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Proposal to Encode Codical Maya Hieroglyphs

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Contents

1. [Introduction](#)
2. [Divisions of the Corpus](#)
3. [The Codical Corpus of the Postclassic](#)
4. [Encoding Roadmap](#)
5. [Principles of the Encoding](#)
6. [Conventions](#)
7. [Text Layout](#)
8. [Sign Inventory](#)
9. [Format Controls](#)
10. [Charts](#)
11. [Properties](#)
12. [Appendices](#)
13. [References](#)

Introduction

The Maya hieroglyphic script arose within southern Mesoamerica and was used across a region roughly the size of modern Germany, encompassing today's southeastern Mexico, Guatemala, Belize and western Honduras. The earliest securely dated texts in the Maya area reach back to the Late Preclassic (ca. 300–200 BC), with roots in—and likely dialogue with—neighboring Isthmian/Epi-Olmec and other regional traditions (Pallán Gayol 2018, Houston 2004). From the Classic period onward (ca. AD 250–900), Maya writing flourished at major Lowland centers such as Tikal, Calakmul, Palenque, Yaxchilan and Copan, spreading over diverse media and genres. (Pallán Gayol 2018)

Over time, the signary expanded dramatically. Early corpora suggest a limited inventory (with less than 250 signs documented thus far), but by the Late Classic period scribes routinely deployed a rich mix of logographic and syllabic signs in highly conventionalized “glyph blocks.” This system supported remarkably rich linguistic expression on public monumental inscriptions and portable artifacts, including a large corpus of polychrome ceramic vessels, as well as carved architectural elements and mural paintings (Houston 2004, Houston et al. 2003). In contrast, the demonstrably Postclassic codices preserve a discrete, comparatively standardized subset of the script. As such, it makes a good starting point for the encoding of Maya writing.

Scope of this proposal. We focus on the Postclassic codical subset (hereafter “Codical Maya”), comprising 496 signs proposed for encoding. This subset is (i) discrete, (ii) less iconic than much Classic-period—“full-figure”—writing that overlaps with iconography, and (iii) sufficiently standardized across the surviving codices to enable consistent comparison (with a majority overlap in sign repertoires; Pallán Gayol 2018, Houston 2004). This approach builds upon prior work ([L2/17-112R], [L2/19-171R], [L2/20-248], [L2/17-110]) and doctoral research (Pallán Gayol 2021), while introducing several innovations. Our font rendering logic (originally explored in proposals for Egyptian controls) has been adapted to the specific behavior of Maya block composition and affixation.

Orthography and conventions. We follow contemporary transcription practice used in Maya epigraphy for linguistic forms (e.g., *ajaw* 'lord'), while retaining conventional spellings for place names (e.g., Yucatan, Uaxactun) to match cartographic standards and library usage (Kettunen & Helmke 2024). As to decipherment status, scholars can now read around 70–80% of the known texts with confidence—a practical threshold to supporting a stable, testable encoding of sign values and shapes (Pallán Gayol 2018).

Divisions of the Corpus

The corpus of Maya hieroglyphic inscriptions can be usefully organized into four overlapping historical/linguistic phases (with calibrated date ranges where possible):

1. **Proto-Maya phase (Preclassic origins; ca. 400–100 BC)** — Early inscriptions from highland contexts (e.g., Takalik Abaj, Kaminaljuyu, Chalchuapa, El Baúl, El Portón) with still-debated ethnolinguistic attribution. The repertoire is very limited (≈50–75 distinct signs), with few long sequences, and the degree of linguistic transparency remains low; correlations to later sign values are uncertain. (Pallán Gayol 2018, Houston 2004)
2. **Early-Maya writing (Late Preclassic into Protoclassic; ca. 300 BC–AD 250)** — A modest signary (≈125–150) across a small corpus (<50 texts), including painted and incised examples from the central Peten and northern Belize (e.g., San Bartolo). Several texts preserve clear calendrical notations and emerging syllabic spellings. The stage of decipherment is better than in Proto-Maya yet remains partial; many readings are provisional. (Pallán Gayol 2018, Saturno et al. 2006, Stuart et al. 2022)
3. **Classic-Maya writing (AD 250–900)** — The golden age of Maya literature, marked by a dramatic increase in the number, length, and distribution of texts—monumental stelae and panels, painted ceramics, architectural programs, bone/wood/stone portable inscriptions, and occasional books. Hundreds of inscriptions are known for large capitals (Tikal, Calakmul, Copan, Palenque). The script's logo-syllabic nature is thoroughly exploited; grammar and orthography reveal a prestige language usually termed Classic Ch'olti'an, shared across many polities (Houston 2004, Houston et al. 2000, Houston 2000). Scholarly consensus on readings is highest for this phase.

4. **Postclassic (AD 1100–1519; with northern/Caribbean continuities from ca. AD 800)** — Text production is much reduced and regionally uneven (Yucatan and the East Coast show continuity). The surviving codices (Dresden, Madrid, Paris)—which provide the focus of this encoding proposal—date from this period. They preserve highly standardized almanacs and astronomical content; their signary correlates well with late inscriptions in northern centers (e.g., Chichen Itza, Uxmal, Dzibilchaltun, Mayapan) and the Caribbean coast (Cozumel, Tulum, Coba, Xelha). Public monumental texts largely give way to codical and painted formats focusing on calendrics and augury, with narrowed grammatical expression compared to Classic prose ([Pallán Gayol 2018](#), [Houston et al. 2003](#))

●●● The Codical Corpus of the Postclassic

The scope of the present encoding proposal is the Maya writing of three codices. The proposed signs cover all of the distinct hieroglyphs found in these documents, when the attestations of the signs themselves are well enough preserved to be identified with confidence. The principles for determining what constitutes a "distinct sign" are discussed in the next section. The three codices are:

1. *Codex Dresdensis* (Dresden Codex or The Maya codex in the SLUB Dresden)
2. *Codex Tro-Cortesianus* (The Madrid codex)
3. *Codex Peresianus* (The Paris codex)

The following table provides statistics relating to the Maya hieroglyphs in this corpus.

Codex	DRESDEN	MADRID	PARIS	Totals
Number of extant pages	74	112	24	210
Number of almanacs	75	237	18	330
Number of tables	21	0	0	21
Number of frames	575	889	192	1,656
Number of glyph-blocks	2,951	3,340	831	7,122
Share of glyph-blocks	41.43%	46.90%	11.67%	100%
Blocks per frame ratio	5.13	3.75	4.32	4.30
Number of graphemes (main-text signs; excludes purely calendric)	7,208	7,913	2,026	17,147
Share of graphemes	42.04%	46.15%	11.82%	100%
Signs per glyph-block ratio	2.44	2.37	2.44	2.41

Comparative statistics derived from analysis of the three extant Maya codices. ([Pallán Gayol 2018](#))

The following images show examples of pages from each of the three codices.

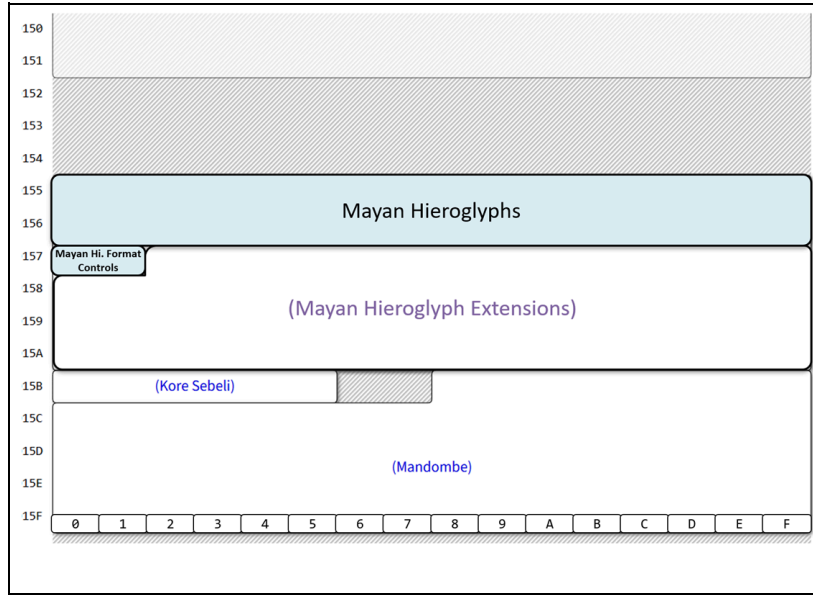


●●● Encoding Roadmap

This proposal aims to encode the Maya writing of the Codical documents from its final stage of development. It is envisaged that the present encoding will be useful by itself to represent and facilitate research into the Maya Codices. It should also serve as a basis for a unified encoding for Maya Hieroglyphic writing of the earlier periods. At least one proposal is in progress that will propose encoding an extension to the codical set. This extension will aim to add signs found in

inscriptions from major sites from the Classic Maya stage. This approach is therefore comparable to the regular addition of extension sets for other large repertoire scripts (e.g., CJK Unified Ideographs, Extensions A–J) and Egyptian Hieroglyphic writing (e.g., [Egyptian Hieroglyphs Extended-A](#)). Therefore, the completeness of the current proposal should only be judged on its coverage of the Codical material rather than Maya writing as a whole.

The Unicode Roadmap has set aside a block for Maya Hieroglyphs comprising 1,536 code points between U+15500 and U+15AFF. The present proposal includes 512 hieroglyph characters covering 32 columns in the range from U+15500 to U+156FF. This proposal also includes two columns of format controls in the range from U+15700 to U+1571F. The remaining 16 columns (1024 code points) from U+15720 to U+157FF are reserved for future extensions — mainly to accommodate signs from the earlier periods of Maya writing. At this time, there cause for concern that the remaining space for Maya Hieroglyph extensions would not be enough to accommodate the writing of the earlier periods. Because script revival efforts for Maya writing are underway in parts of the Maya cultural area, we may see proposals for neographic extensions, for example, to support sounds not attested in the Mayan languages of the historical periods that have come into use in contemporary speech. While it is expected that most of the signs in the codical set are unifiable with signs from other periods, the challenge of determining exactly when Maya Hieroglyphs will be unified is out of scope for the current proposal. The same goes goes for the format controls included in this proposal.

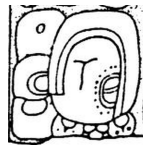



Script revival efforts for Maya Hieroglyphic writing are being undertaken in parts of the Maya cultural area. The present encoding is likely to be of interest to these efforts and, if they are successful, it should be expected that contemporary Maya writing would result in future encoding requests for neographic extensions to Unified Maya writing.

Principles of the Encoding

Following an in-depth study of the requirements for rendering Maya writing in Unicode, the central position of this encoding proposal is that Maya hieroglyphs should be encoded as abstract characters following the practice of Unicode, rather than on a more strictly graphical basis. This distinction requires elaboration. The following principles serve as the basis for identifying the atomic characters for an encoding of the Maya writing system.

1. **Base signs** can have syllabic or logographic values or both. For example, the sign with logographic value ‘stone’ and pronounced /tuun/ is also used as a syllabic sign with pronunciation /ku/.

<i>ahkul</i> (a-ku-la)	<i>tuun</i> TUN-ni
	
‘turtle’ [*]	‘stone’ [‡]

^{*}Palenque, Temple of Inscriptions, East Panel (A12) Drawing by Linda Schele;

[‡]Maya glyph based on Kettunen & Helmke 2004 (12/161).

This is analogous to CJK characters having different values in different contexts. Such as in Chinese:

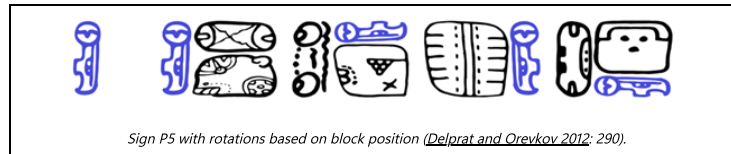
<i>xíngzǒu</i>	<i>yínháng</i>
行走	银行
'to walk'	'bank'
U+884C U+8D70	U+94F6 U+884C

2. **Numerical signs** have already been added to Unicode at U+1D2E0..U+1D2F3, based on the work of Jameson Quinn (L2/16-264r). This set of characters will be used alongside newly encoded signs to represent Maya hieroglyphs.

0	1	2	3	4	5	6	7	8	9
U+1D2E0	U+1D2E1	U+1D2E2	U+1D2E3	U+1D2E4	U+1D2E5	U+1D2E6	U+1D2E7	U+1D2E8	U+1D2E9
10	11	12	13	14	15	16	17	18	19
U+1D2EA	U+1D2EB	U+1D2EC	U+1D2ED	U+1D2EE	U+1D2EF	U+1D2F0	U+1D2F1	U+1D2F2	U+1D2F3

The present encoding will establish the script property `Mayan_Hieroglyphs` for the Maya signs. Therefore, the block of Maya numerals should be reassigned from `Script=Common` to `Script=Mayan_Hieroglyphs` to reflect origin and integration with the Maya writing system (see, [Properties](#) section below).

3. **Signs can have different representations in different positions within a quadrat.** For example, a sign may appear in different rotations based on which edge it is positioned on. This feature of the script was documented already by [Delprat and Orevkov](#) in connection with their work rendering Maya using LATEX.



This might be thought of as a two-dimensional version of the different positional forms used by joining scripts where the same underlying character can take on different forms in for initial, medial, final, and isolated position. For example, ARABIC LETTER BEH (U+0628):

Isolated	Initial	Medial	Final	Joined
U+0628	U+0628_	_U+0628_	_U+0628	U+0628 U+0628 U+0628



In the case of Mayan, the variation is presumably motivated by visual harmony rather than originating from a process of cursivization. Automatic rotation and mirroring of signs will not be perfectly accurate in all cases. Therefore, a set of format controls is proposed to handle exceptions and other instances where a sign is transformed in unexpected ways (see [Format Controls](#)).

4. **Signs can take on reduced visual form when size-constrained as part of a block structure.** For example, the glyph AJAW 'lord' (images from [Kettunen and Helmke 2024](#), p. 16) can occur as just the top element of the glyph block when combined with other signs. Distinctive features occurring in the reduced form are enough to signal the full glyph.

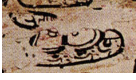

Full-figure glyph*	Reduced glyph*

* Maya glyphs based on Kettunen & Helmke 2004 (16–17).









If a sign is not attested in its full form in the codices, we illustrate it in the code charts in a reduced form. This is a more elaborate and formalized use of a script feature which is also seen in Egyptian Hieroglyphic quadrats, for example the quail chick (w) may be drawn without its legs if there is limited vertical space:

Full-figure glyph	Reduced glyph
 U+13171	 U+13171 U+13430 U+1308B U+13431 U+133CF U+13430 U+13219



5. **All signs included in this proposal are attested in one or more of the extant codices.** Signs that occur in damaged form in one of the codices but which can be confidently reconstructed using evidence from other parts of the Maya corpus have been included.

Damaged	Reconstructed
 MAD 20a B2	 U+15567










6. **Signs can have graphic variants.** These are to be encoded using variation selectors (Unicode 16 §23.4). This corresponds to the practice for CJK, and Myanmar, but differs from Egyptian Hieroglyphs where variants are encoded atomically. In Egyptian Hieroglyphs, variation selectors are used to rotate a defined set of signs.

Base	Variant
 U+5026	 U+5026 U+E0100
 U+50C5	 U+50C5U+E0100
 U+1000	 U+1000 U+FE00
 U+1309A (D34)	 U+1309B (D34A)



- **Shape variants may differ from the base sign by some graphic detail** that is important to control in some contexts, but specialists will mostly agree that the graphic form is essentially the same as the base sign with which it shares phonetic and/or semantic value. For example, it may be desirable for the font logic to select a specific graphic variant of a sign in a particular context, but have that variant accessible using a variation selector in other contexts. This is comparable to Mongolian script, where the MONGOLIAN FREE VARIATION SELECTORS (U+180B..U+180D, U+180F) can be used to select a specific graphic variant where the corresponding graphic variant may be selected automatically by the font in other contexts. See [Jiang 2024](#).
- **Graphic variants are not simple transformations (rotations/reflections) of a base sign.** Such manipulations are to be controlled using the appropriate format control characters that form a part of this encoding, for which, see below ([Format requirements](#)).

Base	Variant
 U+1D2E0	 U+1D2E0 U+FE00

7. **Signs can appear in a colored forms with distinct semantic values.** The codical scribes used red ink (usually hematite or cochineal) to mark special functions of signs in their texts (see [Appendix A](#)). Because the colored forms can occur within a glyph block, and carry a separate semantic function, it is necessary to have them encoded distinctly. We propose this is done using a control character to signal that the single preceding base sign should be rendered in a colored form. Only one such color-variant glyph is needed. When a shape variant occurs in the colored form, the variation selector for the shape variant immediately follows the base sign, followed by MAYA HIEROGLYPH COLOR MODIFIER (U+15704).




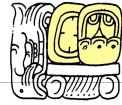
Base	Colored	Image
 U+1D2E0	 U+1D2E0 U+15704	 DRE 72 A E6
 U+1D2E0 U+FE00	 U+1D2E0 U+FE00 U+15704	 DRE 72 C C6
 U+15687 U+15700 U+15571	 U+15687 U+15704 U+15700 U+15571	 DRE 72 C C7

8. **Composite forms.** In both Classic-period inscriptions and the Postclassic codical corpus, a few composite glyphs are commonly found. These signs can be analyzed visually into separate components where each component can be identified as a base sign. While such signs could be encoded as a sequence joined spatially using an appropriate format control character, these signs should properly be considered fossilized digraphs and are to be encoded atomically, i.e., one Unicode code point having the appearance of two separate signs. Such an approach reminds us of diagraphs elsewhere in Unicode.

A + E	令 + 和
 U+00C6	 U+32FF

The status of such diagraphs in Maya writing is strengthened by the fact that the combined form, will differ in meaning, pronunciation, and collation value from the constituent component glyphs. For example: the family of paired variants used to write the logograph TZ'AK 'to put in order / to arrange in sequence', occurs frequently in contexts of sequential calendrical counts and dynastic ordering both in monuments and in the codices. It denotes commanded or ritually "ordered" actions by deities and supernaturals (e.g., calendrical junctures and festival occasions) (Stuart 2003, Kettunen & Helmke 2024).

Stuart has convincingly shown that these paired variants are not read as two separate signs (e.g., "day and night") but instead "stand together as a single unit representing the word TZ'AK" (Stuart 2003). Other pairings also identified by Stuart iconically evokes the cosmic and natural order (e.g., HEAVEN—EARTH, STAR—MOON, DEATH—GENERATION, NIGHT—DAY), reinforcing the notion of sequence and arrangement, which have since been adopted in standard sign catalogues as unitary glyphs (see Kettunen & Helmke 2024: 92, 101).

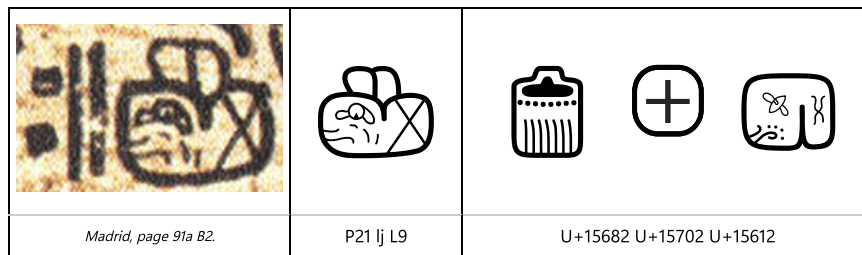
P7	E8	C9	Example
 U+15675	 U+1554E	 U+1552D	
K'IN "day"	AK'AB' "night"	TZ'AK "to put in order"	Composite: DAY + NIGHT for TZ'AK (after Stuart 2003, Fig. 1b) as part of a larger block.

While these composite signs could be encoded as analyzed by their components, doing so would be a disservice to Maya scholars and native speakers as the separate signs would be conflated for search and collation purposes which is not desirable.

9. **Ligatures can be formed from the fusion of two distinct base signs.** This is the opposite of the composite signs, here one apparent sign is formed by a sequence of multiple Unicode code points. This is analogous to the formation of ligatures in Brahmic scripts such as Devanagari and other related systems where a ligature may be formed when the inherent vowel has been suppressed using the Halant character. In such cases, the two adjacent consonant signs become a single form that can have a distinct visual representation, or the component signs may still be discernable at elements of the whole.

Sign 1	Joiner	Sign 2	Ligature
<i>ka</i> क U+0915	<i>Halant</i> ◌् U+094D	<i>ṣa</i> ष U+0937	<i>kṣa</i> क्ष U+0915 U+094D U+0937
<i>ka</i> क U+0915	<i>Halant</i> ◌् U+094D	<i>ta</i> त U+0937	<i>кта</i> क्त U+0915 U+094D U+0937

In Maya writing a few such ligatures have been documented, for example, in the *Codex Tro-Cortesianus*, the signs /pe/ and /tz'e/ are fused atypically in the word /petz'/ meaning "trap". Other examples of ligatures in which the components are less distinct are found in Classic Maya writing.



10. **Maya writing combines signs into glyph blocks.** In Unicode terminology we call these blocks quadrats. It is important to be able to render Maya glyphs in such quadrats as it is an intrinsic part of the writing system. The model for Maya quadrats follows the mechanisms established by the Egyptian Hieroglyphic format controls (Unicode 16 §11.4.3).

The set of format controls necessary to express the spatial relationships between base signs in Maya quadrats is included in this proposal. These format controls are informed by the format controls used with Egyptian Hieroglyphic, but have been tailored to meet the rather different needs of Maya writing. These format controls are described in detail below in [section VII](#).

Conventions

Script name

There are two conventions when it comes to the name of the script. In general, Linguists refer to the script as *Mayan* Glyphs or Hieroglyphs, while epigraphers and archaeologists prefer *Maya Hieroglyphs*. For consistency with the roadmap, and the already existing encoding of Mayan numerals (U+1D2E0–U+1D2FF), we propose to use the name *Mayan Hieroglyphs* for the script.

Character naming

Due to the multiple cataloging systems in use among Maya scholars, and the in-progress development of some sign identifications, the right approach for naming the Maya code points is to follow the precedent of CJK and give names derived from the code points:

15500 MAYAN HIEROGLYPH 15500

It is, of course, important that the Maya Unicode code points are easily identifiable using any of the systems in widespread use. Therefore, this proposal includes a concordance of Maya signs (see [Appendix B](#)) which will make it possible to look up signs and their code points using the following major sign catalogs:

- Zimmermann 1956
- Evreinov et al. 1961
- Knorosov 1961
- Thompson 1962
- Macri & Vail 2009
- Tokovinine 2017
- Looper, Macri, Polyukhovych, and Vail 2022
- Pallan 2021

Before coming to the conclusion to base names on code points, various other options were considered including following the phonetic value, iconographic value, an existing catalog code. However, none of these systems could be uniformly applied across the sign inventory in a non-controversial way that would be immune from debates over assignments and also extend easily to future discoveries.

By adopting code point naming of signs, the burden of naming is shifted away from Unicode's stability policies and into documentation that will be able to grow over time to reflect progress in the field.

Character ordering

Ordering the signs in the code charts has the same essential challenge as naming, that is, there is no definitive ordering principle that will be uncontroversial and comfortably expand to future discoveries. The problem of lexicographic sorting is a separate matter from the ordering of signs in the code charts, since sorting algorithms can be tailored to different systems according to needs. So, the real concern is the code chart which must take on a fixed order. Various approaches have been considered:

- Chronological
- Phonetic
- Order of appearance
- Semantic groups
- Visual complexity
- Visual relationships
- Following an existing catalog
- Frequency
- Consciously random

We propose to order the code charts for the codical signs based on the work of Pallán (2021, see [Sign Inventory](#), below). This ensures that the signs will appear in a coherent order, which will afford some measure of looking up signs from the code charts, but for most purposes, sign lookup should use a database system possibly derived from the included concordance.



Text Layout

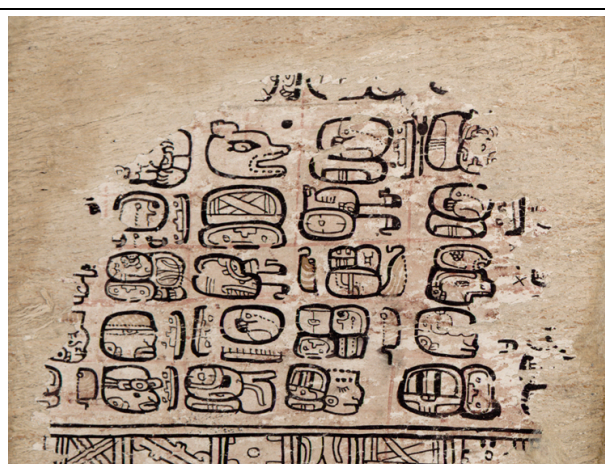
Codical Maya texts are organized as screenfold books whose pages are subdivided into almanacs (thematic units), frames, columns/rows, glyph-blocks, and individual graphemes; the script itself is logo-syllabic and supports rich composition (e.g., conflation, superimposition, infixation, pars pro toto) at block level ([Pallán Gayol 2018](#)). In practice this means we encode signs (not whole blocks) and let layout controls compose them, mirroring epigraphic behavior observed in both codices and classic inscriptions ([Kettunen & Helmke 2024](#)).

Directionality

Reading proceeds by glyph-blocks arranged in double columns and rows; block usually proceed from left to right in paired columns. As such, the text grid can be expressed as a system of rows and columns which are given letter-number references for convenience. One can describe, the paired column reading order as proceeding A1-B1-A2-B2 where applicable two columns are written. It also common to see other reading paths in unconventional layouts ([Kettunen & Helmke 2024](#)). Orientation can be context-sensitive: on architectural programs, signs or whole clauses may be flipped to "address" an entering reader/viewer, a performative adjustment also noted in classic monumental texts ([Houston 2000](#)).



Left-to-right layout, DRE 10a.



Right-to-left layout, PAR 24a.

Spreads

Codices are read page-by-page across screenfold spreads. Almanacs frequently run across adjacent frames, with connectors (directional guides, continuations) steering the reader from one frame to the next; our encoding leaves such continuations to markup/layout while ensuring the internal block order remains computable ([Pallán Gayol 2018](#)).

Pages

Each page contains one or more framed almanacs or tables. Page-level metadata (codex siglum, page number, face/verso where relevant) are handled outside the character set in document structure, while the font's metrics and joiners guarantee consistent block density across pages ([Pallán Gayol 2018](#)).

Frames

Frames are bounded compartments that hold one almanac/table. Within a frame, glyph-blocks populate a 2-column grid (often more in tables); our database tracks frame IDs and preview images to maintain context, and auto-assigns positional IDs (e.g., DRE_02a_F3) for cross-reference and QA ([Pallán Gayol 2018](#)).

Columns

Columns group blocks vertically; in typical prose the reading order interleaves left and right columns by rows (A1→B1, A2→B2, ...). For tables and almanacs, the column logic can diverge (e.g., vertical sequences, wrap-arounds); the A/B labeling remains a coordinate system only, not an absolute reading rule ([Kettunen & Helmke 2024](#)).

Blocks

A glyph-block is a compact “quadrat-like” cluster. Inside the block, signs are composed by stacking and juxtapositions with well-attested operators: *infixation* (size-reduction and insertion), *conflation* (merging diagnostics), *superimposition*, and *pars pro toto* selections ([Pallán Gayol 2018](#), [Kettunen & Helmke 2024](#)) We model these with layout joiners rather than encoding full blocks as atomics, paralleling the approach proven for Egyptian where control characters govern stacking, shading, and enclosure behaviors ([Glass et al. 2021](#))

Clause sequencing & word order

At clause level, hieroglyphic texts typically follow a date-verb-subject formula, reflecting a broader VOS tendency in Mayan; dates may occupy substantial space, verbs often one–two blocks, while elaborate titles expand name phrases. This has implications for line-breaking and continuation marks in frames and tables ([Kettunen & Helmke 2024](#)).



Sign Inventory

Hieroglyphs

This sign inventory is based on the work of Pallán ([2021](#)). Pallán’s system is modeled on Gardiner’s sign list for Egyptian ([Gardiner 1927, 1928](#)). Gardiner’s system divides Egyptian hieroglyphs into semantic and graphically derived groups. Each group is designated by a single uppercase letter (A–Z), plus the additional group ‘Aa’. Within a group, signs are numbered sequentially starting from 1. Grouping Maya hieroglyphs based on semantic and graphic associations is also used in other catalog systems, notably the catalogs of [Macri and Loooper 2003](#), [Macri and Vail 2009](#), and [Loooper et al. 2022](#). The inventory of hieroglyphs will be encoded based on the encoding principles described in detail above ([Principles 1–3](#)).

Pallán’s taxonomy of the codical Maya signs is subdivided into the following classes:

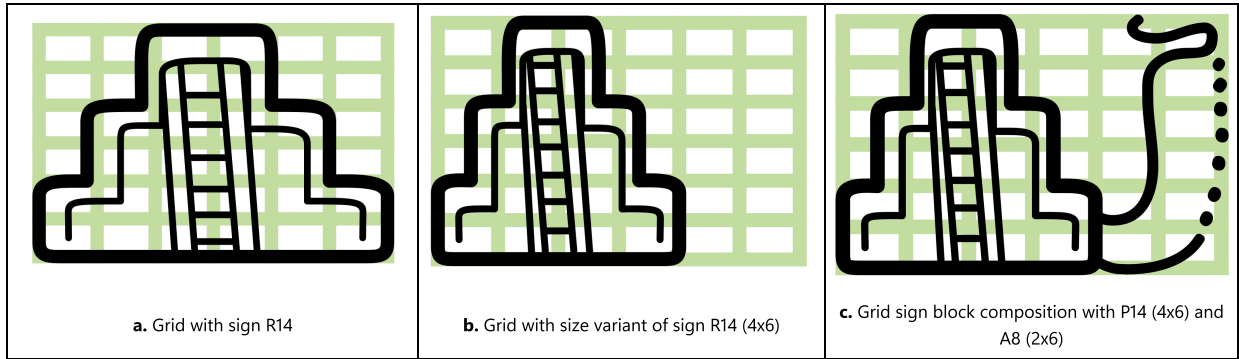
- A. Halved/elongated-open narrow signs, mostly symmetrical
- B. Symmetrical / repeating segment signs (abstract)
- C. Digraphs, Trigraphs, Compound signs combining two/more standard signs
- D. Round/oval/squarish, mostly full-size/inanimate/abstract signs
- E. Sky, Stars, Heavenly Bodies & Cycles of Time
- F. Landscape, Geography, Elemental Forces (earth, mountains, caves water, rain, fire, wind))
- G. Human Body / Body parts / Bones / Organs & Blood
- H. Hand signs
- I. PROFILE HEADS I: Anthropomorphic/humanlike beings, deities & elementals (less overtly supernatural/zoomorphic)
- J. PROFILE HEADS II: Supernatural/anthropomorphic/zoomorphic deities, beings & elemental forces
- K. PROFILE HEADS III: Skulls, Underworldly, Flayed entities
- L. Mammals (whole/parts)
- M. Birds & Bats (whole/parts)
- N. Reptiles / Amphibians / Turtles / Armadillos/ Centipedes / Worms chimera / hybrid
- O. Fish, Mollusks, Shells, invertebrates
- P. FLORA: Trees, Plants, Foliation, Flowers, Seeds, Grains, non-faunal edibles
- Q. Food, Drink and Offerings
- R. Interior and Exterior Architecture, Furniture, Cultural Landscape
- S. Man-made objects, instruments, weapons, vessels, sacrificial/ritual implements
- T. Elements of Attire, Dress, Ornaments, Insignia of Status
- U. Calendric signs I: bar-dot numerals & calendric auxiliary signs (not categorized otherwise)
- V. Calendric signs II: Non-bar-and-dot. Figurative. Head Variants, Day and Month signs, Time period signs



Format Controls

Formatting Hieroglyph blocks

Maya Hieroglyphs compose into quadrats comparable in many respects to Egyptian Hieroglyphic writing. As such, the solutions developed to present Egyptian Hieroglyphs authentically can be adapted for Maya writing. The [Egyptian Hieroglyph Format Controls](#) (U+13430–U+1345F) themselves are loosely modeled on controls and modifiers used by many South and Southeast Asian writing systems to position signs relative to one another. An implementation of a Maya hieroglyph font may depend on OpenType layout tables to perform the necessary substitutions and positioning lookups to correctly render the above controls in combination with a suitable text rendering engine. When rendering Maya hieroglyphs, it is helpful to use a standardized block size with a fixed unit grid on which to position the individual hieroglyphs that make up the block. A six-by-six grid is a common choice for this purpose as it permits even division of the block into halves and thirds which supports the most common structures.



The grid may be used to define the size of a full size glyph (a.) and size variants of that glyph (b.). Size variants of different glyphs can be positioned to form a complete glyph block (c.).

Precedence

In Maya writing, the dominant pattern of a tripartite glyph block is a vertical stack of signs adjacent to a single sign. This is the opposite of the dominant practice observed for Egyptian Hieroglyph clusters, in which a single sign above or below a pair of signs is common. Therefore, the Maya Hieroglyph Vertical Joiner has precedence over the joining effect of the Maya Hieroglyph Horizontal Joiner.

Type	Image	Font	Encoding
<p>Egyptian Horizontal before Vertical</p>		<p>M3 vj Aa1 hj X1</p>	<p>U+131B1 U+13430 U+1340D U+13431 U+133CF</p>
<p>Maya Vertical before Horizontal</p>	<p>Dresden, 72c E3</p>	<p>T4 hj Q4 vj T2</p>	<p>U+156D0 U+15700 U+15694 U+15701 U+156CE</p>

1. Blank and Lost signs

The following signs are used to indicate blanks or lost elements in the text. These signs may be used with the joiners to position relative to other signs in a glyph block.













- o **Maya Hieroglyph Uncertain Sign** — A sign used to indicate uncertainty about the reading of a particular glyph.
- o **Maya Hieroglyph Damaged Sign** — A sign used to indicate that a particular glyph is damaged or illegible.
- o **Maya Hieroglyph Blank Sign** — A sign used to indicate a missing or empty space in the text.

Uncertain Sign	<p>U+156FD</p>
Damaged Sign	<p>U+156FE</p>
Blank Sign	<p>U+156FF</p>




2. Joiners

The joining controls are used to express the spatial relationship between adjacent characters. Joiners connect adjacent characters or groups according to the joining type. They are:

- **Maya Hieroglyph Horizontal Joiner [hj]** — This control is used to join Maya Hieroglyphs horizontally. The join is expressed in logical order. For the normal left-to-right layout, the left character comes first in the sequence.
- **Maya Hieroglyph Vertical Joiner [vj]** — This control is used to join Maya Hieroglyphs vertically. The join is expressed in logical order. The top character comes first in the sequence.
- **Maya Hieroglyph Ligature Joiner [lj]** — This control is used to join Maya Hieroglyphs into ligatures. The topmost character comes first in the sequence — note that the character itself may be represented by a reduced form.
- **Maya Hieroglyph Insertion Joiner [ij]** — This control is used to insert one character within the area of another. The outermost character comes first in the sequence. The infix character may be represented by a reduced form.

	Image	Font	Encoding
Horizontal Joiner	 Dresden 72c B3	 T1 hj J20	 U+156CD U+15700 U+155F2
Vertical Joiner	 Dresden 72b A2	 C9 vj B3	 U+1552D U+15701 U+1550F
Ligature Joiner	 Madrid, 91a B2	 P21 lj L9	 U+15682 U+15702 U+15612
Insertion Joiner	 Dresden 72c F2	 P26 ij F14	 U+15687 U+15703 U+15571





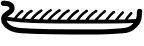





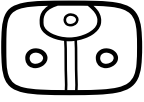
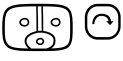
Joiners are used in combination to create complex structures:

Image	Font	Encoding
 Paris 8b C7	 D13 vj D13 vj F6 hj T20 vj F6 vj F6	 U+1553C U+15701 U+1553C U+15701 U+15569 U+15700 U+156E0 U+15701 U+15569 U+15701 U+15569

3. Modifiers

The modifiers are used to alter the appearance of the preceding glyph. They fall into three categories: color, mirroring, and rotation. Only one of each category can be applied to a single base glyph. They can occur in any order.




- **Maya Hieroglyph Color Modifier [cm]** — Specifies that the preceding glyph should be rendered in color. The specific color is the up to the font designer.
- **Maya Hieroglyph Mirror Horizontally [mh]** — Invokes a horizontally mirrored rendering of the preceding glyph.
- **Maya Hieroglyph Mirror Vertically [mv]** — Invokes a vertically mirrored rendering of the preceding glyph.
- **Maya Hieroglyph Rotate 90 Degrees [r90]** — Rotates the preceding glyph 90 degrees clockwise.
- **Maya Hieroglyph Rotate 180 Degrees [r180]** — Rotates the preceding glyph 180 degrees clockwise.
- **Maya Hieroglyph Rotate 270 Degrees [r270]** — Rotates the preceding glyph 270 degrees clockwise.

	Image	Font	Encoding
Color modifier	 Dresden 72a E6	 U4 cm	 U+15687 U+15704
Mirror Horizontally	 Dresden 72c B2	 A5 mh	 U+15504 U+15705
Mirror Vertically	<i>TBD</i>		
Rotate 90 Degrees		 U4 r90	 U+15687 U+15707
Rotate 180 Degrees		 D1 r180	 U+15530 U+15704 U+15700 U+15571
Rotate 270 Degrees	<i>TBD</i>		

4. **Grouping controls**

Grouping controls are used to combine multiple glyphs into a single unit. A common use is to override the precedence of joiners (see [Precedence](#)). In Egyptian hieroglyphic writing, segments can be nested. At this time, there is no can be nested. At this time, there is no demonstrated need for nesting segments in Maya hieroglyphic writing.

- **Maya Hieroglyph Begin Segment [BS]**— This control marks the beginning of a new segment in the text.
- **Maya Hieroglyph End Segment [ES]**— This control marks the end of a segment in the text.



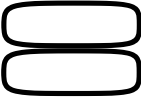


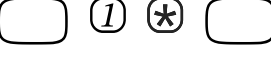

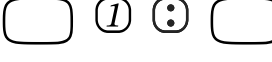



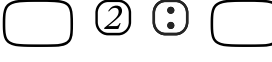


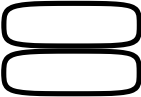
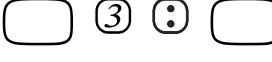
Image	Font	Encoding
 <p>Dresden, 72c B2</p>	 <p>(D13 hj K4) vj A5</p>	 <p>U+15709 U+1553C U+15700 U+155FA U+1570A U+15701 U+15504</p>

5. **Compression controls**

Compression controls are used to compress or expand the space occupied by a hieroglyph. When composing Maya glyph blocks, the normal practice is to ensure that each block renders with the same dimensions. When signs combine in a single glyph block, it is normal for their edges to fuse together to form a complete contiguous shape. When two signs are combined, they share the space available in the 6x6 grid. Two like-signs will normally share the space equally. Affix signs may occupy less space when combined with a full sign. A font system that renders Maya Hieroglyphs should include logic to distribute the block space between signs. Whatever that logic, there will be cases where a text encoder using a Maya Hieroglyph font wants to override that default space allocation logic. This can be done using "Compression Controls", which change a sign's natural spacing preference. Three such controls are sufficient to encode the blocks we have reviewed in Codical and Classic Maya documents. These compression controls inherit their directionality from the joiner they operate with according to precedence. See below for examples.

Because a glyph block should always be full (i.e., 6x6), the effect of a compression sign may not be visible if applied to a sign in a block consisting of a single sign, because a final step in block composition is to inflate the contents of a block to fill the space.

- o **Hieroglyph Compression Control 1 [C1]** — This sign overrides the natural compression value of the preceding sign or group of signs and specifies it should be the most compressible type. Maya Hieroglyphs digits from 1–5 often belong to this group. This sign may be used to force affixes and full signs to take up the least amount of space.
- o **Hieroglyph Compression Control 2 [C2]** — This sign selects the medium compression level. Affixes and digits from 6–10 often belong to this group. This sign may be used to force a full sign to share space unequally with another full sign.
- o **Hieroglyph Compression Control 3 [C3]** — This sign selects the lowest compression level. This level is associated with full signs and digits 11–19. This sign may be used to force a sign with lower natural compressibility to share space equally with a full sign.

	Horizontal		Vertical	
<p>No compression Control</p> 	 <p>U+156FD U+15700 U+156FD</p>		 <p>U+156FD U+15701 U+156FD</p>	
<p>Compression Control 1</p> 	 <p>U+156FD U+1570C U+15700 U+156FD</p>		 <p>U+156FD U+1570C U+15701 U+156FD</p>	
<p>Compression Control 2</p> 	 <p>U+156FD U+1570D U+15700 U+156FD</p>		 <p>U+156FD U+1570D U+15701 U+156FD</p>	
<p>Compression Control 3</p> 	 <p>U+156FD U+1570E U+15700 U+156FD</p>		 <p>U+156FD U+1570E U+15701 U+156FD</p>	

6. **Damage modifiers**

































































































































Damage modifiers are used to indicate that a hieroglyph has been damaged in whole or in part. The 15 modifiers are used to indicate the location of damage to the preceding hieroglyph. Only one damage modifier can be applied to each hieroglyph. Damage modifiers re-size along with the hieroglyph they modify when occurring in a glyph block with other signs.

































































































































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- Maya Hieroglyph Modifier Damaged At Bottom Start [D2]
- Maya Hieroglyph Modifier Damaged At Start [D12]
- Maya Hieroglyph Modifier Damaged At Top End [D3]
- Maya Hieroglyph Modifier Damaged At Top [D13]
- Maya Hieroglyph Modifier Damaged At Bottom Start and Top End [D23]
- Maya Hieroglyph Modifier Damaged At Start and Top [D123]
- Maya Hieroglyph Modifier Damaged At Bottom End [D4]
- Maya Hieroglyph Modifier Damaged At Top Start and Bottom End [D14]
- Maya Hieroglyph Modifier Damaged At Bottom [D24]
- Maya Hieroglyph Modifier Damaged At Start and Bottom [D124]
- Maya Hieroglyph Modifier Damaged At End [D34]
- Maya Hieroglyph Modifier Damaged At Top and End [D134]
- Maya Hieroglyph Modifier Damaged At Bottom and End [D234]
- Maya Hieroglyph Modifier Damaged [D1234]



































































































































15500Mayan Hieroglyphs1557F




























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2	15502	15512	15522	15532	15542	15552	15562	15572
3	15503	15513	15523	15533	15543	15553	15563	15573
4	15504	15514	15524	15534	15544	15554	15564	15574
5	15505	15515	15525	15535	15545	15555	15565	15575
6	15506	15516	15526	15536	15546	15556	15566	15576
7	15507	15517	15527	15537	15547	15557	15567	15577
8	15508	15518	15528	15538	15548	15558	15568	15578
9	15509	15519	15529	15539	15549	15559	15569	15579
A	1550A	1551A	1552A	1553A	1554A	1555A	1556A	1557A
B	1550B	1551B	1552B	1553B	1554B	1555B	1556B	1557B
C	1550C	1551C	1552C	1553C	1554C	1555C	1556C	1557C
D	1550D	1551D	1552D	1553D	1554D	1555D	1556D	1557D
E	1550E	1551E	1552E	1553E	1554E	1555E	1556E	1557E
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














	1558	1559	155A	155B	155C	155D	155E	155F
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1								
	15581	15591	155A1	155B1	155C1	155D1	155E1	155F1
2								
	15582	15592	155A2	155B2	155C2	155D2	155E2	155F2
3								
	15583	15593	155A3	155B3	155C3	155D3	155E3	155F3
4								
	15584	15594	155A4	155B4	155C4	155D4	155E4	155F4
5								
	15585	15595	155A5	155B5	155C5	155D5	155E5	155F5
6								
	15586	15596	155A6	155B6	155C6	155D6	155E6	155F6
7								
	15587	15597	155A7	155B7	155C7	155D7	155E7	155F7
8								
	15588	15598	155A8	155B8	155C8	155D8	155E8	155F8
9								
	15589	15599	155A9	155B9	155C9	155D9	155E9	155F9
A								
	1558A	1559A	155AA	155BA	155CA	155DA	155EA	155FA
B								
	1558B	1559B	155AB	155BB	155CB	155DB	155EB	155FB
C								
	1558C	1559C	155AC	155BC	155CC	155DC	155EC	155FC
D								
	1558D	1559D	155AD	155BD	155CD	155DD	155ED	155FD
E								
	1558E	1559E	155AE	155BE	155CE	155DE	155EE	155FE
F								
	1558F	1559F	155AF	155BF	155CF	155DF	155EF	155FF






























	1560	1561	1562	1563	1564	1565	1566	1567
0								
	15600	15610	15620	15630	15640	15650	15660	15670
1								
	15601	15611	15621	15631	15641	15651	15661	15671
2								
	15602	15612	15622	15632	15642	15652	15662	15672
3								
	15603	15613	15623	15633	15643	15653	15663	15673
4								
	15604	15614	15624	15634	15644	15654	15664	15674
5								
	15605	15615	15625	15635	15645	15655	15665	15675
6								
	15606	15616	15626	15636	15646	15656	15666	15676
7								
	15607	15617	15627	15637	15647	15657	15667	15677
8								
	15608	15618	15628	15638	15648	15658	15668	15678
9								
	15609	15619	15629	15639	15649	15659	15669	15679
A								
	1560A	1561A	1562A	1563A	1564A	1565A	1566A	1567A
B								
	1560B	1561B	1562B	1563B	1564B	1565B	1566B	1567B
C								
	1560C	1561C	1562C	1563C	1564C	1565C	1566C	1567C
D								
	1560D	1561D	1562D	1563D	1564D	1565D	1566D	1567D
E								
	1560E	1561E	1562E	1563E	1564E	1565E	1566E	1567E
F								
	1560F	1561F	1562F	1563F	1564F	1565F	1566F	1567F






























	1568	1569	156A	156B	156C	156D	156E	156F
0	 15680	 15690	 156A0	 156B0	 156C0	 156D0	 156E0	 156F0
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2	 15682	 15692	 156A2	 156B2	 156C2	 156D2	 156E2	
3	 15683	 15693	 156A3	 156B3	 156C3	 156D3	 156E3	
4	 15684	 15694	 156A4	 156B4	 156C4	 156D4	 156E4	
5	 15685	 15695	 156A5	 156B5	 156C5	 156D5	 156E5	
6	 15686	 15696	 156A6	 156B6	 156C6	 156D6	 156E6	
7	 15687	 15697	 156A7	 156B7	 156C7	 156D7	 156E7	
8	 15688	 15698	 156A8	 156B8	 156C8	 156D8	 156E8	
9	 15689	 15699	 156A9	 156B9	 156C9	 156D9	 156E9	
A	 1568A	 1569A	 156AA	 156BA	 156CA	 156DA	 156EA	
B	 1568B	 1569B	 156AB	 156BB	 156CB	 156DB	 156EB	
C	 1568C	 1569C	 156AC	 156BC	 156CC	 156DC	 156EC	
D	 1568D	 1569D	 156AD	 156BD	 156CD	 156DD	 156ED	 156FD
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











Maya Hieroglyph Names






























Code point	Glyph	Name	Pallan code
15500		Mayan Hieroglyph 15500	A1
15501		Mayan Hieroglyph 15501	A2
15502		Mayan Hieroglyph 15502	A3
15503		Mayan Hieroglyph 15503	A4
15504		Mayan Hieroglyph 15504	A5
15505		Mayan Hieroglyph 15505	A6
15506		Mayan Hieroglyph 15506	A7
15507		Mayan Hieroglyph 15507	A8
15508		Mayan Hieroglyph 15508	A9
15509		Mayan Hieroglyph 15509	A10
1550A		Mayan Hieroglyph 1550A	A11
1550B		Mayan Hieroglyph 1550B	A12
1550C		Mayan Hieroglyph 1550C	A13
1550D		Mayan Hieroglyph 1550D	B1
1550E		Mayan Hieroglyph 1550E	B2
1550F		Mayan Hieroglyph 1550F	B3
15510		Mayan Hieroglyph 15510	B4
15511		Mayan Hieroglyph 15511	B5
15512		Mayan Hieroglyph 15512	B6
15513		Mayan Hieroglyph 15513	B7
15514		Mayan Hieroglyph 15514	B8
15515		Mayan Hieroglyph 15515	B9
15516		Mayan Hieroglyph 15516	B10
15517		Mayan Hieroglyph 15517	B11
15518		Mayan Hieroglyph 15518	B12
15519		Mayan Hieroglyph 15519	B13
1551A		Mayan Hieroglyph 1551A	B14
1551B		Mayan Hieroglyph 1551B	B15






























Code point	Glyph	Name	Pallan code
1551C		Mayan Hieroglyph 1551C	B16
1551D		Mayan Hieroglyph 1551D	B17
1551E		Mayan Hieroglyph 1551E	B18
1551F		Mayan Hieroglyph 1551F	B19
15520		Mayan Hieroglyph 15520	B20
15521		Mayan Hieroglyph 15521	B21
15522		Mayan Hieroglyph 15522	B22
15523		Mayan Hieroglyph 15523	B23
15524		Mayan Hieroglyph 15524	B24
15525		Mayan Hieroglyph 15525	C1
15526		Mayan Hieroglyph 15526	C2
15527		Mayan Hieroglyph 15527	C3
15528		Mayan Hieroglyph 15528	C4
15529		Mayan Hieroglyph 15529	C5
1552A		Mayan Hieroglyph 1552A	C6
1552B		Mayan Hieroglyph 1552B	C7
1552C		Mayan Hieroglyph 1552C	C8
1552D		Mayan Hieroglyph 1552D	C9
1552E		Mayan Hieroglyph 1552E	C10
1552F		Mayan Hieroglyph 1552F	C11
15530		Mayan Hieroglyph 15530	D1
15531		Mayan Hieroglyph 15531	D2
15532		Mayan Hieroglyph 15532	D3
15533		Mayan Hieroglyph 15533	D4
15534		Mayan Hieroglyph 15534	D5
15535		Mayan Hieroglyph 15535	D6
15536		Mayan Hieroglyph 15536	D7
15537		Mayan Hieroglyph 15537	D8
15538		Mayan Hieroglyph 15538	D9




















Code point	Glyph	Name	Pallan code
15539		Mayan Hieroglyph 15539	D10
1553A		Mayan Hieroglyph 1553A	D11
1553B		Mayan Hieroglyph 1553B	D12
1553C		Mayan Hieroglyph 1553C	D13
1553D		Mayan Hieroglyph 1553D	D14
1553E		Mayan Hieroglyph 1553E	D15
1553F		Mayan Hieroglyph 1553F	D16
15540		Mayan Hieroglyph 15540	D17
15541		Mayan Hieroglyph 15541	D18
15542		Mayan Hieroglyph 15542	D19
15543		Mayan Hieroglyph 15543	D20
15544		Mayan Hieroglyph 15544	D21
15545		Mayan Hieroglyph 15545	D22
15546		Mayan Hieroglyph 15546	D23
15547		Mayan Hieroglyph 15547	E1
15548		Mayan Hieroglyph 15548	E2
15549		Mayan Hieroglyph 15549	E3
1554A		Mayan Hieroglyph 1554A	E4
1554B		Mayan Hieroglyph 1554B	E5
1554C		Mayan Hieroglyph 1554C	E6
1554D		Mayan Hieroglyph 1554D	E7
1554E		Mayan Hieroglyph 1554E	E8
1554F		Mayan Hieroglyph 1554F	E9
15550		Mayan Hieroglyph 15550	E10
15551		Mayan Hieroglyph 15551	E11
15552		Mayan Hieroglyph 15552	E12
15553		Mayan Hieroglyph 15553	E13
15554		Mayan Hieroglyph 15554	E14
15555		Mayan Hieroglyph 15555	E15






























Code point	Glyph	Name	Pallan code
15556		Mayan Hieroglyph 15556	E16
15557		Mayan Hieroglyph 15557	E17
15558		Mayan Hieroglyph 15558	E18
15559		Mayan Hieroglyph 15559	E19
1555A		Mayan Hieroglyph 1555A	E20
1555B		Mayan Hieroglyph 1555B	E21
1555C		Mayan Hieroglyph 1555C	E22
1555D		Mayan Hieroglyph 1555D	E23
1555E		Mayan Hieroglyph 1555E	E24
1555F		Mayan Hieroglyph 1555F	E25
15560		Mayan Hieroglyph 15560	E26
15561		Mayan Hieroglyph 15561	E27
15562		Mayan Hieroglyph 15562	E28
15563		Mayan Hieroglyph 15563	E29
15564		Mayan Hieroglyph 15564	F1
15565		Mayan Hieroglyph 15565	F2
15566		Mayan Hieroglyph 15566	F3
15567		Mayan Hieroglyph 15567	F4
15568		Mayan Hieroglyph 15568	F5
15569		Mayan Hieroglyph 15569	F6
1556A		Mayan Hieroglyph 1556A	F7
1556B		Mayan Hieroglyph 1556B	F8
1556C		Mayan Hieroglyph 1556C	F9
1556D		Mayan Hieroglyph 1556D	F10
1556E		Mayan Hieroglyph 1556E	F11
1556F		Mayan Hieroglyph 1556F	F12
15570		Mayan Hieroglyph 15570	F13
15571		Mayan Hieroglyph 15571	F14
15572		Mayan Hieroglyph 15572	F15






























Code point	Glyph	Name	Pallan code
15573		Mayan Hieroglyph 15573	F16
15574		Mayan Hieroglyph 15574	F17
15575		Mayan Hieroglyph 15575	F18
15576		Mayan Hieroglyph 15576	F19
15577		Mayan Hieroglyph 15577	F20
15578		Mayan Hieroglyph 15578	F21
15579		Mayan Hieroglyph 15579	F22
1557A		Mayan Hieroglyph 1557A	F23
1557B		Mayan Hieroglyph 1557B	F24
1557C		Mayan Hieroglyph 1557C	F25
1557D		Mayan Hieroglyph 1557D	F26
1557E		Mayan Hieroglyph 1557E	F27
1557F		Mayan Hieroglyph 1557F	F28
15580		Mayan Hieroglyph 15580	F29
15581		Mayan Hieroglyph 15581	F30
15582		Mayan Hieroglyph 15582	F31
15583		Mayan Hieroglyph 15583	F32
15584		Mayan Hieroglyph 15584	F33
15585		Mayan Hieroglyph 15585	G1
15586		Mayan Hieroglyph 15586	G2
15587		Mayan Hieroglyph 15587	G3
15588		Mayan Hieroglyph 15588	G4
15589		Mayan Hieroglyph 15589	G5
1558A		Mayan Hieroglyph 1558A	G6
1558B		Mayan Hieroglyph 1558B	G7
1558C		Mayan Hieroglyph 1558C	G8
1558D		Mayan Hieroglyph 1558D	G9
1558E		Mayan Hieroglyph 1558E	G10
1558F		Mayan Hieroglyph 1558F	G11






























Code point	Glyph	Name	Pallan code
15590		Mayan Hieroglyph 15590	G12
15591		Mayan Hieroglyph 15591	G13
15592		Mayan Hieroglyph 15592	G14
15593		Mayan Hieroglyph 15593	G15
15594		Mayan Hieroglyph 15594	G16
15595		Mayan Hieroglyph 15595	G17
15596		Mayan Hieroglyph 15596	G18
15597		Mayan Hieroglyph 15597	G19
15598		Mayan Hieroglyph 15598	G20
15599		Mayan Hieroglyph 15599	G21
1559A		Mayan Hieroglyph 1559A	G22
1559B		Mayan Hieroglyph 1559B	G23
1559C		Mayan Hieroglyph 1559C	G24
1559D		Mayan Hieroglyph 1559D	G25
1559E		Mayan Hieroglyph 1559E	G26
1559F		Mayan Hieroglyph 1559F	G27
155A0		Mayan Hieroglyph 155A0	G28
155A1		Mayan Hieroglyph 155A1	G29
155A2		Mayan Hieroglyph 155A2	G30
155A3		Mayan Hieroglyph 155A3	G31
155A4		Mayan Hieroglyph 155A4	H1
155A5		Mayan Hieroglyph 155A5	H2
155A6		Mayan Hieroglyph 155A6	H3
155A7		Mayan Hieroglyph 155A7	H4
155A8		Mayan Hieroglyph 155A8	H5
155A9		Mayan Hieroglyph 155A9	H6
155AA		Mayan Hieroglyph 155AA	H7
155AB		Mayan Hieroglyph 155AB	H8
155AC		Mayan Hieroglyph 155AC	H9






























Code point	Glyph	Name	Pallan code
155AD		Mayan Hieroglyph 155AD	H10
155AE		Mayan Hieroglyph 155AE	H11
155AF		Mayan Hieroglyph 155AF	H12
155B0		Mayan Hieroglyph 155B0	H13
155B1		Mayan Hieroglyph 155B1	H14
155B2		Mayan Hieroglyph 155B2	H15
155B3		Mayan Hieroglyph 155B3	H16
155B4		Mayan Hieroglyph 155B4	H17
155B5		Mayan Hieroglyph 155B5	H18
155B6		Mayan Hieroglyph 155B6	H19
155B7		Mayan Hieroglyph 155B7	H20
155B8		Mayan Hieroglyph 155B8	H21
155B9		Mayan Hieroglyph 155B9	H22
155BA		Mayan Hieroglyph 155BA	H23
155BB		Mayan Hieroglyph 155BB	H24
155BC		Mayan Hieroglyph 155BC	H25
155BD		Mayan Hieroglyph 155BD	H26
155BE		Mayan Hieroglyph 155BE	H27
155BF		Mayan Hieroglyph 155BF	H28
155C0		Mayan Hieroglyph 155C0	I1
155C1		Mayan Hieroglyph 155C1	I2
155C2		Mayan Hieroglyph 155C2	I3
155C3		Mayan Hieroglyph 155C3	I4
155C4		Mayan Hieroglyph 155C4	I5
155C5		Mayan Hieroglyph 155C5	I6
155C6		Mayan Hieroglyph 155C6	I7
155C7		Mayan Hieroglyph 155C7	I8
155C8		Mayan Hieroglyph 155C8	I9
155C9		Mayan Hieroglyph 155C9	I10






























Code point	Glyph	Name	Pallan code
155CA		Mayan Hieroglyph 155CA	I11
155CB		Mayan Hieroglyph 155CB	I12
155CC		Mayan Hieroglyph 155CC	I13
155CD		Mayan Hieroglyph 155CD	I14
155CE		Mayan Hieroglyph 155CE	I15
155CF		Mayan Hieroglyph 155CF	I16
155D0		Mayan Hieroglyph 155D0	I17
155D1		Mayan Hieroglyph 155D1	I18
155D2		Mayan Hieroglyph 155D2	I19
155D3		Mayan Hieroglyph 155D3	I20
155D4		Mayan Hieroglyph 155D4	I21
155D5		Mayan Hieroglyph 155D5	I22
155D6		Mayan Hieroglyph 155D6	I23
155D7		Mayan Hieroglyph 155D7	I24
155D8		Mayan Hieroglyph 155D8	I25
155D9		Mayan Hieroglyph 155D9	I26
155DA		Mayan Hieroglyph 155DA	I27
155DB		Mayan Hieroglyph 155DB	I28
155DC		Mayan Hieroglyph 155DC	I29
155DD		Mayan Hieroglyph 155DD	I30
155DE		Mayan Hieroglyph 155DE	I31
155DF		Mayan Hieroglyph 155DF	J1
155E0		Mayan Hieroglyph 155E0	J2
155E1		Mayan Hieroglyph 155E1	J3
155E2		Mayan Hieroglyph 155E2	J4
155E3		Mayan Hieroglyph 155E3	J5
155E4		Mayan Hieroglyph 155E4	J6
155E5		Mayan Hieroglyph 155E5	J7
155E6		Mayan Hieroglyph 155E6	J8




























Code point	Glyph	Name	Pallan code
155E7		Mayan Hieroglyph 155E7	J9
155E8		Mayan Hieroglyph 155E8	J10
155E9		Mayan Hieroglyph 155E9	J11
155EA		Mayan Hieroglyph 155EA	J12
155EB		Mayan Hieroglyph 155EB	J13
155EC		Mayan Hieroglyph 155EC	J14
155ED		Mayan Hieroglyph 155ED	J15
155EE		Mayan Hieroglyph 155EE	J16
155EF		Mayan Hieroglyph 155EF	J17
155F0		Mayan Hieroglyph 155F0	J18
155F1		Mayan Hieroglyph 155F1	J19
155F2		Mayan Hieroglyph 155F2	J20
155F3		Mayan Hieroglyph 155F3	J21
155F4		Mayan Hieroglyph 155F4	J22
155F5		Mayan Hieroglyph 155F5	J23
155F6		Mayan Hieroglyph 155F6	J24
155F7		Mayan Hieroglyph 155F7	K1
155F8		Mayan Hieroglyph 155F8	K2
155F9		Mayan Hieroglyph 155F9	K3
155FA		Mayan Hieroglyph 155FA	K4
155FB		Mayan Hieroglyph 155FB	K5
155FC		Mayan Hieroglyph 155FC	K6
155FD		Mayan Hieroglyph 155FD	K7
155FE		Mayan Hieroglyph 155FE	K8
155FF		Mayan Hieroglyph 155FF	K9
15600		Mayan Hieroglyph 15600	K10
15601		Mayan Hieroglyph 15601	K11
15602		Mayan Hieroglyph 15602	K12
15603		Mayan Hieroglyph 15603	K13






























Code point	Glyph	Name	Pallan code
15604		Mayan Hieroglyph 15604	K14
15605		Mayan Hieroglyph 15605	K15
15606		Mayan Hieroglyph 15606	K16
15607		Mayan Hieroglyph 15607	K17
15608		Mayan Hieroglyph 15608	K18
15609		Mayan Hieroglyph 15609	K19
1560A		Mayan Hieroglyph 1560A	L1
1560B		Mayan Hieroglyph 1560B	L2
1560C		Mayan Hieroglyph 1560C	L3
1560D		Mayan Hieroglyph 1560D	L4
1560E		Mayan Hieroglyph 1560E	L5
1560F		Mayan Hieroglyph 1560F	L6
15610		Mayan Hieroglyph 15610	L7
15611		Mayan Hieroglyph 15611	L8
15612		Mayan Hieroglyph 15612	L9
15613		Mayan Hieroglyph 15613	L10
15614		Mayan Hieroglyph 15614	L11
15615		Mayan Hieroglyph 15615	L12
15616		Mayan Hieroglyph 15616	L13
15617		Mayan Hieroglyph 15617	L14
15618		Mayan Hieroglyph 15618	L15
15619		Mayan Hieroglyph 15619	L16
1561A		Mayan Hieroglyph 1561A	L17
1561B		Mayan Hieroglyph 1561B	L18
1561C		Mayan Hieroglyph 1561C	L19
1561D		Mayan Hieroglyph 1561D	L20
1561E		Mayan Hieroglyph 1561E	L21
1561F		Mayan Hieroglyph 1561F	L22
15620		Mayan Hieroglyph 15620	L23






























Code point	Glyph	Name	Pallan code
15621		Mayan Hieroglyph 15621	L24
15622		Mayan Hieroglyph 15622	L25
15623		Mayan Hieroglyph 15623	L26
15624		Mayan Hieroglyph 15624	M1
15625		Mayan Hieroglyph 15625	M2
15626		Mayan Hieroglyph 15626	M3
15627		Mayan Hieroglyph 15627	M4
15628		Mayan Hieroglyph 15628	M5
15629		Mayan Hieroglyph 15629	M6
1562A		Mayan Hieroglyph 1562A	M7
1562B		Mayan Hieroglyph 1562B	M8
1562C		Mayan Hieroglyph 1562C	M9
1562D		Mayan Hieroglyph 1562D	M10
1562E		Mayan Hieroglyph 1562E	M11
1562F		Mayan Hieroglyph 1562F	M12
15630		Mayan Hieroglyph 15630	M13
15631		Mayan Hieroglyph 15631	M14
15632		Mayan Hieroglyph 15632	M15
15633		Mayan Hieroglyph 15633	M16
15634		Mayan Hieroglyph 15634	M17
15635		Mayan Hieroglyph 15635	M18
15636		Mayan Hieroglyph 15636	M19
15637		Mayan Hieroglyph 15637	M20
15638		Mayan Hieroglyph 15638	M21
15639		Mayan Hieroglyph 15639	M22
1563A		Mayan Hieroglyph 1563A	M23
1563B		Mayan Hieroglyph 1563B	M24
1563C		Mayan Hieroglyph 1563C	M25
1563D		Mayan Hieroglyph 1563D	M26






























Code point	Glyph	Name	Pallan code
1563E		Mayan Hieroglyph 1563E	M27
1563F		Mayan Hieroglyph 1563F	M28
15640		Mayan Hieroglyph 15640	M29
15641		Mayan Hieroglyph 15641	M30
15642		Mayan Hieroglyph 15642	M31
15643		Mayan Hieroglyph 15643	N1
15644		Mayan Hieroglyph 15644	N2
15645		Mayan Hieroglyph 15645	N3
15646		Mayan Hieroglyph 15646	N4
15647		Mayan Hieroglyph 15647	N5
15648		Mayan Hieroglyph 15648	N6
15649		Mayan Hieroglyph 15649	N7
1564A		Mayan Hieroglyph 1564A	N8
1564B		Mayan Hieroglyph 1564B	N9
1564C		Mayan Hieroglyph 1564C	N10
1564D		Mayan Hieroglyph 1564D	N11
1564E		Mayan Hieroglyph 1564E	N12
1564F		Mayan Hieroglyph 1564F	N13
15650		Mayan Hieroglyph 15650	N14
15651		Mayan Hieroglyph 15651	N15
15652		Mayan Hieroglyph 15652	N16
15653		Mayan Hieroglyph 15653	N17
15654		Mayan Hieroglyph 15654	N18
15655		Mayan Hieroglyph 15655	N19
15656		Mayan Hieroglyph 15656	N20
15657		Mayan Hieroglyph 15657	N21
15658		Mayan Hieroglyph 15658	N22
15659		Mayan Hieroglyph 15659	N23
1565A		Mayan Hieroglyph 1565A	O1










Code point	Glyph	Name	Pallan code
1565B		Mayan Hieroglyph 1565B	O2
1565C		Mayan Hieroglyph 1565C	O3
1565D		Mayan Hieroglyph 1565D	O4
1565E		Mayan Hieroglyph 1565E	O5
1565F		Mayan Hieroglyph 1565F	O6
15660		Mayan Hieroglyph 15660	O7
15661		Mayan Hieroglyph 15661	O8
15662		Mayan Hieroglyph 15662	O9
15663		Mayan Hieroglyph 15663	O10
15664		Mayan Hieroglyph 15664	O11
15665		Mayan Hieroglyph 15665	O12
15666		Mayan Hieroglyph 15666	O13
15667		Mayan Hieroglyph 15667	O14
15668		Mayan Hieroglyph 15668	O15
15669		Mayan Hieroglyph 15669	O16
1566A		Mayan Hieroglyph 1566A	O17
1566B		Mayan Hieroglyph 1566B	O18
1566C		Mayan Hieroglyph 1566C	O19
1566D		Mayan Hieroglyph 1566D	O20
1566E		Mayan Hieroglyph 1566E	O21
1566F		Mayan Hieroglyph 1566F	P1
15670		Mayan Hieroglyph 15670	P2
15671		Mayan Hieroglyph 15671	P3
15672		Mayan Hieroglyph 15672	P4
15673		Mayan Hieroglyph 15673	P5
15674		Mayan Hieroglyph 15674	P6
15675		Mayan Hieroglyph 15675	P7
15676		Mayan Hieroglyph 15676	P8
15677		Mayan Hieroglyph 15677	P9

Code point	Glyph	Name	Pallan code
15678		Mayan Hieroglyph 15678	P10
15679		Mayan Hieroglyph 15679	P11
1567A		Mayan Hieroglyph 1567A	P12
1567B		Mayan Hieroglyph 1567B	P13
1567C		Mayan Hieroglyph 1567C	P15
1567D		Mayan Hieroglyph 1567D	P16
1567E		Mayan Hieroglyph 1567E	P17
1567F		Mayan Hieroglyph 1567F	P18
15680		Mayan Hieroglyph 15680	P19
15681		Mayan Hieroglyph 15681	P20
15682		Mayan Hieroglyph 15682	P21
15683		Mayan Hieroglyph 15683	P22
15684		Mayan Hieroglyph 15684	P23
15685		Mayan Hieroglyph 15685	P24
15686		Mayan Hieroglyph 15686	P25
15687		Mayan Hieroglyph 15687	P26
15688		Mayan Hieroglyph 15688	P27
15689		Mayan Hieroglyph 15689	P28
1568A		Mayan Hieroglyph 1568A	P29
1568B		Mayan Hieroglyph 1568B	P30
1568C		Mayan Hieroglyph 1568C	P31
1568D		Mayan Hieroglyph 1568D	P32
1568E		Mayan Hieroglyph 1568E	P33
1568F		Mayan Hieroglyph 1568F	P34
15690		Mayan Hieroglyph 15690	P35
15691		Mayan Hieroglyph 15691	Q1
15692		Mayan Hieroglyph 15692	Q2
15693		Mayan Hieroglyph 15693	Q3
15694		Mayan Hieroglyph 15694	Q4

































Code point	Glyph	Name	Pallan code
15695		Mayan Hieroglyph 15695	Q5
15696		Mayan Hieroglyph 15696	Q6
15697		Mayan Hieroglyph 15697	Q7
15698		Mayan Hieroglyph 15698	Q8
15699		Mayan Hieroglyph 15699	Q9
1569A		Mayan Hieroglyph 1569A	Q10
1569B		Mayan Hieroglyph 1569B	Q11
1569C		Mayan Hieroglyph 1569C	R2
1569D		Mayan Hieroglyph 1569D	R3
1569E		Mayan Hieroglyph 1569E	R4
1569F		Mayan Hieroglyph 1569F	R5
156A0		Mayan Hieroglyph 156A0	R6
156A1		Mayan Hieroglyph 156A1	R7
156A2		Mayan Hieroglyph 156A2	R8
156A3		Mayan Hieroglyph 156A3	R9
156A4		Mayan Hieroglyph 156A4	R11
156A5		Mayan Hieroglyph 156A5	R12
156A6		Mayan Hieroglyph 156A6	R13
156A7		Mayan Hieroglyph 156A7	R14
156A8		Mayan Hieroglyph 156A8	R15
156A9		Mayan Hieroglyph 156A9	S1
156AA		Mayan Hieroglyph 156AA	S2
156AB		Mayan Hieroglyph 156AB	S3
156AC		Mayan Hieroglyph 156AC	S4
156AD		Mayan Hieroglyph 156AD	S5
156AE		Mayan Hieroglyph 156AE	S6
156AF		Mayan Hieroglyph 156AF	S7
156B0		Mayan Hieroglyph 156B0	S8
156B1		Mayan Hieroglyph 156B1	S9

Code point	Glyph	Name	Pallan code
156B2		Mayan Hieroglyph 156B2	S10
156B3		Mayan Hieroglyph 156B3	S11
156B4		Mayan Hieroglyph 156B4	S12
156B5		Mayan Hieroglyph 156B5	S13
156B6		Mayan Hieroglyph 156B6	S14
156B7		Mayan Hieroglyph 156B7	S15
156B8		Mayan Hieroglyph 156B8	S16
156B9		Mayan Hieroglyph 156B9	S17
156BA		Mayan Hieroglyph 156BA	S18
156BB		Mayan Hieroglyph 156BB	S19
156BC		Mayan Hieroglyph 156BC	S20
156BD		Mayan Hieroglyph 156BD	S21
156BE		Mayan Hieroglyph 156BE	S22
156BF		Mayan Hieroglyph 156BF	S23
156C0		Mayan Hieroglyph 156C0	S24
156C1		Mayan Hieroglyph 156C1	S25
156C2		Mayan Hieroglyph 156C2	S26
156C3		Mayan Hieroglyph 156C3	S27
156C4		Mayan Hieroglyph 156C4	S28
156C5		Mayan Hieroglyph 156C5	S29
156C6		Mayan Hieroglyph 156C6	S30
156C7		Mayan Hieroglyph 156C7	S31
156C8		Mayan Hieroglyph 156C8	S32
156C9		Mayan Hieroglyph 156C9	S33
156CA		Mayan Hieroglyph 156CA	S34
156CB		Mayan Hieroglyph 156CB	S35
156CC		Mayan Hieroglyph 156CC	S36
156CD		Mayan Hieroglyph 156CD	T1
156CE		Mayan Hieroglyph 156CE	T2

Code point	Glyph	Name	Pallan code
156CF		Mayan Hieroglyph 156CF	T3
156D0		Mayan Hieroglyph 156D0	T4
156D1		Mayan Hieroglyph 156D1	T5
156D2		Mayan Hieroglyph 156D2	T6
156D3		Mayan Hieroglyph 156D3	T7
156D4		Mayan Hieroglyph 156D4	T8
156D5		Mayan Hieroglyph 156D5	T9
156D6		Mayan Hieroglyph 156D6	T10
156D7		Mayan Hieroglyph 156D7	T11
156D8		Mayan Hieroglyph 156D8	T12
156D9		Mayan Hieroglyph 156D9	T13
156DA		Mayan Hieroglyph 156DA	T14
156DB		Mayan Hieroglyph 156DB	T15
156DC		Mayan Hieroglyph 156DC	T16
156DD		Mayan Hieroglyph 156DD	T17
156DE		Mayan Hieroglyph 156DE	T18
156DF		Mayan Hieroglyph 156DF	T19
156E0		Mayan Hieroglyph 156E0	T20
156E1		Mayan Hieroglyph 156E1	T21
156E2		Mayan Hieroglyph 156E2	T22
156E3		Mayan Hieroglyph 156E3	T23
156E4		Mayan Hieroglyph 156E4	T24
156E5		Mayan Hieroglyph 156E5	T25
156E6		Mayan Hieroglyph 156E6	T26
156E7		Mayan Hieroglyph 156E7	T27
156E8		Mayan Hieroglyph 156E8	T28
156E9		Mayan Hieroglyph 156E9	T29
156EA		Mayan Hieroglyph 156EA	T30
156EB		Mayan Hieroglyph 156EB	T31

Code point	Glyph	Name	Pallan code
156EC		Mayan Hieroglyph 156EC	T32
156ED		Mayan Hieroglyph 156ED	T33
156EE		Mayan Hieroglyph 156EE	T34
156EF		Mayan Hieroglyph 156EF	T35
156F0		Mayan Hieroglyph 156F0	V12
156F1		Mayan Hieroglyph 156F1	V18
156F2		Mayan Hieroglyph 156F2	
156FE		Maya Hieroglyph Lost Sign	
156FF		Maya Hieroglyph Blank Sign	

15700 Maya Hieroglyph Format Controls 1571F

	1570	1571
0	 15700	 15710
1	 15701	 15711
2	 15702	 15712
3	 15703	 15713
4	 15704	 15714
5	 15705	 15715
6	 15706	 15716
7	 15707	 15717
8	 15708	 15717
9	 15708	 15718
A	 15709	 15719
B	 1570A	 1571A
C	 1570B	 1571B
D	 1570C	 1571C
E	 1570D	
F	 1570E	

Maya Hieroglyph Format Control Names

Joiners

- 15700 MAYAN HIEROGLYPH HORIZONTAL JOINER
- 15701 MAYAN HIEROGLYPH VERTICAL JOINER
- 15702 MAYAN HIEROGLYPH LIGATURE JOINER
- 15703 MAYAN HIEROGLYPH INSERTION JOINER

Modifiers

- 15704 MAYAN HIEROGLYPH COLOR MODIFIER
- 15705 MAYAN HIEROGLYPH MIRROR HORIZONTALLY
- 15706 MAYAN HIEROGLYPH MIRROR VERTICALLY
- 15707 MAYAN HIEROGLYPH ROTATE 90 DEGREES
- 15708 MAYAN HIEROGLYPH ROTATE 180 DEGREES
- 15709 MAYAN HIEROGLYPH ROTATE 270 DEGREES

Segment scoping delimiters

- 1570A MAYAN HIEROGLYPH BEGIN SEGMENT
- 1570B MAYAN HIEROGLYPH END SEGMENT

Compression controls

- 1570C MAYAN HIEROGLYPH COMPRESSION CONTROL 1
- 1570D MAYAN HIEROGLYPH COMPRESSION CONTROL 2
- 1570E MAYAN HIEROGLYPH COMPRESSION CONTROL 3

Damage modifiers

- 1570F MAYAN HIEROGLYPH MODIFIER DAMAGED AT TOP START
- 15710 MAYAN HIEROGLYPH MODIFIER DAMAGED AT BOTTOM START
- 15711 MAYAN HIEROGLYPH MODIFIER DAMAGED AT START
- 15712 MAYAN HIEROGLYPH MODIFIER DAMAGED AT TOP END
- 15713 MAYAN HIEROGLYPH MODIFIER DAMAGED AT TOP
- 15714 MAYAN HIEROGLYPH MODIFIER DAMAGED AT BOTTOM START AND TOP END
- 15715 MAYAN HIEROGLYPH MODIFIER DAMAGED AT START AND TOP
- 15716 MAYAN HIEROGLYPH MODIFIER DAMAGED AT BOTTOM END
- 15717 MAYAN HIEROGLYPH MODIFIER DAMAGED AT TOP START AND BOTTOM END
- 15718 MAYAN HIEROGLYPH MODIFIER DAMAGED AT BOTTOM
- 15719 MAYAN HIEROGLYPH MODIFIER DAMAGED AT START AND BOTTOM
- 1571A MAYAN HIEROGLYPH MODIFIER DAMAGED AT END
- 1571B MAYAN HIEROGLYPH MODIFIER DAMAGED AT TOP AND END
- 1571C MAYAN HIEROGLYPH MODIFIER DAMAGED AT BOTTOM AND END
- 1571D MAYAN HIEROGLYPH MODIFIER DAMAGED


Properties

The following proposed sections propose Unicode property values for the Maya Hieroglyph signs and format controls included in this proposal.

Grapheme break ([GraphemeBreakProperty.txt](#))

```
15700..15703 ; Control # Cf [4] MAYAN HIEROGLYPH HORIZONTAL JOINER..MAYAN HIEROGLYPH INSERTION JOINER
15704..15709 ; Extend # Mn [6] MAYAN HIEROGLYPH COLOR MODIFIER..MAYAN HIEROGLYPH ROTATE 270 DEGREES
1570A..1570E ; Control # Cf [5] MAYAN HIEROGLYPH BEGIN SEGMENT..MAYAN HIEROGLYPH COMPRESSION CONTROL 3
1570F..1571D ; Extend # Mn [15] MAYAN HIEROGLYPH MODIFIER DAMAGED AT TOP START..MAYAN HIEROGLYPH MODIFIER DAMAGED
```

Sentence break ([SentenceBreakProperty.txt](#))

```
15500..156F0 ; OLetter # Lo [496] MAYAN HIEROGLYPH 15500..MAYAN HIEROGLYPH 156F0
156FD..156FF ; OLetter # Lo [3] MAYAN HIEROGLYPH 156FD..MAYAN HIEROGLYPH 156FF
15700..15703 ; Format # Cf [4] MAYAN HIEROGLYPH HORIZONTAL JOINER..MAYAN HIEROGLYPH INSERTION JOINER
15704..15709 ; Extend # Mn [6] MAYAN HIEROGLYPH COLOR MODIFIER..MAYAN HIEROGLYPH ROTATE 270 DEGREES
1570A..1570E ; Format # Cf [5] MAYAN HIEROGLYPH BEGIN SEGMENT..MAYAN HIEROGLYPH COMPRESSION CONTROL 3
1570F..1571D ; Extend # Mn [15] MAYAN HIEROGLYPH MODIFIER DAMAGED AT TOP START..MAYAN HIEROGLYPH MODIFIER DAMAGED
```

Word break ([WordBreakProperty.txt](#))

```
15500..156F0 ; ALetter # Lo [496] MAYAN HIEROGLYPH 15500..MAYAN HIEROGLYPH 156F0
156FD..156FF ; ALetter # Lo [3] MAYAN HIEROGLYPH 156FD..MAYAN HIEROGLYPH 156FF
15700..15703 ; Format # Cf [4] MAYAN HIEROGLYPH HORIZONTAL JOINER..MAYAN HIEROGLYPH INSERTION JOINER
15704..15709 ; Extend # Mn [6] MAYAN HIEROGLYPH COLOR MODIFIER..MAYAN HIEROGLYPH ROTATE 270 DEGREES
1570A..1570E ; Format # Cf [5] MAYAN HIEROGLYPH BEGIN SEGMENT..MAYAN HIEROGLYPH COMPRESSION CONTROL 3
1570F..1571D ; Extend # Mn [15] MAYAN HIEROGLYPH MODIFIER DAMAGED AT TOP START..MAYAN HIEROGLYPH MODIFIER DAMAGED
```

Blocks ([Blocks.txt](#))

```
15500..156FF ; Maya Hieroglyphs
15700..1571F ; Maya Hieroglyph Format Controls
```

East Asian width ([EastAsianWidth.txt](#))

```
15500..156F0 ; N # Lo [496] MAYAN HIEROGLYPH 15500..MAYAN HIEROGLYPH 156F0
156FD..156FF ; N # Lo [3] MAYAN HIEROGLYPH 156FD..MAYAN HIEROGLYPH 156FF
15700..15703 ; N # Cf [4] MAYAN HIEROGLYPH HORIZONTAL JOINER..MAYAN HIEROGLYPH INSERTION JOINER
15704..15709 ; N # Mn [6] MAYAN HIEROGLYPH COLOR MODIFIER..MAYAN HIEROGLYPH ROTATE 270 DEGREES
1570A..1570E ; N # Cf [5] MAYAN HIEROGLYPH BEGIN SEGMENT..MAYAN HIEROGLYPH COMPRESSION CONTROL 3
1570F..1571D ; N # Mn [15] MAYAN HIEROGLYPH MODIFIER DAMAGED AT TOP START..MAYAN HIEROGLYPH MODIFIER DAMAGED
```

Line break ([LineBreak.txt](#))

```
15500..156F0 ; AL # Lo [496] MAYAN HIEROGLYPH 15500..MAYAN HIEROGLYPH 156F0
156FD..156FF ; AL # Lo [3] MAYAN HIEROGLYPH 156FD..MAYAN HIEROGLYPH 156FF
15700..15703 ; GL # Cf [4] MAYAN HIEROGLYPH HORIZONTAL JOINER..MAYAN HIEROGLYPH INSERTION JOINER
15704..15709 ; CM # Mn [6] MAYAN HIEROGLYPH COLOR MODIFIER..MAYAN HIEROGLYPH ROTATE 270 DEGREES
1570A ; OP # Cf MAYAN HIEROGLYPH BEGIN SEGMENT
1570B ; CL # Cf MAYAN HIEROGLYPH END SEGMENT
1570C..1570E ; CM # Cf [3] MAYAN HIEROGLYPH COMPRESSION CONTROL 1..MAYAN HIEROGLYPH COMPRESSION CONTROL 3
1570F..1571D ; CM # Mn [15] MAYAN HIEROGLYPH MODIFIER DAMAGED AT TOP START..MAYAN HIEROGLYPH MODIFIER DAMAGED
```

Script data ([Scripts.txt](#))

```
15500..156F0 ; Mayan_Hieroglyphs # Lo [496] MAYAN HIEROGLYPH 15500..MAYAN HIEROGLYPH 156F0
156FD..156FF ; Mayan_Hieroglyphs # Lo [3] MAYAN HIEROGLYPH 156FD..MAYAN HIEROGLYPH 156FF
15700..15703 ; Mayan_Hieroglyphs # Cf [4] MAYAN HIEROGLYPH HORIZONTAL JOINER..MAYAN HIEROGLYPH INSERTION JOINER
15704..15709 ; Mayan_Hieroglyphs # Mn [6] MAYAN HIEROGLYPH COLOR MODIFIER..MAYAN HIEROGLYPH ROTATE 270 DEGREES
1570A..1570E ; Mayan_Hieroglyphs # Cf [5] MAYAN HIEROGLYPH BEGIN SEGMENT..MAYAN HIEROGLYPH COMPRESSION CONTROL 3
1570F..1571D ; Mayan_Hieroglyphs # Mn [15] MAYAN HIEROGLYPH MODIFIER DAMAGED AT TOP START..MAYAN HIEROGLYPH MODIFIER DAMAGED
```

```

..
1D2E0..1D2F3 ; Mayan_Hieroglyphs # No [20] MAYAN NUMERAL ZERO..MAYAN NUMERAL NINETEEN

```

General properties (UnicodeData.txt)

```

15500;MAYAN HIEROGLYPH 15500;Lo;0;L;;;;N;;;;;
..
156F0;MAYAN HIEROGLYPH 156F0;Lo;0;L;;;;N;;;;;
156FD;MAYAN HIEROGLYPH PLACEHOLDER SIGN;Lo;0;L;;;;N;;;;;
156FE;MAYAN HIEROGLYPH LOST SIGN;Lo;0;L;;;;N;;;;;
156FF;MAYAN HIEROGLYPH BLANK SIGN;Lo;0;L;;;;N;;;;;
15700;MAYAN HIEROGLYPH HORIZONTAL JOINER;Cf;0;L;;;;N;;;;;
15701;MAYAN HIEROGLYPH VERTICAL JOINER;Cf;0;L;;;;N;;;;;
15702;MAYAN HIEROGLYPH LIGATURE JOINER;Cf;0;L;;;;N;;;;;
15703;MAYAN HIEROGLYPH INSERTION JOINER;Cf;0;L;;;;N;;;;;
15704;MAYAN HIEROGLYPH COLOR MODIFIER;Mn;0;NSM;;;;N;;;;;
15705;MAYAN HIEROGLYPH MIRROR HORIZONTALLY;Mn;0;NSM;;;;N;;;;;
15706;MAYAN HIEROGLYPH MIRROR VERTICALLY;Mn;0;NSM;;;;N;;;;;
15707;MAYAN HIEROGLYPH ROTATE 90 DEGREES;Mn;0;NSM;;;;N;;;;;
15708;MAYAN HIEROGLYPH ROTATE 180 DEGREES;Mn;0;NSM;;;;N;;;;;
15709;MAYAN HIEROGLYPH ROTATE 270 DEGREES;Mn;0;NSM;;;;N;;;;;
1570A;MAYAN HIEROGLYPH BEGIN SEGMENT;Cf;0;L;;;;N;;;;;
1570B;MAYAN HIEROGLYPH END SEGMENT;Cf;0;L;;;;N;;;;;
1570C;MAYAN HIEROGLYPH COMPRESSION CONTROL 1;Cf;0;L;;;;N;;;;;
1570D;MAYAN HIEROGLYPH COMPRESSION CONTROL 2;Cf;0;L;;;;N;;;;;
1570E;MAYAN HIEROGLYPH COMPRESSION CONTROL 3;Cf;0;L;;;;N;;;;;
1570F;MAYAN HIEROGLYPH MODIFIER DAMAGED AT TOP START;Mn;0;NSM;;;;N;;;;;
15710;MAYAN HIEROGLYPH MODIFIER DAMAGED AT BOTTOM START;Mn;0;NSM;;;;N;;;;;
15711;MAYAN HIEROGLYPH MODIFIER DAMAGED AT START;Mn;0;NSM;;;;N;;;;;
15712;MAYAN HIEROGLYPH MODIFIER DAMAGED AT TOP END;Mn;0;NSM;;;;N;;;;;
15713;MAYAN HIEROGLYPH MODIFIER DAMAGED AT TOP;Mn;0;NSM;;;;N;;;;;
15714;MAYAN HIEROGLYPH MODIFIER DAMAGED AT BOTTOM START AND TOP END;Mn;0;NSM;;;;N;;;;;
15715;MAYAN HIEROGLYPH MODIFIER DAMAGED AT START AND TOP;Mn;0;NSM;;;;N;;;;;
15716;MAYAN HIEROGLYPH MODIFIER DAMAGED AT BOTTOM END;Mn;0;NSM;;;;N;;;;;
15717;MAYAN HIEROGLYPH MODIFIER DAMAGED AT TOP START AND BOTTOM END;Mn;0;NSM;;;;N;;;;;
15718;MAYAN HIEROGLYPH MODIFIER DAMAGED AT BOTTOM;Mn;0;NSM;;;;N;;;;;
15719;MAYAN HIEROGLYPH MODIFIER DAMAGED AT START AND BOTTOM;Mn;0;NSM;;;;N;;;;;
1571A;MAYAN HIEROGLYPH MODIFIER DAMAGED AT END;Mn;0;NSM;;;;N;;;;;
1571B;MAYAN HIEROGLYPH MODIFIER DAMAGED AT TOP AND END;Mn;0;NSM;;;;N;;;;;
1571C;MAYAN HIEROGLYPH MODIFIER DAMAGED AT BOTTOM AND END;Mn;0;NSM;;;;N;;;;;
1571D;MAYAN HIEROGLYPH MODIFIER DAMAGED;Mn;0;NSM;;;;N;;;;;

```

Vertical orientation (VerticalOrientation.txt)

```

15500..156F0 ; U # Lo [496] MAYAN HIEROGLYPH 15500..MAYAN HIEROGLYPH 156F0
156FD..156FF ; U # Lo [3] MAYAN HIEROGLYPH 156FD..MAYAN HIEROGLYPH 156FF
15700..15703 ; U # Cf [4] MAYAN HIEROGLYPH HORIZONTAL JOINER..MAYAN HIEROGLYPH INSERTION JOINER
15704..15709 ; U # Mn [6] MAYAN HIEROGLYPH COLOR MODIFIER..MAYAN HIEROGLYPH ROTATE 270 DEGREES
1577A..1577E ; U # Cf [5] MAYAN HIEROGLYPH BEGIN SEGMENT..MAYAN HIEROGLYPH COMPRESSION CONTROL 3
1577F..1578D ; U # Mn [15] MAYAN HIEROGLYPH MODIFIER DAMAGED AT TOP START..MAYAN HIEROGLYPH MODIFIER DAMAGED

```

 Appendices

Appendix A — Sample of encoded text: Dresden Codex, page 72.

The following table shows a sample of the proposed encoding in action, using the text from page 72 of the Dresden Codex as an example. The left column shows a chromo-lithograph of the original text, while the right column shows the same text rendered with a prototype font using the proposed encoding.

Original document	Encoding
 <p>Chromo-lithograph of text (Foerstemann 1880)</p>	 <p>Text rendered with prototype font</p>



References

- Delprat, Bruno, and Stepan Orevkov. 2012. "MayaPS: Maya hieroglyphics with (La)TeX." *TUGboat* 33.3: 289–94.
- Evreinov, Eduard V.; Jurij G. Kosarev, and Valentin A. Ustinov 1961 *Primenenie élektronnykh vychislitel'nykh mashin v issledovanii pis'mennosti drevnykh Majja: 3. Svodnyj sistematizirovannyj katalog ieroglificheskikh znakov*. Novosibirsk: Izdatel'stvo Sibirskogo Otdelenija AN SSSR.
- Foerstemann, Ernst Wilhelm. 1880. *Die Maya-Handschrift der Königlichen öffentlichen Bibliothek zu Dresden*. Leipzig: Verlag der A. Naumann'schen Lichtdruckerei. <https://digital.slub-dresden.de/werkansicht/df/912849/5>
- Gardiner, Alan. 1927. *Egyptian Grammar: Being an Introduction to the Study of Hieroglyphs*. Oxford: Griffith Institute.
- . 1928. *Catalogue of the Egyptian Hieroglyphic Printing Type: From Matrices owned and controlled by Dr. Alan H. Gardiner*. Oxford: Oxford University Press.
- Glass, Andrew; Ingelore Hafemann; Mark-Jan Nederhof; Stéphane Polis; Bob Richmond; Serge Rosmorduc; Simon Schweitzer. 2017. "A method for encoding Egyptian quadrats in Unicode." *Unicode document repository* L2/17-112R. <https://www.unicode.org/L2/L2017/17112r-quadrat-encoding.pdf>
- Glass, Andrew; Jorke Grotenhuis; Mark-Jan Nederhof; Stéphane Polis; Serge Rosmorduc; Daniel A. Werning. 2021. "Additional control characters for Ancient Egyptian hieroglyphic texts." *Unicode document repository* L2/21-248. <https://www.unicode.org/L2/L2021/21248-egyptian-controls.pdf>
- Gates, William 1932 *The Dresden Codex*. Facsimilar edition. Maya society Publications No. 2. Baltimore: The Maya Society at Johns Hopkins University. https://digital.slub-dresden.de/werkansicht/df/80725/3?tx_dlf_navigation%5Bcontroller%5D=Navigation&cHash=2b7eef6229ba85ff2b6ec7ffb9f4c277
- Houston, Stephen. 2000. "Into the Minds of Ancients: Advances in Maya Glyph Studies." *Journal of World Prehistory* 14: 121–201.
- . 2004. "Writing in Early Mesoamerica." In *The First Writing: Script Invention as History and Process*, 274–312.
- Houston, Stephen; John Baines; and Jerrold Cooper. 2003. "Last Writing: Script Obsolescence in Egypt, Mesopotamia, and Mesoamerica." *Comparative Studies in Society and History* 45(3): 430–479.
- Houston, Stephen; John Robertson; and David Stuart. 2000. "The Language of Classic Maya Inscriptions." *Current Anthropology* 41(3): 321–356.
- Jiang, Kushim. 2024. *Encoding and Shaping of the Mongolian Script*. Unicode Technical Note #57 ver. 4. <https://www.unicode.org/notes/tn57/>
- Kettunen, Harri, and Christophe Helmke. 2024. *Introduction to Maya Hieroglyphs*. 19th ed. Wayeb. https://www.wayeb.org/wp-content/uploads/2024/10/Kettunen_Helmke_2024_WH_English_19th_ed.pdf
- Knorozov, Yuri Valentinovich. 1961. *Pis'mennost' Indeitsev Majja* [The Writing of Maya Indians]. Moscow & Leningrad: Institut Etnografii, Akademiya Nauk SSSR.
- Lacadena García-Gallo, Alfonso. 2005. "Historical Implications of the Presence of non-Mayan Linguistic Features in the Maya Script." In L. van Broekhoven et al. (eds.), *The Maya and their Neighbors: Internal and External Contacts Through Time*, 29–39. Verlag Anton Saurwein.
- Looper, Matthew; Martha Macri; Yuri Polyukhovych; and Gabrielle Vail. 2022. "MHD Reference Materials 1: Preliminary Revised Glyph Catalog." *Glyph Dwellers: Report 71*.
- Macri, Martha; and Matthew Looper. 2003. *The New Catalog of Maya Hieroglyphs*. Vol. 1: The Classic Period Inscriptions. Norman: University of Oklahoma Press.
- Macri, Martha; and Gabrielle Vail. 2009. *The New Catalog of Maya Hieroglyphs*. Vol. 2: The Codical Texts. Norman: University of Oklahoma Press.
- MacLeod, Barbara. 2000. "The Maya Glyphs." In Maurice Pope (ed.), *The Story of Decipherment*. London: Thames & Hudson.
- Pallán Gayol, Carlos. 2018. "A preliminary proposal for encoding Mayan Hieroglyphic text in Unicode." *Unicode document repository* L2/18-038. <https://www.unicode.org/L2/L2018/18038-mayan.pdf>
- . 2019. "Final List of Characters and Quadrats for Mayan Codices." *Unicode document repository* L2/19-171R. <https://www.unicode.org/L2/L2019/19171r-mayan-chars.pdf>
- . 2020. "Updated List of Characters for Mayan Codices." *Unicode document repository* L2/20-248. <https://www.unicode.org/L2/L2020/20248-mayan-update.pdf>
- . 2021. *Correlating Ritual Language & Glyphset in the Codex Dresdensis: otherworldly agents and their worldly outcomes as expressions of identity and belief in Late-Postclassic Yucatán* Doctoral Dissertation, University of Bonn (Abteilung für Altamerikanistik und Ethnologie). 2 vols.
- Pallán, Carlos; and Debbie Anderson. 2017. "Mayan Numerals: Layout and reading order for Mayan historical texts." *Unicode document repository* L2/17-110. <https://www.unicode.org/L2/L2017/17110-mayan-layout.pdf>
- Quinn, Jameson. 2016. "Proposal to encode Mayan Numerals." *Unicode document repository* L2/16-264R. <https://www.unicode.org/wg2/docs/n4804-mayan-numerals.pdf>
- Saturno, William A.; David Stuart; and Boris Beltrán. 2006. "Early Maya Writing at San Bartolo, Guatemala." *Science* 311(5765): 1281–1283.
- Stuart, David. 2003. "On the Paired Variants of TZ'AK." Mesoweb. <http://www.mesoweb.com/stuart/notes/tzak.pdf>
- Stuart, David; Heather Hurst; Boris Beltrán; Alexandre Tokovinine; Eric Velásquez; Karl Taube; and William A. Saturno. 2022. "An early Maya calendar record from San Bartolo, Guatemala." *Science Advances* 8(15): eabl9290.
- Thompson, J. Eric S. 1962. *A Catalog of Maya Hieroglyphs*. Norman: University of Oklahoma Press.
- Zimmerman, Günther. 1956. *Die Hieroglyphen der Maya-Handschrift*. Abhandlungen aus dem Gebiet der Auslandskunde, Band 62, Reihe B (Völkerkunde, Kulturgeschichte und Sprachen Band 34). Hamburg: DeGruyter.