# THE APHRODISIAS COPY OF DIOCLETIAN'S EDICT ON MAXIMUM PRICES 

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(Plates X-XII)
One group of fragments from the Aphrodisias copy of Diocletian's Edict on Maximum Prices has already been published in this Journal; and the discovery of some 150 new pieces in the Portico of Tiberius during the campaign of excavation in 1970 has also been announced; more in fact came to light in the same area in 1971 and 1972. ${ }^{1}$ Work has proceeded meanwhile on the assembly of what may be described as an enormous jig-saw puzzle in which many of the pieces are too heavy to move freely, and others too heavy to move at all without tackle. ${ }^{2}$ It will take some time to complete, but there seems a case for publishing now the somewhat idiosyncratic version of the imperial titles which headed the copy and one substantial section of the price list which it has been possible to recompose in large part. All the fragments used are stored in the Aphrodisias Depot.

It now seems clear that the Aphrodisias copy of the Edict was cut on a series of heavily moulded panels of local marble which formed a free-standing balustrade. The panels were of varying breadths and heights, but it is not yet possible to say more of the shape of the monument as a whole than that the panel which contains the imperial title and the opening lines of the preamble seems to have been comparatively tall (height not less than $0.92 \times$ width not less than 1.10 m ) while that which contains the section of the price list published below was broad and comparatively short (height $0.85+$ moulding $X$ width not less than 2.30 m ).

As was stated in 1970, some pieces from the monument were broken up and reused in late antiquity. The pieces with which we are concerned here, however, were found in what we believe to be the area where the monument stood, and it seems that the deliberate effort to break up the panels had been interrupted and many fragments prepared for re-use were left lying beside them.

In what follows, reference to other evidence for the Edict is normally to the edition by S. Lauffer, Diokletian's Preisedikt (Berlin, 1971), whose numeration of previously published fragments we have followed. ${ }^{3}$

## THE TEXT OF THE INSCRIPTION

1. The imperial titles. The text is reconstructed from one large piece and three small ones (see pl . X) which also carry part of the preamble to the price list. It has in fact been possible to assemble a fair amount of the text of the preamble as well as that of the title, but since this takes up much space without adding significantly to knowledge we have reserved it for the final publication.

The letters here are free-hand capitals of fourth-century type, averaging 2.8 cm in height; A is regularly without a crossbar; the $F$ of 1.1 is flanked by stylized leaves; abbreviations are followed by short strokes slanting upwards from left to right.

[^0][^1]
sic [Pers. m. II Britt.m.Carp.m.Aram.m.Med.m.Adiab.m.t]rib. pot. VX cons. VII p. p. procs. vac et vac.
[Imp. Caesar] M. Aur. Va[1. Maximianus p. ]f. Aug.pont.m. Germ.m. V Sarm.m. III Pers.m. IIv. Britt.m. Carp.m. Ar]ab.m. Med.m.Ạ[diab.m. trib.pot.] VX cons. VI p.p. procs. vac. et vac. [Flabius Valerius] Con[s]tanti[us et Gal. Val. Maximi] anus Germ. m. Perss. CC.PP. Aram. m. Medd. [Adiabb. cons]s. nobb. Caesa[res

This text shows certain peculiarities: ${ }^{4}$ thus Invictus and the number of imperatorial salutations are omitted from the titles both of Diocletian and of Maximian; the tribunician figures are given as VX (probably in both cases) instead of XVIII for Diocletian and XVII for Maximian; Maximian is recorded as Sarmaticus Maximus III instead of IIII; and as Arabicus Maximus instead of Armeniacus Maximus; the titles of the two Caesars are combined, there is no reference to their tribunician years and imperatorial salutations, to the number of their consulates and to their titles Sarmaticus Maximus and Brittanicus Maximus, while Maximus is omitted after Persicus, Medicus and probably Adiabenicus, Carpici is abbreviated to CCPP and Armeniaci to ARAM (presumably for ARMM).

Peculiarities of spelling and of letter forms occur throughout the Edict (cf. those noted below, p. 106) and it seems probable that a palaeographical and orthographical study of the whole Aphrodisias copy will be rewarding when the jigsaw puzzle is sufficiently complete to allow this. ${ }^{5}$
2. Chapter 15, l. 4-Chapter 18 end. The text, which has been substantially recomposed from 16 pieces, was set out in four columns cut side by side on a broad freestanding marble panel; at the left side the treatment of the surface beside col. I suggests the near presence of an edge, probably moulded; but there is no similar evidence to the right of col. IV, and the panel may have extended here to include at least one more inscribed column. In addition to losses due to breakage, the inscribed surface of this panel has been damaged in several important areas and there can be no real hope of recovering the thin slivers of stone detached from these.

The letters here are small capitals strongly influenced by 'Rustics' (ave. ht. 0.012 m ); A is normally without crossbar but traces of one may be seen in some cases in col. I; abbreviations are followed by a stroke slanting upwards from left to right; section headings are out-spaced, by two letters in cols. I, II, by one in cols. III and IV, and their initial letter D is distinctive: in col. I a halfuncial, in col. II analogous to a half-uncial and in cols. III and IV a capital with a characteristically elaborate serif above (see pl. XII, 3).

Two general points which emerge affect the principles on which the text of the Edict as a whole is reconstructed and it may be useful to mention them here:
(i) Col. III, 11. 42-45 give the section de cannis et atramento at the end of ch. 15 whereas the Greek text from Megalopolis, which has hitherto been our only evidence for it, places it after the section de plumis in ch. 18; presumably the Aphrodisian 'ordinator' was tempted by the existence of a space at the bottom of col. III which-with a little squeezing ${ }^{6}$-would just take the whole of this section. Clearly it should not be assumed that the order in which sections of the Edict appear was invariably the same in each inscribed copy.
(ii) In col. IV after 1. 19, in the section de vecturarum mercedibus, the Aphrodisias copy omits the final item, 'freight charge for an ass load', given in the Greek text from Megalopolis which is our other testimony for this section; but it associates the maximum price for an ass load (4 denarii) with the preceding item (freight charge for a specified camel load), for which Megalopolis gives the figure of 8 denarii. It is easy to see how the eye of a copyist might slip in this way, and here, at the end of a section, the resulting error was not extensive; but the possibility of similar dislocations affecting a larger number of items is clearly very real.

In the texts which follow, the line numeration on the left hand side is that of each column in the Aphrodisias copy, on the right hand side that of the sections as given in Lauffer's edition.

Column I = Chapter 15, ll. 4-40, reconstructed from six fragments, one of them the previously published Aphrodisias II (Lauffer). This has been rediscovered, but in poorer condition than when first seen (letters read in the past but now lost are printed in italics). Only the bottom edge survives. Supplements are from the Greek texts of Geronthrae II for 11. 1-17 and Geronthrae II, Megalopolis and Aidipsos for 11.18 f ., with some assistance for 1.39 from the very defective Latin of Hierapytna; see Lauffer's text and apparatus, pp. 142-4.

The six pieces make physical joins one with another, but there is as yet no physical join with

[^2][^3]the fragments of col. II; in the Greek texts, Geronthrae II and Megalopolis, however, the section de vehiculis which stands at the bottom of our col. I is immediately followed by that de carris which appears at the head of our col. II, so that the juxtaposition is very probable. A serious difficulty arises at the top, where it is not immediately clear how many lines are lost. The number of lines to the column varies; there are $c .45$ in col. III and 42 in col. IV, but in cols. I and II an unusually large space is left blank at the bottom-enough for five lines in col. III and three plus a space in col. IV. This suggests 38 or 39 lines in col. I, and we have assumed 39 on the grounds that the column is unlikely to have begun with the unworked of a pair of worked and unworked items; but the calculation cannot be regarded as an absolutely safe one. The difficulty is accentuated by the fact that part of the list of prices for the first seven lines of col. I survives on the stone which carries the top of col. II and the figures do not coincide with those for the appropriate items as recorded in Geronthrae II. This is less alarming than it might seem, for some figures in Geronthrae II have been questioned on other grounds-but of course the Aphrodisias copy may be at fault, or our reconstruction may be wrong.

|  | Radius tornatus | vac. | X - - ] uaginta | L. 5 |
| :---: | :---: | :---: | :---: | :---: |
|  | Infabricatus | vac. | X - - gint]a quinque |  |
|  | [Session]eş [fabricatae | vac. | $\mathrm{X}-$ - se]ptuaginta quinque |  |
|  | [Infabric]atạ [e | vac. | $\mathrm{X} \quad-\quad$ gi]nta quinque |  |
| 5 | [Furca tor] nata [ | vac. | $\mathrm{X}-\mathrm{l}$ ] vac. | L. 10 |
|  | [Infabrica]ța $v$. [ | vac. | $\mathrm{X}-$ ] vac. |  |
|  | [Temo tor]natụ [s | vac. | $\mathrm{X} \quad$ - - qui]nque |  |
|  | [Infa]bric̣ạtụ [s | vac. | X centum vac. |  |
|  | Regula fabri [cata | vac. | X septuaginta quinque |  |
| 10 | Infabricata [ | vac. | \# triginta quinque | L. 15 |
|  | Catena fab[ricata | vac. | X septuaginta quinque |  |
|  | Infabric[ata | vac. | X quadraginta quinque |  |
|  | Acontị[um sive flagellum fabricatum |  | K quinque vac. |  |
|  | Infabr[icatum | $v a c$. | Kquattuor vac. |  |
| 15 | Cost[ae fabricatae n(umero) duae | vac. | X - - |  |
|  | [Infab] ricat[a | vac. | * triginta | L. 20 |
|  | [. . .] ntalia fabr[icata | $v a c$. | W sedecim |  |
|  | [I] nfabricata $v$. [ | vac. | X - - | L. 22 |
|  | Lateraria fabricat[a | vac. | * - - |  |
| 20 | Caplofurcae fabrica[tae | vac. | X - - |  |
|  | Infabricatv.ae vac. [ | $v a c$. | X - - |  |
|  | Iugum Italicum cum pescl[i] sf[abricatum |  | X - - | L. $23 a$ |
|  | Iugum Graecanicum cum pesclis fa [bricatum |  | X - - | L. $23 b$ |
|  | Statumen fabricatum | vac. | X [quadraginta] | L. 24 |
| 25 | Infabricatum | vac. | $\underset{X}{\text { X }}$ [viginti] | L. 25 |
|  | Columella | vac. | $\dot{\text { X }}$ [septuaginta] |  |
|  | Bitum | vac. | X [septingentis quinquaginta] |  |
|  | Cambigines quattuor | vac. | X s[eptuaginta ] |  |
|  | Inductup[m] rotae vehicularis | vac. | * t [riginta |  |
|  | Inductum rotae carralis | vac. | X t[riginta sex | L. 30 |
|  | De Vehiculis | vac. |  | L. 31 |
|  | Saragara optima bitatị [s] rotis sine ferro[ |  | * sex milib] us | L. $31 a$ |
|  | Saragara cambiginatis rotis sine ferro [ |  | \# tribus mi]libus quingentis | L. 32 |
|  | Rape [da] cambiginatis rotis s[ine fe |  | K tri]bus milibus |  |
| 35 | Do[rmito] rium rotis bitati[s sine ferro |  | ${ }^{*}$ sep]tem milibus quingenti[s] | L. 35 |
|  | [Dormitoriu]m rotis cambi] [ginatis | sine f(erro) | \# qu]attuor milibus |  |
|  | [Saragara bitata et cetera supra dicta vehicula cum canthis] vac. |  |  |  |
|  | [vac. et ferraturis habita ratione ferri] distrahi debebunt vac. |  |  |  |
|  | [Carruca rotis bitatis sine ferro | vac. | * septem millibus | L. 37 |

L. 1-7, the price figures given for a spoke turned and unturned, for seats turned and unturned, and for a fork turned and unturned in Geronthrae II are respectively denarii 70, 30, 200 plus, 200, 275 and 175; the figure for a wagon-tongue is lost; 1. 17, [fro]ṇtalia is suggested by Mr. R.G. Coleman, see commentary.

Column $I I=$ Chapter $15, l l .38 f .$, reconstructed from five adjoining fragments one of which is Aphrodisias XIII (Lauffer). The top and a small area of the bottom survive the latter on a stone which makes a physical join with col. III; for the connection with col. I see above. Supplements are from the Greek of Megalopolis, Geronthrae II and Aedipsos for 11. 1-34 and the Latin of Hierapytna for
11. 1-4, of Mylasa V for 11. 25-35 and of Ptolemais VI for 1l. 31-35; see Lauffer's text and apparatus pp. 143-145 and appendix, p. 206.

L. 7, Trag[l]a, cf. tragula or trac $[h] a=$ traha (cf. michi for mihi in late Latin) would both be possible, see commentary; 1.10, there would be room for a final M for the second noun whose gender is unknown; 1.18 , the reading is clear but $\lambda i \theta_{1 v o s ~ o r ~}^{\varepsilon v v} \lambda i \theta_{01 s}$ in the Greek texts suggests that SIN is written in error for CVM, see commentary; 1. 28, not more than five letters can stand between CA surviving here and ECILE restored from Mylasa V.

Column III = new material together with Chapter 16, ll. 1, 2 (probably) and Chapter 18, ll. 11-13, reconstructed from two adjoining pieces, one of which makes a physical join at the bottom with col. IV; for the connection with col. II, see above. Top and bottom edges survive, but in the upper part of the stone the surface is badly damaged over a considerable area.

As already stated, the section de cannis et atramento in 11. 42-45 appears in the Greek of Megalopolis as part of Chapter 18. It seems a reasonable conjecture that only one section is differently placed and to assume that the section de vitro which appears in our $11.35-41$ was immediately followed in the Megalopolis copy by the defective section of uncertain content which seems to correspond with the still more defective section at the head of our col. IV. We argue below, p. 103, that at Megalopolis the heading for this defective section stood in ch. 16, 1. 2a (Lauffer) and if so chapter $16,11.1,2$ should contain the last two lines of the section de vitro. In fact 1.1 gives a maximum price of eight denarii for an item priced by the pound, which fits with the end of 1.40 here; but in 1.2, though the price of six denarii coincides with that of 1.41 here, . . ] M is transcribed before it and has been interpreted as $\chi \rho \omega \bar{j}] \mu(\alpha т о s)$ by analogy with $11.4,5$ in the defective section (see

Lauffer, p. 149). We suggest that this is mistaken, and that either the Megalopolis copy was wrong, or $\ldots] \mathrm{M}$ was wrongly copied for traces of $] \Pi \wedge=\lambda i(\tau \rho \alpha) \alpha^{\prime}$, which would give the desired correspondence with 1. 41.

Clavorum caligạ $[$ ] $]$ io[rum form] ae seç[undae .
Clavorum caligar [iorum forma]e ter[tiae ...
$v a c$. in clavis $v$. n(umero) qu[..c. $9 \ldots]$ vac. $[\ldots . .$.
[...
Catenam pro pond[eris ration]e vac.
Ferramenta fabric[ata ...?p]arua $[\ldots$.
$5 \begin{gathered}\text { Ferramenta fabricic }[\text { ata } \ldots \text {. } . \text { ? } \\ \text { vac. in pondo unum }[\ldots\end{gathered}$
vac. aciari uncias ![...
Pectịnes lanari[i - - -

## 10

$[. .5-6 .$.$] ẸMẠ[...$
$[--$
$[-$

20 Tegula cum imb [rice fo] rmae primae
Laterem bipedaneum
sic Laterem pudạ 11$]$ em
sic Laterem rutundum
Tubulum sive pyrodromum
25 Auriclatum
Tubulum aqualem modialem
Tubulum sev.modialem
Tubulum digitorum quattuor
Doleum Italicorum s mill [e . .? . .]
30 Vasum fictile Italicor(um) s duọ[rum]
sic Lucernas fictilibus vac. de[..?..]
Lagoenam vac. s vi[ginti ..?..]
Cetera vascula pro ratione [. . .
De Vitro vac.
35 Vitri Alexanḍịni libra una
sic [Vitri I]udaici SVIRDIS libra una
[Vitri Ale] xandrini in calicibus et vasis le vac. vibus in pondo uno
vac. vibus in pondo uno
sic
Vitri Iudaici in calicibus et vasis levibus in po(ndo)
vac.
40 Speclaris optimi libra una vac.
Secundi libra una vac.
De Cannis et Atramento $v$. Atramenti lib(ra) una
Cannae scriptoriae monogones Alexandr[i] nae vac. num(ero) decem
45 Secundae formae n(umero) viginti vac.
vac.
vac.
vac.
vac.
vac. [ $\left.\begin{array}{lll}\mathrm{X} & -\overline{\mathrm{vac}} \text {. }\end{array}\right]$
vac. [ X ] sex
vac. X duodecim
vac. [vac.] $\neq$ sex
vac. [vac.] $\#$ quattuor

* mille
* duobus
vac. $\underset{\text { X }}{ }$ quattuor
$X$ duodecim
vac. [ X ] viginti quattuor
v. $\left[\begin{array}{ll}\boldsymbol{X} & \text { t] redecim }\end{array}\right.$
vac. X triginta
vac.
L. 9-15, six lines are assumed to be lost here, but if the interlineal spacing was broad it might have been no more than five; $1.22, \mathrm{~V}$ is reasonably clear-at any rate what survives is difficult to reconcile with the expected E; 1. 31, probably de[cem], see commentary; 1. 32, perhaps vi[ginti quattuor], see commentary; 1. 33, ?[capacitatis], see commentary; 1. 36, probably a mistake for viridis or subviridis.

Column IV = Chapter 16, l. 2a-Chapter 18, l. 10, reconstructed from one large and two small fragments all of which adjoin; for the physical join with col. III, see above. The top and bottom survive, but the surface is badly damaged in the upper part of the stone. Supplements are from the Greek of Megalopolis (11. 1-42) and the Latin of Synnada (11. 4-15) which is, however, linguistically faulty as well as defective; see Lauffer, pp. 149, 150 and apparatus.
L. 1 here corresponds with Megalopolis ch. 16, 1.2a. Since it is certain that at Aphrodisias a new section starts here, and since at Megalopolis it is apparent that a comparatively short entry was
followed by a space which continued to the end of the line, with no price listed at the appropriate place, it seems clear that both texts contained a section heading at this point.

In 11. 3, 4 we have conjecturally supplied coloris to correspond with $\chi \rho \omega \mu \alpha т(о \varsigma), \chi \rho \omega \mu(\alpha т о \varsigma)$ in the Greek. In commenting on the traces of the bottoms of the letters in this line at Synnada, I. W. Macpherson (l.c. on p. 105) reckoned that while these might be consistent with libra at the right side those in the middle of the line were difficult to reconcile with the word coloris; it is rash to argue from a photograph alone, but examination of his illustration under a strong lens suggests at least the
 conjecture, but it is not ruled out that what followed was $c] o l[\rho] r[i] s![i b] r[a l]$.

L. 1, presumably the end of a section heading, is very uncertainly read;1. 19 Megalopolis gives the maximum price here as $X^{\prime}=$ octo and adds one more item-the load of an ass at four denarii; it seems clear that the eye of the Aphrodisias copyist slipped, and that he attributed to the camel load the price prescribed as the maximum for the ass's load which he failed to inscribe, see above, p. 100.

COMMENTARY
As a general principle we have not commented unless we have anything to add to the existing annotation in H. Blümner, Der Maximaltarif des Diokletian (Berlin, 1893) and the supplementary


APHRODISIAS: DIOCLETIAN's PRICE EDICT (see p. 99 f.) $1-4$. FRAGMENTS OF THE IMPERIAL TITLES
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aphrodisias: diocletian's price edict (see p. 99 f.). PART of price-list of column 1 and columns 2 and 3

notes of S. Lauffer (l.c. on p. 99); cf. also the remarks of W. Loring, JHS xi (1890) 299 f. on the sections found at Megalopolis, and I. W. Macpherson, JRS xlii (1952) 72 f .

Col. I, 11. 1-30 give 30 items in the section on wooden components for carriages, of which hitherto we only had a very defective Latin copy and a partially defective Greek version.
L. 17 For [. . .]ntalia, see apparatus; [fro]ntalia, with the sense of 'front material', is a very attractive restoration in view of the identification of lateraria in 1.19 (see below) as 'side material'; in the Greek text, however, the word which should correspond is $\varphi \varepsilon v i \kappa o u \lambda \alpha$, manifestly a transliteration of a Latin word into Greek, and hitherto connected (e.g. by Blümner and Lauffer) with Latin faenum, explained by Blümner as 'Futterkasten' (cf. late Latin feniculum, 'grainstore') and conjecturally translated by E. Graser ( $E S A R \mathrm{v}, \mathrm{p} .362$ ) as a hay-implement; but neither of these explanations is satisfactory in the context.
L. 19 Lateraria must be the side material, the lateral members of a wagon body fitted to the ribs (certainly what is meant by costae in 1.15), so as to form the lattice-work commonly found in representations of Roman freight-wagons.
L. 20 Caplofurcae suggests by its formation a forked member equipped with handles, cf. capulus $=\mathrm{a}$ hilt. A. Rich (A Dictionary of Roman and Greek Antiquities, s.v. furca 4) shows a representation of a four-wheeled wagon on a Pompeian painting, with a body made up of ribs and side-pieces, and fitted with a branching pole, which may be our caplofurcae.
L. 22 Iugum Italicum cum pescl[i]s f[abricatum
L. 23 Iugum Graecanicum cum pesclis fa[bricatum

There seems to be no discussion of the difference between 'Italian' and 'Greek' yokes that we have traced. For pesclum cf. pesculum which appears in Corp. Gloss. v, 132, 139 as a late Latin variant of pessulum. Wooden pegs are regular features linking the two halves of yokes.
L. 24 Statumen. The basic meaning is 'that upon which anything rests', a prop or stay. In the present context this would suggest a stay supporting the body on the wagon-frame.
L. 26 Columella. In technical contexts the meaning is that of a pin or pivot on which something revolves, as with the trapetum or olive-mill. As part of a four-wheeled wagon it could be the pivot on which the front axle revolves.
L. 27 Bitum
750 den.
L. 28 Cambigines quattuor
70 den.

Neither term seems attested elsewhere. Taken together, and in conjunction with the parallel types of wagon wheel (see below, ll. 32-36) called rotae bitatae and rotae cambiginatae, it is evident that they are parts of two different kinds of wheel, the bitum being extremely costly by comparison with the cambigines. The second presents no problems; French 'chambige', a curved wooden member, shows that the four cambigines together make up the felloes into which the spokes are fitted, and over which the tyre is shrunk on. Bitum is more difficult; Blümner (l.c. on p. 104) p. 139 followed Loring in interpreting it as Latin vitum which he connected with the root vi- (as in vi-ere to weave, and vimen, a flexible strip of osier), but this does not seem to us an altogether satisfying derivation. Nevertheless, his conclusion that bitum is a rim made from flexible wood so as to form a single, continuous hoop seems to us sound and it is supported by his citation of a passage of ps.-Augustine de princ. dial. 6 (Migne, PL xxxii, col. 1413): 'quare via dicta est? respondes: flexu, quia flexum velut incurvum veteres vietum dixerunt, unde vietos, quod cantho ambiantur, rotarum ligna vocant.' It is commonly held that wheels of the Roman period were fitted with jointed felloes, but the two well-preserved wheels recovered from a well at the fortress of Zugmantel, near Saalburg, represent both jointed and unjointed types, thus providing strong evidence to support the proposed identification of bitum and cambigines. The jointed specimen has its five felloes, nave and ten spokes intact, but of the second only the continuous rim survives; it is made of a single strip of ash (Saalburg-Jahrbuch iii, p. 68 and pl. xvi). E. M. Jope (in C. Singer, History of Technology ii, p. 551, fig. 504A) shows a drawing of a wheel found at Trimontium (Newstead) in Roman Scotland, in which the felloes are incorrectly represented as unjointed, but J. G. Jenkins (The English Farm Wagon, Reading 1961,68 ) observes that 'in Britain early spoked wheels had one-piece ash felloes, steamed to the correct shape and held there by an iron clamp'. The selection of suitable timber, together with the degree of skill and length of time required in the spoking of a one-piece felloe, would account for the comparatively high price of the one-piece wheel. Blümner's reluctant conclusion (Maximaltarif 139) that a wagon having its wheels $\beta_{1 \tau \omega \tau o i ~ m u s t ~ h a v e ~ t h e ~ f e l l o e s ~ m a d e ~ f r o m ~ a ~ s i n g l e, ~ s k i l f u l l y-w o r k e d ~}^{\text {a }}$ piece of timber ('aus einem einzigen kunstvoll gebogenen Stück besteht') is strikingly vindicated by evidence not available to him.

## L. 29 Inductum rotae vehicularis <br> L. 30 Inductum rotae carralis

The word inductum is evidently a substantive, derived from the verb inducere, the basic meaning of which is that of 'drawing one thing over another' (e.g. 'Scuta ex cortice facta pellibus inducere', Caes., B.G. 2, 33). An inductum would thus appear to be something drawn over a wheel, e.g. a tyre. But tyres were of iron, and the heading of the section indicates that all the items mentioned were of
wood. Furthermore Latin has two words for tyre, viz. orbis (used of the wheel or the tyre), and canthus (restored in the defective 11. 38-9 from the Greek, and otherwise well attested: see under bitum above, and Pers. 5, 71; Mart. xiv, 168, 2; Prob., in Verg. Georg., 1, 163, 'tympana iuncto cantho ferreo').

Ll. 32-39 give the eight items comprising the section on carriages where again very little has hitherto been known of the Latin text, though the Greek existed virtually complete.

> L. 32 Saragara optima bitatis rotis sine ferro $\quad 6000$ den.
> L. 33 Saragara cambiginatis rotis sine ferro

What is meant seems to be a four-wheeled freight wagon for which the normal Latin word is sarracum, as conjectured by Mommsen for the Latin text here. Blümner, following Loring (l.c. p. 105 above), supposed that oapóyopov in the Greek text was a Grecized form of sarracum but it is clearly a simple transliteration from the Latin text, though saragara may be related to sarracum (which is generally thought to be Illyrian in origin). For bitatae and cambiginatae rotae, see 11. 27, 28 above. The large difference in the price of the two carriages derives from the difference in the type of their wheel construction, since ll. 27, 28 show that the maximum for four bitatae rotae would be 3000 denarii, and for four cambiginatae 280 denarii (so that in fact the maximum for the former ought to be 6220 denarii rather than 6000 ); but the type with rotae bitatae is also described as optima, which might imply some other variation although no allowance is made for this in the price.

## L. 35 Dormitorium rotis bitatis sine ferro <br> 7500 den.

L. 36 Dormitorium rotis cambiginatis sine ferro 4000 den.

The only specified difference is that between the two types of wheel construction (see above), but the price differential is greater than can be explained by this.
L. 39 Carruca rotis bitatis sine ferro, priced only 500 denarii below the top-quality dormitorium, which is the most expensive item in the list, is a four-wheeled travelling coach, not unreasonably described by Blümner as a 'Luxuswagen'.

Col. II, 11. 1-16, all under the heading of carts, list fifteen items including carts proper, some other agricultural vehicles, and a number of agricultural implements; of this list only fragments of the first three items were known in Latin, though the whole section survived in Greek.

The agricultural implements do not fit the rubric, but if a section heading is lost here it should be noted that it is also missing from the three known Greek versions.
L. 2-4. The much lower tariffs for the four-wheeled and two-wheeled carts listed here indicate a much smaller type of freight wagon than the saragarae of col. I; 1.3, providing that when a cart is sold complete with ironwork the price should take account both of the wood and of the iron used (cf. the analogous provision for saragarae in col. I, 1. 37), looks to be misplaced, since in the Latin the carrum birotum follows it in 1.4; but the Greek versions all have $\alpha \mu \alpha \xi \alpha$ instead of kóppovin 1.4 so that the Aphrodisias copy may be wrong in this line. If so the proviso appears in its proper place and a different type of cart is listed in 1.4.
L. 5-16 the implements listed are almost all identifiable from the Greek version. But:
L. 5 Tribia, a wooden threshing-sledge, is an unexpected variant for tribulum (cf. the Greek трі́ßо入оऽ).
L. 7 Trac[.]a hoc est leudia corresponds to $\pi \alpha \tilde{y} \gamma \lambda \alpha \tilde{\eta} \tau 01 \gamma \lambda \varepsilon u ́ \delta \iota \alpha$ at Megalopolis, $\pi \tilde{\alpha} \gamma \lambda \alpha$ etc. at Aidipsos and $\delta$ iкє $\lambda \lambda \alpha \nu$ тороvєutinv in Geronthrae II. It has been generally accepted that $\pi \alpha \tilde{\gamma} \gamma \lambda \alpha$ is a Greek transliteration of Latin pavicula, a heavy tamper used for clod-breaking, and that $\gamma \lambda \varepsilon \varepsilon^{\prime} \delta \mathrm{t} \alpha$ is related to Latin glubium to give the same sense, as suggested by Loring, l.c. p. 105. Following a hint of R. G. Coleman, we are inclined to doubt whether leudia and $\gamma \lambda \varepsilon^{\prime} \delta \delta 1 \alpha$ are in fact either Latin or Greek words, and so to disregard them as clues to the sense of the line. If this is right, it may be better to read the first word in the Latin as $\operatorname{traç}[h] a=$ traha, cf. Columella 2,20,4, meaning a drag, see K. D. White, Agricultural Implements of the Roman World (Cambridge, 1967) s.v., or, in view of the Aidipsos reading, trag[l] $a=$ tragula cf. Varro, L.L. $5, \S 139$ Müll., a small version of the same. The Greek translators must then be supposed to have transliterated a word which they had misread, cf. Ch. $18,1.7=\mathrm{col}$. IV, 1. 37, where Megalopolis has $\pi \omega \mu \dot{\varepsilon} v \tau$ tou for tomenti, and there is a still more serious error in Geronthrae II.

The new text confirms that the maximum price for this item is $\rho^{\prime}$, as in Megalopolis and Aidipsos (but not Geronthrae where Mommsen and Kolbe read $\beta^{\prime}$ and it seems clear that there has been some dislocation).
 Geronthrae II. $\Delta \eta \lambda \alpha ́ \beta p \alpha$ has been wrongly explained as a variant of dolabra, 'mattock'; it is surely a variant of ventilabrum, 'winnowing shovel', cf. Corp. Gloss ii, 425, 47, ' $\pi$ túov ventilabrum delabrum', though the interchange of $V$ and $D$ seems surprising at the date of the Edict.
L. 9 Pala is transliterated in Megalopolis and Aidipsos but Mommsen read $\mu \alpha \alpha_{k}[\varepsilon \lambda \lambda \alpha \nu$ in Geronthrae II.
L. 10 Quinquedentem sive lignetere [ $m$ ? ], the words seem otherwise unattested and the gender
of the second remains uncertain; the sense is presumably that of a five-pronged fork (? rake, and probably hay-rake) but the Greek túp $\chi \eta$ ס 1 óסous $\xi \cup \lambda i v n$ has hitherto suggested a two-pronged instrument; we have no explanation for the Greek version.
L. 12 Albeum quinquemodiale corresponds to $\sigma \kappa \alpha \dot{\alpha} \emptyset \eta \pi \varepsilon v \tau \alpha \mu 0 \delta 1 \alpha \dot{\alpha} \alpha$ in the Greek texts. Hollowed out wooden troughs are mentioned frequently in the agricultural writers and served a variety of purposes. The size specified here (capacity rather more than a bushel) may have been used as a standard measure for fruit, cf. our 'bushel boxes'.

## L. 13 Modiale mensuratorium ligneum

L. 14 Modium subedianum ferratum

The Greek texts make no distinction between modiale and modius. The second item- $\mu \dot{0} \delta 10 s$ $\sigma_{1} \delta \eta p \varepsilon \varepsilon \delta \varepsilon \tau o ́ s$ in the Greek-is the 'official' corn-measure, bound with iron hoops and well-known from the monuments. There is no equivalent in the Greek to the adjective subedianum, presumably from the epigraphically-attested word subaedianus, cf. CIL ii, 2211; vi, 9558;9559; x, 6699 and xii, 4393 which records a collegium fabrum subaedianorum at Narbonne; its meaning is uncertain, though it has been interpreted as a reference to craftsmen employed on the interior of buildings-which gives no obvious sense here.
L. 17-21 give the four items in the section on Mills of which a fragment of one line of the Latin was previously known and the whole section in Greek.

The two sizes of animal-powered mills included are well known from the surviving establishments at Pompeii and Ostia. The comparative tariffs can only be explained on the assumption that the animal-powered and hand mills are tariffed complete (i.e. in 1.18 the Aphrodisias text is wrong and should read cum lapidibus as implied by the Greek), while the water mill at 2000 denarii must be tariffed without its wheel, shaft and steering gear.
L. 22-9 contain five items under the heading of Sieves, hitherto known only partially in Latin but substantially in Greek.
L. 24 Cribrum pelliceum simulare. The very high price ( 400 denarii) must be due not only to the skill of the craftsman in making a very fine network of holes (see Blümner (l.c. p. 104) p. 144), but to the high quality of the leather needed for the purpose.
L. 26 Cribrum textile rusticanum pistorium. There is no equivalent to pistorium in either of the Greek texts but Aidipsos has $\mu \dot{\xi} \gamma(\alpha)$ in its place; since there is no corresponding maximum in the Latin it seems reasonable to suggest that the Aidipsos draftsman repeated the word in error from the line above.
L. 27 f. Cribrum legu[minale t]extile, used for removing the chaff from beans and peas, is the first in a list of three coarser and cheaper sieves. A crucial element in the description of the second of these (1.28) is seriously defective both in the Latin (ca [. . ecile]) and in the Greek (mpos [-] $\quad 0[\cdot] \rho 1 \alpha v$, Megalopolis; -wpicu, Aidipsos) and we have no solution to the problem. The third (1.29) is complete in the Greek, but the adjective $\sigma o v p \varepsilon \lambda_{1} \alpha v^{\prime} v$, presumably from Latin surelianum, provides no clue to the use and may be derived from a personal name.
L. 30 gives the heading for a section on bronzeware for which the heading and five items survive in the Greek of Aidipsos and probably the beginning of four lines of the list in the Latin of Ptolemais VI (Lauffer). The Ptolemais fragment shows four items for which the noun was either aeris or aeramenti and these, if they followed the opening aurichalci supplied from Aidipsos, would take the list here to 1.35 ; but from 1.37 it is clear that a new section has begun, concerned with ironware, and the heading for this should have stood in 1. 36. In consequence, unless we have miscalculated the number of lines lost in the gap here, the section on bronzeware must have ended with 1.35. On the character of the items tariffed, see in addition to Lauffer's notes on Ch. 16, 11. 63-6, the notes of Blümner and Lauffer on Ch. 7, 11. 24a-28 on the wages of bronzesmiths.
L. $36-8+$ col. III, 11.1 ff. contain, but in defective form, seven surviving items of ironware, an otherwise unknown section. The heading to the section was perhaps de ferramento or de ferramentis.
L. 37 Fe [rramenti? is too fragmentary for comment and there is nothing in the provision for wages of ironsmiths which helps (ch. 7,1.11).
L. 38 Cla[vi caligarii. Since col. III, 11. 1 and 2 specify nails for military boots of second and third quality, it follows that the nails of col. II, 1. 38 are nails for military boots of first quality.

Col. III, 11. 4-7 are on the whole too fragmentary for comment except that aciarium in 1.7 presumably refers to steel.
L. 8 Pectines laniarii used for raising the nap on woollen cloth were characteristically made of iron, cf. Juvenal vii, 224 'qui docet obliquo lanam deducere ferro'; for lists of examples found in the Western Provinces, see W. Manning, Antiquity xl (1966) 60; Ant.J. lii, 2 (1972) forthcoming.

How many lines this section occupied is unknown. It was followed by another new section of
which only the last three items survive, and those in defective form; they show it to have included gypsum (1.17) and charcoal (1.18). For the very wide variety of uses to which gypsum was put see H. Blümner, Technologie und Terminologie der Gewerbe und Künste bei Griechen und Römern ii, 140 f .

L1. 19-33 give the fourteen items of a section on earthenware, another section hitherto unattested. All the items are clearly coarse wares, the first nine of them used in building construction and the remainder probably all containers, with the exception of the lamps in 1.31 .
L. 20 Tegula cum imb [rice fo]rmae primae. The ordinary tiled roof consisted of flat earthenware tiles butted together, the vertical joints being covered by imbrices or joint-tiles of semicircular section; flat and joint-tiles are here tariffed in pairs. It is clear-and hardly surprising-that more than one quality was available, but only the top quality is tariffed; possibly one or more lines has been omitted in this copy.

## L. 21 Laterem bipedaneum

L. 22 Laterem puda[l]em

## (clearly a mistake for pedalem)

These are bricks for walls, on whose production see H. Blümner, Technologie ii, 18 f ., with special reference to the accounts in Vitruvius ii, 3 and Pliny $N H$ xxxv, 170 f . Vitruvius and Pliny do not mention the sizes of brick specified here, though Vitruvius refers to tegulae bipedales (e.g. at $\mathrm{v}, 10$, 2); but in brick stamps abbreviated forms of bipedalis, bipedaneus sometimes occur (cf. CIL xv, 362, 532,651 ) while Palladius vi, 12 speaks of bricks two feet in length, and the Edict itself refers to lateres pedum binum in its provisions for the payment of brickmakers (ch. 7, 1. 15). In practice builders used a much wider size range of bricks than is tariffed here.
L. 23 Laterem rutundum (for rotundum) is the round coping brick, which is apparently tariffed at the same level as the ordinary one-foot brick.
L. 24 Tubulum sive pyrodromum is the flue pipe for hypocaust heating; several instances of these flue tiles ('box-tiles') have been found with inscriptions which include the word tubulum, cf. one from Wiggonholt, $J R S \operatorname{xxx}(1940)$ p. 188, no. 20. This is the first of five varieties of earthenware pipe, which include three sizes of water pipe (ll. 26-8) and the auric(u)latum (1.25). The last is an otherwise unattested word but suggests the circular exit-stack inserted into a roof tile to carry away smoke (see e.g. C. Blümlein, Bilder aus dem römisch-germanischen Kulturleben (München-Berlin, 1926) p. 41, Abb. 116).
L. 29 Doleum Italicorum (sextariorum) mill[ $e$. . ? . .] denarii 1000, the first item in the list of domestic vessels, is the large, wide-mouthed, handleless storage jar, regularly used for oil and wine but also for other products. The capacity specified here is not quite certain, but 1000 sextarii seems more likely than $1000+$. The high tariff conforms with the literary references to the repair of these vessels, cf. Cato, de Agri Cultura 39, 1.
L. 30 Vasum fictile Italicorum (sextariorum) duọ $[r u m]$ denarii 2, a container in whose description the essential point seems to be the specified capacity. The juxtaposition of the very large (1.29) and the very small (1.30) container may seem surprising and suggests some error in the copy, as also, perhaps, does the next item which interrupts the list of containers.
L. 31 Lucernas fictilibus (sic) de[. . ? . .] denarii 4. These lamps must be of the coarsest and simplest variety, especially if, as seems probable, they were tariffed in tens (assuming n(umero) or num(ero) to have fallen out before de[cem]; in fact fictilibus might be the copyist's misreading of FICTILES N').
L. 32 Lagoenam (sextariorum) vi[ginti . . ? . .] denarii 12. The lagoena (lagona, laguna, lagyna) is another container, a jar probably with a narrow neck and handled, used for serving goods, especially wine, at table; it was apparently of variable shape. Jars with inscriptions which include the word are found from time to time, cf. the recent example from Godmanchester in Britannia ii (1971) p. 296, no. 50. The exact capacity specified here is open to question, but since an amphora as an official measure contains 48 sextarii it is tempting to suggest that the lagoena should contain 24 and restore $v i[g i n t i ~ q u a t t u o r]-a ~ f i g u r e ~ w h i c h ~ a l s o ~ h a s ~ t h e ~ a d v a n t a g e ~ o f ~ r e l a t i n g ~ l o g i c a l l y ~ t o ~ t h e ~ p r i c e . ~ I n ~ p r a c t i c e, ~, ~$ however, the surviving examples show that the word was used for vessels of variable capacity as well as shape.
L. 33 Cetera vascula pro ratione [capacitatis?]. In the context one would expect the decisive factor to be capacity; for capacitatis cf. Columella xii, 45, 2 'pro capacitate vasorum'.

The omission of the amphora from the list seems surprising; it is presumably covered by this rubric and the relation of price to capacity must then be based on that given for the lagoena.
L. 34-41 contain six items comprising the previously unknown section on Glass. This is extremely vague and covers only a surprisingly limited range, which perhaps reflects a very limited use. It allows for only two sources, Alexandria and Judaea (but on the importance of these cf. R. J. Forbes, Studies in Ancient Technology v, p. 153 f. and 148 f.), which implies that other East Mediterranean glass-making centres, like Cyprus, where certain individual characteristics prove local
manufacture, were not exporting (or exported products not sufficiently distinguished from Alexandrian or Judaean to require separate tariffing), and presumably that the major glass-centres of the west, Italy and the Cologne area, were not trading with the East Mediterranean.

The three categories of glass are not defined closely and do not appear to include the fine cut wares for which Alexandria was famous and which have no counterpart in the Judaean glass from the Sidon area. The prices make it clear that the Alexandrian is superior, but only slightly, so the varieties exported must be assumed to be similar. To judge by the prices the vitrium Alexandrinum, sold by the pound at not more than 24 denarii, must be natural green glass as is the Judaean glass (accepting subviridis in 1.35 ), with a maximum price of 13 denarii per pound. Why it should be sold by weight and not by the piece is inexplicable, and there seems no obvious rationale either in the variation between pondo and libra used to express the pound. Storage vessels, sold empty, seem to be what are intended. These are normally of natural green glass, but they have a wide range of size and consequently weight.

L1. 36-8 clearly refer to table-ware, cups (the handled form usually denoted by 'chalice' in modern usage is rare and is not likely here) and other smooth-surfaced vessels, i.e. undecorated. This seems the preferable interpretation of vasis levibus: the alternative 'light glass' is a pointless description, and the prices, which are not much higher than those of the green glass, rule out the possibility of high-quality decorated wares; for levis in this sense cf. Juvenal xiv, 62 of silver, 'hic leve argentum, vasa aspera tergeat alter', and Ovid, Medic. 68 of a mirror, 'fulgebit speculo levior ipsa suo'.

The final item spec(u)laris, best quality and seconds, is very much cheaper than the vessel-glass, and is not connected with a particular centre of production; indeed if window-glass is meant, import from Alexandria would not be expected and it is unlikely even from the Sidon area. In this context it is natural to assume that glass is intended, although specularis is not necessarily a glazed window since other translucent materials were used in windows (cf. the lapis specularis of Pliny, $N H$ xxxvi, 163). Third-century window-glass was blown as a cylinder and flattened out in an annealing oven (D. B. Harden in Glastechnische Berichte viii (1959)), a process nearly as complicated as making simple vessels, and the very low price compared with that of vessel-glass is therefore a little puzzling, though local manufacture would reduce cost. The price, in fact, might favour the assumption that the item is lapis specularis and that window-glass is not intended; and although window-glass is well documented on sites in the north-west provinces, it is not certain that it was used at all extensively in the east-the window-glass from Jerash is later and although a little was found at Samaria and a little at Karanis, it was not enough to suggest general use. But there is another possibility-that raw material is intended. There is evidence of the trade in cakes or ingots of special coloured glass (R. J. Charleston in Journal of Glass Studies v (1963) pp. 58-60), sealing-wax red for instance, probably of Egyptian provenance. The price precludes the possibility of fine coloured glass here, but ingots of glass, sold to be made up into window-panes as required by customers, as for tesserae in wall and floor mosaics, could be what are meant.

L1. $42-5$ give the three items of the section on Pens and Ink, not hitherto known in Latin but surviving in full in Greek. It is not surprising that the Aphrodisias copy confirms that Mommsen was right to supplement $\mathrm{Ch} .18,1.12$ as transcribed at Megalopolis with the figure ten.

Col. IV, ll. 14, very defective, contain, as at Megalopolis, three items tariffed by the pound which, as Megalopolis shows, might be coloured. Blümner suggested that they were dye-stuffs but other potentially coloured items are possible.
L. 5-7 contain the two items of the section on Ivory and Tortoiseshell, previously known in a poor Latin copy from Synnada and in a defective Greek version.
L. 8-12 contain the three items of the section on Needles, again known in a poor Latin copy from Synnada and a defective Greek version.
L. 13-19 contain the five items under the heading of carriage charges which are concerned with transport by land, of which two were already known in the Latin of Synnada and substantially all in Greek.
L. 16, the Latin word which became $\gamma \varepsilon \gamma \circ \mu \omega \mu \dot{v} v o v$ in Greek is onusti, not onerati as hitherto conjectured; unless there is more error in the Aphrodisias copy than is noted in the apparatus, it is the case, as Loring supposed (1.c. p. 105), that is $\lambda$ हitpas which matches ad pondum (sic) in this line was
 1. 18 here.
L. 20-4 give three items under the heading of Fodder, a section previously unknown in Latin but surviving in Greek.
L. 21 Viciae, 'vetch', a very common leguminous feed.
L. 22 Faeni sive palearum is hay or chaff.
L. 24 Pabuli, at 6 lbs to the denarius, is by far the cheapest item here and described by the general term for animal fodder (cf. the section heading); one may suspect that it refers to a standard 'provender' made up of various ingredients.
L. 25-42 give the ten items of the section on Down, previously unknown in Latin but surviving in Greek.
L. 28 plumae agrestis diversarum avium adds to the description the adjective agrestis for which there is no equivalent in the Greek.
L. 37 tomenti sive gnafalli; the Aphrodisias copy naturally confirms the correction of $\pi \omega \mu \dot{\mu} \mathrm{v}$ то to $\langle\tau\rangle \omega \mu \dot{k} \nu \tau<0$ made in the Megalopolis text by Loring (l.c. p. 105).


[^0]:    *In general, notes on goods of agricultural use are by K. D. White and on glass by Dorothy Charlesworth, but interchange of ideas between authors has affected the final version of all sections. We have also had valuable help from R.G.G. Coleman (Cambridge), Mark Hassall (London), William Manning (Cardiff) and Dr. B. Bader of the Thesaurus Linguae Latinae $(1 \rightarrow$ ich).
    ${ }^{1}{ }_{\mathrm{K}} \rightarrow$ in Erim and Joyce Reynolds, $J R S$ lx (1970), 120 f.; Kenan Erim, Joyce Reynolds and Michael Crawford, JRS 1xi (1971), 171 f.
    ${ }^{2}$ We must acknowledge particular help in the assembly of the panels published here from Mrs. Linda

[^1]:    Hatfield (formerly of Newnham College, Cambridge), and at Aphrodisias from Mr. Michael Hendy (Birmingham); in taking squeezes and photographs from Mr. and Mrs. Mossman Roueché (London), and for photographs of the squeezes from Mr. T. R. Volk (Fitzwilliam Museum, Cambridge): for assistance in preparing the manuscript from Mrs. Janet Chapman (formerly of Newnham College, Cambridge).
    ${ }^{3}$ As stated in 1971 (1.c. in n. 1, p. 172) the fragment CIL iii S, p. 2208, Aphrodisias I (Lauffer), previously published as from the Price Edict, belongs in fact to the related inscription on Currency Reform.

[^2]:    ${ }^{4}$ Often shared with the titles in the inscription on the Currency Reform, as was pointed out in 1971 (1.c. in $\mathrm{n} .1, \mathrm{p} .172$ ).
    ${ }^{5}$ For some palaeographical observations based on

[^3]:    the Plataean copy, see R. Marichal, Aegyptus xxxii (1952), 342 f .
    ${ }^{6}$ He has had to put the first item on the same line as the section heading, which is most unusual.

