Research Report

Lineal Megalithic Scripts in widespread rocks, stones and a menhir structure in Zalamea la Real (Huelva, Spain)

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Abstract - Zalamea la Real is close to the biggest Mediterranean mines known in ancient times: Riotinto Mines (Huelva, Spain). Zalamea is within the South Iberia Pyrite Belt, which goes from Alcácer do Sal (Portugal) to Seville (Las Cruces Mines, at Gerena/Aznalcollar villages). It is a territory containing a high density of megaliths and neglected rocks/stones on the surrounding area which are rests of them. Zalamea district could be considered a megalithic region and also a megalithic context altogether, which is linked to mines of metal extractions since 3000 years ago. Probably, the main mines furnaces were at Zalamea. This metal richness could explain Tartessos flourishing, which could extend together with both the high megaliths density and the Southern Iberia Pyrite Belt through South Spain and Portugal. Indeed, common Iberian-Tartessian signary (sometimes admixed with Lineal Megalithic Scripts, a primitive evolutionary writing stage) had been used in this Iberian Pyrite Belt area. In the present paper ,we show our findings on Zalamea la Real engraved rocks/stones and menhirs with Lineal Megalithic Scripts and Tartessian signs, and put them in a context of other similar findings in a big European/African area (South Iberia, Canary Islands and South Algeria, Sahara Desert).

Keywords: Tartessos, Iberian, Iberian Pyrite Belt, Riotinto mines, Zalamea la Real, El Pozuelo, dolmen, Lineal Megalithic Scripts, LMS, semi-syllabary, Alcalar, Cumbres Mayores, Leisner, San Bartolome, slinger, King Solomon.
**Introduction**

Zalamea la Real is a Huelva village in the Aracena Sierra area, which separates Extremadura and Andalusia (Southern Spain) (**Fig. 1**). Its proximity to big Riotinto Mines and to the most ancient documented (thousands year BC) Iberian excavated mines (El Chinflón) (Arnaiz-Villena et al. 2022a) drives to deduce the meaning of the word “Zalamea” as the place where the metals were extracted in the epoch. ‘Zala’ means in Basque *hardcore*, and ‘Mea’ means *mineral*. In other words, where smelting furnaces were placed.

**Fig. 1.** Map showing placement of Zalamea la Real (Huelva province, Spain).
Squared names indicate megaliths or megaliths areas in which admixed Lineal Megalithic Scripts and Tartessian signs have been found (see text and reference list).

Zalamea was the town that in modern and very likely ancient times “officially” controlled the area of the biggest open-pit metal mines (mostly cooper, silver, gold and iron) known in Iberian prehistory and Mediterranean classic literature: Riotinto mines. Nearly, El Campillo and Nerva towns have been set up by miners in
modern times (Fig. 2). The Roman name seems to be “Caliente” (in Spanish “hot”), also related to metal furnaces (Espasa-Calpe 1998). However, the origin of the name is debated since in Iberian there is another Zalamea (Zalamea de la Serena, Badajoz, Spain), also close to other mercury (Hg) mines (Almadén mines, Ciudad Real, Spain); they also were used by Iberians and documented by Strabo. This suggests that Zalamea is an ancient Iberian name according to our Basque-Iberian transcription/translation proposal (Arnaiz-Villena 2000; Arnaiz-Villena and Alonso-García 2007; Arnaiz-Villena et al. 1999).

Fig. 2. Riotinto Mines has been one of the most important open-pit mining complexes (in map, a white impressive hollow that resembles a Moon landscape) since prehistory located on the Iberian Pyrite Belt. Iron, cooper and silver have been traditionally extracted from these mines. In 2005, the Riotinto mining area was declared an Asset of Cultural Interest with the category of historical site.

Zalamea la Real official area contains several dolmens: El Pozuelo dolmens complex, in which area is placed the entrance of El Chinflon mines, the most ancient open-pit mines in Iberia, (not used nowadays) (Pérez-Macías 1996; 2013; 2018).
The megalithic monuments concentration in Southern Portugal and Spain may be probably linked to the South Iberia Pyrite Belt, rich in metals (mainly cooper, silver, gold and iron among others (Fig. 3).

Fig. 3. The Iberian Pyrite Belt.
Area rich in metals likely related to megaliths high density and Tartessos flourishing.

Southern Spain dolmens are dated in 7000 years BC (Arnaiz-Villena et al. 2013). This is also related to the Tartessos flourishing culture, which was placed in this area since ancient times (Celestino-Pérez and López-Ruiz 2020): Stesichorus of Himera, Anacreon, Hecataeus of Miletus and Herodotus of Halicarnassus are quoting Tartessos since 7th century BC, and Strabo (1st century BC) wrote that Tartessians were writing since 6000 years ago (Strabo 1998).
El Pozuelo dolmens are dated 5000 years old and other dolmens close to the South Iberia Pyrite Belt are dated around these dates. About 50 or more megalithic complexes have been found in Zalamea la Real district; they may be divided as placed in two different West and East areas: El Villar and El Buitrón villages (West), and El Pozuelo dolmens (East) (https://www.andalucia.org/es/zalamea-la-real-turismo-cultural-dolmenes-de-el-pozuelo).

Thus, Zalamea la Real is surrounded by hills and big megalithic constructions, close to the important Riotinto mines at the beginning of Aracena Sierra area, whose name may be translated as ‘our ancestors mountains’ from Basque according to our proposal of Basque-Iberian correspondence (Ara means ‘land’; Zena means ‘the Deads’) (Arnaiz-Villena et al. 2022b).

In this context, in year 2019, Félix Lancha-Gómez, an amateur archaeologist born in Zalamea, started to collect photographs of rock and stones archaeological remains around Zalamea and many rocks scripted with lineal signs of different sizes (usually 20 cm - 110 cm) that for us are Lineal Megalithic Scripts (LMS). Hundreds of different rocks/stones were collected in photographs and some of them scripted with lineal signs are depicted in Lancha-Gómez and Gómez-Ruiz (2021).

In the present paper, we study some of these photographed Zalamea la Real Lineal Megalithic Scripts (LMS) in the context of the South Iberia Pyrite Belt (rich in metals) and the megalithic and Tartessian cultures, since we have postulated a transition of LMS to Iberian-Tartessian signary (Gómez-Moreno 1949; 1962) and other Mediterranean, Eurasian and African old languages lineal writings, see Figs in Discussion (Arnaiz-Villena et al. 2021a; 2022b; 2022c).

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.

Félix Lancha-Gómez, born in Zalamea la Real, started making photographs of fixed rocks, stones, and other archaeological artifacts having lineal and other scripts around Zalamea. He is nicknamed “Perrito” in an affectionate way. He never touched or
removed artifacts that were photographed with their coordinates. He started doing this uninterested job by 2019, but may have been years before when started to photograph other archaeological artifacts surrounding Zalamea. He has later been in contact with people related to archaeology and culture but never recognized.

**Results (Figs 4 - 10)**

The photographs taken from stones, rocks and a fallen menhir are identified with their exact location coordinates. Some of the hundreds of photographs taken have only been analyzed and only some of their signs (both LMS and Tartessian signs) have been highlighted. Studies are ongoing to finish search on the rock signs presented in this paper and also in another photographs. Rock/stones were either fixed to earth or free on land: they were not touched and remained as such after being photographed. Dimensions varied between 1 m (or a little longer, up to 140 cm) and 20 cm. All scripted surfaces were previously polished beforehand. Some of the rocks/stones have partially been studied and shown herewith.
Fig. 4. Rock with incise Lineal Megalithic Scripts (LMS) found at Arroyo del Cerrillar, coordinates 37° 41’ 33” N, 6° 42’ 59” W, close to El Villar village that belongs to Zalamea district (Huelva). Signs found in all analyzed Zalamea rocks are the following ones:

\(\times\) (TA, T), proposed translation = the door; \(\bigwedge\) (M), proposed translation = the Mother; \(\bigvee\) (M), proposed translation = the Mother; \(\backslash\) (BA), proposed translation = yes, emphasis; \(\triangleright\) (KE), proposed translation = smoke) (see Figs 4-10). These signs are common to those found in Alcalar (Portugal) (Arnaiz-Villena et al. 2022a) in a megalithic context, Cumbres Mayores Dolmenic complex (Huelva) (Arnaiz-Villena et al. 2022b), Ti-m Missaou (Algeria) (Arnaiz-Villena et al. 2021b) and Canary Islands (Arnaiz-Villena et al. 2020a; 2020b) in a prehistoric non-precised in time context. Also, Muñoz-Gambero (2019) found this type included in the Iberian-Tartessian signary (Appendix I) not only in Malaga but in other Spanish places. The Leisners archaeologists found and photographed Iberian signs in the San Bartolomé dolmen (Appendix II) (Leisner and Leisner 1943; Cerdán et al. 1952; 1975; Gómez-Moreno 1949; 1962 (Appendix I); Vázquez-Hoys 2008; Sousa et al. 2020). Our analysis of these signs may be seen at references (Arnaiz-Villena et al. 2022a; 2022b; 2022c).
Fig. 5. Rock with incise Lineal Megalithic Scripts found in Cabezo de la Morolla (Huelva), coordinates 37° 39’ 49” N, 6° 51’ 14” W.

Signs like $X$ (TA, T), $\wedge V$ (M), $\vee V$ (M), and $I$ (BA) and $\rangle \langle$ (KE) are also found in Cumbres Mayores (Huelva), Alcalar (Portugal), Ti-m Missaou (Algeria) and Canary Islands (Spain) (Arnaiz-Villena et al. 2020a; 2020b; 2022a; 2022b). See Fig. 4 footnote.
Fig. 6. Rock with incise Lineal Megalithic Scripts (LMS) found in Zalamea la Real (Huelva), coordinates 37° 39’ 45” N, 6° 40’ 40” W.

Signs like ∣ (BA) and ⟨ (KE) found in this rock are also found in Cumbres Mayores (Huelva), Alcalar (Portugal), Ti-m Missaou (Algeria) and Canary Islands (Spain) (Arnaiz-Villena et al. 2020a; 2020b; 2022a; 2022b). See Fig. 4 footnote.
Fig. 7. Lineal Megalithic Scripts (LMS) found in El Villar (Huelva) a little village belonging to Zalamea district, coordinates 37° 41’ 46”N, 6° 44’ 17” W. Signs like \( \mathbf{X} \) (TA, T), \( \mathbf{A} \), \( \mathbf{V} \) (M) and \( \mathbf{\Lambda} \) (M) found in this rock are also found in Cumbres Mayores (Huelva), Alcalar (Portugal), Ti-m Missaou (Algeria) and Canary Islands (Spain) (Arnaiz-Villena et al. 2020a; 2020b; 2022a; 2022b). See Fig. 4 footnote.
Fig. 8. Rock with incise Lineal Megalithic Scripts (LMS) found in Cuesta los Pajares, coordinates 37º 40’ 80”N, 6º 40’ 15” W, Huelva.

Signs like $\mathcal{X}$ (TA, T), $\bigwedge$ (M), $\bigvee$ (M), and $\big|_1$ (BA) found in this rock are also found in Cumbres Mayores (Huelva), Alcalar (Portugal), Ti-m Missaou (Algeria) and Canary Islands (Spain) (Arnaiz-Villena et al. 2020a; 2020b; 2022a; 2022b). See Fig. 4 footnote.
Fig. 9. Incise Lineal Megalithic Scripts (LMS) found in what seems a fallen menhir, Arroyo del Cerrillar, coordinates 37° 41’ 33” N, 6° 42’ 59” W, close to El Villar village that belongs to Zalamea district (Huelva) (Arnaiz-Villena et al. 2020a).

Signs like $\times$ (TA, T), $\bigwedge$ (M), $\bigvee$ (M), $\nabla$ (BA), and $\bigtriangledown$ (KE) are common to those found in Alcalar (Portugal), Cumbres Mayores (Huelva), Ti-m Missaou (Algeria) and Canary Islands (Arnaiz-Villena et al. 2020a; 2020b; 2022a; 2022b). See Fig. 4 footnote.
Fig. 10. Rock with incise Lineal Megalithic Scripts (LMS) found in what may be also a fallen menhir at Arroyo del Cerrillar, coordinates 37° 41’ 33” N, 6° 42’ 59” W, close to El Villar village that belongs to Zalamea district (Huelva).

Signs like $\times$ (TA, T), $\wedge \vee$ (M), $\backslash / \backslash$ (M), $\mid$ (BA), and $\triangleright$ (KE) are common to those found in Alcalar (Portugal), Cumbres Mayores (Huelva), Ti-m Missaou (Algeria) and Canary Islands (Arnaiz-Villena et al. 2020a; 2020b; 2022a; 2022b). See Fig. 4 footnote.
Discussion

Megaliths
They are found all around the World; Southern Spain and Portugal have particularly a high concentration of megaliths. Some of them are 5000 years BC old (Arnaiz-Villena et al. 2013) and others are dated between 4000-3000 years BC.

These structures are bound to the South Iberia Pyrite Belt, very rich in metals and mines. As far as we know, the most important South Iberian mines are the prehistoric Riotinto mines, which have been associated until modern times with Zalamea la Real, where furnaces were possibly concentrated according to its Basque-Iberian etymology proposed by us (see Introduction section).

The Zalamea surroundings, with more than 50 today-extant megaliths, is a prehistoric area where many rests, stones and ruins may be dated from megalithic times: 5-3 thousand years BC. Particularly, the hundred stones photographed for this work are bearing Lineal Megalithic Scripts admixed with Tartessian signs (Arnaiz-Villena et al. 2019; 2021a; 2021b; 2022a; 2022b; 2022c).

Common Tartessian signs in other megalithic contexts and possible evolution from Lineal Megalithic Scripts

This megalithic culture goes together with Lineal Megalithic Scripts which are sometimes admixed with Iberian-Tartessian scripts (Appendix I). 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 rock scripts like at Cumbres Mayores Dolmen, San Bartolomé Dolmen (Appendix II) (Leisner & Leisner 1943; Cerdán et al. 1952; 1975; Sousa et al. 2020; Arnaiz-Villena et al. 2022a; 2022b; 2022c) 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 100000 to 60000 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).

**Zalamea and Tartessos**

We have put forward that Zalamea was the main furnace place of prehistoric (including megalithic times) Riotinto Mines because of the Basque-Iberian name of Zalamea (‘hardcore mineral’). These big mines have been surrounded by remarkable legends including that Zalamea name was used since the King Solomon put his name to the place (‘Salomea’) . Anecdotally, ‘Cerro Salomón’ (‘Solomon Hill’) is part of Riotinto Mines. They have also been dismissed (https://zalamealareal-historia.blogia.com; http://tierrasdeldescubrimiento.diphuelva.es/2015/05/zalamea-la-real-conocela/). In this context, Riotinto mines were also identified as King Solomon mines.

However, we have shown in the present paper that Zalamea is surrounded by engraved rocks and stones with Lineal Megalithic Scripts admixed with Tartessian signs: this is another example of how in a big area in Europe and Africa, Iberian-Tartessian signs with a possible religious meaning are found together with LMS (Fig.11). This may be a stage of developing megalithic lineal scripts into Mediterranean, European and African languages lineal writing as described by us (Arnaiz-Villena et al. 2022c).

In addition, this area was famous by its metal richness (Celestino-Pérez and López-Pérez 2020) according to ancient writers as Herodotus of Halicarnassus and others. Thus, a relationship is seen with these Tartessian scripts found in Zalamea rocks/stones (and a fallen menhir), the rich-in-metals Riotinto and other surrounding mines, and the legendary richness of Tartessos in metals (Arnaiz-Villena et al. 2022a; 2022b). On the other hand, both in Portugal and Algarve are evidences that they finally wrote in Iberian-Tartessian (see Museo da Escrita, Almodovar, Portugal; and Jürgen Untermann Iberian corpus of Iberian scripts at http://ibers.cat); old Iberian-Tartessian scripts found in rocks, metal and other supports in Huelva, Andalusia and finally over all Spain and Southern France are evidencing that the ancient Tartessos were placed both at Algarve (South Portugal) and Huelva and Andalusia (South Spain) and was
related and may have influenced the rest of Iberia at least. Canary Islands and Sahara Dessert Iberian-Tartessian signs may have been the origin of the Iberian-Tartessin signary as such (Arnaiz-Villena et al. 2020b; 2021b; 2022c).

**Fig. 11.** Rock scripts included in Iberian-Tartessian semi-syllabary (Appendix I) are found in a wide extension area including Cumbres Mayores (Huelva, Spain), Alcalar (South Portugal), Canary Islands (Spain) and Ti-m Missaou (Algeria, Sahara Desert). These scripts which may be found in a megalithic context (5000-3000 years BC) (Arnaiz-Villena et al. 2020a; 2020b; 2021a; 2021b; 2022a; 2022b).

**Conclusions**

1) The concentration of dolmenic structures surrounding Zalamea la Real with Lineal Megalithic Scripts (LMS) admixed with Tartessian signs, and the number of engraved stones (part or included in dolmenic complexes) make us to
consider our Zalamea-surrounding findings in the context of a Megalithic culture place.

2) The same admixture of LMS with Tartessian signs is also found in Cumbres Mayores megaliths (Huelva, Spain), Alcalar megaliths (Portimao, Portugal), all seven Canary Islands (Spain), in which a megalithic context is also possible; and Ti-m Missaou (Algeria), in which Iberian-Tartessian signs may be found with no LMS. This broad geographic territory of ancient Iberian-Tartessian scripts admixed with LMS in the absence of known links drive us to propose a common Mother Goddess Religion that continued from Paleolithic to Megalithic times as being a feasible common link.

3) It is possible that LMS evolved to Iberian-Tartessian signary and other Mediterranean, African and European languages with lineal writing expression.

4) The legendary-rich Tartessos most likely comprised the metal-rich South Iberia Pyrite Belt (Fig. 3), which starts at Alcácer do Sal (Portugal) and finishing in Seville (Las Cruces Mines, at Gerena/Aznalcollar villages).

Appendix I

Iberian-Tartessian semi-syllabary assembled by Manuel Gómez-Moreno (Gómez Moreno 1949; 1962).
Appendix II

Artifact identified by us as a small slinger projectile found at San Bartolomé Dolmen, Huelva, Spain. It is too small to be used as an arrow sharpener. 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, like a small fist), 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).

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

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