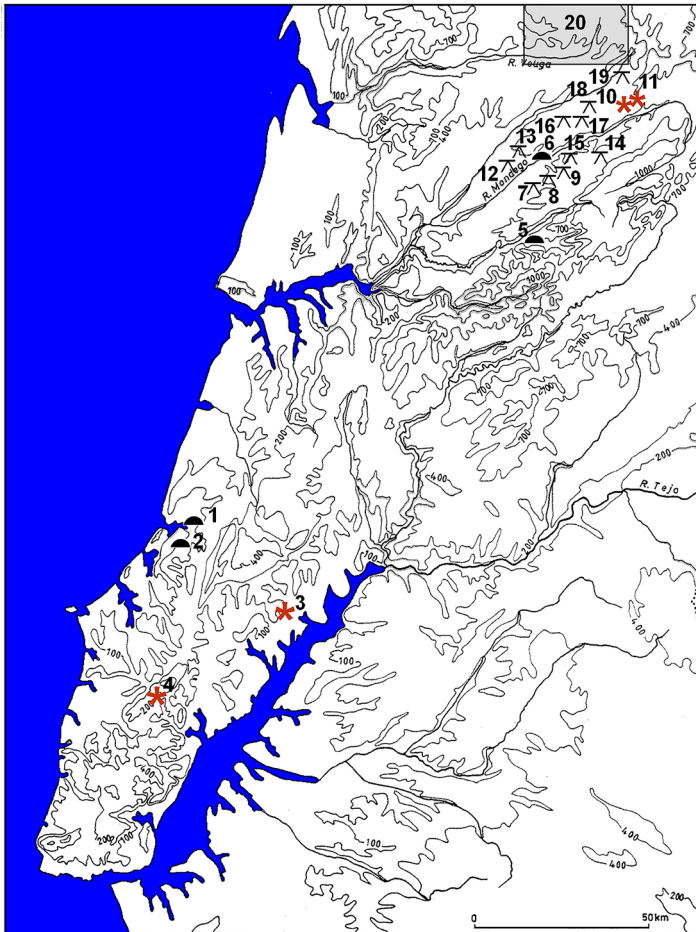


Fig. 4 – Funerary contexts and habitat sites, mentioned in the paper, in use during the EBA/MBA in Central Portugal, with inverted tronco-conical vessels (● Caves – ▴ Megalithic Monuments – ✖ Habitats). The coastline represents the maximum of the flandrian transgression: 1- Redondas; 2- Carvalho de Turquel; 3- Casal da Torre; 4- Pragança; 5- Buraco da Moura de S. Romão; 6- Complexo 1 do Penedo da Penha; 7- Dolmen of Bobadela; 8- Dolmen of Seixo of Beira; 9- Dolmen of Sobreda; 10- Fraga da Pena; 11- Malhada; 12- Orca dos Fiais da Telha; 13- Orca do Outeiro do rato; 14- Orca do Pinhal Dos Amiais; 15- Orca de Rio Torto; 16- Orca do Carvalho da Louça; 17- Orca dos Braçais; 18- Orca dos Padrões; 19- Casa da Orca da Cunha Baixa; 20- Orca 3 do Carapito; 21-Grupo do Alto Vouga/Alto Paiva (Orca de Antas; Orca das Castenairas; Orca de Seixas; Orca do Tanque; Orca dos Juncais; Orca de Forles).

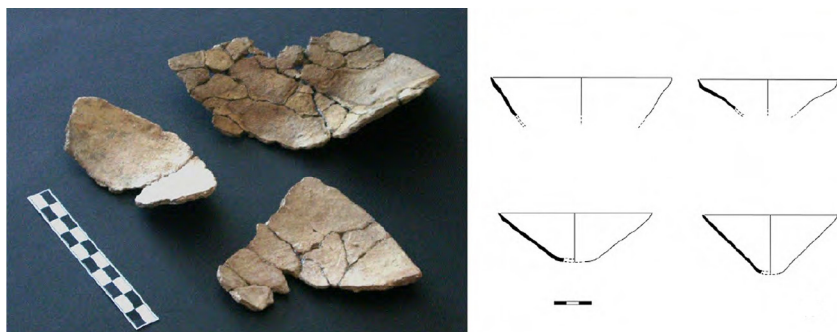


Fig. 5 – Moulds for salt production from Monte da Quinta 2. From Valera, 2017: fig.4C-D with permission.

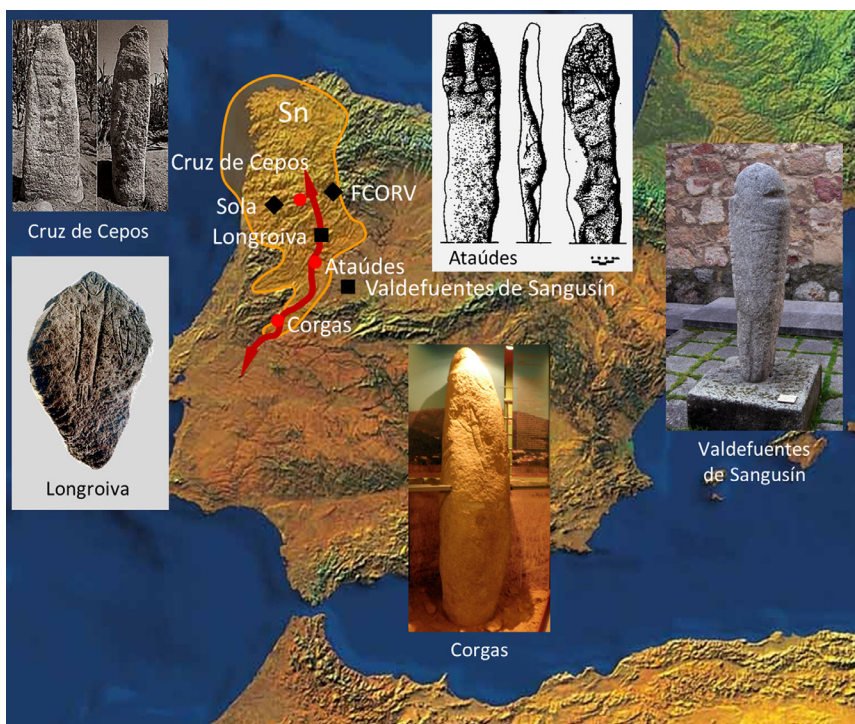


Fig. 6 – The Stelae Route in the EBA/MBA and the stelae that signal it through the Portuguese Beiras till East-ern Trás-os-Montes.

This situation was already recognized by Susana Oliveira Jorge (Jorge, 1996/1997) who blamed the proliferation of smaller, more disperse and consequently less archaeographically visible settlements after the “Chalcolithic collapse”, but left open the question of why it happened.

In Western Iberia and in the areas where we actually have some information there is no evidence of special “chief’s houses”, much less of a hierarchical settlement system in between them. There is also no evidence for the existence of central food storage facilities, thus implying the lack of evidence for any kind of centralized accumulation. In particular for Beira-Alta all the available evidence points to very conservative EBA/MBA communities, namely in the funerary practices, and we only know two individual burial mounds for all the area under consideration, whose dating fall within the EBA/MBA (Serra da Muna 1 and 3 – Cruz, 2001: 267, Quadro XLVIII). There are however various others known, which were not yet excavated or object of C14 dating (Cruz, 2001). The concentration of the later in the eastern periphery of Beira Alta must be considered together with other data.

Eastern Beira Alta (or Beira Transmontana) is crossed from South to North by the Côa river basin, which constitutes part of an old natural way (nowadays mostly followed by the IP2) linking Northeast Alentejo to Trás-os-Montes, and which we have been calling the stelae route (Senna-Martinez, 2013a, 2013b).

The importance of this passageway can be followed from Late Palaeolithic (when it probably functioned as a seasonal transhumance route for herbivores, emphasised by the Lower Côa open air “sanctuary” of Palaeolithic Art – cf. Zilhão, Ed. 1997), through the Neolithic (as a circulation route for the variscites from the Zamora area), with a clear increase in importance from the Late Chalcolithic through the Bronze Age (Senna-Martinez, 2013a, 2013b).

During the EBA/MBA this route through the Portuguese Beiras is signalled by the first “power figures” (Fig.6), materialized in the menhir-statues with weapons placed alongside it from Beira Baixa to Southern Galicia .

The presence of the stelae of Longroiva (EBA), Corgas (MBA), Nave (MBA) and Ataúdes (MBA), with the respective representations of metal weapons, constitutes the materialization of one of the important social changes that the EBA introduced regarding the Neo-Chalcolithic: the emergence of a new symbolic system revealed by the fading of feminine iconographic representation, the development of a masculine iconography, and the role of metal weapons and jewellery as social markers of prestige and

Table 1
Megalithic Tombs and Habitat Sites of Mondego's Platform and Alto Vouga/Alto Paiva Groups used or reused in the Early/Middle Bronze

Site	County	Bell-Beaker Presence	EBA	References
Arguinha da Moura	Tondela	---	Pottery	Cunha, 1995
Orca dos Frias da Telha	Carregal do Sal	---	Pottery, metal	Senna-Martinez, 1989; Ventura, 1998
Orca do Outeiro do Rato	Carregal do Sal	Pottery, metals (?)	Pottery, metals (?)	Senna-Martinez, 1989, 1994; Senna-Martinez and Amigo, 1987
Orca de Travanca	Carregal do Sal	---	Pottery	Ventura, 1993; Senna-Martinez, 1993a
Orca do Pinalhal dos Amiais	Nelas	---	Pottery	Pinhelro, 2012
Orca dos Bracais	Mangualde	---	Pottery	Senna-Martinez, 1984, 1989, 1993a
Orca dos Padriões	Mangualde	---	Pottery	Senna-Martinez, 1984, 1989, 1993a
Casa da Orca da Cunha Baixa	Mangualde	---	Pottery	Senna-Martinez, 1984, 1989, 1993a
Orca do Garapito 3	Fornos de Algodres	---	Pottery	Senna-Martinez, 1989, 1993a
Dólmen da Sobreda	Oliveira do Hospital	Pottery	Pottery	Senna-Martinez, 1984, 1989, 1993a
Dólmen do Seixo da Beira	Oliveira do Hospital	Pottery	Pottery	Senna-Martinez, 1984, 1989, 1993a
Dólmen da Bobadela	Oliveira do Hospital	Pottery, metal (?)	Pottery, metal (?)	Senna-Martinez, 1984, 1989, 1993a
Orca do Carnalhal	Seia	---	Pottery	Senna-Martinez, 1984, 1989, 1993a
Orca do Rio Torto	Gouveia	---	Pottery	Senna-Martinez, 1984, 1989, 1993a
Arca do Penedo do Com	Penalva do Castelo	Pottery	Pottery	Gomes and Carvalho, 1993
Orca da Pedralta	Viseu	---	Pottery	Senna-Martinez, 1984, 1989, 1993a
Orca de Seixas	Moimenta da Beira	Pottery, metals (?), wrist-guard (?)	Metals (?), wrist-guard (?)	Senna-Martinez, 1994
Orca das Gastenaiiras	Vila Nova de Paiva	Pottery	Pottery	Senna-Martinez, 1994
Orca das Antas	Vila Nova de Paiva	---	Pottery	Senna-Martinez, 1984, 1989, 1993a
Orca dos Junciais	Vila Nova de Paiva	---	Pottery	Senna-Martinez, 1984, 1989, 1993a
Orca do Tanque	Vila Nova de Paiva	---	Pottery	Senna-Martinez, 1984, 1989, 1993a
Orca dos Molinhos de Rua	Vila Nova de Paiva	Pottery	Pottery	Gomes and Carvalho, 1993
Orca de Fortes	São João	---	Pottery	Senna-Martinez, 1984, 1989, 1993a
Linhares	Santa Comba Dão	---	Pottery	Valera, 1995/96, 1999, 2007
Pedra da Mulher	Tondela	Metal (?)	Metal (?)	Previously unpublished
Quinta de Vale de Gato	Nelas	Metal (?)	Pottery, metal (?)	Previously unpublished
Complexo 1 do Penedo da Penha	Nelas	Pottery	Pottery	Senna-Martinez, 1989, 1993a; Estrewhina, Senna-Martinez and Valera, 1989.
Buraco da Moura de S. Romão	Seia	---	Pottery, metal	Senna-Martinez, 1989, 1993a, 1993b
Fraga da Pena	Fornos de Algodres	Pottery, metal (?)	Pottery, metal (?)	Valera, 1997, 2007
Malhada	Fornos de Algodres	---	Pottery, metal	Valera, 1995, 2007

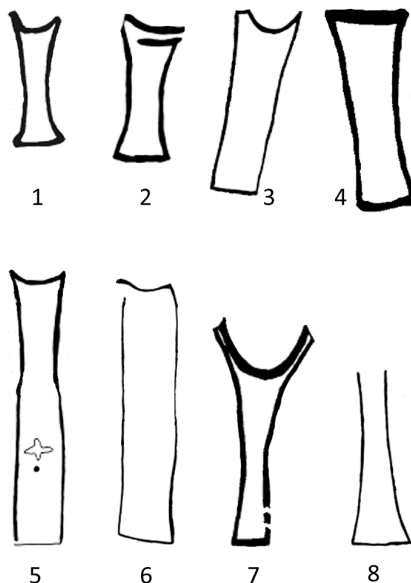


Fig. 7 – Frontal Skeuomorphs from Eastern Beira Alta and Beira Baixa, North Portugal and Western Northern Meseta: 1- Ataúdes, 2- Bouça, 3- Longroiva, 4- Nave 1, 5- Nave 2, 6- Soalar, 7- Tremedal de Tormes, 8- S. Martinho 3.

power (Senna-Martinez, 2007, p.120).

We think there is no coincidence that the northeastern concentration of non-megalithic tombs of the MBA/LBA studied by Domingos Cruz (Cruz, 2001) borders the stelae route. This route was instrumental for the North/South circulation of products, ideas and, by necessity, people.

When the Beaker Complex disperses throughout Iberia, where modern genetic analysis shows that the majority of Beaker-complex-associated individuals was genetically most similar to preceding Iberian populations, and lacked steppe affinities that are present all through Central Europe to the British Isles (Olalde, et al. 2018), the reasons behind this expansion are probably more socio-cultural than demic.

The thirteen metal artefacts from Beira Alta attributed to the EBA/MBA are summarized in Table-II, with their chemical composition when known. The table also includes the only foundry testimony we have from the EBA, a crucible fragment from the Malhada habitat (Fornos de Algôdres – cf. Valera, 2007).

All the items of Table-II belong to the EBA, with the exception of the axe of Barcelos type from Canas de Sabugosa (Tondela) which can be attributed to the MBA.

Table-II
Early/Middle Bronze Age Metal Artefacts from the Mondego's Platform
EDxRF elementary analysis

Artefact ref.	Type	Analysis	Cu (%)	Sn (%)	Fe (%)	As (%)	Ag (%)	Au (%)	Sb (%)	Pb (%)	Ref
PINHALMELOS	Tongue sword	1 place	95,88	0	0,001	4,1	0,016	0	0	0	SAM, Senna-Martinez, 1989
ORFI-109/86 ¹	Tongue dagger	Average	86,8 ± 4,4	0,0 ± 0,0 ₂	2,9 ± 1,5	11,1 ± 4,2	0,0 ₂ ± 0,0 ₂	---	0,0 ₂ ± 0,0 ₂	---	Senna-Martinez, 1994, 1989: II-3.1-1.
OROR-900 ¹	Awl	Average	82,6 ± 1,0	0,0 ₂ ± 0,0 ₂	3,0 ± 0,7	14,8 ± 1,8	0,0 ₂ ± 0,0 ₂	---	0,0 ₂ ± 0,0 ₂	---	
OROR-700/86	Spiral ring	Average	---	---	---	---	11,1 ± 0,6	88,1 ± 1,0	---	---	
DBOB-7001 ¹	Palmela point	Average	98,1 ± 1,3	0,2 ± 0,0 ₂	---	---	0,3 ± 0,0 ₂	---	0,7 ± 0,1	---	
BMSR-1[1]-1001 ¹	Chisel	Average	91,56 ± 1,44	0,08 ± 0,01 ₁	4,33 ± 1,0 ₁	5,98 ± 2,26	---	---	0,02 ± 0,01 ₂	---	
BMSR-1[1]-1002 ¹	Undifferentiated fragment	Average	96,88 ± 2,02	0,29 ± 0,27 ₂	---	3,74 ± 1,44	0,03 (1 place)	---	0,03 (1 place)	---	
ORSEI (MNA 992.1.3)	Palmela point	ND	---	---	---	---	---	---	---	---	Senna-Martinez, 1989
ORSEI (MNA 992.1.4)	Flat Axe	ND	---	---	---	---	---	---	---	---	Senna-Martinez, 1989
FPENA	Awl	1 place	94,9	0,4	---	---	3,1	---	1,6	---	Valera, 1997: 80
MALHADA	Crucible	1 place	XXX	---	---	---	---	---	---	---	Valera, 2007
VGATO-001 ¹	Tongue dagger	FL	98,4	---	---	1,6	---	---	---	---	Previously Unpublished
		CP	96,8	---	---	3,2	---	---	---	---	
		Average	97,6	---	---	2,4	---	---	---	---	
PMULHER-01	Tongue dagger	ND	---	---	---	---	---	---	---	---	Previously Unpublished
CANASSABUG ¹	Axe of Barcelos Type	Average	89,7 ± 0,5	8,9 ± 0,4	<0,05	1,1 ± 0,1	n.d.	n.d.	n.d.	n.d.	Senna-Martinez, et al. 2013

¹Analyses processed by Center for Nuclear Physics, University of Lisbon.

If “metals do not make the world go around” in Bronze Age Iberia, as we argued (Senna-Martinez and Luis, 2016), they nevertheless are surely archaeographic markers of social development, namely when the scale of metallurgical operations is very small and simple, producing metal mainly through use of open-vessel reduction of copper oxides and/or carbonate ores (Rovira, and Ambert, 2002).

As we proposed “...the EBA will see the generalization. of copper artefacts production in Iberia (mainly arsenical copper), as well as the first golden pieces of jewellery (and rarely of silver). In several Iberian regional areas, the first weapons in arsenical cooper (halberds, tongue-daggers, Palmela points, first swords) and simple jewellery of beaten gold (spiral rings, earrings, diadems and “archer brassards”) will go together with what we usually call “second generation” bell-beakers...” (Senna-Martinez, 2013a: 11-12).

This is the type of situation when only a few “select” individuals will have access to metal artefacts and these will constitute status symbols (Senna-Martinez and Luis, 2016: 118).

As Table-II shows, for Beira Alta we clearly have a situation where the scarcity of the items produced in arsenical copper – not to mention the absolute rarity of items in gold – and their main association as funerary offerings of select few burials (even when they reuse previously built large dolmens) points towards a non-technomical character for the regional

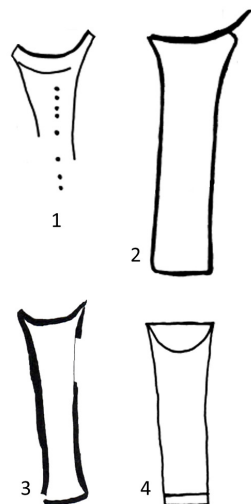


Fig. 8 – Dorsal Skeuomorphs from Eastern Beira Alta, North Portugal and Western Northern Meseta: 1- Cha-ves, 2- Muiño de San Pedro, 3- Tameirón, 4- São João de Ver (Redrawn from Díaz-Guardamino (2009)..

EBA metallurgy. The situation could be compounded by the fact that the absence of known metal working areas – with the sole crucible fragment from Malhada being the possible indicator of an exception – could imply that we are in presence of artefacts produced either locally or elsewhere.

CONCLUDING... THE NEED FOR POWER LEGITIMATION IN EBA BEIRA ALTA.

We have characterized the development of Beira Alta societies during the EBA/MBA as conservative (Senna-Martinez, 2000). The reuse of older megalithic monuments for a new era of symbolism surely fits this description, but we think the reason behind this fact lies with the need of the new male protagonists to reclaim the old Neolithic matrilineages as ancestors and a legitimization source of the new powers to be. We can add to the conservatism the reuse, in the new “power figures” iconography, of an old Neolithic symbol the “skeuomorph”. This symbol, depicting a skinned hide, and occupying either the front or the back of the male power figure (Figs.7-8), is present in the Longroiva stela and many others (Fig.9), where it represents a probable late maintenance of the Neolithic symbol present in the “megalithic art” of the northern half of Western Iberia (Twohig, 1981: 23). These symbols distribution in Iberia follows mostly the “stelae route” of Eastern Beira Alta (cf. Díaz-Guardamino, 2009: 143). We argued that various tensions and balances pass through the neo-chal-

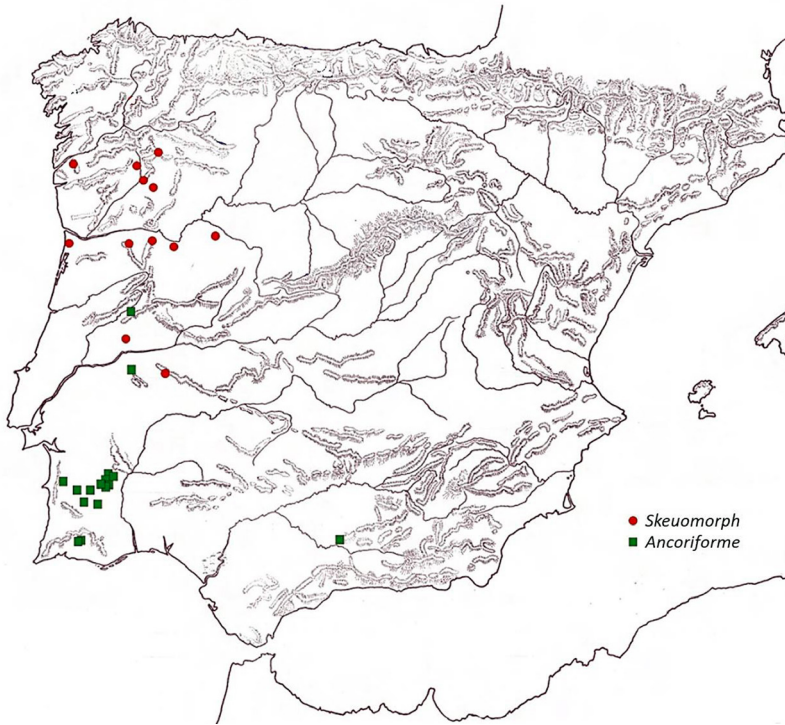


Fig. 9 – The distribution of the EBA/MBA Stelae and Menhir-Statues in Iberia. Based in Díaz-Guardamino (2009: 143, fig.92) redrawn.

colithic system of beliefs that underlies the megalithic art in Beira Alta. For us, the symbolic oppositions / complementarities present in its iconography reflect the characteristics of the regional Neolithic, a world where hunting and pastoralism are associated with winter-fruits collecting (mainly acorns), in societies not yet fully agricultural, and in which andriarchal values and representations remain structural (Senna-Martinez and Ventura, 2008: 328-332). In the new EBA system, male power legitimation can thus be seen in continuity with earlier, Neolithic, social beliefs adding and transforming what was needed to fulfil the new power agenda and legitimate the new power actors.

Lisbon – July 2018

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