

Research Article

Lineal Megalithic and Tartessian Rock Scripts in the Alcalar Dolmens complex (Portimao, Portugal)

Also found in other Spanish and African prehistoric contexts

Antonio Arnaiz-Villena^{1*}, Valentin Ruíz-del-Valle¹, Alejandro Sánchez-Orta¹, Fabio Suarez-Trujillo¹

¹Department of Immunology, School of Medicine, University Complutense and Instituto de Investigación Sanitaria Gregorio Marañón, Madrid, Spain. *Corresponding author: Departamento de Inmunología, Facultad de Medicina Universidad Complutense, Avda. Complutense s/n, 28040 Madrid, Spain, Phone: +34 3947080, +34 606993161. e-mails: arnaizville@hotmail.com, arnaiz@med.ucm.es Webpage: <http://chopo.pntic.mec.es/biolmol>

Received 27 October 2022; **Accepted** 21 November 2022; **Published** 6 December 2022)

Abstract - Lineal Megalithic Scripts (LMS) have been found in the Alcalar Dolmen complex (Portimao, Portugal) in a stoneslab which is located close to the reconstructed Dolmen 7. Exact situation of the megalithic Alcalar Stoneslab and scripts placing are shown in this paper. Their preliminar analysis has given also finding of some Iberian-Tartessian signs common to Cumbres Mayores Dolmens (Huelva, Spain), and other signs also found in Sahara Desert (Tim Missaou, Algeria) and Canary Islands rocks. The presence of these LMS admixed with some signs contained in the Iberian-Tartessian signary suggests a transition between LMS and lineal Tartessian signary. A religious funerary transcription has been proposed to these Tartessian signs based on Basque and ancient Iberian-Tartessian language close relatedness. The fact that Tartessian culture is located at Portuguese Algarve and Spanish Andalusia fits with the finding that both in Portugal (Alcalar) and Spain (Cumbres Mayores) Dolmens are found Iberian-Tartessian signs that may be as old as the megaliths (3-4 thousand years BC). It is also proposed that this development and concentration of megaliths in Algarve (Portugal) and Andalusia (Spain) is related to Tartessos civilization in the area which would follow the South Iberia Pyrite Belt, rich in cooper (Cu), silver (Ag), gold (Au) and iron (Fe), that crosses South Portugal and Spain; Tartessos would be somewhat attached to the Iberian Pyrite Belt source of richness. Leisners archaeologists also observed and photographed “Iberian” signs in the San Bartolomé Dolmen (Huelva, Spain) in 1951 AD; they described here “Iberian” scripts in a small artifact most likely is a slinger soldier (“hondero”) projectile who could exist since 3-4000 BC in South Spain

Keywords: Alcalar, Cumbres Mayores, Dolmen complex, Tartessos, Spain, Andalusia, Portugal, Algarve, Iberian-Tartessian, Iberian Pyrite Belt, Lineal Megalithic Scripts, mines, Iberian, Etruscan, Latin, Greek, Sitovo, Tim Missaou, Zalamea scripts, “hondero”, slinger.

Introduction

The megalithic complex of Alcalar was constructed in the 3rd millennium BC on the Monchique Sierra range. Torre River navigation was then possible from the sea to these foothills. Alcalar Dolmens constructed area account for 4 hectares; a total of 18 megalithic small towns were found on the area surrounding these hills (Martins 2011). Alcalar village is placed in the Mexilhoeira Grande County, Portimao Province (see Fig. 1).

Decorated with lines flat stones were also found into the dolmen (Martins-Estacio da Veiga 1886) stuck to walls (see discussion). Also, some human bones were found and Solutrean arrow heads appeared inside the dolmen without a Neolithic context: this could suggest just a Solutrean (22.000 – 17.000 years BC) arrow heads work into an already constructed dolmen according to the surprised archaeologist that discovered it (Martins-Estacio da Veiga 1886). Dolmen 7 (Fig. 2) is the one which is reconstructed close to the non-reconstructed Dolmen 8 (see Fig. 1). This set of Megalithic structures was declared National Monument of Portugal in 1910. Its age was calculated in 4000 years BC and Dolmen 7 is the oldest one among neighboring ones and is built on the top of the hill

<https://web.archive.org/web/20131101023616/http://www.cultalg.pt/alcalar/index.html?subpagina=alcalar3.html#historia>

We have recently described rock scripts in the Megalithic complex of Cumbres Mayores (Huelva, Spain) (Arnaiz-Villena *et al.* 2022a). Some of these signs are Lineal Megalithic ones and some others are contained in the Iberian-Tartessian semi-syllabary (Gómez-Moreno 1946; 1960). Both type of signs are frequently mixed together and have been found at Canary Islands and at South Sahara Desert, Tim Missaw, Algeria (Arnaiz-Villena 2020a; 2020b; 2021a).

In the present paper we describe new Iberian-Tartessian signs together with Lineal Megalithic scripts on a big-rectangular stone which is placed between the Alcalar complex entrance (from the interpretative center) and Dolmen 7 (Fig. 2). This Alcalar Megalithic Slabstone seems to be an element designed for a Dolmen ceiling at the outside entrance of the corridor, or at the putative “tholos” exit if it was placed in this type of corridor and tholos dolmen (Fig. 3). Signs were placed facing to the Dolmen 7 side (Fig. 3). However, it could be a piece belonging to some other non-identified structure. In addition, human skeletons and bones were found in Dolmen 7 and also in others. Dolmen 7 also has a tholos and a corridor.

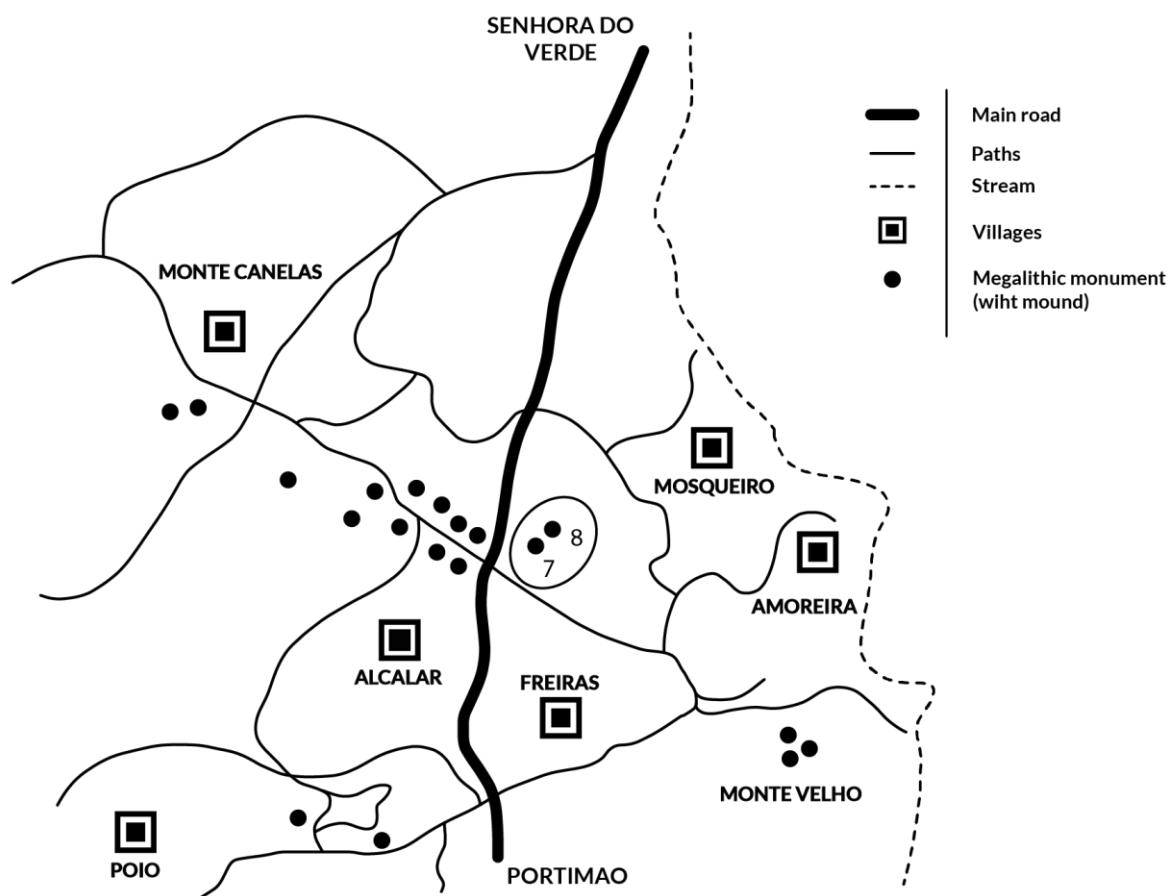


Fig. 1. Map showing Alcalar Megalithic complex.



Fig. 2. Rebuilt Dolmen 7 in Alcalar (Portugal) megalithic complex. (Photo taken by Antonio Arnaiz-Villena)



Fig. 3. Several photographs of “the Alcalar Stoneslab”.

It has a rectangular form about 50 cm thick, and about 170 cm x 80 cm lengths. The stone may have been created for a structural function (i.e.: Dolmen corridor ceiling). The possibility that it was standing being earthed by one of its shorter sides is not discarded. Engravings described in this paper are placed in the upper edge of the Stoneslab rectangular side that faces now to Dolmen 7 of the complex (June 2022). Visitors entrance path and informative panel is observed at the photograph back (see [Fig. 3A,3B](#)). The Alcalar Stoneslab was probably neither not found in the present place and position. It was not described in 1866 by [Martins-Estacio da Veiga](#). (Photographs taken by Antonio Arnaiz-Villena)

Material and Methods

A Sony Camera Cybershot 14.1 Megapixels Carl-Zeiss lens Vario-Tessar and Sony Xperia G3112 cellular phone camera were used for photograph work. Magnification of photographs and computational analyses of rocks have been performed with Adobe Illustrator 2020 and MacOS images visualizer. All Alcalar Dolmen photographs were taken by Antonio Arnaiz-Villena. They may be used under complete citation of paper and permission, as law permits.

Results

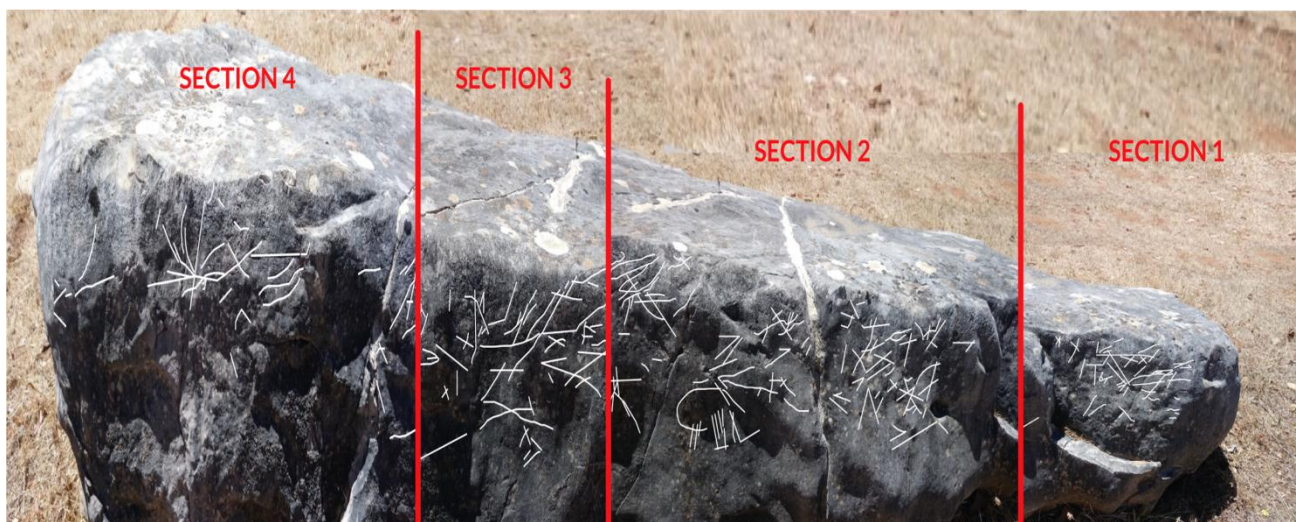


Fig. 4. The Alcalar Stoneslab.

This is a compilation of four photographed parts. Eleven photographs have been used for this assembling to make sure that a maximum of accuracy was reached by taking into account photographs borders. **Signs pointed out in Figures 5-9 are also found in a Megalithic/ Prehistoric context at Cumbres Mayores Megaliths (Huelva, Spain), Canary Islands and Tim Missaou (Sahara Desert, Algeria)** *Rock scripts and other studies presented in this paper are preliminary and further research is ongoing.* (Photograph by AA-V)



Fig. 5. Signs found in the Alcalar Stoneslab remarked in black and white.

For details of these incised signs without remarking in white, see Figures 4 and 6-11. Some of the signs found in the Alcalar Stoneslab are assimilated with the Iberian-Tartessian semi-syllabary and we have put forward a translation based in the recognized similarities between Old Iberian and Basque in our previously works ([Arnaiz-Villena et al. 2000](#); [2020a](#); [2020b](#); [2021a](#)):

- (1) \times (TA, T), proposed translation = the door; (2) $\wedge \vee$ (M), proposed translation = the Mother;
 (3) $\lambda / \gamma / \lambda$ (M), proposed translation = the Mother; (4) $| |$ (BA), proposed translation = yes, emphasis;
 (5) $> <$ (KE), proposed translation = smoke.



Fig. 6. Section 1 of the Alcalar Stoneslab natural and with signs remarked in white. Common signs recorded in Cumbres Mayores dolmen, Canary Islands (all seven main Islands) and Sahara Desert (Ti-m Missaou, Algeria) are the following:

- (1) \times (TA, T); (2) $\wedge \vee$ (M); (3) $\lambda \gamma \lambda$ (M); (4) $| |$ (BA). Some of them are marked with red numbers in the Figure (see [Fig. 5](#) foot note). (Photograph by AA-V).

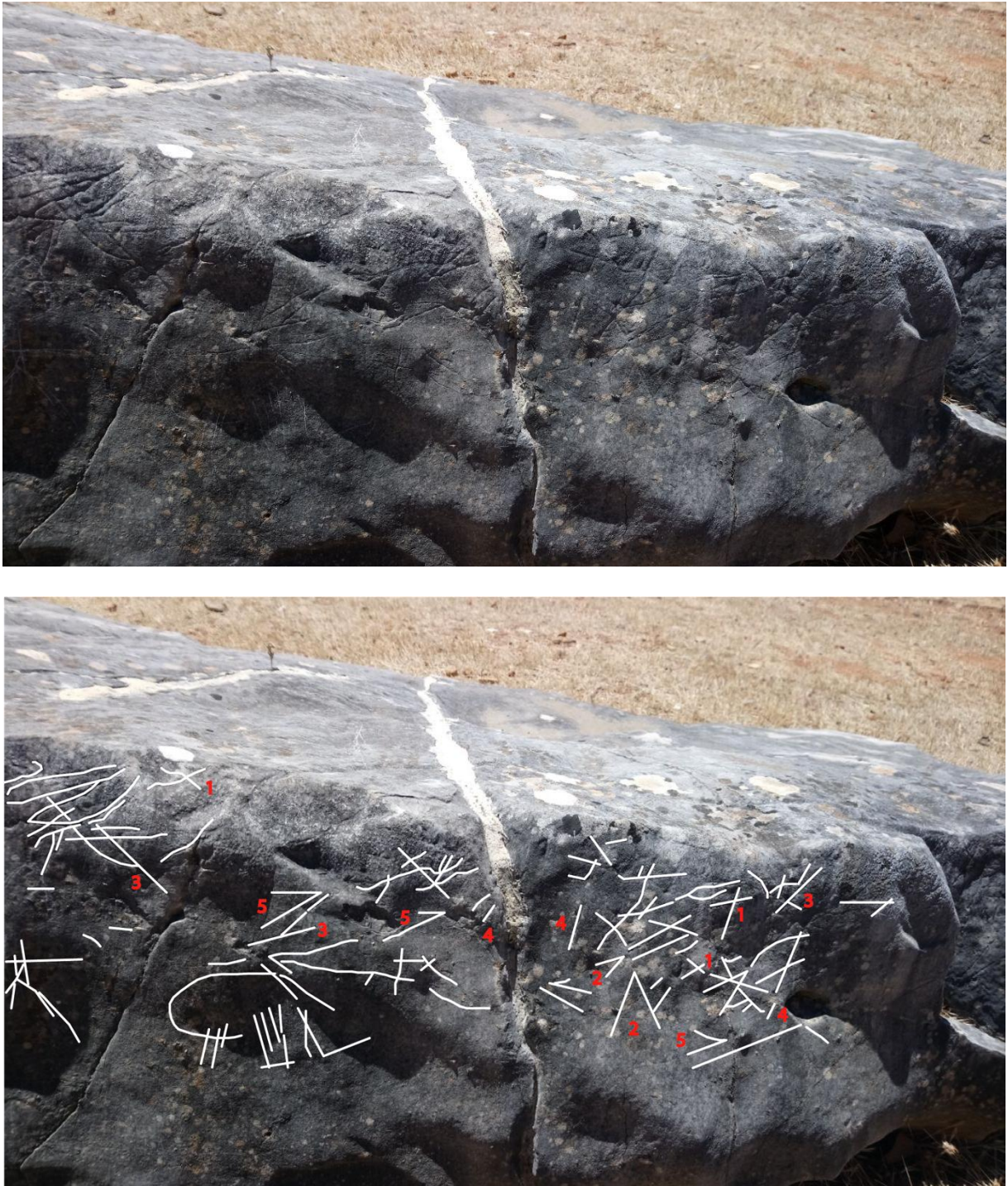


Fig. 7. Section 2 of the Alcalar Stoneslab natural and with signs remarked in white. Common signs recorded in Cumbres Mayores dolmen, Canary Islands (all seven main Islands) and Sahara Desert (Ti-m Missaou, Algeria) are the following:

- (1) \times (TA, T); (2) $\wedge \vee$ (M); (3) $\lambda \gamma \lambda$ (M); (4) $| \perp$ (BA); (5) $> <$ (KE).
Some of them are marked with red numbers in the Figure (see [Fig. 5](#) foot note).
(Photograph by AA-V).



Fig. 8. Section 3 of the Alcalar Stoneslab natural and with signs remarked in white. Common signs recorded in Cumbres Mayores dolmen, Canary Islands (all seven main Islands) and Sahara Desert (Ti-m Missaou, Algeria) are the following: (1) \times (TA, T); (2) $\wedge \vee$ (M); (3) λ / λ (M); (4) $| |$ (BA); (5) $> <$ (KE). Some of them are marked with red numbers in the Figure (see [Fig. 5](#) foot note). (Photograph by AA-V).



Fig. 9. Section 4 of the Alcalar Stoneslab natural and with signs remarked in white. Common signs recorded in Cumbres Mayores dolmen, Canary Islands (all seven main Islands) and Sahara Desert (Ti-m Missaou, Algeria) are the following:

- (1) \times (TA, T); (2) \parallel (BA). Some of them are marked with red numbers in the Figure (see [Fig. 5](#) foot note). (Photograph by AA-V)

Discussion

Inscriptions in the megalithic Alcalar Stoneslab

It is striking again that in a megalithic context, a big rectangular stone is found scripted and could be named “the Alcalar Stoneslab”, is part of a megalithic constructions ceiling, possibly a dolmen corridor. Otherwise, it could be a kind of megalithic stoneslab to deposit bodies, corpses or sacrifices to celebrate funeral/religious rites (**Fig. 3**). The rectangular Stoneslab has lineal inscriptions on the upper part of one of its large edges: that one facing Dolmen 7. Analysis of the inscriptions have found both type of signs, those included in the Iberian-Tartessian semi-syllabary and also Lineal Megalithic Scripts as defined in ([Arnaiz-Villena et al. 2022b](#)) (See also [Muñoz-Gambero 2019](#); [Vazquez-Hoys 2008](#)). Similar rock scripts were observed and photographed on a megalithic context by the Leisner archaeologists in 1951 at San Bartolomé dolmen (Huelva), also studied in ([Sousa et al. 2020](#)) (see **Fig. 10**). To our view, it is is a stone rounded projectile, similar to those used by Balearic “hondero” soldier or slinger which has a fissure to inserting the sling breaded jute cord. If this is correct slingers and slings Megalithic weapons existed since 3-4,000 years BC.



Fig. 10. Artifact identified as a little “arrow-sharper” found at San Bartolomé Dolmen, Huelva, Spain. Photograph taken by Leisners in October 1951 who tagged as “Iberian” the inscriptions made on it (taken from [Sousa et al. 2020](#); page 554). To our view (and its small size), it is more appropriate to define it as a **fissured stone sling projectile** that was skillfully used by Balearic Is. (and other Iberians) slinger-soldiers (Menorca Museum, Flaquer Fund).

The official construction of Alcalar megalithic complex is dated in the 4th millennium BC. However, Portuguese archaeologist Sebastiao Philippes Martins Estacio da Veiga found a strange collection of arrowheads inside a dolmen in Alcalar (possibly Dolmen 7 or 8) ([Martins-Estacio da Veiga 1886](#)) (**Fig. 11**). These arrowheads were definitively belonging to the Solutrean period according to him (23000 – 17000 years BC); he indicated that they belonged to the skeletons also found inside the dolmen ([Martins-Estacio da Veiga 1886](#); pages 224-225). Did this dolmen, or other structure over which dolmen was constructed, existed by Solutrean period? This question puzzled the discoverer in 1886, (See **Fig. 11**).

On the other hand, lineal scripts were also found by Martins-Estacio da Veiga on flat stones that were covering the wall inside of the dolmen. He ordered to collect the fragments with these scripts and keep them safe until a time when scripts could be deciphered ([Martins-Estacio da Veiga 1886](#); page 219) (**Fig. 12**). They are not very different to those found by us on the Alcalar Stoneslab (**Figs. 4 - 9**).

At studying Alcalar dolmen, we have found Lineal Megalithic Scripts and some of the signs contained in the Iberian-Tartessian semi-syllabary (Gómez-Moreno 1946; 1962), see results photographs. These signs are evident on “The Alcalar Stoneslab”; they have been also found in another Iberian Megalithic context (Cumbres Mayores, Huelva, Spain) ([Arnaiz-Villena et al. 2022a](#)). These signs are also recorded in the seven main Canary Islands and at the center of South Sahara Desert (Tim-Missaou, Algeria) ([Arnaiz-Villena et al. 2020a](#); [2020b](#); [2021a](#); [2022b](#)). The Leisner archaeologists found “Iberian” lineal signs in an artifact found in San Bartolomé Dolmen (**Fig. 10**; [Sousa et al. 2020](#)) later identified as an arrow polisher, but may be a lingerer or “hondero” soldier stone projectile according to us ([Vázquez-Hoys 2008](#)). Muñoz-Gambero ([Muñoz-Gambero 2019](#)) reports widespread Lineal Megalithic Scripts (LMS) in South and other parts of Iberia stones and rocks. We have postulated that admixture of Lineal Megalithic Scripts and Iberian-Tartessian signs are evolutionary related and that LMS may have originated Iberian-Tartessian scripts and other Mediterranean and European ones, like Iberian, Berber, Runes, Etruscan, Greek, Latin , Sitovo and others ([Arnaiz-Villena et al. 2022b](#)).

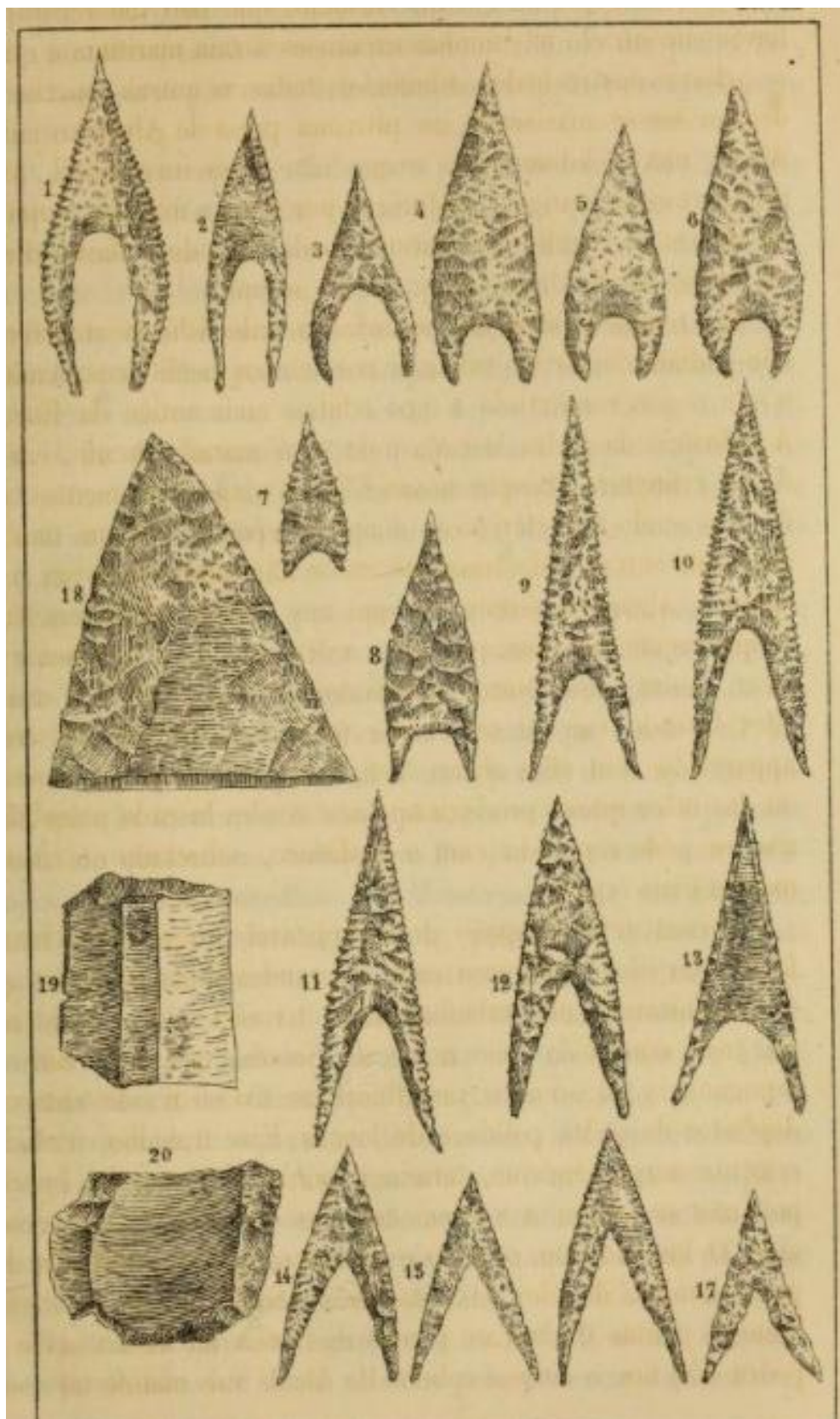


Fig. 11. Arrowheads found inside Alcalar dolmen attributed to the Solutrean period, 23-17,000 y. BC, according to Martins Estacio da Veiga ([Martins-Estacio da Veiga 1886](#); pages 224-225).

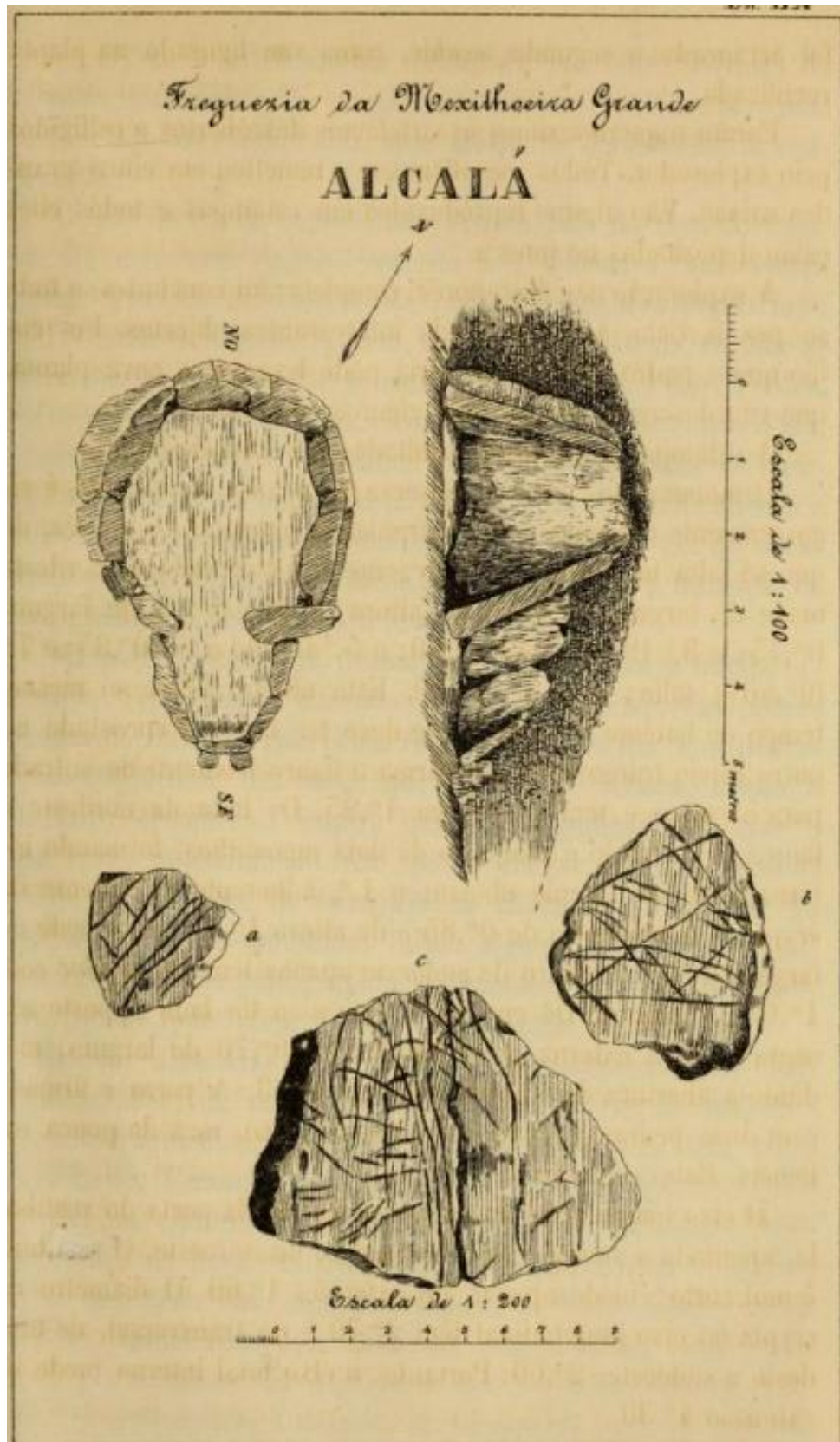


Fig. 12. Alcalar dolmen drawings with lineal scripts found inside the dolmen (a, c, d). Some of these scripts are similar to those described by us on the Alcalar megalithic Stoneslab (Martins-Estació de Veiga 1866; page 219).

Tartessos, Alcalar and the Iberian Pyrite Belt

Also, we put forward that the rich in metal Iberian Pyrite Belt (**Fig. 13**) may have been related with these very early megalithic constructions and archaeological remains which may be around these monuments, and given rise to the Tartessian civilization. The Iberian Pyrite Belt specifically starts (for practical handling of the concept) at Alcácer do Sal (Portugal) and continues from Northwest to Southeast finishing at Seville (Las Cruces Mines, at Gerena/Aznalcollar villages). Zalamea la Real hosts the first underground small mines excavated in Iberia (Chiflon Mines) and in the Iberian Pyrite Belt, which are not used nowadays. They are surrounded by megaliths (El Pozuelo Dolmens; [Pérez-Macías 1996; 2013; 2018](#)).

Alcalar megalithic complex in the Algarve, close to Portimao, is within an ancient mines area. Several mines have been discovered in Algarve: Portimao (iron), Alcoutim (cooper), Aljezur (cooper), Castro Marin (cooper and silver), Lagos (iron), Loule (cooper and lead; this latter is unique in the area), Silves (iron), Tavira (cooper, iron). All these mines have been not constructed in a recent epoch, or documents about its constructions do not exist ([Sampaio 2016](#)). Apparently, at the end of the XIX century some of these mines started to be used again. Our hypothesis is that Kinetes (Celts; [Strabo 1998](#)) occupying eastern South Portugal and Huelva, developed a Tartessian culture common to this Portuguese and also Spanish part of Iberia. This cultural Tartessian flourishing in the area may have occurred due to metals richness and trading with other Mediterranean important cities, including Canaan cities: this richness has been accompanied by both the same type of writing in Spanish and Portuguese area (Iberian-Tartessian; [Gomez-Moreno 1949; 1962](#)), and an important and dense Megalithic culture throughout the Area (Algarve and Andalusia).

Algarve and Andalusia have one of the most ancient megaliths in the Mediterranean area and the densest concentration of menhirs, dolmens, and cromlech buildings. This culture was developed at least 2000 years before Giza pyramids were constructed (started by 7000 years BP) ([Arnaiz-Villena et al. 2013](#)). Megaliths are also found in the rest of Andalusia at the right side of Guadalquivir River and further East, including Jaen, Malaga (Antequera Dolmen complexes), Granada and Murcia. These Guadalquivir and eastern peoples were also getting minerals from Linares and Cartagena (Kart Hadast, Murcia) and other places ([Pérez-Macias 2018](#)).

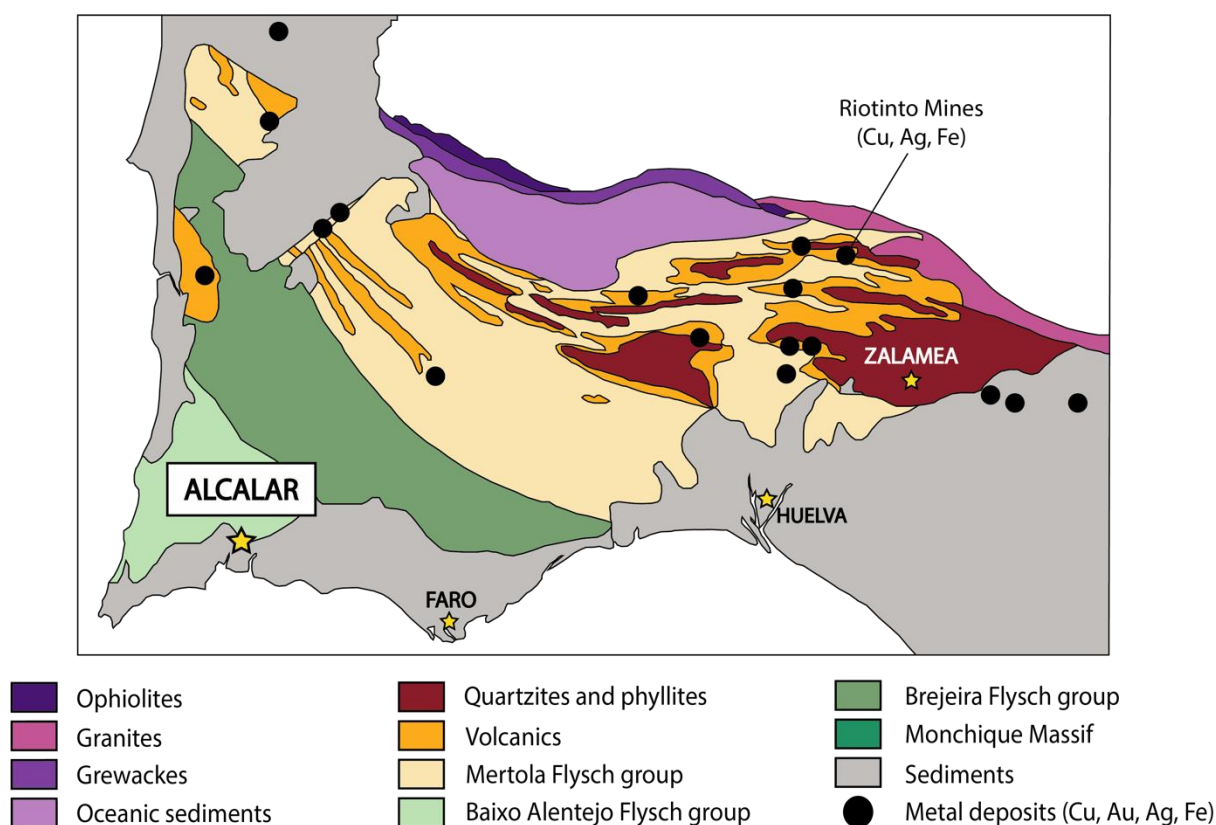


Fig. 13. The Iberian Pyrite Belt.

Iberian-Tartessian: a common epigraphy possibly developed from Lineal Megalithic Script (LMS)

We do not know the meaning and the repertoire of LMS which is found in a wide area. In fact, some of the Iberian-Tartessian semi-syllabary signs are found admixed with LMS. A kind of structured writing normalization may have kept by priests of Mother Goddess Religion or other chiefs, and other people only learnt some basic signs (\times (TA, T); $\wedge \vee$ (M); $\lambda \gamma \lambda$ (M); $|$ (BA); $> <$ (KE)) because the funeral and religious importance (Arnaiz-Villena *et al.* 2021a; 2022a; 2022b).

Regarding LMS wide extension area may be because the Paleolithic-Neolithic Mother Goddess Religion on the lack of other known ties. Small fat Paleolithic figurines (Fig. 14) have been found throughout all Europe and Mediterranean Area (including Canary Islands, in Fortaleza de Ansite, and other places). Gimbutas (1991) attributed these fat goddesses to a “Religion of the Mother” that was widespread in the area. Neolithic figurines are an extension of Paleolithic ones (Fig. 14). Indeed, “Mother

religion” has been used by us to propose transcriptions and translations hypotheses from Basque/Iberian equivalences: Ama = the mother (Basque, B.), Ata= the entrance to another dimension or death (B.), As =darkness (B.), Bake = peace (B.), Il = dead (B.), Ke = smoke, burnt corpse (B.), Aka = dead (B.), and others. It was a female-driven religion and society ([Gimbutas 1991](#); [Arnaiz-Villena 2000](#); [Arnaiz-Villena & Alonso-García 2001](#); [2007](#)), which covered Europe and North Africa at least after thousands years BC. It is difficult to explain maintainance of such a wide geographic extension during thousand years without many commercial or other types of contacts or a wide geographical political or religious unity that may have been the Mother Goddess basic religion.

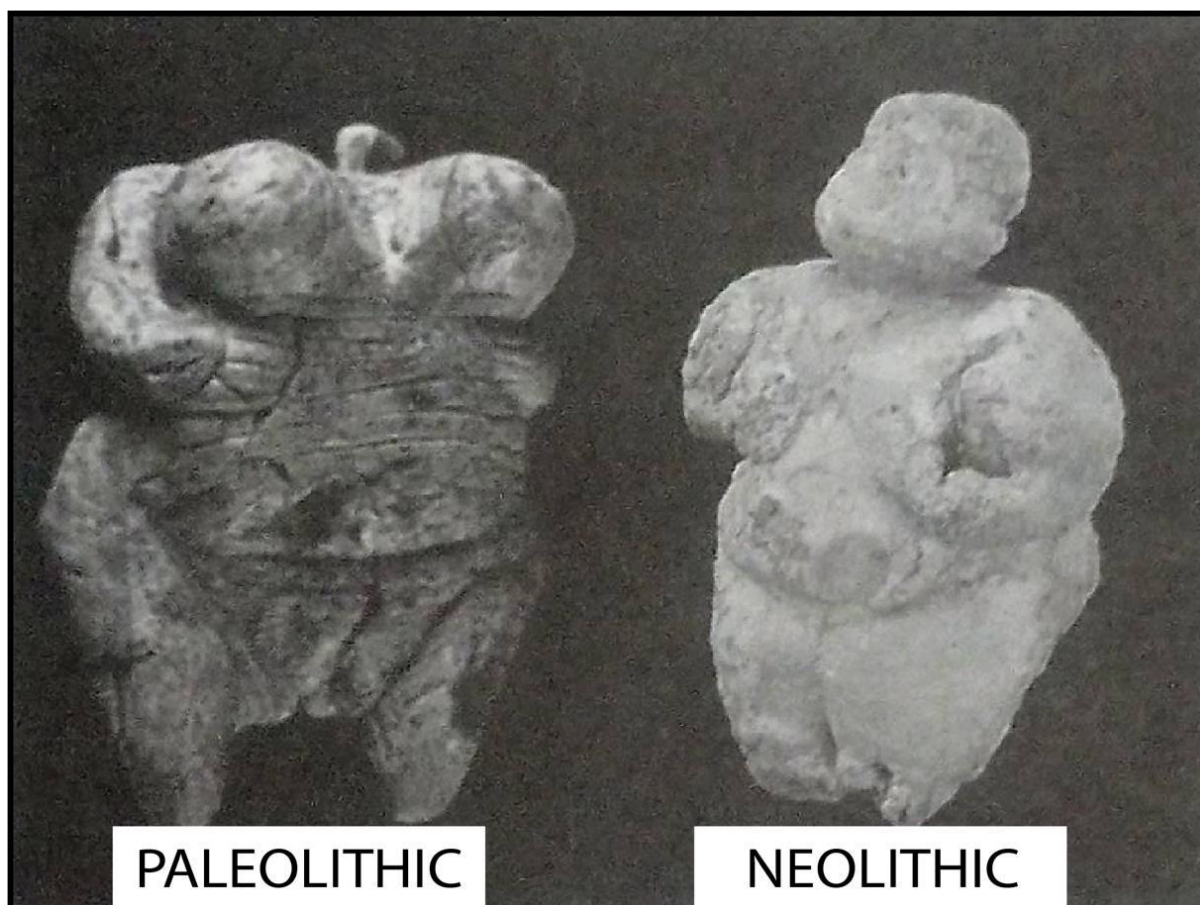


Fig. 14. At left, Paleolithic figurine from Hohle Fels, Germany, 40000 years BP. At right, Neolithic figurine from Catal Hüyük, Turkey, 8000 years BP. These Paleolithic and Neolithic figurines are found in the context of Mother Goddess religion which was extended throughout Europe, Atlantic and Mediterranean areas, and Africa. This extension went in parallel with the Lineal Megalithic and Paleolithic scripts that may have given rise to the Iberian-Tartessian scripts. Mother Goddess Religion and religious lineal rock writings may be different faces of the same culture. Figures taken from [Piquero \(2017\)](#).

This culture goes together with Lineal Megalithic Scripts which are sometimes admixed with Iberian-Tartessian scripts (Leisner & Leisner 1943; Cerdán *et al.* 1952; 1975; Sousa *et al.* 2020; Arnaiz-Villena *et al.* 2022a; 2022b). Our proposed religious and funerary meaning for these simple inscriptions suggests that Mother Goddess Religion remained from Paleolithic to Neolithic (Megalithic) times and that both religion and scripts have evolved conjointly. Iberian-Tartessian initial scripts may have appeared in the middle of Megalithic Lineal Megalithic rock cripts like at Cumbres Mayores Dolmen, San Bartolomé Dolmen (**Fig. 10**) (Leisner & Leisner 1943; Cerdán *et al.* 1952; 1975; Sousa *et al.* 2020; Arnaiz-Villena *et al.* 2022a; 2022b) and Alcalar Dolmen (the Alcalar Stoneslab). On the other hand, an older Lineal Paleolithic Script has been recorded and solidly dated in South Africa by Henshilwood group at Howiesons Poort (Henshilwood & Dubreuil 2011; Wadley 2015; Arnaiz-Villena *et al.* 2021b). Dates are back to 100,000 to 60,000 years old. Mother Goddess Religion manifestations are worldwide shown on the 5 continents and may be a strong cohesion force that joined other cultural traits like our studied Paleolithic/Neolithic Lineal writings, and Iberian-Tartessian and other ancient languages writings (Arnaiz-Villena *et al.* 2021b). A wide review on Mother Goddess Religion can be obtained in Gimbutas (1991), Graham (1996), Campbell (2013), Piquero (2017) and Lacalle-Rodríguez (2019).

Southern Iberian common language and writing

It has been established during Ancient Medieval and Modern times that Old Iberian language is the same or very related to Basque language. Only in the middle of the last century that was doubted and refused later, and after 80 years it is now established again. All Spanish Kings and reputed Kings official chronicle writers had asserted the relationship or even identity between Iberian and Basque (https://www.academia.edu/78265098/AAV_Bermeo_2019_Texto_mitologia_iberia_Vascoiberismo?email_work_card=title). Koldo Mitxelena and Antonio Tovar doubted about Iberian and Basque relationship in the 2nd part of the 20th century and opened the door to a group of university scholars that have been dismissing in the last 60 years approximately such a relationship with furious attacks to its defenders. Orduña-Aznar and Ferrer i Jane have shown that Basque and Iberian numerals and counting system are equivalent and the Basque-Iberism is now re-established again after a few years dismissed (Ferrer i Jane 2009; Orduña-Aznar 2005; 2013).

It is clear that a semi-syllabary like Cretan Lineal A and B and Iberian-Tartessian are more ancient than an alphabet (Moorhouse 1995). Also, it has been published a proposal of dictionary of Basque-Iberian names based on a phonologic and semantic methodology (Arnaiz-Villena and Alonso-García 2007), related Iberian and Basque to some Mediterranean languages: the Usko-Mediterranean languages (Arnaiz-Villena 2000) and postulated that Lineal Megalithic Scripts or even Paleolithic ones (Arnaiz-Villena et al. 2021b) are precursors of Iberian and other Mediterranean lineal languages (Figs. 15, 16). Iberian-Tartessian semi-syllabary has been used to propose some of our transcriptions and translations (Appendix I). The same signary or semi-syllabary was used in Portugal, Spain and Southern France to write Old Iberian language (see Museo da Escrita, Almodovar, Portugal; and Old Iberian scripts corpus collected in Spain by Jürgen Untermann, <https://ibers.cat/corpuscast.html>).

Thus, we find in a Dolmenic context some Iberian-Tartessian signs both in Alcalar dolmens and Cumbres Mayores dolmen (Huelva, Spain) (Arnaiz-Villena et al. 2022a), and according to the Leisners archaeologists in 1951 and also to ourselves, signs found in San Bartolomé dolmen (Huelva) are also Iberian-Tartessian (Sousa et al. 2020; Arnaiz-Villena et al. 2022a; 2022b). These signs are admixed with LMS and a possible evolution from LMS to signs of the Iberian-Tartessian semi-syllabary has been put forward (Arnaiz-Villena et al. 2022a; 2022b).

Therefore, a common writing in megaliths from Portugal and Spain is found and also a common or similar language may be postulated. *Later, we propose that Portuguese, Castilian (official worldwide Spanish), Catalan and other Iberian languages developed. Basque remained very similar to the Old Iberian language.*

Genetics and anthropology

Genetics supports that similar people were established in Iberia and Northern Africa, exchanging genes throughout the Gibraltar Strait since Paleolithic times (Arnaiz-Villena et al. 1995; Arnaiz-Villena et al. 1997; Currat et al. 2010; Botigue et al. 2013; González-Fortes et al. 2019).

The Iberian Pyrite Belt and high density of megaliths

The very high density of Megaliths around the Iberian Pyrite Belt and mines, being both across South Portugal (Algarve, Alentejo) and South Spain (Andalusia), has not been related (Pérez-Macías 2018) although ancient sources like Bible or Strabo (Strabo 1998) suggest that they must have been related like the metal mines are definitively related with Tartessian flourishing. Findings in a Megalithic context of Iberian-Tartessian lineal signs (Appendix I) admixed with LMS at Alcalar (Portugal), Cumbres Mayores dolmen (Spain) and San Bartolomé dolmen (Spain) suggest that both Megalithic and Tartessian civilization may be related to the abundance of metal mines, and that Tartessian writings evolved from LMS since 7000-8000 years BC (Arnaiz-Villena et al. 2013; 2022b).

Anthropology and climate

On the other hand, it has been established that Mesolithic-Neolithic transition of Southern Iberia (Algarve-Málaga) was rapid and coincidental with a climate aridity peak at Sahara Desert, North Africa and Southern Iberia. Many evidences suggest that this transition rapidly was provoked by colonists from Maghreb (North Africa), which is vital to understand Neolithic in Iberia and Western Europe which should not be associated to cardial impressed pottery appearance. Settlements are as ancient as 8th millennium BC (Cortés-Sánchez et al. 2017). This is coincidental with *our hypothesis based in genetics, climatic and anthropological traits* (Arnaiz-Villena et al. 1999; 2002; 2021; Arnaiz-Villena & Lubell 2000).

The Saharan migration (Fig. 15) took place in the final stage of the Iberian-North African exchange which makes difficult to distinguish Iberians from North Africans (Arnaiz-Villena et al. 1995; 1997; 1999; 2002; Currat et al. 2010; Botigue et al. 2013; González-Fortes et al. 2019).

In fact, the Islamic invasion (711 CE) was accomplished for about a few thousand Berbers, recently converted to Islam; Iberia had about 10 million inhabitants. This Berber invasion was an elite Muslim cultural invasion more than a genetic (people) noticeable invasion. This was called by one of the parts of the ongoing Iberian Civil War. Thus, “Reconquest” in Iberia of Christians against Muslims may have been 800 years a Civil War between Old Iberians, since Christians and Muslims were converted

easily to one or another religion on political and danger reasons (Olagüe 2017; Arnaiz-Villena *et al.* 2022c).

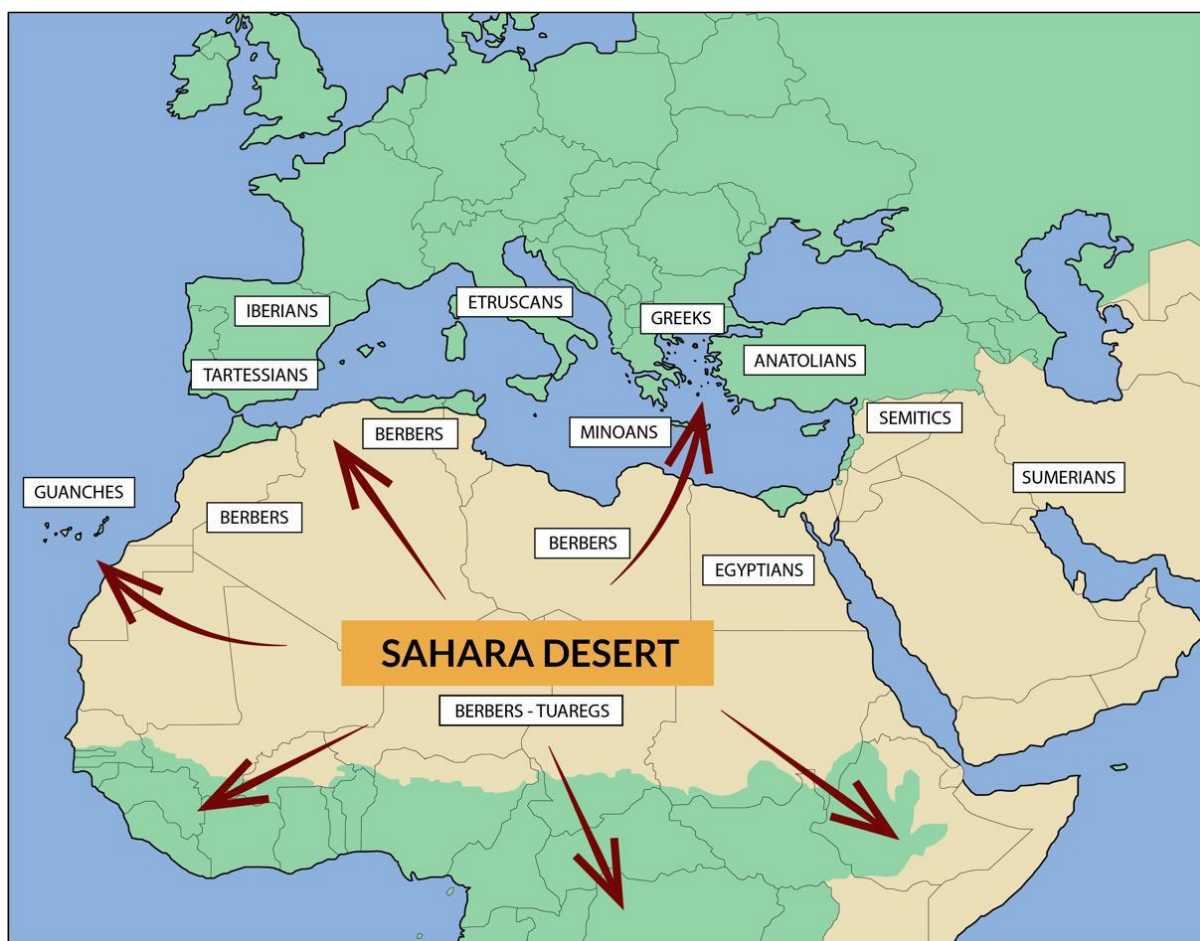


Fig. 15. Map showing how African/Eurasian Lineal writing of different languages could have been transmitted. However, Megalithic and Paleolithic Lineal culture traces are wider. Mediterranean area showing classic populations (squares). Arrows represent population movements before 3,000 years BC (Sellier & Sellier 1993; Arnaiz-Villena *et al.* 1995; 1997; 1999; 2002; Currat *et al.* 2010; Botigue *et al.* 2013; González-Forbes *et al.* 2019).

Conclusions

- 1) Both mixed Lineal Megalithic Scripts (LMS) and apparent Tartessian signs have been found in the Alcalar Dolmens complex (Portimao, Algarve, Portugal) at one edge of the Alcalar Stoneslab, as preliminarily studied in present paper.
- 2) The same mixed LMS and Tartessian signs have also been found at Cumbres Mayores Dolmen complex (Huelva, Spain) (Fig. 16) (Arnaiz-Villena *et al.* 2022a). In addition, Leisners archaeologists observed “Iberian” scripts in a San

Bartolomé Dolmen artifact (Huelva, Spain), that may be a stone slinger projectile (Fig. 10)

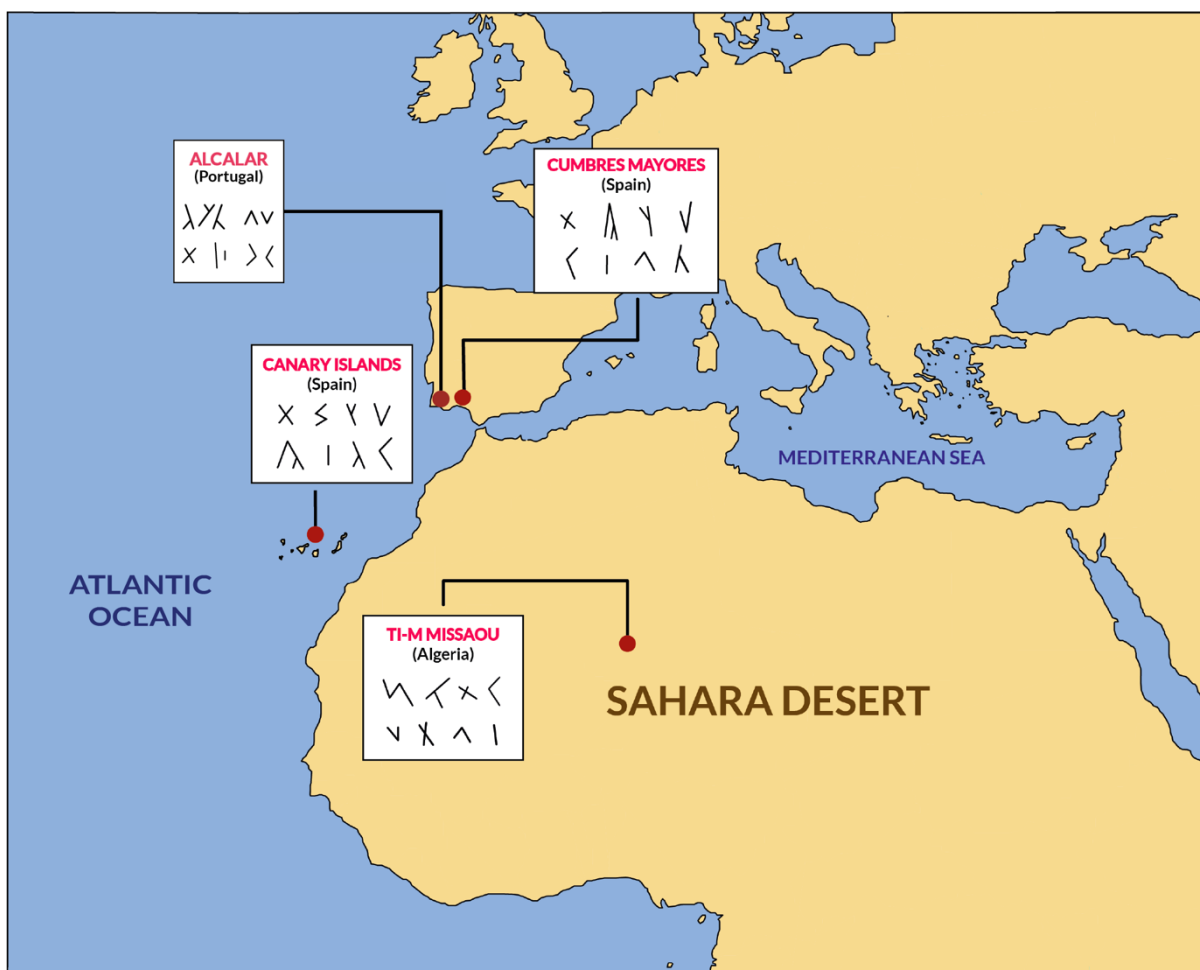


Fig. 16. Rock scripts included in Iberian-Tartessian semi-syllabary (Appendix I) are found in a wide extension area. Note that Cumbres Mayores (Huelva, Spain) and Alcalar (South Portugal) Tartessian scripts are found in a megalithic context (3000 - 5000 years BC). Also, San Bartolomé Dolmen (Huelva, Spain) has Iberian-Tartessian semi-syllabary signs as reported by Leisner archaeologists in 1951 (Leisner & Leisner 1943; Cerdán *et al.* 1952; Sousa *et al.* 2020).

- 3) Tartessos putative area could comprise both Algarve Portuguese area and West Andalusia Spanish area (Huelva, Seville and Cadiz at least). The Iberian-Tartessian completely formed signary was widely used in Portugal (Museo da Escrita, Almodovar, Alentejo, Portugal), Spain and southern France (Gómez-Moreno 1946; 1960; <https://ibers.cat/corpuscast.html>).

- 4) Age of Portuguese and Spanish Dolmens are between 3000 and 5000 years BC; Tartessian scripts may have evolved from LMS ([Arnaiz-Villena et al. 2022b](#)). Also, [Strabo \(1998\)](#) noticed that Iberians/Tartessians wrote since 6000 years BC.
- 5) We also support that flourishing and developing of Tartessian culture and area comprising South Portugal and Spain is bound to the metals richness attached to the Iberian Pyrite Belt (cooper, silver, gold, iron...). This band goes across southern Portugal and Spain starting at Alcácer do Sal (Portugal) and finishing in Seville (Las Cruces Mines, at Gerena/Aznalcollar villages). It could explain the high density of megaliths (and thus, population), their proximity ([Arnaiz-Villena et al. 2013](#)), and also subsequent Tartessian civilization and culture expansion from the Eurasian Atlantic area to the Central and East Mediterranean area.
- 6) We also put these findings on the context of Green Sahara relatively rapid Desert conversion and migration of their people that occurred after 10000 years BC.

Appendix I

Iberian →		← Tartessian	Phoenician	Ancient Greek	Iberian →		← Tartessian	Phoenician	Ancient Greek
R D P P	a	Δ Δ	κ Ϝ	α Α	ρ ρ	bi	γ	Ⓜ Ⓜ	β β
Ε Ε Ε	e	Ϝ Ϝ (Ϝ Ϝ)	Ⓜ	Ⓜ	χ χ χ	bo	Ⓜ Ⓜ Ⓜ		
Ν Ν	z	Ϸ Ϸ (Ϸ Ϸ)	Ⓜ	Ⓜ	□	bu	□ (Ⓜ)		
Η Η	o	Ο Ο ϑ	ο	ο	χ	ka	Ⓜ Ⓜ Ⓜ	Ⓜ Ⓜ	τ ε
Α Α ↑	u	Ϸ ↑ ü?	Ϸ Ϸ	Ϸ Ϸ	Ⓜ Ⓜ Ⓜ Ⓜ	le	Ⓜ Ⓜ Ⓜ Ⓜ	Ⓜ Ⓜ	Ⓜ Ⓜ
Λ Λ	l	1	λ	λ	Ϸ Ϸ Ϸ Ϸ	li	Ⓜ Ⓜ Ⓜ Ⓜ	Ⓜ Ⓜ	Ⓜ Ⓜ
ϑ ϑ ϑ ϑ ϑ	r	Ϸ Ϸ Ϸ	Ⓜ	Ϸ Ϸ	Ϸ Ϸ Ϸ	lo	Ⓜ Ⓜ Ⓜ		
Μ Μ	s	Μ Μ Μ	Ϸ Ϝ	Μ	Ⓜ Ⓜ Ⓜ Ⓜ	lu	Δ Δ Ϸ (Ϸ Ϸ)	Δ Δ	Δ Δ
Ξ Ξ Ξ	ς	Ϝ Ϝ (Ϝ Ϝ)	Ϝ	Ϝ x	Α Α Α	ca	Λ (Ⓜ)	1 Ϸ	1 Λ Ϸ
Ϸ Ϸ Ϸ Ϸ Ϸ	m	Ξ Ξ	Ϸ Ϸ	Ϸ	< Ϸ Ϸ Ϸ Ϸ	ke	Ⓜ Ⓜ Ϸ Ϸ Ϸ Ϸ	Ϸ Ϸ	Ϸ Ϸ
Ν Ν	n	Ϸ Ϸ Ϸ (Ϸ Ϸ)	Ϸ	Ϸ	Ϸ Ϸ Ϸ Ϸ	ki	Ⓜ Ϸ (Ⓜ Ϸ?)		
Ι	ba	Ι			Ⓜ	co	Ⓜ Ⓜ		
Ϸ Ϸ Ϸ Ϸ Ϸ	be	Ϸ Ϸ Ϸ			Ⓜ Ⓜ	cu	Ⓜ Ϸ (Ⓜ)	Ⓜ Ϸ	Ⓜ Ϸ

Iberian-Tartessian semi-syllabary assembled by Manuel Gómez-Moreno ([Gómez Moreno 1949; 1962](#)).

Conflicts of Interest: The authors declare no conflict of interest.

Acknowledgements: We thank Complutense University and population genetics grant PI18/721 from Ministerio de Ciencia and Feder funds.

References

- Arnaiz-Villena A. 2000. Prehistoric Iberia: Genetics, Anthropology and Linguistics. Chapter 9: The Usko-Mediterranean Languages. Ed. Kluwer. Plenum Press. New York, USA. <http://chopo.pntic.mec.es/~biolmol/publicaciones/Usko.pdf>
- Arnaiz-Villena A. & Alonso García J. 2001. Egipcios, Bereberes, Guanches y Vascos. Ed. Visión Libros. (3rd Edition 2011) ACCI, Madrid, Spain. <https://www.amazon.es/Egipcios-Bereberes-Guanches-Vascos-enguas/dp/841726700X>; Wikimedia Commons: https://commons.wikimedia.org/wiki/File:Iberian-Guanche_inscriptions.pdf
- Arnaiz-Villena A. & Alonso-García J. 2007. Diccionario Ibérico-Euskera Castellano. Ed. Fundación Estudios Genéticos y Lingüísticos | Nueva Edición 2012 Ed. Visión Libros, Madrid, Spain. <https://www.amazon.es/Diccionario-etrusco-euskera-castellano-Diccionarios-Bilingües-Arnáiz-Villena/dp/8490119368>
- Arnaiz-Villena A., Lubell J. 2000. Prehistoric Iberia: Genetics, anthropology, and linguistics. *Current Anthropology* 41(4): 636-638. DOI: <https://10.1007/978-1-4615-4231-5>
- Arnaiz-Villena A, Benmamar D, Alvarez M, Diaz-Campos N, Varela P, Gomez-Casado E, Martinez-Laso J. 1995. HLA allele and haplotype frequencies in Algerians. Relatedness to Spaniards and Basques. *Hum Immunol.* 43(4): 259-68. DOI: [https://doi.org/10.1016/0198-8859\(95\)00024-X](https://doi.org/10.1016/0198-8859(95)00024-X)
- Arnaiz-Villena A, Martínez-Laso J, Gómez-Casado E, Diaz-Campos N, Santos P, Martinho A, Breda-Coimbra H. 1997. Relatedness among Basques, Portuguese, Spaniards, and Algerians studied by HLA allelic frequencies and haplotypes. *Immunogenetics* 47: 37-43. DOI: <https://doi.org/10.1007/s002510050324>
- Arnaiz-Villena A., Martinez-Laso J., Alonso-Garcia J. 1999. Iberia: Population Genetics, Anthropology and Linguistics. *Human Biology* 71: 725-743. https://www.academia.edu/30890490/Iberia_population_genetics_anthropology_and_linguistics

Arnaiz-Villena A., Gomez-Casado E., Martinez-Laso J. 2002. Population genetic relationships between Mediterranean populations determined by HLA allele distribution and historic perspective. *Tissue Antigens* 60: 111 - 121.

DOI: <https://doi.org/10.1034/j.1399-0039.2002.600201.x>

Arnaiz-Villena A., Alonso-Rubio J, Ruiz-del-Valle V. 2013. Tiwanaku (Titikaka Lake, Bolivia) and Alberite Dolmen (Southern Spain) ritual “ears”. Celtic, Iberian, Aymara and Basque languages. *Int. J. Mod. Anthropol.* 6: 61 – 76.

DOI: <http://dx.doi.org/10.4314/ijma.v1i6.3>

Arnaiz-Villena A., Suárez-Trujillo F., Ruiz-del-Valle V., López-Nares A., Pais-Pais F.J. 2020a. The Iberian-Guanche rock inscriptions at La Palma Is.: all seven Canary Islands (Spain) harbour these scripts. *Int. J. Mod. Anthropol.* 2 (14): 318 – 336.

DOI: <http://dx.doi.org/10.4314/ijma.v2i14.5>

Arnaiz-Villena A., Medina M., Ruiz-Del-Valle V., Lopez-Nares A., Rodriguez-Rodriguez J., Suarez-Trujillo F. 2020b. The Ibero-Guanche (Latin) rock inscriptions found at Mt. Tenezara volcano (Lanzarote, Canary Islands, Spain): A Saharan hypothesis for Mediterranean/Atlantic Prehistory. *Int. J. Mod. Anthropol.* 2 (13): 140 – 162. DOI: <http://dx.doi.org/10.4314/ijma.v2i13.5>

Arnaiz-Villena A., Ruiz-del-Valle V., López-Nares A, Suárez-Trujillo F. 2021a. Iberian inscriptions in Sahara Desert rocks (Ti-m Missaou, Ahaggar Mts. area, Algeria) and first evidence of incise Iberian rock scripts in continental North Africa. *Int. J. Mod. Anthropol.* 2(15): 440-467. DOI: <http://dx.doi.org/10.4314/ijma.v2i15.3>

Arnaiz-Villena A, Medina M, Ruiz-Del-Valle V, Lopez-Nares A, de Vera-Lima J.A., Mata L., ...Suarez-Trujillo F. 2021b. Lineal Megalithic Rock Scripts as precursors of Iberian and other lineal Mediterranean/Euro African ancient writings: the case of Fuerteventura (Canary Islands, Spain). *Int. J. Mod. Anthropol.* 2 (16): 629 – 648.

DOI: <http://dx.doi.org/10.4314/ijma.v2i16.6>

Arnaiz-Villena A., Palacio-Gruber J., Ruiz-del-Valle V., Sánchez-Orta A., Vaquero-Yuste C., Suarez-Trujillo F. 2022a. Cumbres Mayores (Huelva, Spain): a new striking Megalith complex and its incise Lineal Megalithic and Tartessian Scripts. *Int. J. Mod. Anthropol.* 2 (17): 778 – 802. DOI: <http://dx.doi.org/10.4314/ijma.v2i17.4>

Arnaiz-Villena A., Palacio-Gruber J., Ruiz-del-Valle V., Heras-García A., Molina-Alejandro M., Suarez-Trujillo F. 2022b. The Iberian-Tartessian semi-syllbary: possible evolution from Lineal Megalithic/Paleolithic Scripts and the Mother Goddess Religion. *Int. J. Mod. Anthropol.* 2 (17): 820-841. DOI: <http://dx.doi.org/10.4314/ijma.v2i17.6>

Arnaiz-Villena A., Longás J., Rodríguez-Sainz C., Gómez-Casado E., Palacio-Gruber J., Luna, F., ... Suárez-Trujillo F. 2022c. HLA in Las Alpujarras Mts., South-East Spain: A Renaissance process of population artificial substitution. *Human Immunology* 83 (6): 480-481. DOI: <https://doi.org/10.1016/j.humimm.2022.03.009>

Botigue L.R., Henn B.M., Grave IS., Maples B.K., Gignoux C.R., Corona E., ... Bustamante C.D. 2013. Gene flow from North Africa contributes to differential human genetic diversity in southern Europe. *Proceedings of the National Academy of Sciences* 110 (29): 11791–6. DOI: <https://www.pnas.org/content/110/29/11791>

Campbell J. 2013. Goddesses, misteries of the Feminine Divine. Ed. Joseph Campbell Foundation, California, USA.

Cerdán C., Leisner G., Leisner V. 1952. Los sepulcros megalíticos de Huelva. Ed. Ministerio de Educación, Madrid, Spain.

Cerdán C., Leisner G., Leisner V. 1975. Los sepulcros megalíticos de Huelva. In: “Huelva: prehistoria y antigüedad”. Ed. Nacional, Madrid, Spain.

Cortés-Sánchez M, Jiménez Espejo F. J., Simón Vallejo M. D., Gibaja Bao J. F., Carvalho A. F., Martínez Ruiz F., ... Bicho N. F. 2017. The Mesolithic-Neolithic transition in Southern Iberia. *Quaternary Research* 77 (2): 221-234. DOI: <https://doi.org/10.1016/j.yqres.2011.12.003>

Currat M., Poloni E.S., Sanchez-Mazas A. 2010. Human genetic differentiation across the Strait of Gibraltar. *BMC Evol. Biol.* 10: 237-243. DOI: <https://doi.org/10.1186/1471-48-10-237>

Ferrer i Jane J. 2009. El Sistema de Numerales Iberico: Avances en su Conocimiento. *Acta Paleohispanica X. Paleohispanica* 9: 451 - 479.

Gimbutas M. 1991. Diosas y Dioses de la vieja Europa, 7000-3800 a. C. Ed. Itsmo, Madrid, Spain.

Gómez Moreno M. 1949. Las lenguas hispánicas. Discurso de recepción en la Real Academia Española. Madrid, Spain.

Gómez Moreno M. 1962. La escritura bardulo-turdetana. Ed. Primitiva Hispánica, Madrid, Spain.

Gonzalez-Fortes G., Tassi E., Trucchi E., Henneberger K., Paijmans J.L.A., Diez-Del-Molino D. 2019. A western route of prehistoric human migration from Africa into the Iberian Peninsula. *Pro Royal Soc B*. DOI: <https://royalsocietypublishing.org/doi/full.10.1098/rspb.2018.2288>

Graham L. 1996. Goddesses. Ed. Abbeville Press, New York, USA.

Henshilwood C.S. & Dubreuil B. 2011. The Still Bay and Howiesons Poort, 77–59 ka. Symbolic Material Culture and the Evolution of the Mind during the African Middle Stone Age. *Current Anthropology*. 3(52): 361-400. DOI: <https://doi.org/10.1086/660022>

Lacalle-Rodríguez R. 2019. Los símbolos de la prehistoria. Ed. Almuzara, Córdoba, Spain.

Leisner G. & Leisner V. 1943. Die Megalithgräber der Iberischen Halbinsel. Erster Teil: Der Süden. Collection Römisch-Germanische Forschungen, 17. Ed. Verlag Von Walter de Gruyter und Co., Berlin, Germany.

Martins A. 2011. Archaeological Circuits in Alentejo and Algarve. Ed. IGESPAR, Lisbon, Portugal.

Martins-Estacio da Veiga S.P. 1866. Paleoethnologia. Antiguidades monumentaes do Algarve. Tempos prehistoricos. Vol I. Ed. Imprensa Nacional, Lisbon, Portugal. Available in:
<https://archeieve.org/details/paleoethnologi01veig/page/218/mode/2up?view=theater>

Moorhouse A. C. 1995. Historia del alfabeto. Ed. Fondo de Cultura Económica, Madrid, Spain.

Muñoz-Gamero J. M. 2019. El origen de la escritura. La magia de los símbolos. Ed. Fundación Unicaja, Málaga, Spain.

“Olage” I. 1969. Les arabes n’ont pas envahi l’Espagne, Ed. Flammarion, Paris, France.

Orduña-Aznar E. 2005. Sobre algunos posibles numerales en textos ibéricos. *Paleohispanica IX. Paleohispanica.* 5: 491 - 506.

Orduña-Aznar E. 2013. Los Numerales Ibéricos y el Vascoiberismo. *Acta Paleohispánica XI. Paleohispanica.* 13: 517 - 529.

Pérez Macías J. A. 1996. La producción de metales en el Cinturón Ibérico de Piritas durante la Prehistoria y la Antigüedad. Universidad de Huelva. Salamanca. ISBN: 84-89609-03-9

Pérez Macías J. A. 2013. Las minas de Tarteso. In: Alvar J, Campos JM(eds.)Tarteso. El emporio del metal. pp. 449-472. Córdoba. ISBN: 978-84-15828-30-3.

Pérez-Macías J. A. 2018. Patrimonio arqueológico de la Faja Pirítica Ibérica. Actas de la I jornada de arqueología, historia y minería de la Faja Pirítica Ibérica, Spain. pp. 23-54.

Piquero G. 2017. Mitología salvaje. Ed. Natena, Santander (Spain)

Sampaio J.R. 2016. A Antiga “Exploração” Mineira no Concetho de Monchique. Ouro, Prata, Cobre e “Outros” Metais. *Journal de Monchique*, Portugal. Available in :
<https://www.journaldemonchique.pt/a-antiga-exploracao-mineira-no-concello-de-monchique-ouro-prata-cobre-e-outros-metais/>

Sellier J. & Sellier A. 1993. Atlas des Peuples d'Orient. Ed. Editions La Découverte, Paris, France.

Sousa A.C., Torquato F., Bragança F., Kunst M. 2020. George Leisner e Vera Leisner e o estudo do Megalitismo do Ocidente da Península Ibérica, Contributos para a história da investigação arqueológica luso-alemão a través do Arquivo Leisner (1909-1972), p. 553. Ed. UNIARQ, Universidade de Lisboa, Lisboa, Portugal. ISBN: 978-989-99146-9-8.

Strabo 1998. Geografía. Book III, Part 6, last paragraph. Ed. Biblioteca Clásica Gredos. Madrid, Spain.

Vázquez-Hoys A. M. 2008. Las golondrinas de Tartesos: sobre el origen de la escritura. Ed. Almuzara, Córdoba, Spain.

Wadley L. 2015. Those marvelous millennia: the Middle Stone Age of Southern Africa, Azania: Archaeologica. Research in Africa, 50(2): 155-226.
DOI: <https://doi.org/10.1080/0067270X2015.1039236>

To cite this article:

Arnaiz-Villena A., Ruíz-del-Valle V., Sánchez-Orta A., Suárez-Trujillo F. 2022. Lineal Megalithic and Tartessian Rock Scripts in the Alcalar Dolmens complex (Portimao, Portugal); also found in other Spanish and African prehistoric contexts.
International Journal of Modern Anthropology. 2(18): 896-922
DOI: <http://dx.doi.org/10.4314/ijma.v2i18.1>



This article, as all articles published in this journal, is under The Creative Commons Attribution: Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0).

<https://creativecommons.org/licenses/by-nc-nd/4.0/>