

ISO/IEC JTC 1/SC 2/WG 2
**PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS
 FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646¹.**

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

Please read Principles and Procedures Document (P & P) from <http://www.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://www.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html>.
 See also <http://www.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html> for latest Roadmaps.

A. Administrative

1. Title:	<i>Proposal to Add Additional Ancient Roman Characters to UCS</i>
2. Requester's name:	<i>David J. Perry</i>
3. Requester type (Member body/Liaison/Individual contribution):	<i>Individual Contribution</i>
4. Submission date:	<i>August 1, 2006</i>
5. Requester's reference (if applicable):	
6. Choose one of the following:	
This is a complete proposal:	<i>Yes</i>
(or) More information will be provided later:	

B. Technical – General

1. Choose one of the following:					
a. This proposal is for a new script (set of characters):					
Proposed name of script:					
b. The proposal is for addition of character(s) to an existing block:	<i>Yes</i>				
Name of the existing block:	<i>Latin Extended-C, Number Forms, Supplementary Punctuation</i>				
2. Number of characters in proposal:	<i>15</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 checked="" type="checkbox"/>	D-Attested extinct	<input 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. Proposed Level of Implementation (1, 2 or 3) (see Annex K in P&P document):	<i>3</i>				
Is a rationale provided for the choice?	<i>No</i>				
If Yes, reference:					
5. 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>				
b. Are the character shapes attached in a legible form suitable for review?	<i>Yes</i>				
6. Who will provide the appropriate computerized font (ordered preference: True Type, or PostScript format) for publishing the standard?	<i>David Perry</i>				
If available now, identify source(s) for the font (include address, e-mail, ftp-site, etc.) and indicate the tools used:	<i>David Perry (hospes@scholarsfonts.net); Fontlab Studio 5.0</i>				
7. References:					
a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?	<i>Yes</i>				
b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?	<i>Yes</i>				
8. 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)?	<i>No</i>				

9. 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 <http://www.unicode.org/Public/UNIDATA/UCD.html> and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

¹. Form number: N3002-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)

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before? If YES explain	<i>No</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.)? If YES, with whom? If YES, available relevant documents:	<i>Yes</i> <i>Email discussion groups for epigraphy and Unicode issues in Classics</i>
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included? Reference:	<i>No</i>
4. The context of use for the proposed characters (type of use; common or rare) Reference:	<i>Common among classical scholars, especially epigraphers</i>
5. Are the proposed characters in current use by the user community? If YES, where? Reference:	<i>Yes</i> <i>Scholarly publications (see examples in proposal)</i>
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP? If YES, is a rationale provided? If YES, reference:	<i>Yes</i> <i>Yes.</i> <i>Characters belong logically to existing BMP ranges. See proposal.</i>
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?	<i>No</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? If YES, reference:	<i>No</i>
9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters? If YES, is a rationale for its inclusion provided? If YES, reference:	<i>No</i>
10. Can any of the proposed character(s) be considered to be similar (in appearance or function) to an existing character? If YES, is a rationale for its inclusion provided? If YES, reference:	<i>Yes</i> <i>Yes</i> <i>Discussion on pages 4-5 of proposal.</i>
11. Does the proposal include use of combining characters and/or use of composite sequences? 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? If YES, reference:	<i>No</i>
12. Does the proposal contain characters with any special properties such as control function or similar semantics? If YES, describe in detail (include attachment if necessary)	<i>No</i>
13. Does the proposal contain any Ideographic compatibility character(s)? If YES, is the equivalent corresponding unified ideographic character(s) identified? If YES, reference:	<i>No</i>

Proposal to Add Additional Ancient Roman Characters to UCS

David J. Perry

Introduction

Ancient Roman texts used a variety of special letters and signs. These characters, many of which are currently not in the Universal Character Set, are found in literary texts as well as in inscriptions and are needed to publish texts containing them properly.

New Characters Proposed

The following characters are proposed for inclusion in the Universal Character Set.

Reversed Letters for Feminine Forms

The Romans used reversed or inverted letters to represent feminine forms, particularly when there was a similar masculine form that was represented by a regular letter. For example, the *praenomen* (personal name) Gaius is abbreviated by the letter C; the feminine form Gaia is shown with a reversed shape C (already encoded as U+2183).² The following need to be added.

Ɔ The reversed F stands for *filia* (daughter) or *femina* (woman); Figure 1 and Figure 2.

Ɔ The reversed P stands for *puella* (girl); Figure 1 and Figure 2.

W An inverted M or rotated M M stands for *mulier* (woman); Figure 3 and Figure 4. The UCS contains the character U+019C LATIN CAPITAL LETTER TURNED M, used in writing the Zhuang language of southern China (lowercase is 026F LATIN SMALL LETTER TURNED M). The letter used in Zhuang, however, is simply an enlarged form of the turned minuscule M , rather than the traditional Latin capital M. This fact, and the need to accommodate the ancient glyph variant M , makes it desirable to encode a new character.

Other Special Letterforms

I The I longa, an extra-tall I, was introduced in the early first century BCE to represent the phoneme /i:/ as opposed to /i/. It is one of the most common features of Latin inscriptions and editors prefer to show it in its original form whenever possible. In Figure 3, Figure 5, Figure 6, Figure 7, and Figure 9, all of the extra-tall Is represent phonetically long vowels,

² The earliest Roman alphabet used the letter C to stand for both /k/ and /g/; later on the letter G was created for the latter sound, but for reasons of social conservatism C remained the abbreviation for Gaius, and Cn for Gnaeus.


while none of the regular height Is are long, so the contrast is very clear.³ This is true also in Figure 8 with one exception, the word *IN* on line 16, whose vowel is short. On occasion stoncutters used the long I where it does not seem justified. Whether this represents variant pronunciation (Latin was spoken over a long period and over a wide area, so variations certainly arose), ignorance, haste, or some other reason is not clear.

W Roman *praenomina* (personal names) were always abbreviated in writing. The *praenomen* Manius is shown by the character *W* (Figure 8, Figure 10, Figure 11, and Figure 12), an archaic form of the letter M that was preserved specifically to abbreviate this *praenomen*. The standard M shape was used for the more common *praenomen* Marcus, seen in Figure 10. The archaic M needs to be encoded separately, since if it is treated as a glyph variant of M it could be confused with the abbreviation for Marcus. Modern printers sometimes render the abbreviation as M' but this is character substitution, not a form known to the ancient Romans.

These five characters should have the character property Lu. Epigraphers do not use these in lowercase. However, for reasons of case pairing stability, it may be desirable to encode lowercase equivalents for the first four; since they are adaptations of common Latin letters, they may have, or may acquire, uses beyond the needs of epigraphers. Lowercase forms for the first four are included in the summary table below (page 7). The archaic form of M should not have a lowercase form, however. It is similar to the Old Italic letters, which are only in uppercase. Also, it has only one use, to abbreviate a *praenomen*, and so will always be uppercase as a name abbreviation. It is exceedingly unlikely that this letter will ever be used outside the domain of epigraphy.

These letters would logically be placed in the Latin Extended C range.

Roman Numerals

Q The character *Q* is sometimes found as the Roman numeral six (see Figure 13, Figure 14, Figure 15 and Figure 16). It is common from the second century CE onwards, especially in Christian inscriptions. The origin of this character is uncertain. Cagnat (1898) describes this as a ligature of V and I; Gordon in his *Introduction* (1983) cites Cagnat and calls *Q* a “rather strange” form (p. 44, reproduced in Figure 14). Regarding this character as a V-I ligature seems palaeographically suspect to some, who believe that that this form of six is taken from the Greek Stigma, which has a numerical value of six.⁴ The shape *Q* is similar to the shapes  found in ancient Greek for the numeral six (not so similar to the shape of Stigma ζ shown in the Unicode charts). The fact that this form of six is found at first in Christian inscriptions—Christianity being an import from the Greek-speaking eastern half of the Roman empire—may strengthen the identification with Stigma. Gordon in his 1965

³ Introductory Latin textbooks usually print the final i of *mihi* (last line of Figure 6) as short; however, it was sometimes pronounced long, as many examples from poetry make clear.

⁴ I omit here the complex history of this number, which started out as Digamma, acquired cursive and uncial forms, and was eventually conflated with the Sigma-Tau ligature; see Nick Nicholas’s web page for complete discussion: <http://ptolemy.tlg.uci.edu/~opoudjis/unicode/numerals.html#stigma>.

Album mentions that Wilhelm Larfeld suggested Stigma as the source of C̄ (*Griechische Epigraphik*, 1914) but does not give his own opinion on the issue. Spawforth and Reynolds, in the article “Numbers, Roman” in the *Oxford Classical Dictionary*, say that the origin of C̄ is “at first sight obscure” but give no explanation of where they believe it comes from. The character survived into the early Middle Ages. Cappelli (Figure 16) gives examples of C̄ = 6 and also of C̄I = 7, C̄II = 8, and C̄III = 9, all dated to the 8th century.

This character should be encoded separately from U+03DA GREEK LETTER STIGMA for several reasons. First is the uncertainty about whether it really is a borrowed Stigma. Second is its shape, which although similar is not identical to Stigma (the Roman number has a rounder, more C-shaped bowl). Finally, the fact that C̄ was used for 600 years or more, not only by itself, but also as a part of other Roman numerals, shows that was thoroughly Latinized.

- ↓ Most people today equate Roman numerals with Latin capital letters, but they were not letters to begin with. The Romans originally had distinct numeric symbols which, over the course of time, were conflated with letters of the alphabet. This conflation took a long time to complete. The Roman numeral fifty originally had the forms ↓, ↓, and ⊥ (Figure 17 and Figure 15) which were used into the first century BCE, after which they were assimilated to the letter L. Epigraphers want to have a way to distinguish reliably between L and the earlier forms; furthermore, the three earlier shapes are not appropriate variants for the letter L in any context except specialist use of Roman numerals. For these reasons the new character is proposed.

Ⓓ, Ⓔ These are the Roman numerals 50,000 and 100,000. If the note in TUS found with U+2183 “used in combination with C and I to form larger numbers” is followed, 50,000 would be represented as ICCC (four separate characters) and 100,000 as CCCICCC. This is indeed an accurate visual representation of one variant of these numerals (see “13th stylization” in Figure 20). There are two issues here. First, the note in TUS suggests that the process of adding reversed Cs and Cs to a central I can go on to even higher numbers. Because this method of indicating large numbers is awkward, the Romans developed alternatives: a bar placed over a numeral indicated multiplication by 1,000, and a bar plus vertical lines on either side of a numeral indicated multiplication by 100,000. (See Figure 15 and the lower left of Figure 20.) So numerals higher than 100,000 shown in the CIO style do not occur. Second, the numbers 1,000, 5,000, 10,000, 50,000 and 100,000 had many glyph variants (Figure 15, Figure 18, Figure 19, and Figure 20). Smart fonts designed to support epigraphy need to have single characters for 50,000 and 100,000 which can be used as a base for stylistic alternates, as we already have for 1,000, 5,000 and 10,000.

These four characters should have the character property NI. They would logically be placed in the Number Forms range.

Other Characters

- The Roman legion was subdivided into several smaller units, including the *centuria* (century) that nominally contained 100 men. A century was commanded by a *centurio* (centurion), roughly the equivalent of a modern sergeant. Roman inscriptions often make use of a special symbol that can stand for either *centuria* or *centurio* in various case forms (*centuriā*, *centuriae*; *centurio*, *centurioni*, etc.). This centurial sign has many glyph variants: C , > , 7 , 7 , 7 , 3 , 3 , Z , and Z (Figure 21, Figure 22, Figure 23, Figure 24 and Figure 29). The UCS contains some characters that might be used to stand for the centurial sign, such as C , > , 7 , Z , and Z . It is desirable, however, to encode one character that can stand unambiguously for the centurial sign. This is partly because the sign is so common and partly because users who wish to search, for example, a large database of inscriptions will be well served by having one codepoint, not several, to deal with. A parallel case is U+2E0E EDITORIAL CORONIS, an ancient Greek sign to mark divisions of text that has five common variants and several other rare ones.

The centurial sign should have the property So. It would logically be placed in the Miscellaneous Symbols range. The form 7 is suggested as the reference glyph because it is one of the more common variants (the 3-shapes and Z-shapes are much rarer), but is not apt to be confused with existing characters such as the numeral seven.

- ✦ Roman inscriptions and coins from the imperial period make use of a palm branch character (Latin *palmula* “little palm” or *ramulus* “little branch”). Sometimes the ramulus is used like an interpunct⁵ (see Figure 25), and sometimes to separate one inscription from another, as in Figure 27. Ramuli were also used together with interpuncts (see Figure 26 and Figure 27). Because the palm branch is found together with the interpunct it needs to be encoded separately.

Because the palm branch is used to separate words or sections of text, it should be regarded as a punctuation character rather than as a symbol. It should have the property Po and the line breaking property BA (break after) so that applications can break lines after it if needed. In this regard it is similar to other word separator characters encoded for ancient scripts, such as the Runic punctuation (U+16EB–16ED). See the discussion in UAX#14 Line Breaking Properties, under the “Word Separators” section. It would logically be placed in the Supplementary Punctuation range.

⁵ An interpunct is a word separator that can take many forms: triangle, wedge, x-shape, dot, slanted or curved line, etc. The Romans originally wrote with no separation between words, but beginning in the late Republic inscriptions often employ interpuncts (not spaces!) to distinguish individual words. See Figure 9, Figure 28 and Figure 29 for examples of interpuncts in various shapes. The UCS already contains characters such as U+00B7 MIDDLE DOT that can be used to encode the interpunct.

Reference Glyphs and Suggested Names

The symbols may be grouped as follows.

Alternate Letterforms

Ɔ	LATIN CAPITAL LETTER REVERSED F
ɿ	LATIN SMALL LETTER REVERSED F
Ɔ	LATIN CAPITAL LETTER REVERSED P
ɿ	LATIN SMALL LETTER REVERSED P
Ɔ	LATIN CAPITAL LETTER INVERTED M
ɿ	LATIN SMALL LETTER INVERTED M
Ꞛ	LATIN CAPITAL LETTER I LONGA
ꞛ	LATIN SMALL LETTER I LONGA
Ɔ	LATIN CAPITAL LETTER ARCHAIC M

Roman Numerals

Ϟ	ROMAN NUMERAL SIX LATE FORM
↯	ROMAN NUMERAL FIFTY EARLY FORM
Ϟ	ROMAN NUMERAL FIFTY THOUSAND
Ϟ	ROMAN NUMERAL ONE HUNDRED THOUSAND

Other Characters

>	ROMAN CENTURIAL SIGN
☞	PALM BRANCH

Bibliography

- Cagnat, René. *Cours d'épigraphie Latine*. 3rd edition. Paris: Fontemoing, 1898.
- Calabi Limentani, Ida. *Epigrafia Latina*. 4th edition. Milano: Cisalpino, 1991.
- Cappelli, Adriano. *Dizionario di abbreviature latine ed italiane*. Milano: Ulrico Hoepli, 1929, reprinted 1979.
- Dessau, Hermann. *Inscriptiones Latinae Selectae*. Vol. I. Berlin 1892.
- Ifrah, Georges. *Universal History of Numbers*. New York: John Wiley & Sons, 2000. English translation of *Histoire universelle des chiffres*, 1994.
- Gordon, Arthur E. *Introduction to Latin Epigraphy*. Berkeley: University of California Press, 1982.
- Gordon, Arthur E. and Joyce S. Gordon. *Album of Dated Latin Inscriptions*. Vols. I–IV. Berkeley: University of California Press, 1963–1965.
- Hornblower, Simon, and Spawforth, Anthony, edd. *The Oxford Classical Dictionary*. 3rd edition. Oxford and New York: Oxford University Press, 2003.
- Hübner, Emil. *Exempla Scripturae Epigraphicae Latinae*. Berlin 1885.
- Keppie, Lawrence. *Understanding Roman Inscriptions*. Baltimore: Johns Hopkins University Press, 1991.
- Ricci, Serafino. *Epigrafia Latina*. Milano: Ulrico Hoepli, 1898.
- Sandys, John Edwin. *Latin Epigraphy: An Introduction to the Study of Latin Inscriptions*. Second edition, revised by S. G. Campbell. London, 1927; reprinted 1974 by Ares Publishers, Chicago.

Acknowledgments

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Figures

N. B. — Les personnages d'ordre sénatorial portent le titre de *vir clarissimus* (V·C), en grec ἀνὴρ λαμπρότατος ou συγκλητικός (C·M·V = *clarissimae memoriae vir*, après sa mort); C·P = *clarissimus puer*; C·I = *clarissimus juvenis*; C·F ou C·F̄ = *clarissima femina*; C·P̄ (*clarissima puella*)¹.

Figure 1. From Cagnat 1898, p. 89, showing reversed F and P.

Per indicare il femminile di alcuni sostantivi e nomi, si capol
sigla:

C Gaius
P puer
F filius

3 Gaius (v. 73)

9 puella

7 femina

Figure 2. From Calabi Limentani, p. 132. Apparently the printer did not have reversed letters to match the typeface used in the rest of the book.

C. I. L., XII, 4364 :

M · MAECIO
M · F · OCEANO
NVMISIAE · W · L
PRIVATAE

Figure 3. From Cagnat 1898, p. 334. The third and fourth lines read *Numisiae m(ulieris) l(ibertae) Privatae*, meaning “To Numisia Privata, ex-slave of a woman,” using the reversed M for *mulier* and the I longa.

SALARIAE
ΣΙΒ
APHRODITES

0,040

D(is) M(anibus) | Salariae | Σ (mulieris) lib(ertae) | Aphro-
dites | T. Vennonius | Restitutus | matri | v(ivae) f(ecit)

Figure 4. From Hübner, no. 358, with a rotated M for *mulier*.

IMP · CAES · DIVI TRAIANI
PART · F · DIVI · NERVAE · N
TRAIANVS · HADRIANVS · AVG
PONT · MAX · TRIB · POT · XX · COS · III · P · P a. 136
5 I · S · M · R · STATVAM · EX · DONIS AVREIS
ET · ARG · VETVSTATE · CORRVPIS
FIERI ET · CONSECRARI IVSSIT
EX · AVRI P III - ET · ARG · P · CCVI =

Figure 5. From *Corpus Inscriptionum Latinarum* vol. 14, no. 2088; note I longae.

sic VIVA · OFFICIUM · TIBI · FACERE NON
VERVNT · AD SVMMVM · SVPREMVM
DECORAVNT · VT MERVISTI · CASTA MATER
SSA · VTRORVM · ANNAES ET CISSI · AMANTIS
5 SITA · SVNT · CISSVS VIVIT · SED · QVAM
M · CVPIT · AD · SVAM · AMANTISSVMAM
IRE
NIS · POTVIT · IVCVND · VIDERI
NIT · MORTIS · VOS MHI RESTITV

Figure 6. From *Corpus Inscriptionum Latinarum* vol. 6, no. 11669, with I longae.

a) *Tessères militaires*. — Elles portent un nom de soldat avec la désignation du corps auquel il appartient.

Ex. : *C. I. L.*, VI, 2541 (lame de bronze inscrite sur les deux faces) :

TI · CLAVDII · PRISCI
MIL COH·III·PI·7·PATERNI

[T]i. Claudi(i) Prisc[us], mil(itis) coh(ortis) IIII pr(aetoria)e, c(enturia) Patern[us].

Figure 7. From Cagnat 1898, p. 334 showing the 7-shaped centural sign and the I longa.

BELLVM · PVNICVM · PRIMVM

490	AP · CLAVDIVS · C · F · AP · N · CAVD · EX · M · FVLVIVS · Q · F · M · N · FLACCVS
491	CDX · M · VALERIVS · M · F · M · N · MAXIMVS · M · OCTACILIVS · C · F · M · N · CRASSVS
	VI · N · HOC · HONORE · MESSALL · APPELL · E · CN · FVLVIVS · CN · F · CN · MAXIM · CENTVMALVS · DICT · CLAVI · I · CAVSSA
	Q · MARCIVS · Q · F · Q · N · PHILIPPVS · MAG · EQ
492	L · POSTVMIVS · L · F · L · N · MEGELLVS
493	L · VALERIVS · M · F · L · N · FLACCVS
494	CN · CORNELIVS · L · F · CN · N · CIP · O · ASINA · C · IVLIVS · M · F · M · N
495	L · CORNELIVS · L · F · CN · N · SCIP · IO · C · AQVILLIVS · M · F · C · N · FLORVS
496	A · ATILIVS · A · F · C · N · CAIATIANVS · C · SVLPICIVS · Q · F · Q · N · PATERCVLVS
	CENS · C · D · I · IVS · M · F · M · N · l. cornelius l. f. cn · N · SCIP · IO · l. f. xxxiii
497	C · ATILIVS · M · F · M · N · REGVLVS · CN · CORNELIVS · l. f. cn · n. blasio i
	Q · OGVLNIVS · L · F · A · N · GALLVS · dict · LATINAR · FER · CAVSSA
	M · LAETORIVS · M · F · M · N · PLANCIVS · MAG · EQ
498	L · MANLIVS · A · F · P · N · VVLSO · LONGVS · Q · CAEDICIVS · Q · f · Q · N · IN · MAG · MORT · M
	IN · EIVS · LOCVM · FACTVS · EST · M · ATILIVS · M · F · L · N · REGVLVS · II
499	SER · FVLVIVS · M · F · M · N · PATIN · NOBILIOR · M · AEMILIVS · M · F · L · N · PAVLLVS

Figure 8. From Cagnat 1898, p. 284. Note the I longae (marked by a circle) and the abbreviation for Manius (marked by a square)

CALAMVS
 TI·CLAVDI·CAESARIS
 AVGVSTI·GERMANICI

Figure 9. From Hübner, no. 98, with triangular interpuncts and I longae.

MERQVRIO
 M'RVSTIVS·M·M'N
 DVVM·VIR·DAT

Figure 10. From Hübner, no. 2. Transcription: *MERQVRIO* | *M(anius)·RVSTIVS·M(arci)·F(ilius)·M(anii)·N(epos)* | *DVVM·VIR·DAT*. “Manius Rustius, son of Marcus, grandson of Manius, duumvir⁶, gives [this] to Mercury.” Two examples of the abbreviation for Manius, contrasted with the regular M to abbreviate Marcus, and triangular interpuncts.

7° Au lieu de **M**, abréviation de *Manius*, on trouve dans les éditions des auteurs et même dans certains ouvrages d'épigraphie un **M** suivi d'un apostrophe, **M'**. C'est là un caractère employé pour faciliter l'impression; ce n'est pas une sigle usitée sur les monuments. Nous avons parlé plus haut⁷ de cette forme archaïque du M.

Figure 11. From Cagnat 1898, p. 40, showing archaic M for Manius.

two of them could be indicated by a single initial letter, the exceptions being GN for “Gnaeus” and **M** for “Manius,” simple C and M being already preempted for “Gaius” and “Marcus.” This system of ex-

Figure 12. From Gordon 1982, p. 15, showing abbreviation for Manius.

⁶ A *duumvir* was one of two chief officials in a Roman town, sort of co-mayors.

Cursive forms of the figures are usually recognizable without undue difficulty (cf. $\# = 30$), though $\zeta = 6$, common especially in Christian texts, is at first sight obscure.

Figure 13. From Hornblower and Spawforth, p. 1053, showing late form of numeral 6.

Whereas our so-called Arabic numerals are ten in number (0-9), the Roman numerals number nine: I = 1 (one), V = 5, X = 10, L = 50, C = 100, D = 500 (D regularly with middle bar, the modern form being simply D), a symbol for 1,000 (see below), Q = 500,000, and a rather strange symbol for 6: ζ .
C is not commonly thought to be an

Figure 14. From Gordon 1982, p. 44, with late form of numeral 6.

I	1	⓪, M, ω, ʘ, ∞	1000
IIII, IV	4	∞ ∞	2000
IIII, V	5	∞ ʘ	4000
IIII ζ VI	6	D, ʘ, h, ʘ	5000
VIII, IX	9	\bar{X} , ⓪, ʘ, ʘ	10.000
X	10	(h), n h	
XII X	18	\bar{X} II CCI	12.201
XXII X	25	D, ʘ, \bar{D}	50.000
ψ, ϕ, ι	50	(⓪), (⓪)	100.000
XXXXXX	60	\bar{X}	1000.000
⓪ C	100	\bar{C}	10.000.000
D ⓪	500	\bar{D}	50.000.000
ω		\bar{M}	100.000.000

Figure 15. From Ricci 1898, Plate IV with late 6, early 50, and variant forms of 50,000 and 100,000; also variants of 5,000/10,000 and bars for multiplication.




		(V̄) 4 1/2	XIV	
		(V̄) 8 (nelle bolle pont.)	XVIII	
		(V ^a) quinta	XIV p.	
		(V ^o) 500	XV	
		(VCC ^m) 700 000	xv f.	
		(VCCXL ^m) 740 000	xv f.	
		(VI) 6	VIII	
		G, C _i (VI) 6	VIII	
		Q	(VI) 6	VIII
rite		G, h (VI) 6	XV	
		Gj	(VI) 6	XIV
IV		Vl	(VI) 6000	XIII
		vj ^{oo}	(VI ^{oo}) 120	XIV
III		vj ^{te}	(VI ^{te}) sex mite (monete, Loo- vanto)	xv f.
		vj ^{oo} oo	(VI ^{oo} XV) 135	XV
e		Cil	(VII) 7	VIII

		Gl	(VII) 7	VIII	→
		VH	(VI+) 6 1/2	XIV	→
		Cil	(VIII) 8	VIII	→
		Cny	(VIIIJ) 9 (s. ritt. meron.)	VIII	→
		UDC	(VDC) 5600	VIII	→
		vny ^f	(VIIJ ^o) ottocen- to	XV m.	→
		vys	(VIIs) (septem semis)	XIII f.	→
		vny ^{io}	(VIIJ ^{io}) novem- briio	XVI p.	→
		uij	(VIII) 9	XIV	→
		viii ^{or}	(VIIIJ ^{or}) 9 (quin- que et quatuor)	XIV	→
		VIX	(VIX) 16 (sexto- decimo)	XIV	→
		VX	(VX) 15 (quinto- decimo)	XIV	→
		X	(X) 9 1/2	XIV	→
		X _o	(X) 10	XIV	→
		X̄	(X̄) 10 000	XIV	→
		X4	(X4) 14	XIV	→

Figure 16. Examples of the late form of six, both alone and used in combination to form other Roman numerals, dated to the 8th century, from Cappelli p. 418-419.

The Roman numerals in the right-hand column show the century.

numbers, Roman The numbers are based on seven signs: I = 1, V = 5, X = 10, L = 50 (formerly, before the 1st cent. BC, ↓), C = 100, D = 500, ∞ (or a recognizable variant) = 1,000 (M was not used as a figure, only as an abbreviation of the words *mille, milia*). The system's origins are debated. Modern scholarship rejects the Figure 17. From Hornblower and Spawforth, page 1053; note early form of 50.

10,000 se figurait ainsi : , ou, en simplifiant la figure, , , «bb», ulu ;







5,000, par suite, se représentait par , , ,  ;

Figure 18. From Cagnat 1898, p. 31, with variants of 5,000 and 10,000.

100,000 s'indiquait par le signe ,  ;



50,000, par suite, était noté , .

Figure 19. From Cagnat 1989, p. 32.

	1,000	5,000	10,000	50,000	100,000
Basic graphic form					
1st stylisation					
2nd stylisation					
3rd stylisation					
4th stylisation					
5th stylisation					
6th stylisation					
7th stylisation					
8th stylisation					
9th stylisation					
10th stylisation					
11th stylisation					
12th stylisation					
13th stylisation					

FIG. 16.62.

\bar{V} = 5,000 = 5 × 1,000	CIL, VIII, 1577
\bar{X} = 10,000 = 10 × 1,000	CIL, VIII, 98
$\overline{LXXXIII}$ = 83,000 = 83 × 1,000	CIL, I, 1757

Examples from Latin inscriptions of which the oldest date from the end of the Republic

FIG. 16.63.

$\overline{IIIIDCCCLXXII}$	4,872
$\overline{VDLXVIII}$	5,568
$\overline{VDCCCCXVI}$	5,916
$\overline{VICCLXIII}$	6,264

Examples from a Latin astronomical manuscript of the 11th or 12th centuries CE (Bibliothèque nationale, Paris, Ms. lat. 14069, folio 19)

FIG. 16.64.

Figure 20. From Ifrah 2000, p. 198.

), 3, {, 3, }, centurio, centuria
 Z, Z, }

Figure 21. From Cagnat 1898, p. 445; various forms of centurial sign.

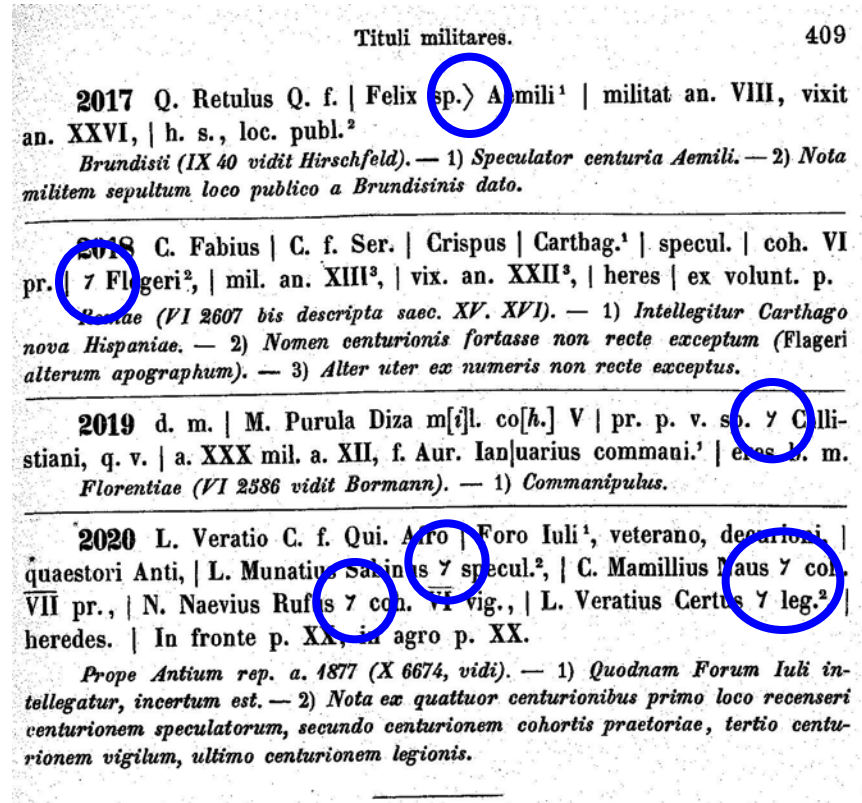


Figure 22. From Dessau 1892, p. 409. Two different forms of the centurial sign.



Figure 23. From Keppie 1991, p. 82; centurial sign on a stone.

*M(arcus) Favoni(us) M(arci) f(ilius) Pol(lia)
 Faci | lis 7 leg(ionis) XX Verecund | us et
 Novicius lib(erti) posu | erunt h(ic) s(itus)
 e(st).*⁹ ‘Marcus Favonius Facilis, son of Mar-
 cus, of the voting-tribe Pollia, centurion of
 legion XX. The freedmen Verecundus and
 Novicius erected (it). He lies here.’

Figure 24. From Keppie 1991, p. 81. Figure 24 is a transcription of the stone in Figure 23. Note how the editor substituted a numeral 7 to stand for the centurial sign, shown with an angle bracket shape on the stone.

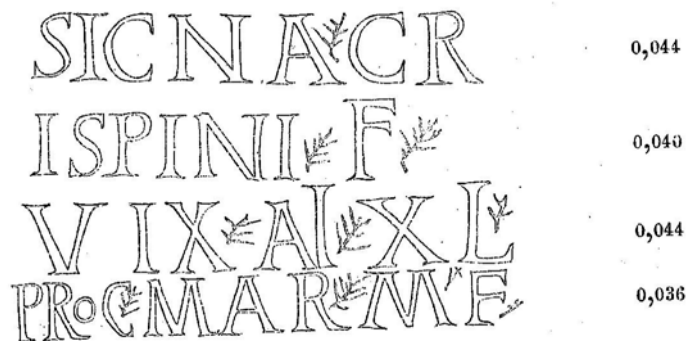


Figure 25. From Hübner, no. 400, showing branches to separate words.

† HIC · QUIESCIT · ANAS^{tasius}
 columba
 palmae ramusculo
 insidens

X KAL AN^{ril}

Figure 26. From *Corpus Inscriptionum Latinarum* vol. 14, no. 1953; this inscription shows both interpuncts (printed here with round dots) and ramuli.

6981 (4)
 Q · PETILLI · AMPHIONIS · II ·
 DEDIT
 PETILLIAE · Q · L · IVCVNDAE

6982
 Q · PETILLI · AMPHIONIS · II
 DEDIT
 OCRISIAE · P · L · IVCVNDAE

VALERIAE · L · F · POSTVMAE

Figure 27. From *Corpus Inscriptionum Latinarum* vol. 6, nos. 6981–6982. These two inscriptions are, according to Hübner, next to each other on a plaque, with the ramulus at the end of the first separating it from the second; this is not well shown in the publication in *CIL*, which uses rules to set off each inscription. Note the use of interpuncts (round dots) together with the ramuli.



Figure 28. From Hübner, no. 375 with ivy leaves as interpuncts.

C[♣]IVLIVS | GEMINVS | CAPELLIANVS | LEG(atus) [♣]AVG(usti) [♣]PR(o) [♣]PR(aetore)

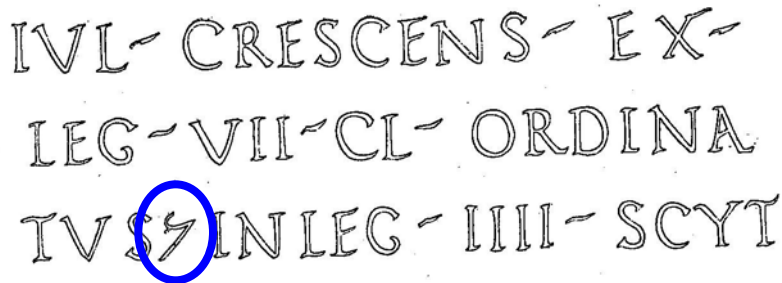


Figure 29. From Hübner, no. 494. Note the centurial sign (circled) in addition to the interpuncts in the form of diagonal lines.