

Title: Proposal to encode the Southern Palaeohispanic script

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Date: 1st January 2020

Attached is a proposal for Southern Palaeohispanic. Differences from the earlier proposal [L2/19-333](#) are identified by yellow highlighting. These include: one new character, a discussion of hapaxes and variants, improved captions, two new bibliographic references and eight new figures/charts.

Earlier documents include the following for the Southern Palaeohispanic.

[L2/19-333](#) Proposal to encode the Southern Palaeohispanic script

[L2/19-045](#) New charts for Northern and Southern Palaeohispanic

The following documents were based on a unified script of Northern and Southern Palaeohispanic.

[L2/18-283](#) Proposal to encode the Palaeohispanic script

[L2/18-030](#) Proposal to encode the Palaeohispanic script

[L2/17-129](#) Proposal to encode the Palaeohispanic script

(In 2015, two preliminary proposals were submitted, but they were only for “north-eastern Iberian” and did not include Southern Palaeohispanic.)

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1. Summary

Palaeohispanic scripts are attested in the Iberian Peninsula by *ca.* 2,700 inscriptions dating from the 7th century BC to the 1st century AD. They were used to write at least four different local languages: Celtiberian, Iberian, the south-western or Tartessian language and probably as well Turdetan. Although the longest inscription contains *ca.* 500 words, most long texts rarely reach over 50 words; others, on the other hand, are very short and contain just a personal name or abbreviations.

The Palaeohispanic script family consists of several scripts that can be divided into 2 types: the northern (with *ca.* 2,500 inscriptions) and the southern group (with *ca.* 170 inscriptions). That's why we codify them according to two different standards:

1. Northern Palaeohispanic, which includes the north-eastern Iberian and the Celtiberian script.
2. Southern Palaeohispanic, which includes the south-eastern Iberian script, the south-western or Tartessian script, the Turdetan script and the Espanca abecedary.

All Palaeohispanic writing systems are characterised by a similar corpus of signs and by the coexistence of alphabetic and syllabic characters. Moreover, all of them share a common ancestor, which might ultimately arise from the Phoenician alphabet (see fig. 1). However, the differences between the two groups are too deep to be appropriately processed into a unique Unicode character set. The main obstacle is the different degree of decipherment between the two groups, which is almost complete for the north-eastern Iberian group and still incomplete for at least a third of the signs attested in the southern scripts. The second obstacle is that many signs shared by these two groups actually have different values: it is the case for most of the vocalic signs, as well as for other frequent signs for which there is clear consensus on their value.

The decipherment of the northern Palaeohispanic scripts was accomplished at the beginning of the 20th century by Manuel Gómez-Moreno (1922, 1949). Nevertheless, some aspects were not entirely deciphered until very recent dates. Such is the case of a variant of this script called *the dual system*, which consists of the use of signs with two variants, each of them with its own distinctive value, differing from each other in presenting an additional stroke (e. g. $\times = \mathbf{da}$ and $\times = \mathbf{ta}$). In fact, some concrete features of this system are even still undergoing research. Unlike the northern scripts, the southern scripts have not been fully deciphered, since there are many signs for which there is no agreed value among specialists. The non-deciphered characters will be named in this proposal after an arbitrary code, as it is currently in use in the specialized bibliography.

The Palaeohispanic inscriptions are being edited and digitalized in the Hesperia open access database (<http://hesperia.ucm.es/>), in the framework of a research project carried out by a team of scholars from different Spanish universities.

2. Background

This proposal, together with the one devoted to northern Palaeohispanic, is an updated version of three earlier proposals: "L2/15-120-Preliminary proposal to encode the north-eastern Iberian script"; "L2/15-119 Preliminary proposal to encode the southern Palaeohispanic scripts"; and L2/18-283 "Proposal to encode the Palaeohispanic script".

The last of them was an attempt to codify all the Palaeohispanic scripts together, under a single encoding. However, after submitting this possibility for analysis with several Unicode specialists, we have come to the conclusion that a separate codification for the southern and northern scripts makes it possible to better reproduce the graphematic system in the different scripts. The revised charts in the current proposal now reflect repertoires that reflect the graphemes in the writing systems. Therefore, two documents are produced, this one for the southern Palaeohispanic script, and another one for the northern Palaeohispanic script.

With the proposed repertoires, all characters in Southeastern Iberian, Southwestern, Turdetan and Espanca's scripts can be represented. As with Old Italic, fonts will be used to represent the different alphabets of Iberia.

The earlier proposals, L2/15-120 and L2/15-119, contain detailed discussion on the characters, figures, and references. See also the article J. Ferrer, N. Moncunill, J. Velaza, "Toward a systematisation of Palaeohispanic scripts in Unicode: synthesising multiple transcription hypotheses into two consensus encodings", *Palaeohispanica* 15, 2015, pp. 13-55.

This proposal also includes some novelties with respect to the previous ones: the codification of some additional characters that will allow the representation of the recently identified Turdetan script reflecting its own specificity.

Recent research on Turdetan inscriptions has revealed a number of features specific to the Turdetan writing, which makes it possible to individualise this script from the rest of southern scripts. The use of the S65 character as a variant of the vowel **a** is particularly noteworthy (𐤀).

Unlike what happens in the dual southern Iberian script, it seems possible to postulate the existence in Turdetan inscriptions of a two-element variants for the labials: cf. for example the complex **ba** sign, with an inner dot (𐤁), which appears in the lead from Los Allosos in coexistence with the simple variant (𐤂); or the complex glyphs for **bo** in the dolmen of Valdecaballeros (𐤃) or in the coins of Obulco (𐤄).

It also seems clear the existence of a new duality not documented so far in any other Palaeohispanic script which would affect the lateral consonant: cf. the **l** character with an inner dot in the lead tablet from Alcolea del Río (𐤅).

It is also possible to identify a super-complex variant of **ka** with a double mark (𐤆) in the lead from Piquía, which allows us to consider the existence of a third value for this character, as it happens in the northeastern Iberian script. A third nasal can also be identified in the super-complex variant of the sign for **n** (𐤇), as documented in the lead tablets from Gádor and from Alcolea del Río.

Finally, Turdetan inscriptions also contain some complex characters which do not seem to be allographs of other previously identified characters; for this reason, they should be codified independently. This is the case of the sign S64 (𐤈), which is documented in the lead tablets from

Gádor and Alcolea del Río and the sign S62 () , which is documented in several monetary legends from Obulco.

Although the specific value of some of these characters is still under discussion, their existence as independent graphemes is clear. In our opinion, these recent developments should be taken into consideration in the Unicode codification of the southern Palaeohispanic scripts.

In the southern inscriptions (Fig. 19), especially in the southwestern group (Fig. 20), there are many forms that appear only once (hapax) and which are probably, in most cases, misreadings or rare variants of other well-known characters, as has been recently demonstrated for the well-documented sign S65 () , and plausibly also for the hapax S70 () , which are variants of the sign a () (Ferrer i Jané 2018; 2019; e.p.). Therefore, the different variants of the rung series signs are not included in this proposal: S47b () , S47c () , S47d () , S47e () , S47h () , S47i () , S47j () and S86 () as they are probably variants of one of the three well known signs S47 () , S47f () and S47g () . Other hapax that have not been encoded separately are the Espanca sign () whose reading is uncertain because of the bad state of the surface and which is probably a variant of the sign () , missing in the Espanca abecedary; the Espanca sign S52 () , probably a variant of the r sign () , also missing in the Espanca abecedary; the sign S61, probably a misreading; the signs S82, also probably a variant of the sign () ; the sign S85 () , probably an inverted variant of the sign to () ; the sign S88 () , probably a variant of ki () ; the sign S89 () , probably a misreading; the sign S90 () , probably a round variant of ko ()); the sign S91 () , probably a variant of () ; the sign S92 () , probably a variant of the S87 sign () the S93 sign () , probably a variant of () ; the sign , probably a variant of u () ; and the signs  and  , probably both variants of () .

3. Structure

All Palaeohispanic scripts are semisyllabic: vowels, nasals, laterals, sibilants and trills are alphabetical, whereas characters for plosives are syllabic.

There is another feature shared by most Palaeohispanic scripts: the possibility they offer to differentiate some similar signs with close phonetic value by an additional stroke; rather than a mere diacritic (although originally it might have been so), this stroke tends to be an integrating component of the sign itself. This subset of scripts with a larger number of variants has been labelled as “dual”. The recent discovery of dual abecedaries confirms that these dualities were integrated in the standard scripts, where the pair of signs appears always in the same order: the complex variant, with its additional stroke, in the first place and, thereafter, the simple one.

These dualities can affect different sets of sounds: plosives, continuous consonants, but not vowels in the southern scripts. However, only for the first ones the phonetic opposition (in this case, voiced – voiceless) between the complex and the simple has been confirmed. Therefore, according to the extension of the use of dualities, it is possible to identify different subsets within every script:

- The south-eastern Iberian, according to the current available documentation, seems to be always dual, with dualities for both plosives, except for labials, and some continuous consonants.
- The Turdetan script according to the current available documentation, seems to be always dual, with dualities for both plosives, including labials, and some continuous consonants, including the lateral.

- The south-western script and the script represented by the Espanca abecedary are clearly non-dual.

The standard script for Unicode has been built taking into account an inventory of signs as large as possible, including all dual variants; in general terms, the glyphs for the proposed characters to be encoded match the glyphs of the south-eastern Iberian dual extended script.

In addition, the Unicode repertoire also considers as meaningful a three-elements variability for the sign **ka** in the Turdetan script, following the same feature in the northern scripts, although this possibility is only supported by the shape of the **ka** sign in the lead cover from Piquía, that shows two inner strokes.

As for other characters which can also display a more than two elements variation, such as $\varnothing / \Phi / \varnothing$ and $\mathbb{N} / \mathbb{H} / \mathbb{H} / \mathbb{H} / \mathbb{H}$ the glyphs with more than one additional stroke have not been encoded separately, since they can be considered in most cases as an allograph of the glyph with only one additional bar and the conflictive cases are very scarce.

4. Direction of script

The proposed default direction of the southern script is right to left, which is the predominant direction in inscriptions of the southern group. In order to render texts left to right, users should use RLO and PDF overrides, or other mechanisms as described in UAX #9 (<http://www.unicode.org/reports/tr9/proposed.html>). If the default direction of the script is overridden, the glyphs in the font should be mirrored from those presented here.

5. Character names

The character names are based by default on the north-eastern script, which is the script with more inscriptions and the one whose decipherment is completed. However, since the values are not usually the same in each Palaeohispanic script, notes are used to specify the value of the character in every script. For instance:

10268  SOUTHERN PALAEOHISPANIC LETTER R2

= R1 in Southeastern Iberian and Turdetan

= R2 in Southwestern Palaeohispanic

= S52 in Espanca's script

The lack of notes implies that the sign has the same value in all scripts. For instance:

10265  SOUTHERN PALAEOHISPANIC LETTER N

When a sign is exclusive of one single script it is specified that way:

1024E  SOUTHERN PALAEOHISPANIC LETTER KA WITH TWO ADDITIONAL STROKES

- Turdetan

The marked signs in the "dual" scripts are named with the terminology "with additional stroke" or "with two additional strokes". For instance:

1024C  SOUTHERN PALAEOHISPANIC LETTER TI WITH ADDITIONAL STROKE

- Southeastern Iberian

When the phonetic value of a sign is unknown, we use the conventional code used in the specialized bibliography. For instance:

1026D  SOUTHERN PALAEOHISPANIC LETTER S45-4

Please note that the names of the letters don't always reflect the transcription system used in the discursive parts of the proposal. These are the correspondences:

S1 = **s**

S2 = **ś**

S2 WITH ADDITIONAL STROKE = **š**

L WITH DOT = **í**

N = **n**

N WITH ADDITIONAL STROKE = **ñ**

N WITH ADDITIONAL STROKES AND DOTS = **ň**

R1 = **ř**

R1 WITH ADDITIONAL STROKE = **ṛ̌**

R2 = **r**

KA = **ka**

KA WITH ADDITIONAL STROKE = **ga**

KA WITH TWO ADDITIONAL STROKES = **kạ**

KE = **ke**

KE WITH ADDITIONAL STROKE = **ge**

KI = **ki**

KI WITH ADDITIONAL STROKE = **gi**

KO = **ko**

KO WITH ADDITIONAL STROKE = **go**

BA = **pa**

BA WITH DOT = **ba**

...

6. Numbers

Iberian metrological expressions are basically formed by groups of vertical bars to generate the numerical component of the expression: I = 1, II = 2, III = 3, IIII = 4, IIIII =5. In one inscription (G-7-2) vertical dots are used.

7. Punctuation

The most common word separator consists of a vertical bar, but it is also common the use of vertical dots, two, three or even more, which, all together, are used with a similar frequency to the bar. Sporadically a blank can also be used as separator and, in some other cases, we do not find any separators at all.

Although the different word separators used in the south-eastern Palaeohispanic script are already-encoded characters, such as 205A for the two-dots punctuation, we have encoded the abstract concept of word separator with a unique code specific to this codification in order that it can be customized in each font representing the different south-eastern traditions.

8. Order

For the code chart: vowels will appear in the alphabetical order **a, e, i, o, u**; plosives in the usual alphabetical order **p/b, k/g, t/d**; and continuous consonants in the alphabetical order **l, n, r, s**. The marked-sign pairs or trios will be grouped together, the marked character preceding the unmarked, as appears in the north-eastern Iberian abecedaries, and the double marked character preceding the marked. The signs of unknown value are ordered by their code. The numeral sign stands at the end.

The proposed order for sorting is as follows: **a, ba, pa, S42, be, pe, S87, pi, po, bo, pu/bu, da, ta, de, te, di, ti, do, to, du, tu, e, S48, ga, ka, ka, S45.4, S45.2, ge, ke, gi, ki, go, ko, ku/gu, i, l, l, l, n, n, n, o, r, r, r, r, s, s, s, u, S80,S81, S83, S50, S62, S64**

Specific exceptions to the alphabetical order are as follows:

- Consecutive order for simple sibilant (**s**) and sibilant with an additional stroke (**š**);
- Consecutive order for voiceless and voiced plosives in order to keep together the dual and non-dual transcriptions of the same elements.
- Some signs of unknow value are inserted between the characters with supposed close value: S42 between **ba** and **be**, S48 after **e** and S45.4 and S54.2 between **ka** and **ke**.

9. Unicode Character Properties

All the SOUTHERN Palaeohispanic letters from 10240 to 10275 are as below.

10240; SOUTHERN PALAEOHISPANIC LETTER A;Lo;0;L;;;;N;;;;;

10241; SOUTHERN PALAEOHISPANIC LETTER E;Lo;0;L;;;;N;;;;;

10242; SOUTHERN PALAEOHISPANIC LETTER I;Lo;0;L;;;;N;;;;;

10243; SOUTHERN PALAEOHISPANIC LETTER O;Lo;0;L;;;;N;;;;;

10244; SOUTHERN PALAEOHISPANIC LETTER U;Lo;0;L;;;;N;;;;;

10245; SOUTHERN PALAEOHISPANIC LETTER BA WITH DOT Lo;0;L;;;;N;;;;;

10246; SOUTHERN PALAEOHISPANIC LETTER BA;Lo;0;L;;;;;N;;;;;
10247; SOUTHERN PALAEOHISPANIC LETTER BE WITH ADDITIONAL STROKE;Lo;0;L;;;;;N;;;;;
10248; SOUTHERN PALAEOHISPANIC LETTER BE;Lo;0;L;;;;;N;;;;;
10249; SOUTHERN PALAEOHISPANIC LETTER S87;Lo;0;L;;;;;N;;;;;
1024A; SOUTHERN PALAEOHISPANIC LETTER BI;Lo;0;L;;;;;N;;;;;
1024B; SOUTHERN PALAEOHISPANIC LETTER BO WITH TWO? ADDITIONAL STROKES;Lo;0;L;;;;;N;;;;;
1024C; SOUTHERN PALAEOHISPANIC LETTER BO;Lo;0;L;;;;;N;;;;;
1024D; SOUTHERN PALAEOHISPANIC LETTER PU-BU;Lo;0;L;;;;;N;;;;;
1024E; SOUTHERN PALAEOHISPANIC LETTER KA WITH TWO ADDITIONAL STROKE;Lo;0;L;;;;;N;;;;;
1024F; SOUTHERN PALAEOHISPANIC LETTER KA WITH ADDITIONAL STROKE;Lo;0;L;;;;;N;;;;;
10250; SOUTHERN PALAEOHISPANIC LETTER KA;Lo;0;L;;;;;N;;;;;
10251; SOUTHERN PALAEOHISPANIC LETTER KE WITH ADDITIONAL STROKE;Lo;0;L;;;;;N;;;;;
10252; SOUTHERN PALAEOHISPANIC LETTER KE;Lo;0;L;;;;;N;;;;;
10253; SOUTHERN PALAEOHISPANIC LETTER KI WITH ADDITIONAL STROKE;Lo;0;L;;;;;N;;;;;
10254; SOUTHERN PALAEOHISPANIC LETTER KI;Lo;0;L;;;;;N;;;;;
10255; SOUTHERN PALAEOHISPANIC LETTER KO WITH ADDITIONAL STROKE;Lo;0;L;;;;;N;;;;;
10256; SOUTHERN PALAEOHISPANIC LETTER KO;Lo;0;L;;;;;N;;;;;
10257; SOUTHERN PALAEOHISPANIC LETTER KU-GU WITH ADDITIONAL STROKE;Lo;0;L;;;;;N;;;;;
10258; SOUTHERN PALAEOHISPANIC LETTER TA WITH ADDITIONAL STROKE;Lo;0;L;;;;;N;;;;;
10259; SOUTHERN PALAEOHISPANIC LETTER TA;Lo;0;L;;;;;N;;;;;
1025A; SOUTHERN PALAEOHISPANIC LETTER TE WITH ADDITIONAL STROKE;Lo;0;L;;;;;N;;;;;
1025B; SOUTHERN PALAEOHISPANIC LETTER TE;Lo;0;L;;;;;N;;;;;
1025C; SOUTHERN PALAEOHISPANIC LETTER TI WITH ADDITIONAL STROKE;Lo;0;L;;;;;N;;;;;
1025D; SOUTHERN PALAEOHISPANIC LETTER TI;Lo;0;L;;;;;N;;;;;
1025E; SOUTHERN PALAEOHISPANIC LETTER TO;Lo;0;L;;;;;N;;;;;
1025F; SOUTHERN PALAEOHISPANIC LETTER TU WITH ADDITIONAL STROKE;Lo;0;L;;;;;N;;;;;

10260; SOUTHERN PALAEOHISPANIC LETTER TU;Lo;0;L;;;;N;;;;;
10261; SOUTHERN PALAEOHISPANIC LETTER L WITH DOT;Lo;0;L;;;;N;;;;;
10262; SOUTHERN PALAEOHISPANIC LETTER L;Lo;0;L;;;;N;;;;;
10263; SOUTHERN PALAEOHISPANIC LETTER N WITH ADDITIONAL STROKES AND DOTS;Lo;0;L;;;;N;;;;;
10264; SOUTHERN PALAEOHISPANIC LETTER N WITH ADDITIONAL STROKE;Lo;0;L;;;;N;;;;;
10265; SOUTHERN PALAEOHISPANIC LETTER N;Lo;0;L;;;;N;;;;;
10266; SOUTHERN PALAEOHISPANIC LETTER R1 WITH ADDITIONAL STROKE;Lo;0;L;;;;N;;;;;
10267; SOUTHERN PALAEOHISPANIC LETTER R1;Lo;0;L;;;;N;;;;;
10268; SOUTHERN PALAEOHISPANIC LETTER R2;Lo;0;L;;;;N;;;;;
10269; SOUTHERN PALAEOHISPANIC LETTER S1;Lo;0;L;;;;N;;;;;
1026A; SOUTHERN PALAEOHISPANIC LETTER S2 WITH ADDITIONAL STROKE;Lo;0;L;;;;N;;;;;
1026B; SOUTHERN PALAEOHISPANIC LETTER S2;Lo;0;L;;;;N;;;;;
1026C; SOUTHERN PALAEOHISPANIC LETTER S42;Lo;0;L;;;;N;;;;;
1026D; SOUTHERN PALAEOHISPANIC LETTER S45-4;Lo;0;L;;;;N;;;;;
1026E; SOUTHERN PALAEOHISPANIC LETTER S45-2;Lo;0;L;;;;N;;;;;
1026F; SOUTHERN PALAEOHISPANIC LETTER S48;Lo;0;L;;;;N;;;;;
10270; SOUTHERN PALAEOHISPANIC LETTER S50;Lo;0;L;;;;N;;;;;
10271; SOUTHERN PALAEOHISPANIC LETTER S62;Lo;0;L;;;;N;;;;;
10272; SOUTHERN PALAEOHISPANIC LETTER S64;Lo;0;L;;;;N;;;;;
10273; SOUTHERN PALAEOHISPANIC LETTER S80;Lo;0;L;;;;N;;;;;
10274; SOUTHERN PALAEOHISPANIC LETTER S81;Lo;0;L;;;;N;;;;;
10275; SOUTHERN PALAEOHISPANIC LETTER S83;Lo;0;L;;;;N;;;;;

The only Palaeohispanic southern numeral as below.

10276; SOUTHERN PALAEOHISPANIC NUMERAL ONE;No;0;L;;;;1;N;;;;;

The word separator will be encoded as below.

10. Proposed Characters

c	1024	1025	1026	1027
0	 A	 KA	 TU	 S50
1	 E	 KE WITH ADDITIONAL STROKE	 L WITH DOT	 S62
2	 I	 KE	 L	 S64
3	 O	 KI WITH ADDITIONAL STROKE	 N WITH ADDITIONAL STROKES AND DOTS	 S80
4	 U	 KI	 N WITH ADDITIONAL STROKE	 S81
5	 BA WITH DOT	 KO WITH ADDITIONAL STROKE	 N	 S83
6	 BA	 KO	 R1 WITH ADDITIONAL STROKE	 Numeral ONE
7	 BE WITH ADDITIONAL STROKE	 KU-GU	 R1	 WORD SEPARATOR
8	 BE	 TA WITH ADDITIONAL STROKE	 R2	
9	 S87	 TA	 S1	
A	 BI	 TE WITH ADDITIONAL STROKE	 S2 WITH ADDITIONAL STROKE	
B	 BO WITH TWO ADDITIONAL STROKES	 TE	 S2	
C	 BO	 TI WITH ADDITIONAL STROKE	 S42	
D	 PU-BU	 TI	 S45-4	
E	 KA WITH TWO ADDITIONAL STROKES	 TO	 S45-2	

F	A	KA WITH ADDITIONAL STROKE	A	TU WITH ADDITIONAL STROKE	4	S48		
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10240  SOUTHERN PALAEOHISPANIC LETTER A

= S87 in Southwestern Palaeohispanic

= pi in Turdetan

10241  SOUTHERN PALAEOHISPANIC LETTER E

10242  SOUTHERN PALAEOHISPANIC LETTER I

10243  SOUTHERN PALAEOHISPANIC LETTER O

10244  SOUTHERN PALAEOHISPANIC LETTER U

10245  SOUTHERN PALAEOHISPANIC LETTER BA WITH DOT

- Turdetan

10246  SOUTHERN PALAEOHISPANIC LETTER BA

= ba in Southeastern Iberian

= pa in Turdetan

= pe/be in Southwestern Palaeohispanic and Espanca

10247  SOUTHERN PALAEOHISPANIC LETTER BE WITH ADDITIONAL STROKE

- Turdetan

10248  SOUTHERN PALAEOHISPANIC LETTER BE

= be in Southeastern Iberian

= pe in Turdetan

= S41 in Southwestern Palaeohispanic and Espanca

10249  SOUTHERN PALAEOHISPANIC LETTER S87

1024A  SOUTHERN PALAEOHISPANIC LETTER BI

= bi in Southeastern Iberian

= pi/bi in Turdetan, Southwestern Palaeohispanic and Espanca

1024B  SOUTHERN PALAEOHISPANIC LETTER BO WITH TWO ADDITIONAL STROKES

- Turdetan

1024C  SOUTHERN PALAEOHISPANIC LETTER BO

= bo in Southeastern Iberian

= po in Turdetan

= po/bo in Southwestern Palaeohispanic and Espanca

1024D  SOUTHERN PALAEOHISPANIC LETTER PU-BU

1024E  SOUTHERN PALAEOHISPANIC LETTER KA WITH TWO ADDITIONAL STROKES

- Turdetan

1024F  SOUTHERN PALAEOHISPANIC LETTER KA WITH ADDITIONAL STROKE

= ga in Southeastern Iberian and Turdetan

10250  SOUTHERN PALAEOHISPANIC LETTER KA

= ka in Southeastern Iberian and Turdetan

= ka/ga in Southwestern Palaeohispanic and Espanca

10251  SOUTHERN PALAEOHISPANIC LETTER KE WITH ADDITIONAL STROKE

= ge in Southeastern Iberian and Turdetan

10252  SOUTHERN PALAEOHISPANIC LETTER KE

= ke in Southeastern Iberian

= ke/ge in Southwestern Palaeohispanic and Espanca

10253  SOUTHERN PALAEOHISPANIC LETTER KI WITH ADDITIONAL STROKE

= gi in Southeastern Iberian and Turdetan

= ki/gi in Southwestern Palaeohispanic

10254  SOUTHERN PALAEOHISPANIC LETTER KI

= ki in Southeastern Iberian and Turdetan

= ki/gi in Espanca

10255  SOUTHERN PALAEOHISPANIC LETTER KO WITH ADDITIONAL STROKE

= go in Southeastern Iberian and Turdetan

10256  SOUTHERN PALAEOHISPANIC LETTER KO

= ko in Southeastern Iberian and Turdetan

= ko/go in Southwestern Palaeohispanic and Espanca

10257  SOUTHERN PALAEOHISPANIC LETTER KU-GU

10258  SOUTHERN PALAEOHISPANIC LETTER TA WITH ADDITIONAL STROKE

= da in Southeastern Iberian and Turdetan

10259  SOUTHERN PALAEOHISPANIC LETTER TA

= ta in Southeastern Iberian and Turdetan

= ta/da in Southwestern Palaeohispanic and Espanca

1025A  SOUTHERN PALAEOHISPANIC LETTER TE WITH ADDITIONAL STROKE

= de in Southeastern Iberian and Turdetan

= de/te in Southwestern Palaeohispanic and Espanca

1025B  SOUTHERN PALAEOHISPANIC LETTER TE

= te in Southeastern Iberian and Turdetan

1025C  SOUTHERN PALAEOHISPANIC LETTER TI WITH ADDITIONAL STROKE

= di in Southeastern Iberian

1025D  SOUTHERN PALAEOHISPANIC LETTER TI

= ti in Southeastern Iberian and Turdetan

= ti/di in Southern Palaeohispanic and Espanca

1025E  SOUTHERN PALAEOHISPANIC LETTER TO

= to/do in Southwestern Palaeohispanic and in Turdetan

1025F  SOUTHERN PALAEOHISPANIC LETTER TU WITH ADDITIONAL STROKE

= du in Southeastern Iberian and Turdetan

10260  SOUTHERN PALAEOHISPANIC LETTER TU

= tu in Southeastern Iberian and Turdetan

= tu/du in Southwestern Palaeohispanic and Espanca

10261  SOUTHERN PALAEOHISPANIC LETTER L WITH DOT

- Turdetan

10262  SOUTHERN PALAEOHISPANIC LETTER L

10263  SOUTHERN PALAEOHISPANIC LETTER N WITH ADDITIONAL STROKES AND DOTS

- Turdetan

10264  SOUTHERN PALAEOHISPANIC LETTER N WITH ADDITIONAL STROKE

= Southeastern Iberian and Turdetan

10265  SOUTHERN PALAEOHISPANIC LETTER N

10266  SOUTHERN PALAEOHISPANIC LETTER R1 WITH ADDITIONAL STROKE

= Southeastern Iberian and Turdetan

10267  SOUTHERN PALAEOHISPANIC LETTER R1

= R1 in Southeastern Iberian and Turdetan

= R2 in Southwestern Palaeohispanic

10268  SOUTHERN PALAEOHISPANIC LETTER R2

= R2 in Southeastern Iberian and Turdetan

= R1 in Southwestern Palaeohispanic

= S52 in Espanca

10269  SOUTHERN PALAEOHISPANIC LETTER S1

= S80 in Southwestern Palaeohispanic

= S51 or S80 in Espanca's script

1026A  SOUTHERN PALAEOHISPANIC LETTER S2 WITH ADDITIONAL STROKE

- Southeastern Iberian and Turdetan

1026B  SOUTHERN PALAEOHISPANIC LETTER S2

1026C  SOUTHERN PALAEOHISPANIC LETTER S42

= S42 in Southeastern Iberian and Turdetan

= ba/pa in Southwestern Palaeohispanic and Espanca

1026D  SOUTHERN PALAEOHISPANIC LETTER S45-4

- Southeastern Iberian and Turdetan

1026E  SOUTHERN PALAEOHISPANIC LETTER S45-2

1026F  SOUTHERN PALAEOHISPANIC LETTER S48

- Southeastern Iberian and Espanca

10270  SOUTHERN PALAEOHISPANIC LETTER S50

- Espanca

10271  SOUTHERN PALAEOHISPANIC LETTER S62

- Turdetan

10272  SOUTHERN PALAEOHISPANIC
LETTER S64

- Turdetan

10273  SOUTHERN PALAEOHISPANIC
LETTER S80

- Southwestern Palaeohispanic and
Espanca

10274  SOUTHERN PALAEOHISPANIC LETTER
S81

- Southeastern Iberian

10275  SOUTHERN PALAEOHISPANIC
LETTER S83

- Southwestern Palaeohispanic

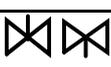
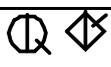
10276  SOUTHERN PALAEOHISPANIC
NUMERAL ONE

- Southeastern Iberian

10277  SOUTHERN PALAEOHISPANIC WORD
SEPARATOR

11.- Glyph Variation chart

Encoded glyph	Transcription (see pp. 4-5)		Southern			
			Iberian	Turdetan	South western	Espanca
			SI+	T	SW	Esp
	10240	a				
	10241	e				
	10242	i				
	10243	o				
	10244	u				
	10245	ba				
	10246	pa				
	10247	be				
	10248	pe				
	10249	S87		*		
	1024A	pi				
	1024B	bo				
	1024C	po				
	1024D	pu/bu		*		
	1024E	ka				
	1024F	ga		*		
	10250	ka				
	10251	ge		*		

	10252	ke				
	10253	gi				
	10254	ki		*		
	10255	go				
	10256	ko				
	10257	ku/gu				
	10258	da		*		
	10259	ta				
	1025A	de				
	1025B	te				
	1025C	di		*		
	1025D	ti				
	1025E	to/do				
	1025F	du				
	10260	tu				
	10261	í				
	10262	l				
	10263	ñ				
	10264	n				
	10265	n				
	10266	ř				
	10267	ř				

					r	
	10268	r				
	10269	s				
	1026A	š				
	1026B	ś				
	1026C	S42				
	1026D	S45.4		*		
	1026E	S45.2				
	1026F	S48				
	10270	S50				
	10271	S62				
	10272	S64				
	10273	S80				
	10274	S81				
	10275	S83				
	10276	numer al 1				
	10277	Word separa tor				

SI + = Southeastern Iberian dual

SW = Southwestern Palaeohispanic

For the signs of unknown phonetic value, we use a conventional code (S standing for sign + number), following de Hoz (2010).

¹ For an interpretation of this glyph as an archaic variant of the other two, see J. Ferrer, N. Moncunill, J. Velaza, "Towards a systematisation of Palaeohispanic scripts in Unicode: synthesising multiple transcription hypotheses into two consensus encodings", *Palaeohispanica* 15 (2015), p. 36 ; J. Ferrer, «El origen dual de las escrituras paleohispánicas : un nuevo modelo genealógico », *Palaeohispanica* 17 (2017), p. 72. This interpretation was first proposed by Jürgen Untermann (1992) in a conference paper which was never published: "During its development in the south the sign S52 lost two of the strokes and the oval opened to become a semicircle". Note, in any case, that this character is a hapax.

² This character is only attested once and its exact shape is uncertain (see J. Ferrer, N. Moncunill, J. Velaza, "Towards a systematisation of Palaeohispanic scripts in Unicode: synthesising multiple transcription hypotheses into two consensus encodings", *Palaeohispanica* 15 (2015), p. 35-36).

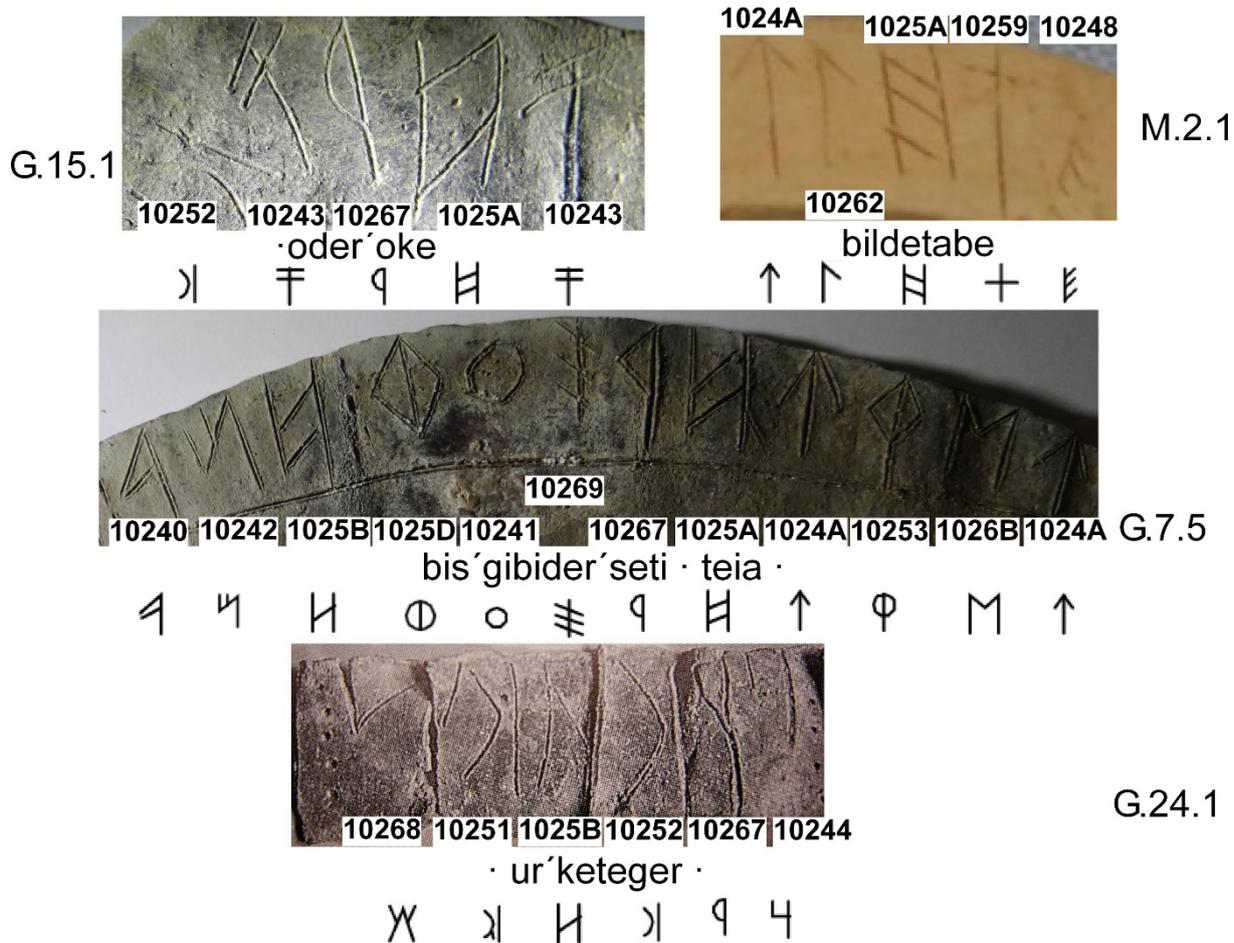


Fig 3.- Examples showing inscriptions with code points and expected letter shapes in online/print publications.

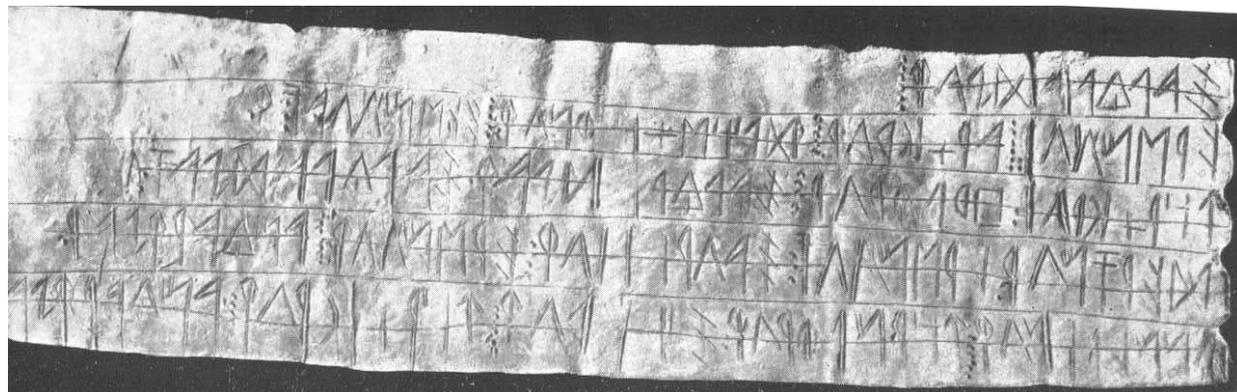


Fig 4.- Lead plaque from La Bastida (G.7.2) showing the main characters of the north-eastern Iberian script.



Fig 5.- Lead plaque from Los Allosos showing a two-element variation for the labials in Turdetan inscriptions (namely **ba** with an inner dot () in coexistence with the simple variant ())



Fig 6.- Lead plaque from La Bastida (G.7.5) showing the characters of the south-eastern Iberian script.



Fig 7.- Silver coin from ikalensken (A.95) showing the characters of the south-eastern Iberian script, in this case written from left to right.



Fig 8.- Bronze coin from *Obulco* (A.100) with a north-eastern Iberian inscription in the reverse right-to-left oriented.



Fig 9.- Lead cover form Piquía with a Turdetan inscription.



Fig 10.- Sling projectile with a south-eastern Iberian inscription (BDH SP.01.08).



Fig 11.- Pottery vase (H.6.2*) with a south-eastern Iberian inscription.



Fig 12.- Pottery vase (H.11.1) bearing a south-eastern Iberian inscription.



Fig 13.- Lead plaque from La Carencia bearing a long south-eastern Iberian inscription using word separators.



Fig. 14. Rock inscription from Abrigo de Reiná bearing a south-eastern Iberian inscription.



Fig. 15.- Stone stelae from Fonte Velha (Lagos, J.1.1) bearing a south-western inscription.



Fig. 16.- Stone stelae from Abóbada (Almodôvar, J.12.1) bearing a south-western inscription.

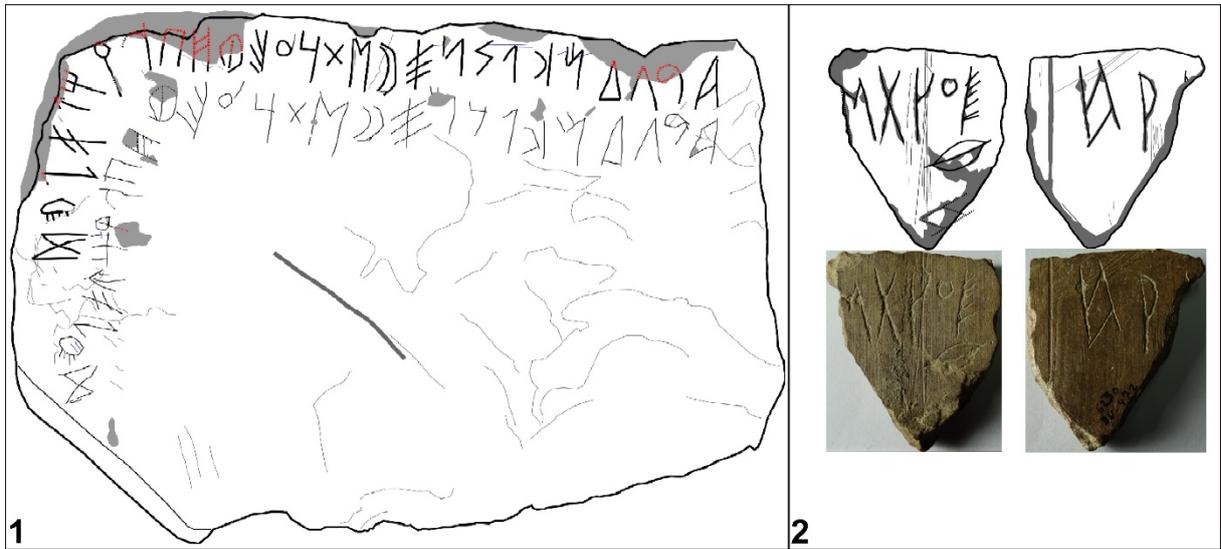


Fig. 17.- Abecedaries from Espanca (Castro Verde, J.25.1) and Villasviejas del Tamuja.

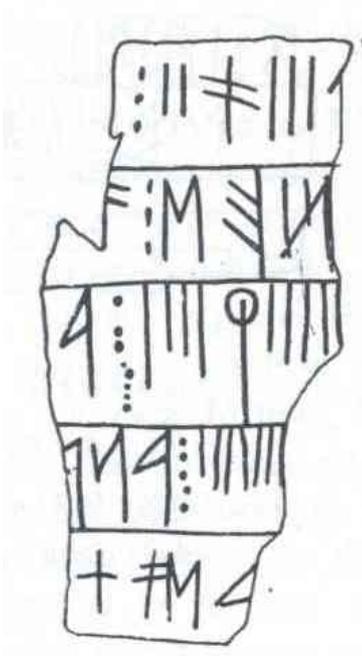


Fig. 18.- Lead plaque from unknow origin (G.0.1) with numerals (vertical bars).

Sign	Ref.	JU	JdH	JAC	JRR	AMF	JFJ
	S42	?	ba	?	ke	be	bé?
	S81	?	?	?	to	ke / r / to	té?
	S48	e	ti	?	e	e	é?
	S47a	te	¿?	?	bo/bu	bu	bo
	S45	ki	ki	?	ku	gi	ké?
	S41	be	i?	be	be	be	be
	G27	bo	bo	bo	bo	bo	go
	S60	ba	bi	ba?	ba	ba	ba
	S46	?	ki	?	ki	ki	ki
	S46	e	ki	?	e	ki	gi
	S47f	te?	te	te	te	te	te
	S56	r	?	r	r	r	r

Fig. 18.- Controversial values of the south-eastern Iberian script according to different scholars (Ferrer i Jané and Moncunill 2019)³.

Sign	Ref.	JU	JdH	JAC	VHC	JRR	MV	JFJ
	S83	n(n)	?	m?	m	m	n	¿?
	S80	m	-u / s	-u	s	m	s	-u
	S41	-a	?	-a	h	h	f	-a
	S81	pe?	ke	?	?	ke	r?	? / ke?
	S47g	ku	?	ku	te	pu	pu	pu
	S58	pu	?	pu	ko/ku	ku	ku	ku
	S44	-i	pi	?	pi	pi	?	pi
	S87/S92	ti?	pi	?	pi	pi	?	-i?
	S57	to	to/tu	to	to/tu	to	to	to
	G23	tu	tu	tu	to/tu	tu	tu	tu
	S46	-i	ki	ki	ki	ki	ki	ki
	G17	ko	ko	ko	ko/ku	ko	ko	ko
	S47f	te	te	te	te	te	?	te
	S47a	po	po/pu	po	po/pu	po	po	po
	S56	r	?	r	r	r	r	r

Fig. 18.- Controversial values of the south-western script according to different scholars (Ferrer i Jané and Moncunill 2019)⁴.

³ According to: Untermann 1990 [JU]; De Hoz 2011 [JdH]; Correa 1985, 1993-1994, 2004 [JAC]; Rodríguez Ramos 2002, 2006 [JRR]; Faria 1990-1991 [AMF]; Ferrer 2010a [JFJ].

⁴ According to: Untermann 1997 [JU]; De Hoz 2010 [JdH]; Correa 1996 [JAC]; Correia 1996, 2014 [VHC]; Rodríguez Ramos 2000, [JRR]; Valério 2008; Ferrer 2016 [JFJ].

1	2	3	4	5	6	7	1	2	3	4	5	6	7		3	4	5	6	7
𐤀	𐤁	𐤂	𐤃	G1	𐤄	𐤅	𐤆	h	𐤇	E	S41	E	𐤈	cf. iber. G2	cf. G25S60		bi?		
𐤆	𐤇	𐤈	𐤉	G2	𐤊	𐤋	𐤌	m	𐤍	p(a)	S42	ba?	𐤎	cf. iber. G24			S61	to??	𐤏
𐤌	𐤍	𐤎	-	G3'	𐤐	𐤑	—		𐤒	S43	ba?	𐤓	cf. iber. G24				S62a		𐤔
𐤑	?	𐤒	o	G4	𐤓	𐤔	G26'		𐤕	p(i)	S44	bi	𐤖	cf. iber. G5			S62b		𐤗
𐤒	w	𐤓	u	G5	𐤔	𐤕	cf. G16		𐤖	Z	S45	ki?	𐤗				S63		𐤘
𐤓	l	𐤔	l	G6	𐤕	𐤖	G16'		𐤘	k(i)	S46	ki	𐤙				S64		𐤚
𐤔	r	𐤕	r	G7	𐤖	𐤗	cf. G20		𐤛	S47:									𐤜
𐤕	—	𐤖	n	G8	𐤘	𐤙			𐤟	PU	S47a	bu?		cf. iber. G28			S70		𐤠
𐤖	—	cf. S83	—	G9	—	—			𐤡	H	S47b						S71		𐤢
𐤗	—	—	—	G10	—	—			𐤣	“	S47c								𐤤
𐤘	s	𐤙	s	G12	𐤚	𐤛			𐤥	“	S47d								𐤧
𐤙	s(w s)	𐤚	ś	G13	𐤛	𐤜			𐤦	“	S47e					ś	S80		𐤩
𐤚	g	𐤛	k(a)	G14	ka	𐤜			𐤨	“	S47f		𐤩		D	S81			𐤫
𐤛	k	𐤜	k(e)	G15	ke	𐤝			𐤪	“	S47g		𐤫			S82			𐤭
𐤜	—	—	—	G16	ki	𐤞			𐤬	“	S47h		𐤭		M	S83			𐤯
𐤝	q	𐤞	k(i)	G16'	kí	𐤟			𐤮	“	S47i		𐤮		p(e)	S84			𐤱
𐤞	—	𐤟	k(o)	G17	ko	𐤠			𐤰	“	S47j		𐤰		V	S85			𐤳
𐤟	—	—	—	G18	ku	𐤡			𐤲	TI	S48	ti?	𐤲	cf. iber. G21	H	S86			𐤵
𐤠	t	𐤡	t(a)	G19	ta	𐤢			𐤴		S50		𐤴			S87			𐤷
𐤡	h	𐤢	t(e)	G20	te*	𐤣			𐤶		S51		𐤶		k(i)	S88			𐤹
𐤢	—	cf. S48	—	G21	ti	𐤤	Espanca n°20		𐤸		S52		𐤸			S89			𐤻
𐤣	t	𐤤	t(i)	G21'	ti	𐤥			𐤺		S56	W	𐤺	cf. iber. G25	E	S91			𐤽
𐤤	—	—	TU	G22	to	𐤧			𐤼		S57	TU	𐤼			S92			𐤿
𐤥	d	𐤧	t(u)	G23	tu	𐤨			𐤾		S58	PO	𐤾			S93			𐥀
𐤧	m	𐤩	p(a)	G24	ba*	𐤪			𐥁										𐥂
𐤩	b	𐤫	p(e)	G25	be	𐤬	cf. G23		𐥃										𐥄
𐤫	p	—	—	G26	bi	𐤯	cf. G27		𐥅										𐥆
𐤬	—	—	p(i)	G26'	bi*	𐤱			𐥇										𐥈
𐤱	—	—	—	G27	bo	𐤲			𐥉										𐥊
𐤲	—	—	—	G28	bu	𐤳			𐥋										𐥌

Fig. 19.- Southern scripts according to J. de Hoz 2011.⁵

⁵ 1/2: Phoenician. 3/4: Southwestern script. 5. Reference. 6/7: Southeastern Iberian script.

	Identification of the graphemes			Phonetic value			
	Espanca	Correa (1996)	de Hoz (2010)	Correa	MLH IV	RodRamos	de Hoz
	1	1	G1	a	a	a	a
	15	4	G2	e	e	e	e
	5	2	G3	i	i	i	i
	24	5	G4	o	o	o	o
	14	3	G5	u	u	u	u
	7	6	G6	l	l	l	l
		7	G7	r	r	r	r
	9	9	G9	n	n	n	n
	10	10	G12	s	s	s	s
	12	11	G13	ś	ś	ś	ś
	3	14	G14	k ^a	k ^a	k ^a	k(a)
	6	18	G15	k ^e	k ^e	k ^e	k(e)
	21	20	G16' / S46	k ⁱ	-i	k ⁱ	k(i)
	27	23	G17	k ^o	k ^o	k ^o	k(o)
	13	13	G19	t ^a	t ^a	t ^a	t(a)
	18	17	G20 / S47f	t ^e	t ^e /b ^o /k ^u	t ^e /p ^u	t(e)
	17	19	G21'	t ⁱ	t ⁱ	t ⁱ	t(i)
	4	25	G23	t ^u	t ^u	t ^u	t(u)
	8	12	G24 / S42	p ^a	b ^a	p ^a	p(a)
	2	16	G25/ S84	p ^e	b ^e	p ^e	p(e)
	16	15	S41	- ^a	- ^a	h?	E
	23	28	S44	?	-i	p ⁱ	p(i)
	25	35	S45	?	-i	p ⁱ ?	ki?
	19	21	S47a	p ^o	b ^o	p ^o /t ^a /t ^e	PU
			S47b				H
		17	S47c	t ^e	t ^e /b ^o	t ^e /p ^o /p ^u	H
		17	S47d	t ^e	t ^e	t ^e /p ^o	H
		31	S47e	?	t ^e	t ^a	H
		26	S47g	k ^u	k ^u	p ^u	H
		32	S47h	?	k ^u	p ^o	H
		31	S47i	?	k ^u /b ^o	t ^e /p ^u	H
		33	S47j	?			H

		37	S86	?	?	t ^a	H
	22	47	S48	?	?		TI
	20		S51	?	?		?
	26	45	S52	?	?		?
	(11)	8	S56	í	í	í	W
		22	S57	t ^o	t ^o	t ^o	TU
		24	S58	p ^u	b ^u	k ^u	PO
		27	S80	-u	m	m	ś
		34	S83	m?	?	m	M
		36	S85	?	t ^o	t ^o	V
		39	S88	r?	r		k(i)
		48	S92	?	?	p ⁱ ?	?
			S50		k ^e ?		?
		29	S81	?	?	k ^e ?	D
		40	S82	?	?		?
		38	S87	?	?	p ⁱ ?	?
		41	S89	?	r		?
		43	S90	?			?
		49	S91	?	?		E
			S93				?
			Guerra 2002: 226				

Fig. 20.- Southwestern script according to Correa and Guerra 2019.⁶

⁶ 1/2: Phoenician. 3/4: Southwestern script. 5. Reference. 6/7: Southeastern Iberian script.

Systembedingt	Weitere Schriftzeichen
a Δ	Ξ ^{-a} s. § 426
e $\textcircled{\text{O}}$	Φ ⁻ⁱ s. § 423
i v	J ⁻ⁱ s. § 423
o \neq	DD s. § 427
u 4	\uparrow s. § 425
l 1	
n v	Die 'leiterförmigen' Schriftzeichen
m M	H s. t^e in der ersten Kolumne und § 431
r D	H s. k^u in der ersten Kolumne und § 432
í X	H s. b^o in der ersten Kolumne und § 430
s \neq	H s. § 434
ś M	
b^a $\text{}$	Weitere mögliche Varianten (§ 435)
b^e D	H r
b^i s. § 423	v t^o
b^o DH	H e
b^u H	
k^a \wedge	Vereinzelt und unklar
k^e > 	v § 436
k^i s. § 423	v § 437
k^o XH	H § 438
k^u H	H § 439
t^a $\text{X}+$	X § 439
t^e H	
t^i D	
t^o Δ	
t^u Δ	

Fig. 21.- Southwestern script according to Untermann 1990.

	vocal simple	B	T	K
A	Λ	Ʒ	× 𐌷	Λ
E	o	e	𐌷	>
I	ʎ	↑	⊖	φ
o	≠	□	Λ ∇	⊗ ⊘
u	ʎ	𐌷	Δ	⊗

S-10 1 ↑ S-11 n ʎ S-12 r 9 S-14 s ≠ S-15 s M

S-14 𐌷 r̄ (o s₃??) transcripción convencional, posiblemente una vibrante o una sibilante

Fig. 22.- Southwestern script (Rodríguez Ramos 2000).



Fig 23.- Turdetan most characteristic signs: S62, S63 and S64 (Ferrer I Jané e.p.).

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ISO/IEC JTC 1/SC 2/WG 2

PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS

FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646⁷.

Please fill all the sections A, B and C below.

Please read Principles and Procedures Document (P & P) from <http://std.dkuug.dk/JTC1/SC2/WG2/docs/principles.html> for guidelines and details before filling this form.

Please ensure you are using the latest Form from <http://std.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html>.

See also <http://std.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html> for latest *Roadmaps*.

A. Administrative

1. Title:	Proposal to encode the Palaeohispanic script
2. Requester's name:	<i>Joan Ferrer, Noemí Moncunill, Javier Velaza, and Deborah Anderson</i>
3. Requester type (Member body/Liaison/Individual contribution):	<i>liaison</i>
4. Submission date:	<i>FILL IN</i>
5. Requester's reference (if applicable):	
6. Choose one of the following:	
This is a complete proposal:	<input checked="" type="checkbox"/>
(or) More information will be provided later:	<input type="checkbox"/>

B. Technical – General

1. Choose one of the following:	
a. This proposal is for a new script (set of characters):	<input checked="" type="checkbox"/>
Proposed name of script:	<i>SOUTHERN PALAEOHISPANIC</i>
b. The proposal is for addition of character(s) to an existing block:	<input type="checkbox"/>
Name of the existing block:	
2. Number of characters in proposal:	<i>55</i>
3. Proposed category (select one from below - see section 2.2 of P&P document):	
A-Contemporary	<input type="checkbox"/>
B.1-Specialized (small collection)	<input type="checkbox"/>
B.2-Specialized (large collection)	<input type="checkbox"/>
C-Major extinct	<input type="checkbox"/>
D-Attested extinct	<input checked="" type="checkbox"/>
E-Minor extinct	<input type="checkbox"/>
F-Archaic Hieroglyphic or Ideographic	<input type="checkbox"/>
G-Obscure or questionable usage symbols	<input type="checkbox"/>
4. Is a repertoire including character names provided?	<i>yes</i>
a. If YES, are the names in accordance with the “character naming guidelines” in Annex L of P&P document?	<i>yes</i>

TP⁷PT Form number: N4502-F (Original 1994-10-14; Revised 1995-01, 1995-04, 1996-04, 1996-08, 1999-03, 2001-05, 2001-09, 2003-11, 2005-01, 2005-09, 2005-10, 2007-03, 2008-05, 2009-11, 2011-03, 2012-01).

b. Are the character shapes attached in a legible form suitable for review?

yes

5. Fonts related:

a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard?

The Atelier National de Recherche Typographique (Thomas Huot-Marchand and Arthur Francietta)

b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.):

Fill in

6. References:

a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?

Yes

b. Are published examples of use (such as samples from newspapers, magazines, or other sources)

of proposed characters attached?

yes

7. Special encoding issues:

Does the proposal address other aspects of character data processing (if applicable) such as input, presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)?

yes

8. Additional Information:

Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script. Examples of such properties are: Casing information, Numeric information, Currency information, Display behaviour information such as line breaks, widths etc., Combining behaviour, Spacing behaviour, Directional behaviour, Default Collation behaviour, relevance in Mark Up contexts, Compatibility equivalence and other Unicode normalization related information. See the Unicode standard at <http://www.unicode.org> for such information on other scripts. Also see Unicode Character Database (<http://www.unicode.org/reports/tr44/>) and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before?	<i>yes</i>
If YES explain	<i>L2/15-119, L2/15-120, and L2/15-012</i>
2. Has contact been made to members of the user community (for example: National Body, user groups of the script or characters, other experts, etc.)?	<i>yes</i>
If YES, with whom?	<i>Scholars in Spain, Portugal, France, Germany, and UK</i>
If YES, available relevant documents:	
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included?	<i>yes</i>
Reference:	<i>See proposal</i>
4. The context of use for the proposed characters (type of use; common or rare)	<i>rare</i>
Reference:	<i>See proposal</i>
5. Are the proposed characters in current use by the user community?	<i>yes</i>
If YES, where? Reference:	<i>Books, articles, database, etc.</i>
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP?	<i>no</i>
If YES, is a rationale provided?	
If YES, reference:	
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?	<i>yes</i>
8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence?	
If YES, is a rationale for its inclusion provided?	<i>yes</i>
If YES, reference:	<i>See proposal</i>
9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters?	<i>no</i>
If YES, is a rationale for its inclusion provided?	
If YES, reference:	
10. Can any of the proposed character(s) be considered to be similar (in appearance or function) to, or could be confused with, an existing character?	<i>yes</i>
If YES, is a rationale for its inclusion provided?	<i>yes</i>
If YES, reference:	<i>See proposal</i>
11. Does the proposal include use of combining characters and/or use of composite sequences?	<i>no</i>

If YES, is a rationale for such use provided?	
If YES, reference:	
Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided?	<i>no</i>
If YES, reference:	
12. Does the proposal contain characters with any special properties such as	
control function or similar semantics?	<i>no</i>
If YES, describe in detail (include attachment if necessary)	
13. Does the proposal contain any Ideographic compatibility characters?	<i>no</i>
If YES, are the equivalent corresponding unified ideographic characters identified?	
If YES, reference:	