L2/06-234

| ISO/IEC JTC 1/SC 2/WG 2 | | |
|---|--------------------------|--|
| PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS | | |
| FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646. ¹ | | |
| Please fill all the sections A, B and C below. | | |
| Please read Principles and Procedures Document (P & P) from <u>http://www.dkuug.dk/JTC1/SC2/WG2/docs/principles.h</u> | tml_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 | <u>n.html</u> | |
| See also <u>http://www.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html</u> for latest <i>Roadmaps</i> . | | |
| A. Administrative | | |
| 1. Title: Proposal to Add Ancient Roman Weights and Monetary Signs | to UCS | |
| 2 Requester's name: David I Parry | | |
| 3. Requester type (Member body/Liaison/Individual contribution): Individual Contribution | on | |
| 4. Submission date: July 30, 2006 | | |
| 5. Requester's reference (if applicable): | | |
| 6. Choose one of the following: | | |
| This is a complete proposal: | Yes | |
| (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: | | |
| | Yes | |
| Name of the existing block: Ancient Numeric Systems, 10100–101FF | 105 | |
| 2. Number of characters in proposal: | 11 | |
| · · · · · · · · · · · · · · · · | 11 | |
| 3. Proposed category (select one from below - see section 2.2 of P&P document): | | |
| A-Contemporary C-Major extinct X D-Attested extinct B.2-Specialized (large collection) E-Minor extinct | n) | |
| | 1. | |
| | | |
| 4. Proposed Level of Implementation (1, 2 or 3) (see Annex K in P&P document): | 3 | |
| Is a rationale provided for the choice? | | |
| If Yes, reference: | | |
| 5. Is a repertoire including character names provided? | Yes | |
| a. If YES, are the names in accordance with the "character naming guidelines" | 17 | |
| in Annex L of P&P document? | Yes Yes | |
| | | |
| 6. Who will provide the appropriate computerized font (ordered preference: True Type, or PostScript format) for | r | |
| publishing the standard? David Perry | | |
| If available now, identify source(s) for the font (include address, e-mail, ftp-site, etc.) and indicate the tools | | |
| used: David Perry (hospes@scholarsfonts.net); Fontlab Studio 5.0 | | |
| 7. References: | 17 | |
| a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided? | Yes | |
| b. Are published examples of use (such as samples from newspapers, magazines, or other sources) | | |
| of proposed characters attached? <u>Yes</u> | | |
| 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)? | λ7 - | |
| presentation, sorting, searching, indexing, transmeration etc. (if yes prease enclose information)? | No | |
| | | |
| 9. Additional Information: | and a first state of the | |
| Submitters are invited to provide any additional information about Properties of the proposed Character(s) or So | | |
| in correct understanding of and correct linguistic processing of the proposed character(s) or script. Examples of | | |
| are: Casing information, Numeric information, Currency information, Display behaviour information such as line to Combining behaviour. Spacing behaviour, Directional behaviour, Default Collation behaviour, relevance in | | |
| 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 | | |
| <u>http://www.unicode.org.</u> for such information on other scripts. Also see <u>http://www.unicode.org/Public/UNIDATA/UCD.html</u> | | |
| 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

| C. Technical - Justification | |
|--|------------|
| 1. Has this proposal for addition of character(s) been submitted before? | Yes |
| If YES explain L2/06-173 | |
| 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.)? | Yes |
| If YES, with whom? <i>Email discussion groups for epigraphy and Unicode issues in</i> | 1 Classics |
| If YES, available relevant documents: | |
| 3. Information on the user community for the proposed characters (for example: | |
| size, demographics, information technology use, or publishing use) is included? | |
| Reference: | |
| 4. The context of use for the proposed characters (type of use; common or rare) | |
| Reference: Common among classical scholars, especially epigraphers | |
| 5. Are the proposed characters in current use by the user community? | Yes |
| If YES, where? Reference: Scholarly publications (see examples in proposa | ıl) |
| 6. After giving due considerations to the principles in the P&P document must the proposed characters be entit | rely |
| | No |
| If YES, is a rationale provided? | |
| If YES, reference: | |
| 7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?8. Can any of the proposed characters be considered a presentation form of an existing | Yes |
| character or character sequence? | No |
| If YES, is a rationale for its inclusion provided? | 110 |
| If VES reference: | |
| 9. Can any of the proposed characters be encoded using a composed character sequence of either | |
| existing characters or other proposed characters? | No |
| If VUV is a retional for its inclusion provided? | |
| If VES reference: | ••••• |
| 10. Can any of the proposed character(s) be considered to be similar (in appearance or function) | |
| to an existing character? | Yes |
| If YES, is a rationale for its inclusion provided? | Yes |
| If VES reference: Discussion on page 5 of proposal | |
| | No |
| 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: | |
| 12. Does the proposal contain characters with any special properties such as | |
| control function or similar semantics? | No |
| If YES, describe in detail (include attachment if necessary) | |
| | |
| 13. Does the proposal contain any Ideographic compatibility character(s)? | No |
| If YES, is the equivalent corresponding unified ideographic character(s) identified? | 110 |
| ICVEC and an and | |
| | |

Proposal to Add Ancient Roman Weights and Monetary Signs to UCS

Introduction

The ancient Romans used a variety of symbols to represent weights and values of their coinage. These symbols, 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.

Background on Roman Coinage

For a long time Romans of the early Republic did not use coins, relying on lumps of bronze (*aes rude*, "rough bronze") as a medium of exchange. The first real coins for domestic use were introduced in the early 3^{rd} century B.C. This is referred to as *aes grave*, "heavy bronze," because the unit $(as)^2$ contained one pound³ of bronze. There were several smaller coins, also of cast bronze. This system continued in use until the economic problems caused by the Second Punic War (218–201 B.C.) caused the currency to collapse.

About 211 B.C., the Romans introduced a new system of coinage. Its unit was a bronze *as* weighing half the old one-pound coin, with silver coins valued at multiples of the *as*. This system remained in use for about 500 years, although the metallic content of both the bronze *as* and the silver coins was devalued repeatedly over time. When the system was established, the relative values of the coins were as follows:

as, the basic unit, bronze coin; the as was divided into many smaller units, as shown in the chart below and Figure 1a
sestertius, 2 ¹/₂ asses (the name derives from semis tertius; semis = ¹/₂, so the name means "one half [subtracted from] three," i.e., two and a half); silver coin and the most common Roman accounting unit in the Republic and early Empire quinarius, five asses; name derived from quinque, five; silver coin denarius, ten asses; name derived from decem, ten; silver coin

Another bronze coin, the *dupondius* ("two pounder") was introduced as part of the *aes grave* coinage, when the *as* was theoretically one pound, and had a value of two *asses*. It was not much used until the Empire, when it became common. There were also several other Roman coins produced over the centuries which never acquired special signs to represent them and so will not be discussed here.

² The word *as* carried the notion of a basic or indivisible unit, although the *as* coin was sometimes subdivided. Cf. Balbus, *De asse* 1: *Quidquid unum est et et quod ex integrorum divisione remanet assem ratiocinatores vocant.* ("Whatever is one and which remains from the division of wholes, accountants call the unit.") Under Roman law, a person might be *heres ex asse*, "heir to the whole estate."

³ The Roman pound (*libra*, source of the modern sign £) contained 327.45 grams, .721 of an American pound.

Background on Roman Weights and Measures

The values of Roman coins need to be considered together with the units for Roman weights, since the Romans often used the same term for a subdivision of many different measures. For example, the term *uncia* essentially means " $1/12^{\text{th}}$ of anything:" a pound, a *iugerum* (~ acre), a foot, or an *as*. On the Republican *aes grave* coinage we do in fact find some of the same symbols used for weights, which is not surprising since the as at this time was a pound of bronze. The following table gives an overview of all the Roman units; note that the subdivisions are based on a duodecimal system, where the main unit is divided into twelve parts.⁴ The notation ++ in the Unicode column indicates that the symbol can be constructed by combining two or more characters and so does not need to be encoded separately.

| NAME | AS | UNCIAE | UNICODE | GLYPH | VARS. |
|-------------------------|--------|--------|----------|-------|---|
| As | 1 | 12 | proposed | + | ∕, , レ |
| Deunx | 11/12 | 11 | ++ | S==- | |
| Dextans | 5/6 | 10 | ++ | S== | |
| Dodrans | 3/4 | 9 | ++ | S=- | |
| Bes | 2/3 | 8 | ++ | S= | |
| Septunx | 7/12 | 7 | ++ | S- | |
| Semis | 1/2 | 6 | 0053 | S | |
| Quincunx | 5/12 | 5 | ++ | ==- | |
| Triens | 1/3 | 4 | ++ | == | |
| Quadrans | 1/4 | 3 | ++ | =- | |
| Sextans | 1/6 | 2 | proposed | = | z, Z |
| Sescuncia | 1/8 | 11/2 | ++ | £– | Σ- |
| Uncia | 1/12 | 1 | proposed | _ | •, ₀ , ₀ , (|
| Semuncia | 1/24 | 1/2 | proposed | c | Ε , Σ, Σ |
| Binae sextulae / Duella | 1/36 | 1/3 | ++ | SS | ll |
| Sicilicus | 1/48 | 1/4 | 10140 |) | |
| Sextula | 1/72 | 1/6 | proposed | S | θ , ς |
| Dimidia sextula | 1/144 | 1/12 | proposed | £ | |
| Scripulum | 1/288 | 1/24 | 2108 | Э | 7 |
| Siliqua | 1/1728 | 1/144 | proposed |)) | |

⁴ The Romans preferred to divide almost everything into twelve parts rather than ten. Thus there were twelve months in the year, twelve hours in the day, twelve inches to a foot, and twelve ounces in the Roman pound.

Note on names: *Binae sextulae* = "a pair of sextulae;" *Duella* is derived from the number two (*duo*), again referring to being double the value of a sextula; *Dimidia sextula* = "half sextula."

The table above was organized to show Unicode equivalents, where such exist, and to separate out the glyph variants. For an unedited table from an epigraphical handbook, see Figure 1a. Figure 2 shows some of these units on an inscription.

Discussion of Possible Unification

The Roman sicilicus **)** appears very similar to U+10140 GREEK ACROPHONIC ATTIC ONE QUARTER, as the examples in Figure 2 show. Furthermore, both characters have the meaning of one quarter, although it is doubtful that the Roman sign was directly borrowed from the Greek. U+03FD GREEK CAPITAL REVERSED LUNATE SIGMA SYMBOL and U+2183 ROMAN NUMERAL REVERSED ONE HUNDRED are less close to the sicilicus in appearance and in meaning. We have suggested the unification of the sicilicus with 10140 to avoid unnecessarily proposing a new character, but if this unification is not appropriate, epigraphers would have no objection to encoding a separate sicilicus character.

New Characters Proposed

The following characters are proposed for inclusion in the Universal Character Set. All other characters needed to represent the units in the table above, such as the letter S, are already encoded.

Units of Weight

- -, = The <u>uncia</u> is shown by a horizontal line and the <u>sextans</u> by two lines, one on top of the other. These shapes are similar to the Aegean numbers one and two, U+10110 and 10111 =, except that the lines are usually longer. Figures 1a, 1b and 1c provide modern typeset examples using longer lines. All typeset examples that were available for inspection use such lines, although the stonecutter who created the inscription shown in Figure 2 made the lines shorter. (Figure 2 was included because it shows several of the symbols discussed in this proposal in use, not because its glyph shapes are necessarily the best models.) The uncia has glyph variants including a dot (common on *aes grave* coins; numismatists refer to it as a pellet; see Figure 3), o, ∞, and *\cup{c}*. The sextans has a glyph variant *z* (probably the two lines formed without lifting the pen) or Z. Because of the range of glyph variants for the uncia and sextans, it is not appropriate to unify them with the Aegean numerals.
- \mathfrak{L} The <u>semuncia</u> is denoted by \mathfrak{L} , with glyph variants Σ , Σ , and \in (Figure 1a). It seems clear that the character is a Sigma in origin; however, the variants \mathfrak{L} and \in are not found in Greek texts, so a separate semuncia character should be encoded. The form \mathfrak{L} as seen in Figure 2 looks at first glance like a fraktur L, but is rather a slightly cursive Sigma. The central point of Σ has been lowered and become a slight bump above the lower horizontal. The character has nothing to do with the modern pound sign \mathfrak{L} (derived from a barred L abbreviation for *libra*) or the fraktur L and so should be encoded separately.

- The <u>sextula</u> (1/72 of an as or 1/6 of an uncia) is represented by a reversed S glyph (Figures 1 and 4a) with the variant \mathcal{V} (Figure 4b). Binae sextulae or duella is shown by two of these reversed S glyphs or by the glyph variant U (Figure 1a).
- $\frac{2}{2}$ Dimidia sextula (1/144 of an as or 1/12 of an uncia) is shown by the symbol $\frac{2}{2}$ (Figure 1a).
- ³⁾ The <u>siliqua</u> (1/1728 of an as or 1/144 of an uncia) is represented by the shape ³⁾ (Figure 1a).

These should have the character property So.

Monetary Units

- The <u>as</u> was denoted by a slanted, crossed stroke (Figure 5). Glyph variants include a slanted stroke with a tick at the left: *f* (Figure 7), a plain vertical stroke | and the shape *b*.
- H The <u>dupondius</u> is shown by the sign H, with glyph variants H and 4 (both in Figure 5).
- HS The <u>sestertius</u> was represented by the symbol HS, standing for 2 ½ asses (Figures 5, 8 and 9). There are many glyph variants, including HS (Figure 10), SS (Figure 11), \pounds (Figure 5), and S. There is one common character substitution: some printers have used the letters HS to represent the sestertius sign which they did not have available in their fonts (Figure 12), but the letter H has nothing to do with the meaning of the symbol.
- ∀ The <u>quinarius</u> is represented by the symbol ∀, with a glyph variant S for semis, half a denarius (both in Figure 5, ∀ in Figure 6).
- X The <u>denarius</u> is consistently denoted by the symbol X (Figures 5 and 8). Occasional glyph variations are found, such as X (Figure 7).

These should have the character property Sc.

Reference Glyphs and Suggested Names

The symbols may be grouped under two subheads.

Roman Weights and Measures

- = ROMAN SEXTANS SIGN
- ROMAN UNCIA SIGN
- ۲ ROMAN SEMUNCIA SIGN
- 2 ROMAN SEXTULA SIGN
- ₹ ROMAN DIMIDIA SEXTULA SIGN
- » ROMAN SILIQUA SIGN

Roman Coin Symbols

- **X** ROMAN DENARIUS SIGN
- HS ROMAN SESTERTIUS SIGN
- H ROMAN DUPONDIUS SIGN
- *t* ROMAN AS SIGN

Codepoint Assignments

It is suggested that these characters be placed in the Supplementary Multilingual Plane because they are used to represent ancient texts. The range 10100–1018F already contains ancient Aegean and Greek numbers. It would be logical to locate these proposed Roman characters further up in the 101XX area.

Bibliography

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- 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.
- Vindolanda Tablets Online <u>http://vindolanda.csad.ox.ac.uk/</u>. This online edition now supercedes the earlier printed editions.

Acknowledgments

The following people and institutions were helpful in the preparation of this proposal: Deborah Anderson, Script Encoding Initiative; John Bodel, Brown University; Rick McGowan, Unicode, Inc.; Richard Peevers, Thesaurus Linguae Graecae; Vassar College Library; Ken Whistler, Unicode, Inc.

Figures

| | AS. | Ouce. | |
|-----------------|-------------------------------|----------------|----------------------------------|
| <i>As</i> | 1 | 12 | l |
| Deunx | ¹¹ / ₁₂ | 11 | S I I I |
| Dextans | $\frac{5}{6}$ | 10 | $S \equiv \Xi$ |
| Dodrans | $\frac{3}{4}$ | 9 | s <u>−</u> − |
| Bes | $\frac{2}{3}$ | 8 | s 🗆 |
| Septunx | 7/12 | 7 | s – |
| Semis | $\frac{1}{2}$ | 6 | S |
| Quincunx | 5/12 | 5 | |
| Triens | 1/3 | 4 | |
| Quadrans | 1/4 | 3 | |
| Sextans | 1/6 | 2 | <u> </u> |
| Sescuncia | 1/8 | 1 1/2 | Σ- ou Σ - |
| Uncia | 1/12 | 1 | - |
| Semuncia | 1/24 | 1/2 | L ou Σ ou E |
| D uella | 1/36 | 1/3 | U 10 SS |
| Sicilicus | 1/48 | 1/4 | 3 |
| Sextula | $\frac{1}{1}$ | | S |
| Dimidia sextula | 1/144 | $\frac{1}{12}$ | 2 |
| Scripulum | $\frac{1}{288}$ | 1/24 | Э ou 7 |
| Siliqua | 1/1728 | 1/144 | » |
| | / / / / / | | |

Figure 1a. From Cagnat 1898 page 33; table of Roman weights.

| libra or as | 1 pound |
|-------------|------------------|
| deunx | 11 oz. $S = = -$ |
| dextans | 10 oz. $S = =$ |
| dodrans | 9 oz. S = - |
| bes | 8 oz. S = |
| septunx | 7 oz. S – |
| semis | 6 oz. S |
| quincunx | 5 oz. $= = -$ |
| triens | 4 oz. = = |

Figure 1b. From Hornblower and Spawforth 2003, page 1621.

FRACTIONS

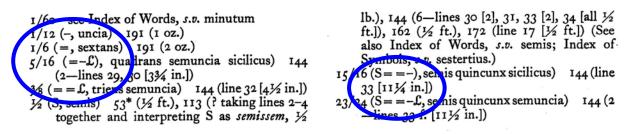


Figure 1c. From Gordon 1965 vol. IV, page 61. The use of the stylized L (perhaps an Italian lira sign) for the semuncia is character substitution.

LOCA'ADJIGNATA'IN'A MPHITATRO LAELIO'PLAVTIO'LAMIAQPACTVMEIOFRNTONE ACCEPTVMAB'LABERIO'MAXMOPROCVRATOREPRAEFANNONAE L'VENNVLEIO'APRONANO'M AGCVRATORE' THYRSO FRATRIBVS'A BWALIBVS'MENIANO'T-CVNXIII GRADIBMARM'VIII GRAD'VIII FED'V-5'F-PED'XXXX IISORADV-1-VNO'TED XXIIS-ETMEN



Figure 2. From Ricci 1898, plate LXI. An inscription of ca. 80 A.D. showing the quadrans, semuncia, and sicilicus as well as the letter S = semis (line 6); deunx and sicilicus, deunx and semuncia (line 7); deunx and semuncia (line 8).



Figure 3. Roman coin of 217–216 B.C. (Sear, *Roman Coins & their Values* [2000 Edition] #615). The single dot or pellet to the right of the head of Roma and below the prow of the ship indicates that the value is an uncia.

Sextula. 1) a) Römisches Gewicht, ¹/₆ der Uncia, ¹/₇₂ des Pfundes (*libra*) bezw. pfündigen Kupferasses. Stellennachweise Hultsch Metrol. scr. II Ind. s. v. Moderner Gewichtswert etwa 4,45 g. Die gewöhnliche Schätzung zu 4,548 g (Hultsch Metrol.² 706 Taf. XIII A) greift zu hoch. Zeichen 2, Hultsch Metrol. script. II 10 xxvIII; Metrol.² 147f.

Figure 4a. From Pauly-Wissowa, showing sextula glyph.

2) Sextula, die Sechstel Uncia = 4 Scripula, 20 das Zweiundsiebzigstel des As und damit der Gewichtseinheit (Belege: Hultsch Metrol. scr. II 255 im Index), ja jeder Einheit überhaupt; von Varro de l. l. V 171 aeris minima pars, sextula, quod sexta pars unciae auch als Kupfereinheit, d. h. als Münzsorte aufgeführt, in den erhaltenen Prägungen des Assystems aber nicht nachweisbar; die kleinste wirklich ausgeprägte Einheit im Assystem ist vielmehr die stadtrömische Viertelunze (im Gewichtssystem Sicilicus 30 genannt) des Semilibralfußes, Haeberlin Aes grave 1910, 115. - Als 1/7., des Pfundes entspricht die S. metrologisch sowohl dem ältesten Denarius wie dem goldenen Solidus der constantinischen Zelt, Hultsch II 113. — Sigle der S: 🔊 [Regling]

Figure 4b. From Pauly-Wissowa, showing variant of sextula.

| 1 | As. | ſ |
|---------------------|-----------------|--------------|
| $As \ldots =$ | 1 | + |
| Dupondius = | 2 | H = 4 |
| Sestertius = | $2 \frac{1}{2}$ | $HS = f^*$ |
| Quinarius = | 5 | ∀ = s |
| $Denarius \ldots =$ | 10 | * |

Figure 5. Roman coin symbols from Cagnat, 1898, page 34. Footnote 2 (referenced next to the Sestertius variant) mentions that IS and SS with horizontal bars are also are used for sestertii; see Figures 7 and 8 below.

A e11 GL II p. 250f. = Index Apuleianus ed.
0 Oldfather usw. p. X frg. 11, besonders aber Volus. Maecian. distrib. 44f. = metr. script. II 66, 24ff.: ... quae olim in aere erat, postea et in argento feriri coepit ita, ut omnis nummus argenteus ex numero aeris potestatem haberet. eo in numero sunt hi argentei nummi: denarius ..., quinarius, cuius nota ∀, sestertius ... Er fährt 46f. = metr. script. II 67, 5ff. fort: denarius primo asses X valebat, unde et nomen traxit; quinarius dimidium eius, id est quinque asses, unde et
0 ipse vocatur, ... nunc denarius XVI, victoriatus

Figure 6. From the entry in Pauly-Wissowa "Quinarius."

Figure 7. Vindolanda tablet 301 showing *as* and *denarius* signs plus the abbreviation S for *semis*

Candido suo salutem souxtum saturnalicium / iiii aut sexs rogo frater explices et radices ne mi nus X s(emis)

praesentes hora II usque / ad asse $\langle m \rangle$ dividiatur (read dividantur) deducta a matione statu $\langle a \rangle$ e / et familiae Augustal(iun) HS [= sestertiis) c(entum) \bar{n} (ummis); quet (read quod) si ita /¹⁵ factum non erit, tum et HS (= sestertium) \overline{XL} \bar{m} (ilia) \bar{n} (ummum / dari rei p(ublicae) Ost(iensi or -sium) sub eadem condicione / qua $\langle e \rangle$ s(upra) s(cripta) est. Ob cuius dedicatione $\langle m \rangle$ dedit / decurionib(ut) X (= denarios) V et Augustalibus X V; / isque honore sibi habito sumptum sta= /²⁰ tuae ordini Augustalium remisit [-it in ligature].

Figure 8. From Gordon 1982, p. 151.

(17) Quater (pe)cunia mea iuvi aerarium, ita ut sestertium milliens et quing(en)t(ien)s⁵ ad eos, qui praeerant Aerarium aerario, detulerim. Et, M. Lepido et L. Arruntio 6 A.D. co(nstitut)um est⁶, ex quo praemia darontur militibus, qui vicena (aut plu)ra sti(pendi)a emeruissent, HS nilliens et septingenti(ens ex pa)t(rim)onio m(e)o detuli⁷.

Figure 9. From Sandys 1927, p. 267.

Text (from photo): D(is) M(anibus) (upper margin). / Ex codicillis triplicibus Popili / Heraclae, / G(aius) Popilius Heracla heredib(us) salut(em) (dicit). /⁵ Vos, heredes mei, rogo iubeoque / fideique vestrae committo uti / monumentum mihi faciatis in (monte) Vatic(ano) / ad Circum, iuxta monumentum Ulpi / Narcissi, ek IS ()= sestertium, gen. pl.) VI n(ummum), in quam rem /¹⁰ numerabit Novia Trophime IS III n(ummum) / et coheres eius IS III n(ummum); ibique reliquias / meas et Fadiae Maximae uxoris meae, / si quid ei humanitus acciderit, poni volo; / cuius monumenti ius lego

Figure 10. From Gordon 1982, p. 143.

Text: Cum sim colonus hortorum $\langle h \rangle$ olitoriorum qui sunt via Osțiensi, iuris / Collegi Magni Arķarum Divarum Faustinarum Matris et Piae, colens in / asse annuis SS ()= sestertium, gen. plu.) \overline{XXVI} eț quod excurrit per aliquod (read -quot) annos in ho/diernum pariator, deprecor tuam quoq(ue) iustițiam,

Figure 11. From Gordon 1982, p. 161.

Note.—Sēstertium (which may be a fossilised Gen. Pl. = sēstertiōrum) was modified by distributives (rarely by cardinals), thus : bīna sēstertia, 2000 sesterces. But in multiples of a million (deciēns centēna mīlia sēstertium, *i.e.*, sēstertiōrum), centēna mīlia was regularly omitted, and sēstertium declined as a neuter singular. HS stands as well for sēstertius as sēstertium; and the meaning is regulated by the form of the numeral; thus HS vigintī (XX) = 20 sēstertiī; HS vicēna $(\overline{XX}) = 20$ sēstertia, *i.e.*, 20,000 sestertiī.

Figure 12. From Gildersleeve and Lodge, p. 493