# THE ATHENIAN AGORA results of Excavarions CONDUCTED BY 

THE AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS

## VOLUME XXI

## GRAFFITI AND DIPINTI

BY
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## Library of Congress Cataloging in Publication Data

## Lang, Mabel L <br> 1917-

 Graffiti and dipinti.(The Athenian Agora; v. 21) Bibliography: p.

1. Athens. Agora. 2. Graffiti-Athens.
2. Inscriptions, Greek-Athens. I. Title.
II. Series: American School of Classical Studies at Athens. The Athenian Agora; v. 21.
DF287.A23A5 vol. 21 938'.5s [938'.5] 75-40229
ISBN 0-87661-221-4

## PREFACE

Perhaps even more than in other volumes of the Athenian Agora series the material presented here has had the benefit of much time and thought over the years on the part of a goodly number of excavators, cataloguers and visitors in the Agora. Everyone enjoys verbal puzzles that challenge one's powers of reading (ancient) minds, and many happy notions about these texts were evolved around the tea table so that the 'onlie begetter' may have been lost in obscurity.

Dating of the material has also been a cooperative effort, so that the present author is indebted not only to excavators but also to the many scholars whose study of particular kinds of material for particular periods has brought order out of complication and confusion.

Basic to this work was first a complete listing of all graffiti and dipinti found in the Agora, initiated by Lucy Talcott and effected by Suzanne Young and a succession of helpful volunteers. Then, the foundations of this study's categories A through G were laid in a preliminary version written in the early 1950's by George A. Stamires and Eugene Vanderpool. Although far more limited in scope and number of pieces studied than this, that work has on several occasions provided not only the best reading but also the right phrases in which to present the material. In the years following, the present author was fortunate in being able to consult with Eugene Vanderpool and benefit from his vast experience of all things Greek and graphic. His wisdom and tempered judgment in consequence pervade the whole work; the infelicities and what errors there may be of commisssion or omission are all my own.

Illustrations of the graffiti have been limited to drawings. In the case of dipinti photographs have been preferred for one category, because of the difficulties presented by a combination of run-on cursive forms and the fugitive medium. The drawings were made by Hero Athanasiades and Helene Besi who have shown both skill and firmness in representing what was actually visible rather than being influenced by the 'wishful seeing' of the author.
'It is easy to read if you know what it says.' - EUGEne Vanderpool

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# ABBREVIATIONS AND BIBLIOGRAPHY 

Agora
A. J. A. Annuario
Beazley, A. B. V.
Beazley, A. R. V.
Bechtel
Bickerman
Brann
B. S. A.
B. C. $H$.
C. I. L.
C. R.

Edmonds J. M. Edmonds, The Fragments of Attic Comedy, Leiden, 1959-61
Howland
I. G.
I. G. A.
I. G. R. R.

Immerwahr
Jeffery, L. S. A. G.
Kretschmer
Kubitschek
LSJ
Meisterhans ${ }^{2}$ K. Meisterhans, Grammatik der attischen Inschriften, second edition, Berlin, 1888

## ABBREVIATIONS AND BIBLIOGRAPHY

Metrolog. Script. $\quad$ Metrologicorum Scriptorum Reliquiae, Leipzig, 1864-1866
P. Oxy.

Pape
Prosop. Att.
Robinson, Chronology
Robinson and Fluck

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Pottery of the Roman Period: Chronology. Agora, V
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Roehl
S. E. G.

Sparkes-Talcott
Tolstoy
Wycherley

See I. G. A. above
Supplementum Epigraphicum Graecum, Leyden, 1923 Black and Plain Pottery of the 6th, 5th and 4th Centuries B.C. Agora, XII
J. Tolstoy, Grecheskie Graffiti drevnikh gorodov Severnogo Prichernomoreia, Moskva-Leningrad, 1953
Literary and Epigraphical Testimonia. Agora, III

## INTRODUCTION

Informal inscriptions, incised or painted, appear on over 3000 pieces (pottery, lamps, miscellaneous clay) catalogued in the Agora excavations. At least one-third of these consist of one or two letters only, incised on the bottom of small vessels, perhaps as marks of ownership, or painted on the necks of unglazed amphoras, perhaps as some kind of commercial notation. The brevity of these texts allows so great a variety of interpretations that publication would serve no useful purpose; it is sufficient to note the large number of such curtailed abbreviations. In addition to the complete inscriptions of one or two letters there are many broken inscriptions consisting of only a few letters which admit of so many possible restorations that nothing certain can be learned from them. This publication therefore is limited to the 859 graffiti and dipinti which have sufficient content to be meaningful, whether the meaning is clear or not. The selected pieces range in time from the late 8 th century b.C., when letters first appear on pottery, to the 6th century of our era. Since the variety of the material is so great, other specific criteria employed in the selection can best be listed in connection with the various categories of texts.

Certain types of inscriptions on pottery do not belong in this study and will be more appropriately dealt with elsewhere:

1) Ostraka;
2) Artists' signatures, love names and other painted inscriptions on black-figured and red-figured pottery;
3) Convivial inscriptions painted on Hellenistic pottery and Late Roman motto mugs, and all other painted inscriptions which are part of the decoration of the pot;
4) Stamped or molded inscriptions such as amphora handles, lamp signatures, Arretine stamps, etc.

## Classification

Various as the selected material is, the majority of items falls readily into a comparatively small number of categories:
A. Abecedaria
B. Messages and Lists
C. Love Names and Hate Names
D. Names on Sherds
E. Numerical Notations on Sherds
F. Owners' Marks
F. Private Ownership

Fa. Public Ownership, Delta-epsilon Ligatures
Fb. Public Ownership, Delta-eta Ligatures
G. Dedications and Convivial Inscriptions
H. Commercial Notations

Ha. Capacity
Hb . Tare
Hc. Date

## Hd. Contents

He. Combinations
I. Tax Notations
J. Christian Inscriptions
K. Miscellaneous
L. Unclassified
M. Pictures

An introduction to each category defines the type, indicates special characteristics and suggests parallels, purpose, etc.

## Dating and Provenience

There may be as many as three kinds of evidence bearing on the date of any particular inscription: 1) form of the letters; 2) date of the object on which the inscription was written; 3) date of the deposit in which it was found. Sometimes all three of these lines may give a result; sometimes, however, the writing may be characterless, the pot fragment may be featureless, or the context may be meaningless. Although the date of the inscription is what we have to determine, it must most often be arrived at by means of one of the other dates, since the chronology of letter forms is not as yet an exact science. The context date will often be the most convenient. Where the date of the pot agrees closely with the context date, it seems unnecessary to give a date for the pot as well. Dates for the pots are included therefore only where the context is meaningless or where the pot is obviously earlier than its context. For the most part, three dates will be given only when they are different, as for example for a geometric sherd inscribed in the 7th century b.c. and found in a 5th-century b.c. context.
The arrangement of inscriptions in each category is chronological, but since there is considerable difference in the degree of accuracy possible for various items, the order in some cases is purely conventional. Thus those pieces which can not be dated more closely than to a century follow those that have been assigned to a particular quarter or half of that century even though they may indeed be earlier than the second-half or fourth-quarter pieces. Even more vague are dates like Early Roman (roughly 1stearly 3rd centuries after Christ) or Late Roman (1ate 3rd-6th centuries) which cover still longer periods of time.

When the sherd or pot comes from a closed deposit, the deposit number on the Agora grid is given. A list of the deposits with all pieces here published from each will be found in the index of Deposits. When a piece comes in a fill predominantly of one period, though not a closed deposit, the context date is given without a deposit number. When an item was found in an area which provided no information concerning its date, no mention is made of provenience.

## Publication References

When a piece has already been either noted in a preliminary report or more formally published in a special study in Hesperia or in an Agora volume, the publication reference (often only the most recent) is included in the first paragraph of the catalogue description. This reference may be in the form of volume and page numbers or expressed as an equation between the catalogue number here assigned and that given in the other publication, e.g., "Ha 26 (P 9902). Round-mouthed jug, Robinson, Chronology, M 169" or "F 177 (L 4212). Black-glazed lamp ( $=$ Howland, no. 267)." Frequently the shape and form of a vessel is defined with reference to examples already published and dated either in Hesperia or one of the Athenian Agora volumes. See list of Abbreviations for short forms of reference.

## Letter-shapes and Spelling

The variety of shapes which each letter may take is dependent on several factors of which chronology is only one; others are the nature of the writing surface, the nature of the writing implement, the writing
skill of the inscriber, and the amount of care which he has taken. Thus anything but the most painstaking incision on (or through) good black glaze results in angular letters and straight lines where curves might be expected. A very fine metal point is easier to control but seems not to have been used so often as some blunter instrument. The older, softer fabrics lend themselves more to curved lines so that even the straight uprights of alpha and delta are often curved. A writer who knows his letters well produces more recognizable shapes than one who draws each line without much feeling for the appearance of the letter as a whole.

Because of these factors it is not practicable to see all differences in letter-shapes as relevant to the date and development of the alphabet. For example, even though epsilons are known to develop from tailed to untailed, a good black-glazed sherd of the 5th century b.c. may show a long-tailed epsilon while those on a coarse pot of the 6th century b.c. are without a tail. One or more of a number of reasons may be involved: the hard surface of black glaze requires so much pressure that complete control over the length of line may be lost; the 5th-century writer may be an old man using the letter-shapes of his early youth; the 6th-century writer may have been a careful person who had established a base line below which he did not go, etc.

Spelling, and the use of Attic or Ionic alphabet, are also subject to other influences than that of chronology. Although in formal public inscriptions the Ionic alphabet was not ordinarily used until 403 b.c., individuals in Athens were open to influences of many sorts: citizens may have been quick to pick up the more precise Ionic vowels for greater clarity; metics and slaves may have brought their own writing habits with them. In a time before dictionaries, there can have been no standard of spelling or even of pronunciation, so that even with the best will in the world spelling will have been idiosyncratic. A good example of the range and variety of both letter-shapes and spelling possible to individuals all writing at the same time may be the ostraka cast against Themistokles in the 480's:

Theta-square or round; crossbarred or dotted
Epsilon-bars horizontal or slanted; omitted at least once
Mu -last leg of equal or unequal length
Iota-sometimes omitted
Sigma-most often three-barred, occasionally four or more; sometimes doubled, or reversed, or omitted
Tau-most often written theta, occasionally tau
Omicron-square or round
Kappa-no variety
Lambda-always Attic
Epsilon-see above; either single or doubled; omitted at least once
Sigma-see above
The letters of Neokleous not already dealt with are only nu (last leg may be equal or unequal) and the diphthong (most often omicron, occasionally omega). In Phrearrios the phi may be square or round, the rho's may be tailed or not, and the rho in the middle may be single or double, both with and without eta as the aspirate.

A close study of letter-shapes has been included in the introduction to Owners' Marks (F), since this category alone not only covers our whole time span from early 7 th century в.c. to the 6 th century of our era but also provides a sufficient number of similar texts for statistical purposes. The conclusions arrived at for that one group can here be tested on all categories; they appear generally to hold true.
"A more or less standard old Attic alphabet ( A or $\mathrm{AB} \triangle \triangle E I H \otimes I K L M N O \Gamma P S T V \Phi X$ or +$)^{1}$ is used with only a few exceptions and variant forms through the second quarter of the 5 th century b.c.' (p. 23 below). Obviously these standard shapes will often only be approximated by writers who may be unskilled or using intractable materials, but in addition there are real exceptions which may be tabulated as follows:

[^0]| （1） | $\theta$ | （D 15；F 50） | $\otimes($ F 43） | 中（ $\mathbf{F}_{66 \text { ）}}$ |
| :---: | :---: | :---: | :---: | :---: |
| X＋ | $\psi$ | （F 25，F 65） |  |  |
| 0 | $\Omega$ | （A 3；C 24； | 6，F 75，F 78） | w（F 72） |

Perhaps most interesting is the use of the two exceptional sigmas（four－barred and reversed three－barred） for special purposes like word－ends and to combine with chi for xi；see below in introduction to Names on Sherds（D）（below，pp．16－17）．＂Punctuation＂in this period is limited：a line dividing the end from the beginning of a text written in a circle（ $\mathbf{C ~ 1 6}$ ；seen somewhat later in $\mathbf{F}$ 83， $\mathbf{F}$ 92）；dot punctuation between some words（B 1，B 3；F 18，F 24；G 2）；spaces between words（C 14）．
＂With the middle of the［5th］century［B．C．］the balance shifts so that the rule is a more or less standard Ionic alphabet（ $А В Г \triangle E I H \odot I K \wedge M N \Xi O Г P 〔 T Y Ф X Y \Omega)^{2}$ with a gradually diminishing number of exceptions＂ （p． 24 below）．The exceptions for all categories may be seen in the following chart，which is primarily designed to show the transition in the 5th and 4th centuries b．c．from Attic to Ionic forms；the later changes and introduction of cursive forms are not for the most part indicated；only some of the earliest examples of cursive letters are noted；it is understood that these became fairly general by the 1 st cen－ tury b．c．

## Norm Exceptions

```
A \ (F 94, F 169) A (F 157, F 183) X (G 16)
E \in (F 198, F 210; G 13)
I Z (F 178; G 19)
```



```
P R (F 81, F 84, F 105)
} < (F 84, F 118, F 119, F 125; Ha 8) C (F 165, F 182, F 196, F 202-204)
    [ (Ha 17)
(1) & (F 126, F 152) क (F 151, F 211)
X + (F 85; Ha 2, Ha 10; K 7)
\Omega O (B 9; D 41; G 7) \omega(F 138, F 199, F 212; K 12)
```

[^1]For the use of the long vowels also the middle of the 5th century b.c. is a time of transition. In the earlier period eta is used for the aspirate, and epsilon is used for both short and long vowel and for epsilon-iota, with the following exceptions: epsilon-iota for epsilon-iota (B 2, B 6; C 7, C 10, C 19; D 8, D 25, D 36; F 3, F 12, F 13; G 1, G 4); eta for the long vowel (B 7, B 8; C 18, C 23; D 35; F 15, F 53); eta for the diphthong or short vowel (C 8; F 55); no aspirate (B 7, B 8; C 8; D 13, D 16; F 54). After the mid-5th century b.c. there is a change, and eta is used for the long vowel, except perhaps in F 84, F 116, F 123 and G6. In the earlier period omicron is used for both short and long vowel and for omicron-upsilon, with only two exceptions: the diphthong is written out in F23; omega is written in F 56, F 72, F 75, F 78. After the mid-5th century b.c. omega is used for the long vowel except in $\mathbf{F}$ 85, F 132, F 145, G 6 and $\mathbf{G} 7$. Omicron continues in use for omicron-upsilon well into the 4th century b.c. with only one exception ( $\mathbf{F} \mathbf{1 4 4}$ ); omicron-upsilon becomes general in the late 4th century b.c.

Some other confusion about vowels persists: $\beta \varepsilon v \varepsilon \varepsilon \omega$ for $\beta ı v \in \omega$ (C 2, C 14); iota for epsilon-iota (D 1, D 25; G 8); eta for epsilon (B 14; D 35; F 127) or iota (D 42); epsilon-iota for epsilon (C 33; F 65); omega for omicron (F 160). And frequent in later times is epsilon for alpha-iota (Ha 25, Ha 32; I 18).


 He $6 \Delta$ ıovvó́ov; I 11 Oủıx[ ; I 23 M\&9ウivns).

 $\kappa v\langle i\rangle \delta_{1}(\mathcal{O})$; Ha $23 \xi \xi\langle\sigma\rangle \tau \eta s ; L 8 \pi \varepsilon\langle\nu\rangle \tau \varepsilon$. The iota subscript is omitted in B17, B18 and G21, and a whole syllable may have been omitted in B6. The only cases in which letters have been added are where a sigma before a dental has been doubled (F 26, F 77; He 31) and in C 19 ('A ${ }^{\prime} \lambda_{\text {каïos). For the most }}$ part, however, double consonants are written as singles: B 17; D 11, D 16, D 17, D 21, D 30, D 35; F 3, F 58, F 62, F 103, F 138, F 168; I 20.

The general practice followed in the direction of writing is also discussed in the introduction to Owners' Marks (below, p. 23). Retrograde writing and boustrophedon appear only in categories A, D and F , and the boustrophedon in D is most often a result of following the edge of the sherd. As one might expect, ligatures and monograms are limited to the Owners' Marks category. Abbreviations are of different sorts: the variously shortened forms of names used to identify property in particular circumstances (below, pp. 26-28); standardized forms of weights, measures, etc. which appear in commercial notations (below, pp. 56-57).

Nothing more in the way of general introduction seems either necessary or desirable. It is not even possible to point to any parallel work that includes the variety, number and scope of texts that might be useful. One collection, that of J. Tolstoy, does cover much of the same ground as our earlier material (A-G), but in all cases specific parallels can be most effectively quoted in connection with the particular categories or items.

## CONVENTIONS

All dates before Christ are so indicated. Dates not thus marked belong to our era.
Inscriptions in the Attic alphabet are transcribed as they are written. For the sake of clarity or to indicate our interpretation, we sometimes give a parallel text in the Ionic alphabet. Otherwise a name or word will appear in Ionic letters only in the appropriate index.

Except where otherwise noted, all drawings are actual size. Since in the interests of accuracy the drawings were made as faithful representations of the inscriptions rather than as illustrations of the readings given here, they often include marks and lines which have seemed to us irrelevant and immaterial.

The Agora inventory number is given in parentheses after the present catalogue number. A concordance in the order of the Agora numbers is given below.

The dimensions of vessels are for the most part given only in those categories (Capacity, Tare, etc.) where the size of the pot is relevant to its inscription.

1. $=$ liter, m. $=$ meter, $\mathrm{H} .=$ height, D. $=$ diameter, $\mathrm{P} .=$ preserved.

## A. ABECEDARIA

The eleven abecedaria found in the Agora are all now incomplete; only five may have been originally complete (A 2, A 3 almost certainly; A 1, A 4, A 5 probably), but all the rest were fragmentary in intention. The difference is clearly a chronological one: through the early 5 th century b.c. complete alphabets were written out, perhaps as models in the spread of literacy, perhaps from the sheer pleasure of exercising a new skill; from the 4th century b.c. on only the beginning of the alphabet was written, perhaps for magical purposes, perhaps as a proof of literacy or as a counting device. The chronological range, as for all classes of informal epigraphy in the Agora, is wide, from the 8th century b.c. to the 4th century of our era, with more than half the examples in the 5th and 4th centuries b.c.

Letter-shapes are for the most part canonical. In the early examples (A1-5) the forms of the old Attic alphabet are constant with only slight variations: the rectangular digamma rather than the F shape appears in A 2, A 3; delta with a dot substituted for its bottom stroke is seen in A 3, A 4; the dotted theta of $\mathbf{A} \mathbf{3}$ combines with its inclusion of omega to suggest foreign influence. In the later examples (A 6-11) the only notable points are: an old Attic gamma in A 6 which is out of place in the 4th century B.C.; more chronologically to be expected, a broken-barred alpha in A 10 and a lunate epsilon and Zshaped zeta in $\mathbf{A 1 1}$. The number of letters included in these fragmentary abecedaria is however very limited, so that we may expect much more evidence for letter-shapes from other categories of inscriptions.
The scantiness and incompleteness of the abecedaria are most disappointing for the study of alphabetic order, since no other texts provide evidence for this. Of the two points which should be noted, one is familiar and the other is without parallel: it was to be expected that the sixth place would be taken by digamma only in the early alphabets (A1-3) and that the digamma would disappear later, but the final letter-order of A 3 (chi, phi, omega) must be either a mistake or a reflection of the order in which the non-Phoenician letters were added in some omega-using environment.

Again, in the direction of writing most of the abecedaria are seen to be typical of their times: A 1 as the earliest piece is not only retrograde in both lines with the two upside down to each other but also shows at least two letters reversed (epsilon and digamma); with one exception the later pieces all read from left to right (with only one letter reversed in A 2). The peculiarity of A5, which reads first from bottom to top and then reverses, is more likely to result from lack of skill than to be an indication of date.

Previously known Attic abecedaria are neither numerous nor particularly significant. They include one piece published in Bull. dell' Inst. di Corrisp. archeol., 1867, p. 75 which seems to be a numerical alphabet, including digamma, koppa and sampi, and at least two examples among the Hymettos sherds (C. W. Blegen, A.J.A., XXXVIII, 1934, pp. 10-28, no. 10: alpha, beta, gamma; R. S. Young, A.J.A., XLIV, 1940, pp. 1-9, no. 9: alpha, beta, gamma, delta), which belong to the 7th century b.c. As far as abecedaria from the rest of Greece are concerned the latest general treatment is that in Jeffery, L.S.A.G.

A 1 (MC 907). Pl. 1. Pyramidal loomweight, much worn at the edges, inscribed with an abecedarium on one of the broad faces and with a horse and rider on the bottom (M1). Context: late 8th-early 7th centuries b.C. (N 11:6). Hesperia, XXX, 1961, p. 146, R 22, pl. 23.
VIII-VII cent. b.c. $\alpha \beta \gamma \delta \varepsilon \mathrm{F}$ ! ! . . к $\boldsymbol{\lambda} \mu \boldsymbol{\mu}$ (retrograde)
All trace of theta, iota and the upper half of kappa are lost as a result of wear on the lower edges. Surface wear has obliterated some other strokes: the lower crossbars of epsilon, the crossbars of zeta and the slanting stroke of lambda. The direction of writing is retrograde, but some letters face in the opposite direction: epsilon and digamma. Theta and iota must have turned the corner on the now worn edge so that the second line also reads from right to left and is upside down to the first line.

A 2 (P 6074, P 3272). Pl. 1. Two fragments from the shoulder of a large amphora of 6th-century b.c. type, like Hesperia, VII, 1938, p. 378, no. 9, fig. 14. The smaller fragment was found in a layer of the 6th century b.C. inside the Hellenistic Metroon; the larger piece was found beside the foundations of the Metroon but in association with 7th- to 6th-century B.c. pottery. Graffito on inside. The two fragments do not join but evidently belong to the same alphabetical exercise.
VI cent. B.C. (a) $\alpha \beta \gamma \varepsilon$ $\alpha \beta \gamma \delta \varepsilon F \succeq \eta$
(b) $] \uparrow \mathfrak{\imath} \kappa \lambda[$ $\rho \sigma$ [
From its location on the sherd, the first line of (a) seems to be an incorrect imitation rather than a false start. For the rectangular digamma, see I.G., $\mathrm{I}^{2}, 760$ and Tod, B.S.A., XLV, 1950, p. 135; see also A 3 below. Rho is the only letter written in reverse.

A 3 (P 7247). Pl. 1. Fragment of a black-glazed kylix base of early 5 th-century b.c. type, related to Bloesch's Acropolis group (H. Bloesch, Formen attischer Schalen, Bern, 1940, pl. 39, 1). Graffito on upper surface.

Somewhat less than half the foot is preserved, but it is clear from the arrangement of the letters that the alphabet went all the way around so that its end overlaps its beginning. For the dotted delta, which is also found on ostraka of the early 5th century b.c., see Kretschmer, p. 96 and Beazley, A.J.A., LII, 1948, p. 336. Theta is also dotted. The order of the non-Phoenician letters can not be paralleled.

A 4 (P 13282). Pl. 1. Fragment from the wall of a small closed vase. Graffito scratched through black glaze on outside. Context: early 5th century b.c. (H 12).
Early V cent. b.c. $\quad \alpha \beta \gamma \delta[$
The delta appears to have been dotted, as in A 3.

A 5 (P 2707). Pl. 1. Fragment of black-glazed cup-kotyle of early 5th-century в.c. type, like Hesperia, XV, 1946, p. 293, no. 78, pl. 45. Context : early 5 th century b.c. (G 6:3). Graffito on both upper and lower surfaces.
Early V cent. b.c. (lower surface) $\kappa \quad \alpha \beta \gamma \delta \varepsilon$
The first three letters of the alphabet, reading from the bottom up, are quite clear. Above them a delta and an epsilon (reversed orientation) can be made out. Below the alpha is a large kappa. On the upper surface a few scratches may represent an even less successful attempt.

A 6 (L 3773). Pl. 1. A fragment of the body of a black-glazed lamp of the 4th century b.c. (= Howland, no. 277, Type 25A). Graffito on the outer wall. Context: mid-4th century b.c. (F 19:2).
IV cent. b.c. (near the handle) $\quad \sigma \kappa \beta \gamma \beta \sigma \kappa$ $\alpha \beta\langle\dot{\gamma}\rangle \delta$
$\delta$
(at the nozzle) k [
This should probably be regarded as an alphabetic exercise, perhaps with magical significance, rather than as an abecedarium.

A 7 (P 1504). Pl. 1. A fragment preserving some of the rim and body of a black-glazed fish-plate of the 4th century b.c. Inscribed on the under surface.
IV cent. b.c. $\alpha \beta \gamma$
A 8 (P 22110). Pl. 1. A fragment from the wall of a black-glazed bowl. Graffito on outside, upside down to the pot. Context: 4th century b.c. IV cent. B.c. $\quad \alpha \beta \gamma \delta \varepsilon l[$
A 9 (L 4414). Pl. 1. Lamp fragment (= Howland, no. 599, Type 46B). Graffito on underside.
Mid-III cent. b.c. $\alpha \beta \gamma \delta$
A 10 (P 2145). Pl. 1. Part of a black-glazed bowl of 2 nd-century b.c. fabric. Graffito on floor.
II cent. b.c. $\quad \alpha \beta \gamma$
A 11 (P 18248). Pl. 1. Flat-bottomed jug of early 4th-century type, like Robinson, Chronology, M 228. Graffito on shoulder.
Early IV cent. $\quad \alpha \beta \gamma \delta \varepsilon \tau$

## B. MESSAGES AND LISTS

Messages and lists were for the most part written on potsherds, which were used as we use scrap paper for casual notes and notations. Only B 17 and B 18 were certainly written on the complete vessel, which was, in these cases, the subject or object of the message.

The messages, which range in date from mid-6th century в.c. (B 1) to the 2nd-3rd centuries of our era (B 18), include both notes urging some action (B1, B 2, B 7) and what may best be thought of as tags accompanying and explaining various things delivered (B6, B 9, B 17, B 18). The lists, ranging in date from the 4th-3rd centuries B.C. to the 5th century of our era, are mostly kitchen inventories or shopping lists (B 12-16, B 20) with one (B 19) more limited to pharmaceutical items and another (B 21) to amounts of wine. Other items are more uncertain since they are too fragmentary to provide continuous texts: B 5 may be a list of men in various relationships; B 8 and B 11 might be literary quotations; B 10 could be an informal copy of a contract or treaty; B 3 and B 4 are completely uncertain.
The letters and dialect of $\mathbf{B} \mathbf{1}$ are certainly Megarian and so may best be compared with texts from Megara (see, for example, Jeffery, L.S.A.G., pp. 132ff.). The Attic texts earlier than 403 b.c. (B 2-9) show an irregular use of late, unusual and Ionic forms and shapes: four-barred sigma in B 2, B 4, B 5 and B 9 compared to the three-barred sigma of B 7; Ionic lambda and/or gamma in B 2, B 5 and B 9 as against Attic forms in B 4, B6 and B 7; tailed rho in B 7; epsilon for eta except in B 7 and B 8; omicron for all o-sounds in all texts. The later texts use the Ionic alphabet consistently; stemmed upsilons and dotted theta are also regular. One lunate sigma appears with other four-barred forms in B 12; lunate epsilon first appears much later in B 17. As far as more specifically orthographic oddities are concerned, we see the substitution of delta for zeta in B 13, a single for the more properly doubled pi of B 17 and a second-declension dative singular without the iota subscript in both B 17 and B 18.

Parallels for texts of this sort may be noted in Tolstoy, Jeffery and Immerwahr.

B 1 (P 17824). Pl. 2. Base of a skyphos of Corinthian shape, with rays above the foot, of a type which may be dated to the first half of the 6th century b.c. Graffito on the underside, obviously written on the sherd; the base has been mended from four fragments, but part of it is missing. Context: 6th century b.c. (J 18:4). See Hesperia, XVII, 1948, p. 160, pl. 41, 2 for a brief account of the circumstances of finding and of some of the objects found in the same deposit.
Mid-VI cent. B.c. $[\Theta \alpha \mu v \varepsilon]$ ũ: $\kappa \dot{\alpha} 9 \varepsilon \varsigma:$ humò Tõı hoठõı

"Thamneus, put the saw under the threshold of the garden gate." A fragment is missing from the beginning of the inscription; we restore here the name Thamneus (of which a possible trace of the final upsilon is preserved) because two vases belonging to Thamneus (F 12, F 13) were found in the same pit. The letter forms correspond with those used in Megara in the Archaic period: b-shaped epsilon, closed eta as aspirate, triangular rho, and four-barred sigma (cf. Jeffery, L.S.A.G., pp. 132-138). Probably, therefore, the writer was a Megarian. Thamneus himself writes in Attic letters (F 12,

F 13). The word oúסós, which is from the same root as ódós, still retains its rough breathing in this early inscription.
B 2 (P 1265). Pl. 2. Fragment from the rim of a red-figured kylix of late 6th-century b.c. type. Graffito on inside, obviously written on the sherd. Context: beginning of 5 th century b.c. (G 6:3). Hesperia, XV, 1946, p. 279, no. 32.

$$
\begin{aligned}
& \text { Ca. } 500 \text { в.c. } \quad \pi \alpha i ̃, ~ т o ̃ ı ~ Ф \alpha \lambda \alpha ́[\nu 9 \circ ı] ~
\end{aligned}
$$

$$
\begin{aligned}
& \text { as 甲ópsı }
\end{aligned}
$$

"Boy, bring other new couches for Phalanthos." The name Phalanthos and the word for couches are restored exempli gratia. The use of the Ionic lambda and four-barred sigma at this early date is exceptional; the omega is not used. For the omitted iota see Meisterhans ${ }^{2}$, pp. 24-25.
B 3 (P 12225). Pl. 2. Fragment from the wall of a black-glazed krater. Graffito on outside, written vertically to the pot; obviously written on the sherd, which was subsequently broken all around. Context: early 5th century b.c.
Early V cent. b.c. ]E! . [
]!PE: $\Delta[$
]. OM[

The punctuation suggests a fairly extensive text like a message or list.

B 4 (P 14131). Pl. 2. Fragment from wall of lekane of early 5th century в. C. Graffito on outside, obviously written on the sherd, which was subsequently broken all around.
Early V cent. b.c. ]N N I[


B 5 (P 10511). Pl. 2. Fragment from wall of lekane of early 5th century b.c. Graffito on inside, obviously written on the sherd, which was subsequently broken all around.
Early V cent. в.c. ]EРГN[
]ANTIB[
]OEONA [
]AN E ! OK [
A possible restoration might be:

| ò סєĩva] 'Avтıß[io ]os 'Ov́d [oo ò סєiva] 'Avסок[1ठ० ]EI |
| :---: |
|  |  |
|  |  |
|  |  |
|  |  |

B 6 (P 27850). Pl. 2. Fragment from rim of blackglazed kylix. Graffito on inside, probably written on the sherd. Context: early 5th century (H 13:5).
Early V cent. b.c. $K \lambda \varepsilon 1\langle\tau 0\rangle \varphi \mid \sigma ̃ v \tau 1$
The omission of a syllable may have been accidental or it may be a form of abbreviation; cf. Kleimenes and Kleitomenes. The dative case suggests that the sherd was used as a tag.

B 7 (P 15208). Pl. 2. Fragment from wall of unglazed amphora. Graffito on outside, obviously written on the sherd. Context: ca. 490-450 b.c. (F 19:4).
 tóxos |'Apкє́бluos
"Eumelis, come as quickly as you can. Arkesimos." The $\dot{\text { ® }}$ tóxos was crowded in later as an afterthought. Above the text is an isolated gamma; below, an isolated epsilon. Note the use of eta as aspirated long vowel. This feminine form of a common name is not attested; Arkesimos is known in Eretria (Bechtel).

B 8 (P 18325). Pl. 2. Base of lekythos of second quarter 5th-century b.c. type. Graffito on underside, possibly written on the sherd, which was
then broken at one side. Context: second half 5th century в.c. (C 19:5).
Second quarter V cent. b.C. ótıì TaũTג $\alpha \in \kappa[$
A long vertical stroke seems to separate the beginning of the text from the end. The text does not seem to have been long enough to allow for a reading which requires an alternative, i.e., őti ท̂.

B 9 (P 2022). Pl. 2. Handle and immediately adjacent part of rim and wall of black-glazed skyphos. Graffito on inside, obviously written on the sherd. Context: fourth quarter 5th century b.c. (J 13-14:1).
Fourth quarter V cent. B.C. $\quad$ _oofiveo(s) $\varepsilon \in \pi \epsilon \sigma \tau \varepsilon \lambda \varepsilon$ Г $\lambda$ аúkoı दौs वैठтv हैv $\delta \varepsilon \sigma \mu$ ( $v$ )
"Sosineos sent a bundle to Glaukos in town." Tag or message?

B 10 (P 16391). Pl. 2. Two non-joining fragments from the wall of a large unglazed pot. Graffito on outside, obviously written on the sherd. Of the original sherd, which appears to have been fairly large, two fragments are preserved; the relation between the two is not evident. Context: mid-4th century b.C. (F 19:2).



] Kopıv9̣. . oury


]OミOE..... $\Sigma$...
] olkos óvóápia $\sigma \pi[$
 ] $\Sigma \Omega$ T....[
] $\Sigma$...A[
(b) $] \mathrm{s}: \mathrm{E}[$
(only traces of other letters)
The reading is neither certain nor complete enough to make a restored text possible, but we may perhaps assume from the mention of Corinth and such words as $\bar{\varepsilon} \lambda$ úrato that we have a rough copy of some contract or treaty.

B 11 (P 23690). Pl. 2. Wall fragment of a Corcyrean amphora of the 4th century b.c. Graffito on outside, obviously written on the sherd, which was subsequently chipped on the upper right. Context: 4th century b.c.

The use of 8 ot is like that in excerpts from literary texts，but both sense and syntax are obscure．

The next three items（B 12－14）are lists of vases and culinary equipment and may be thought of as rough kitchen inventories or shopping lists． All come from the immediate vicinity of the Tholos and are undoubtedly lists of the kitchen equipment used in that building．They are men－ tioned in Hesperia，Supplement IV，p．135．For a more formal inventory of Tholos equipment see the inscription published ibid．，pp．144－147．B 15， perhaps part of a similar list，is not from the Tholos area but from South Stoa I．
B 12 （P 10810）．Pl．2．Fragment of a small shallow saucer with dull red glaze．Graffito on floor． Context：late 4th－early 3rd centuries b．c．（H 12）． Late IV－early III cent．b．c．

| ко́pঠ］отоs | i．e．，kneading－trough |
| :---: | :---: |
| ó］$\varepsilon^{\text {¢ }}$ íaı $\Delta \Delta[$ | long loaves $20+$ |
| $\lambda$ 入ото́бıı | dishes |
| mivakes иモ́ooi ：III | platters middle－sized 4 |
| $\beta \alpha \tau \alpha{ }^{\prime}{ }^{\prime}(\alpha): \Gamma[$ | little dishes 5＋ |
| тоти́pla II［ | cups 2＋ |
| $\lambda$ д́кuツos | oil－flask |
| ìmíxouv | half－chous |
| трúß $\lambda_{1}$ ט | bowl |
| рофєї $\Delta[$ | ？10＋ |
| ］ 1 ［ |  |

Line 2：cf．ò $\beta \varepsilon \lambda \varepsilon i^{\alpha} \alpha$ in I．G．， $\mathrm{II}^{2}, 1631,409 ; 1672$ ， 310；Hesperia，XXIV，1955，pp．80－81．Line 3： cf．Allen，Classical Studies presented to Edward Capps，Princeton，1936，pp．1－2．Line 6：cf． Hesychios，s．v．Line 11：new word．
B 13 （P 3784）．Pl．3．Fragment of small shallow unglazed saucer．Graffito on floor．Context： second half of 4th century в．c．（F 12：3）．
Second half IV cent．b．c． Xútpas i．e．，pots
 （traces）

Line 4：for a similar substitution of delta for zeta in a 4th－century b．c．graffito see $\mathbf{C} 33$.

B 14 （P 4899）．Pl．3．Fragment of small shallow saucer with dull red glaze，similar to $\mathbf{B} 12$ but with grooved rim．Graffito on floor．Context： F 12.

Late IV－early III cent．B．C． $\lambda 0 \pi \alpha \dot{\delta} \eta \quad$ i．e．，dish

| $\mu \varepsilon \gamma \dot{\alpha} \lambda \eta$ ：I | large 1 |
| :---: | :---: |
| пп $\mu$ iom（ $\alpha$ ）：II | half－size 2 |
|  | long loaves 2 |
| $\chi]$ ¢́p $\dagger \eta[5$ | papyrus roll？ |

Line 1：presumably an alternate form for入omás．Line 3：cf．Aesch．，fr． 91 for ì $\mu$ iotos：of
 Line 4：cf．B 12，line 2.
B 15 （P 23309）．Pl．3．Fragment of small shallow saucer with dull red glaze．Graffito on floor． Context：4th century b．C．
IV cent．b．c．El．［

$$
\begin{aligned}
& \text { п̀ } \mu \text { íx } \alpha \text { i.e., half-choes } \\
& \text { ]íces }
\end{aligned}
$$

Line 2：the short form of $\mathfrak{\eta} \mu i \chi^{\circ} \alpha$ is found in I．G．，XI 2， 199 B 80.
B 16 （P 3289）．Pl．3．Fragment of roof tile with dull black glaze on one side．Graffito on glazed side，obviously written on the sherd．Context： Hellenistic．

Apparently the heading of an informal list of victories in two events（the long race and the stone）．It is also possible that the word in the second line is a verb rather than a noun．In the first line the last letter of the first word was originally a sigma，which was corrected to an upsilon．There was no room for a similar correction at the end of $\lambda i \operatorname{li}$ os．For the contests involving a stone（weight－lifting and putting the shot）see E．N．Gardiner，Athletics in the Ancient World，Oxford，1930，pp．54，60， 154.
B 17 （P 9922）．Pl．3．Wheel－ridged amphora（＝ Robinson，Chronology，M 104）．Dipinto in black on body．Context：second half 2 nd cen－ tury（M 17：1）．
Second half II cent．$\sigma \tau[\alpha \dot{d}] \mu \nu \circ v$ ớróóos $\Phi_{1} \lambda_{i} \pi \omega \omega \Phi_{1} \lambda_{i} \pi \eta \eta S$ $\alpha \dot{\alpha} \delta \lambda \lambda \varphi \tilde{\omega}$
＂Return the stamnos to Philippa＇s brother Philip．＂For the absence of the iota subscripts in the datives compare Meisterhans ${ }^{2}$ ，pp．52－53．
B 18 （P 8341）．Pl．3．Shoulder fragment of am－ phora（ $=$ Robinson，Chronology，J 52）．Dipinto in black．Context：mid－2nd to early 3rd centuries （C 12：1）．
Mid－II－early III cent．［ $\left.{ }^{[ }\right]$］$\left.\rho \omega \nu[\dot{L}]\right] \mu \omega$
［ $\chi \rho$ ］$\eta \sigma \tau \tilde{\omega} \alpha \alpha^{\alpha} \delta \varepsilon \lambda \varphi[\tilde{\omega}]$
$[\pi \alpha] \rho \dot{\alpha}[\check{\alpha}] \delta \varepsilon \lambda \varphi[\omega \sim \nu]$
［ $\sigma$ T $\alpha$ ］${ }^{2}$
＂A stamnos for our good brother Hierony－ mos from his brothers．＂See B 17 for the omission of the iota subscript in the dative case．

B 19 （P 8046）．Pl．3．Fragment from side of bowl． Graffiti inside（a）and out（b），obviously written on the sherd．Context：late Roman．

Late Roman（a）Úteq $\alpha$
（b）$\varphi \circ 1 v 0$ ũ

The＂pestles＂of（a）may have been required to prepare the drugs of（b）： 47 ounces of the juice of the red poppy； 7 ounces of acorn（ơّкu入os） or of a seed which，mixed with white wine，was good for scorpion bites（ảku $\lambda \lambda \omega$ ढ́vıov，Dioscorides， III，100）；some quantity of strychnine（vopún）．

B 20 （P 11763）．Pl．3．Fragment from wall of unglazed closed pot．Graffito on outside，ob－ viously written on the sherd．Context：mixed to Late Roman．

Late Roman $\kappa \omega \cdot v \omega[\nu$
$\psi \omega \mu i \omega[\nu$ ỏ óqpsi（ou） $\pi \varepsilon \rho \sigma \tilde{\eta}$ ỏs $\dot{( }(\mu \alpha \lambda \alpha)$ vaú̉ou ó óqpıi（ou） is olvov［
i．e．，of pine－cones
of buns
of fish or relish peaches？ of freight charges？ of fish or relish for wine

Line 1：cf．Ath．，II，57b．Line 4：cf．ỏ§́u $\alpha \lambda \alpha$ mepoikd．Line 7：is for हis，see Meisterhans ${ }^{2}$ ， pp．38－39．
B 21 （P 2004）．Pl．3．Wall fragment of micaceous water jar．Graffito on outside．Context：5th century（Q 13：3）．

| V cent． | $1 \Phi \Omega P$ |  |
| :---: | :---: | :---: |
|  | $\beta \varepsilon v]$ व́¢ppl（ov） | K（otú入入l）$\varepsilon^{\prime}$ |
|  | ］＾ | к（отט́入入ı） |

Small points（for omicrons）in the upper part of the kappas combine with the numbers following to suggest an abbreviation like that which is restored．The item in the second line has been tentatively restored as a kind of wine； perhaps the inscription recorded the mixture within the jar．

## C．LOVE NAMES AND HATE NAMES

This category is rather a mixed bag．Besides a few love names and vilifications of a standard sexual type we have included several other pieces with inscriptions of a highly personal or emotional nature． Love names painted on figured vases are not included here since they are more properly studied in con－ nection with the vases on which they appear．

The 14 kalos－name inscriptions catalogued below ${ }^{1}$ range in time from the mid－6th century to the end of the 5th century b．c．and in content from the simple and anonymous ó mais ка入ós（C 4）to the full and explicit $\Lambda u к o ́ \mu \alpha \chi$ оs ко入òs סоквĩ＇lavsí［（ $\mathbf{C} \mathbf{1 0}$ ）．The admirers are not named in ten cases（seven mas－ culine objects，two feminine，one both），but it is apparently not possible to assume that the writer（or admirer）was always masculine，since the dative Mé $\lambda_{1}$ tı（to whom Alkaios seems beautiful）in C 19 is most probably feminine．Of the named admirers（C 3，C 7，C 10，C 19）two lack endings and so might conceivably be either gender，although it is likely that the admirer of Antheme（C 3）is Aischines or Ais－ cheas $^{2}$ and that Lykomachos＇admirer（ $\mathbf{C} \mathbf{1 0}$ ）is Ianthis rather than Ianthides．These probable hetero－ sexual pairs are matched by a clearly homosexual one in C 7，where Menekrates is beautiful and dear to Lysikles．

Parallels for these kalos－names are most conveniently gathered together in Robinson and Fluck， Greek Love Names，and in Beazley，A．R．V．and A．B．V．

Sexual insult plays a part in 15 of the texts below．${ }^{3}$ The most common term（eight times）is katamúy $\omega v$ （or mu aios），ordinarily appearing with masculine names but occurring once in abbreviated form－


[^2] verbs to describe sexual proficiency and relationships．Parallels for hate names of this general sort may be found in Hesperia，XXII，1953，pp．215－224．

The five remaining texts are miscellaneous：a love－pledge（C 6），names of men admired or insulted in other texts（C 9，C 20），picture and pet name of the male organ（C 30），and names written backwards for some presumably fell purpose（ $\mathbf{C} 32$ ）．

Since most of these frank expressions of admiration and distaste date from before the end of the 5th century b．c．，the forms of writing and spelling are for the most part old Attic．That is，for the pieces through C 29，it will be easiest to state a general practice and then to note exceptions：general are Attic lambda and gamma，three－barred sigmas，crossbarred theta，chi－sigma for xi，eta open and used only for the aspirate；exceptional are Ionic lambda and／or gamma in C 7 （part），C 13，C 15，C 24，C 27－29， four－barred sigma in C 26－28，dotted theta in C 3，C 17，C 21，omega in C 24，closed eta in C 1 and C 8， eta for both aspirate and long vowel in C 18 and C 23，eta for the long vowel in C 29 and for epsilon－ iota in C 8．Other spelling oddities include：＇Oגט〈 $\mu\rangle$ móviкos（C 5）；$\beta \varepsilon v \varepsilon ́ \omega$（C 2，C 14）；＇A入入каĩos（C 19）． After the end of the 5th century b．C．the general rule is Ionic letters including eta and omega for the long vowels，but still omicron－upsilon continues to be written omicron．Spelling oddities include Өaıoסooí and $\lambda \alpha ı \alpha \dot{\prime} \delta \varepsilon ı$（ $\mathbf{C} 33$ ）．As far as＂punctuation＂is concerned，only two pieces provide evidence：C 14 leaves spaces between words； $\mathbf{C} 16$ shows a stroke between end and beginning of a circular text．

C 1 （P 26452）．Pl．4．Fragment from rim of cup similar to Hesperia，Suppl．II，p．157，C 55. Graffito on outside below flaring rim．Context： second quarter 7th century B．C．（R 17：5）． Hesperia，XXX，1961，p．377，S 18.
 ＂The boy is lewd．＂
C 2 （P 13322）．Pl．4．Wall fragment from closed vase．Graffito on outside．Context：early 6th century b．c．
Early VI cent．B．C．$\quad \operatorname{los} \beta \varepsilon v[\varepsilon i$

## For the verb see C 14.

C 3 （P 23693）．Pl．4．Fragment from the bottom of a black－glazed alabastron of mid－6th century B．C．type．Graffito on outside．

＂Antheme appears beautiful to Aisch ．．．．＂ Cf．C 10．The feminine name is known from Eretria（Bechtel）．
C 4 （P 17827）．Pl．4．Rim and wall fragment of black－glazed skyphos．Graffito on outside，upside down to pot．Context：mid－6th century b．c． （J 18：4）．
Mid－VI cent．B．C．ho $\pi \alpha[i ̄ s$ k $\alpha \lambda$ ós
An upsilon at lower left may be the end of this inscription．
C 5 （P 24910）．Pl．4．Plain hydria．Graffito around top of rim．Context：ca．520－480 b．c．（R 12：4）． Hesperia，XXV，1956，p．63，pl．22，c，f．Cf． Sparkes－Talcott，no． 1594.

Late VI cent．B．C．

＂Titas the Olympic victor is a lewd fellow．＂ The name is not otherwise attested，and the victory is presumably figurative，to suggest Titas＇championship status．
C 6 （P 7690）．Pl．4．Fragment from floor of red－ figured kylix with courting scene inside and palaestra outside，dated by Beazley to 500 b．c． or a little earlier．Graffito on inside beside figures．B．S．A．，XLVI，1951，pl．16，c．
Ca． 500 в．C．$\varphi \downarrow \lambda]$ отध́ $\sigma \circ$ i．e．，loving－cup
For the use of the word cf．Aristoph．，Lys．， 203. The ending here suggests either a neuter vessel understood or a masculine one in the accusative case（as the object of an understood verb）．
C 7 （P 20787）．Pl．4．Fragmentary black－glazed kylix of which most of lower part of cup is pre－ served．Graffito around lower outside wall， upside down to pot．Context：late 6th－early 5th century в．c．（R 12：1）．
Late VI－early V cent．b．c．

＂Menekrates is beautiful and dear to Lysikles．＂ The Ionic lambdas in the last two words com－ bine with smaller letters to suggest that the last three words were added by a second hand． （In the drawing the piece with－kpótes is slightly misplaced．）
C 8 （P 15555）．Pl．4．Rim fragment of unglazed bowl．Graffito on inside，obviously written on
the sherd．Hesperia，Suppl．VIII，p．399，pl．58， 10 ，a（with different interpretation）．Cf．Sparkes－ Talcott，no． 1892.

## Early V cent．в．c．＇Eуєбтратоs <br> $\mu \mathrm{oi} \mu i \sigma \gamma \eta$


#### Abstract

＂Hegestratos lies with me．＂Eta is not used for the aspirate but as the epsilon－iota of the third singular verb．Whether the active voice of this verb can be used with a suppressed object to convey the meaning usually expressed by the middle or passive seems uncertain．


C 9 （P 15379）．Pl．4．Wall fragment of large pot of non－Attic fabric．Graffito on outside．Con－ text：pottery ranging from Geometric to early 5th century b．c．Hesperia，Suppl．VIII，p．399， fig． 4.

This piece is included here because it was found about 15 meters from C 8 and may be a similar reference to the same man．

C 10 （P 14710）．Pl．4．Base fragment of small black－glazed kylix．Graffito on upper surface． Context：late 6th－early 5th centuries b．c．

［8］окєĭ＇lavงi8［
＂Lykomachos appears beautiful to Ianthi ．．．＂ The spacing is just about right for the length of the supplement．Lykomachos is not known but appears to be an acceptable compound．The name Ianthe（not Ianthis which might be the feminine patronymic from the following）is known in Athens（I．G．， $\mathrm{II}^{2}, 3799$ ）and Ianthos elsewhere（Pape）．

C 11 （P 14943）．Pl．4．Fragment of black－glazed kylix foot of early 5th－century в．c．type．Graffito on underside．

Cf．Beazley，A．R．V．，p． 944 for two other instances of the love name Aphrodisia．

C 12 （P 410）．Pl．4．Wall fragment of black－ glazed cup．Graffito on outside．
Early V cent．b．c．］$\pi=5$［aĩos
C 13 （P 27848）．Pl．4．Rim fragment from black－ glazed mug．Graffito on outside below lip． Context：early 5th century b．c．（H 13：5）．
Early V cent．B．c．K］a $\lambda_{0}$［
C 14 （P 9482）．Pl．5．Wall fragment of lekane with dull red glaze inside．Graffito on outside， vertical to pot．Context：pottery down to $c a$ ．

450 в．c．with much earlier material（C 9：6）．
Hesperia，Suppl．V，p．143，fig．71， 35.
Second quarter V cent．B．c．］！os кגi h［
］o $\alpha$ каі X［


Cf．Acropolis graffito（Graef－Langlotz，Vasen der Akropolis，II，Berlin，1925－33，no．256）： $\beta$ हvẽтal，which Peek（ibid．，p．131，＂Epigraphische Nachträge＇＂）takes as equivalent to $\beta$ ıvẽtaı． Cf．also Hiller von Gaertringen，Inschriften von Priene，Berlin，1906，no． 317.
C 15 （P 27698）．Pl．4．Half of hemispherical black－glazed stand．Incised before glazing and firing．Cf．Sparkes－Talcott，p．180，note 2.
Second quarter V cent．b．c．］os $\mathrm{Nik}[$ ка入ó［s
For the picture on this piece see M9．
C 16 （P 5128）．Pl．4．Black－glazed kylix base． Graffito on underside．Context：second quarter 5th century b．c．（H 6：5）．Hesperia，V，1936， p．347．Cf．Sparkes－Talcott，no． 436.
Second quarter V cent．b．c．Tıцóxбєvos ка $\lambda$ ós
A long line separates the end of the writing from the beginning．
From this same well（H 6：5）came the next six pieces（C 17－22）．All share the second quarter 5th－century B．C．context and all were first published in Hesperia，V，1936，pp．347ff．See also Robinson and Fluck．
C 17 （P 5144）．Pl．5．Fragmentary base of skyphos of Corinthian type．Graffito on underside．Cf． Sparkes－Talcott，no． 314.

C 18 （P 5157）．Pl．5．Small lekane（ $=$ Sparkes－ Talcott，no．1794）．Graffito on underside．Hes－ peria，XXII，1953，p．218；Beazley，Potter and Painter in Ancient Athens，London，1946， p．20；Richter，Attic Red Figure Vases，New Haven，1958，p． 57.
Second quarter V cent．b．c．
ミобías кататíyov
hós $甲 \eta \sigma$ lv ho $\gamma$ páqooas
Although it has been suggested that a name was obliterated before $\varphi \eta \sigma v$ ，it seems unlikely， since both paint and surface are preserved． ＂Thus says the writer＂（ $\omega$ s $\varphi \eta \sigma$ ）seems right． ．Note open eta for both long vowel and aspirate．
C 19 （P 5160）．Pl．5．Lekane（＝Sparkes－Talcott， no．1792）．Graffito inside，upside down to pot（a）， on the underside（b），and outside，upside down to pot（c）．

Second quarter V cent．b．c．
（a）Пu9óסopos ка $\lambda$ ó［s
（b）＇ $\mathrm{A} \lambda\langle\lambda\rangle$ коĩos ка入òs тò סокєĭ Mé $\lambda$ ltı
（c）$\mu \grave{~} \varphi^{\varepsilon} \rho \in$
（b）2：to seems to be $\tau \tilde{\omega}$ ；for the form see LSJ，s．v．тஸั．（c）：the third letter was originally read as theta，but compare other theta－like phi＇s：D 15，F 43．For the name Melis，cf． S．E．G．，XXII， 237.

C 20 （P 5167）．Pl．5．Base of lekane（ $=$ Sparkes－ Talcott，no．1795）．Graffito on underside．
Second quarter V cent．в．c．＇$A \lambda_{k \alpha i}(o u)$
This may well be an owner＇s name but is included here as being undoubtedly the same person as is praised in C 19 and C 22.

C 21 （P 5164）．Pl．5．Large lekane．Graffito on underside，which was marked off in squares． Cf．Sparkes－Talcott，no． 1797.
 ка入ós
Эعoí Пứxoovos
Tıиóxбєvos ка入ós
Xapuíठes ka入ós

The name in line 3 ，which should perhaps be read as $\Pi_{p}\langle\dot{\alpha}\rangle \xi \omega v$ ，is most probably genitive and gives the paternity，whether physical or figurative，of Therikles．

C 22 （P 5169）．Pl．5．Fragment of lekane base （ $=$ Sparkes－Talcott，no．1796）．Graffito on underside．
Second quarter V cent．B．c．

For the restored name see C 19，C 20.
C 23 （P 18499）．Pl．5．Rim fragment from lekane． Graffito on inside．Context：second quarter 5th century в．с．（C 18：7）．
Second quarter V cent．b．c．

ho ミuסpóuaxos
First line mostly erased．Whether the verb is active or passive in sense is uncertain．The name is unknown．

C 24 （P 15225）．Pl．5．Fragments of roof tile with black glaze on top surface．Graffito on glazed side．Context：ca．490－450 b．c．（F 19：4）．Hes－ peria，XXII，1953，pp．219－220．

Second quarter V cent．b．c．Ẹủk $\underset{[ }{[\tilde{\eta}]}$
S Katat
＇sب̣
Note the Ionic letters．
C 25 （P 10779）．Pl．6．Base fragment of lekane． Graffito on underside．Context：second quarter 5th century в．c．
Second quarter V cent．b．c． $\mathrm{M} \nu[\quad$ кат $\alpha] \pi \cup \prime \gamma \circ[\nu]$
C 26 （P 5449）．Pl．6．Base fragment of black－ glazed skyphos．Graffito on underside．Context： ca．470－425 в．c．（E 13：1）．Hesperia，XXII，1953， p．220，no．6，fig．2，left．


C 27 （P 17123）．Pl．6．Base and lower part of body of black－glazed skyphos with rays above foot． Graffito on underside．Context：third quarter 5th century b．c．Hesperia，XXII，1953，p．220， no．7，fig．2，right，pl．66，b．
Third quarter V cent．B．c．

The writer first wrote katmu，then corrected it to кататuy（ ）but finally left the word un－ finished，perhaps from lack of space，perhaps in doubt as to the feminine form（see the discus－ sion thereof in Hesperia，XXII，1953，pp．216－ 217）．

C 28 （P 19403）．Pl．6．Fragment of roof tile with dull red to black glaze on concave upper surface． Graffito on glazed side，written after tile had been broken．Context：late 5th century b．c．
Late V cent．b．c．［ ］］тратоs
［ka］${ }^{\text {ós }}$
Considerations of space suggest a short name such as Sostratos．
C 29 （P 10618）．Pl．6．Fragment of convex cover tile with flaky brown glaze on outside．Graffito on glazed side．Context：pottery ranging from late 5th century to 3rd century b．c．
Late V cent．в．c．$\quad] \lambda \eta$ ка $\lambda \dot{\eta}$
C 30 （L 2450）．Pl．6．Nozzles and parts of rim of black－glazed lamp（ $=$ Howland，no．176，Type 21C）．Graffito on top of nozzle．Context： pottery to near end of 4th century b．c．（E 6：3）．
Late V－early IV cent．в．c．ко́к ка入（이）
（drawing of phallus）（See M 13）
Presumably ко́кка入оı，like ко́кко，could be used for testicles，but it is also possible that
this is an abbreviation of the name Kokkaline （Demosth．，LIX，35，120，124）．

C 31 （P 23837）．Pl．6．Rim fragment of unglazed lid．Graffito on either side，obviously written on the sherd．Context ：ca．420－390 в．C．（Q 15：2）．
Ca．400－390 в．с．（inside）Пробобі́к ка $\lambda \eta$ ŋ́ $\Pi \alpha \nu \tau \alpha \lambda \varepsilon ́ \omega \nu$ к $\mid \alpha \lambda o ́ s$
（outside）Паvта入є́ $\omega v$ ка $\lambda o ́ \mid s$ $П \rho о|\sigma о| \sigma i \alpha \alpha \kappa \lambda[\eta \dot{\eta}$
Note the way in which the two omitted letters in the last line were added below．Both Pantaleon and Prosousia are known as personal names， but the peculiar incidence of Prosousia should be considered in combination with the fact that both names are also titles of comedies and that the well in which this sherd was found also produced several coarse pitchers with comic scenes（Hesperia，XXIV，1955，pp．76－84）． That is，Prosousia seems to be limited to mid－ 4th－century в．c．tombstones（I．G．， $\mathrm{II}^{2}$ ，8769， 12533－5），suggesting that something at the beginning of the century gave rise to this rash of an otherwise unattested name．Could Eu－ boulos＇play Prosousia（or The Swan），which presumably took its first name from a＂Pres－ ence＂（whether female character or abstraction）， have been responsible？The play is tentatively dated by Edmonds（The Fragments of Attic Comedy，II，p．641）to 385－380 B．C．，but a case might well be made for a date closer to the context date of this sherd：Edmonds assumed that the two titles may refer to Diogenes Laertius＇story $(3,5)$ that Socrates，after dream－ ing of a cygnet in his lap which later flew away with a pleasant cry，identified the bird with Plato，who came to him（prosousia）as a pupil the next day；Edmonds further assumed that the play would not have been relevant till Plato began teaching in the Academy in 386 в．c．，but it is hard to imagine that this was the first time his voice had been heard．

Theopompos＇play Pantaleon presumably had as its chief character the prankster of the same name（Athen．，XIV，616a）．${ }^{4}$ If this Panta－ leon is the older brother of the speaker of Lysias X and the defendant in Lysias кат ${ }^{2}$ Пav－ т $\alpha$ גह́ovtos（frags．210，211；Prosop．Att．，no． 11599），he could have been about 27 years old in 400 в．c．and full of the kind of deviousness that might lend itself to comic treatment．Even if that identification is uncertain，Theopompos＇ productive life（ $415-362$ в．с．）allows the possi－ bility that our sherd represents applause or favorable critical judgment of two plays，
presumably put on at the same festival：Eubou－ los＇Prosousia and Theopompos＇Pantaleon．If it did（and the possibility seems no more remote than the unprecedented pairing of male and female names with ка入ós and ка入ı́），it would provide a definite cross reference between two comic poets and a far closer absolute date than the scanty fragments of the plays allow．
C 32 （L 5298）．Pl．6．Black－glazed lamp，similar to Howland，no．267，Type 25A．Graffito on top of nozzle and rim．Context：4th century b．c． Hesperia，XXVII，1958，p．159，pl． 46.
Mid－IV cent．b．c．’Avtık
Праگías
＇Аркєбїخаs
＇A入кías

$\Phi_{1} \lambda o ́ \delta ŋ \eta \mu s$
The names are written backwards，not retrograde．Since some magic seems to be involved，the piece is included here under ＂hate names．＂Of the six names all but one （Antimedes）were borne by two or more 4th－ century b．c．Athenians，so that identification of this particular group is unlikely．The fact that three mid－4th－century в．c．men bearing three of these names（Antikleides，Arkesilas，Philo－ demos）have naval connections and belong to the Erechtheid phyle is more likely to be a function of the nature of our sources than a clue to the identity of this group．
C 33 （P 6153）．Pl．6．Fragmentary black－glazed skyphos．Graffito on outside，just below lip， starting near one handle and running around under the other（a），and on opposite side（b）． Context：mid－4th century b．c．（D 15：3）．Hes－ peria，XXII，1953，p．221，note 5a．

（b）$\lambda$（ $\alpha ı \kappa \alpha ́ \sigma \tau \rho 1 \alpha)$
The last letters of the verb，and hence its exact form，are doubtful，but the root and therefore the meaning are certain．For another instance of delta used instead of zeta in a 4th－ century b．c．graffito see B 13．Theodosia＇s name has been crossed out．For the supplement in（b），cf．C 34.
C 34 （MC 483）．Pl．6．Black－glazed spindle whorl of a type found in 5th－4th centuries b．c．，like Hesperia，Suppl．VII，pp．94－96，no．9．The graffito runs all the way around the whorl at the lower part of the side．


[^3]
## D. NAMES ON SHERDS

The criterion for admission to this category is that the name or names shall have been written on the sherd, not on the complete vase. Although obviously it is not always possible to be absolutely certain on this point, it may be said that the writing was definitely done on the sherd when it either turns to follow the edge of the sherd or continues in the next line on reaching the edge, or when it was done on the inside of a fragment from a closed pot. It may be said probably if not certainly to have been done on the sherd when it is aligned with one edge of the sherd or neatly centered on it.

Sherds with a name incised on them have been found in considerable numbers at the Agora and elsewhere in Athens. The great majority of them can be dated in the 5th century b.c., and the names they bear are frequently those of persons well known in Athenian history. These sherds are ostraka, the ballots used by the Athenians in voting at an ostrakophoria. The law on ostracism may well have been part of Kleisthenes' constitution and probably dates from the last decade of the 6th century b.c. although it was not applied until $488 / 7$ b.c. ${ }^{1}$ It was invoked at intervals for the next seventy years until $418 / 7$ b.c. when Hyperbolos was ostracized under such scandalous circumstances that the institution was thrown into disrepute, and the Athenians never again had recourse to it. Therefore, any sherd with an incised name that can be dated in the 5th century b.c. has an a priori claim to be considered an ostrakon. There are now about 6500 sherds which have been identified as ostraka, ${ }^{2}$ and the identification may be considered certain in all but a very few cases.

But how shall we interpret a sherd with a name on it which must be dated either earlier or later than the period when ostracism was practiced? There is quite a group of them, mostly of the 6th century b.C., with a few as early as the 7th or late 8th centuries b.c. In Hesperia, Suppl. VIII, pp. 405-408 a sherd with the name Peisistratos (D 1 below) was published and along with it four sherds from 6th-century b.c. contexts (D 6, D 8, D 14, D 22), each with a name incised on it. In the case of the Peisistratos sherd and one of the others which bears the name Aristion the suggestion was tentatively put forward that they may have been used by the Council of the Areopagos as ballots on the occasion of Peisistratos' first exile. For the other pieces no definite interpretation was offered other than the general suggestion that they may have been the work of school children or of idlers writing their own names or the name of some friend, acquaintance or lover. It is also possible that the sherds may have served in some way as tags to accompany goods or parcels, or to identify individual belongings. It is likely that no single interpretation will suit all these early sherds, especially as some of them have women's names, others have two names together, and still others were inscribed on both sides, sometimes with different names. They were no doubt written on various occasions and for various reasons.

Parallels may be quoted from elsewhere in Greece: Amyklai, Lakonia (A.J.A., LXI, 1957, p. 168); Phaistos, Crete (Annuario, XIV-XVI, 1952-1954, pp. 167-173); see also Jeffery, L.S.A.G., p. 314.

Generally in D 1-39 (late 8th century through the second quarter of the 5th century b.c.), we see pretty consistent use of a standard old Attic alphabet (AB $\triangle \triangle E I H \otimes I K L M N O \Gamma P S T V \Phi+$ or $X$ ). The exceptions are: Ionic lambda in D 27, D 39; closed eta in D 6; tailed rho in D 6, D 25, D 37, D 39; xi in D 35, D 39; phi with horizontal crossbar in D 15; four-barred sigma in D 25-27 and reversed three-barred sigma in D 1, D 3, D 7, D 10, D 12, D 14, D 18, D 23, D 24. The use of these two aberrant sigmas is such that they almost certainly represent two efforts to differentiate from regular sigma the sigma that comes at wordends or combines with chi to make xi. That is, all three uses of four-barred sigma come at word-ends; of the nine occurrences of the reversed sigma seven come either at word-ends or with chi; only one of the

[^4]two reversed sigmas in D 1 and that in D 23 are not in these special positions. This same pattern may be seen in the use of four-barred and reversed sigmas in the early examples of Owners' Marks. But whether the effort to differentiate was motivated by a "heard" difference or by a desire for visual aid is unclear, as is the reason why the effort was so comparatively short-lived. ${ }^{3}$

Spelling practice in these same items (D 1-39) is as follows: epsilon for eta except in D 35 (and in D 36 where epsilon-iota seems to substitute for eta); epsilon-iota spelled out except for D 1 (only iota), D 9 (only epsilon) and D 25 (only iota in two cases, but the diphthong once); eta for the aspirate except in D 13 (but this name is attested elsewhere without the aspirate), and perhaps D 16; omicron for all o-sounds; koppa instead of kappa before o- and u-sounds; properly doubled consonants are regularly single except in D 37; the nasal sound in D 34 is represented by nu-kappa. As far as mistakes are concerned all that can be detected in the fragmentary state and nature of the material are three omissions of single letters (D 1, D 10, D 32).
Seven of the names are written retrograde (D 1, D 6, D 13, D 15, D 23, D 31, D 36); five are in some form of boustrophedon (D 11, D 14, D 16, D 24, D 32). There is no indication of punctuation.

In the five pieces which date from after the middle of the 5th century b.c. the general rule is Ionic letters, four-barred sigmas, eta and omega as long vowels; D 42 exceptionally substitutes eta for iota.

Identification of the person bearing a particular name can be attempted only rarely. Names which are attested elsewhere in Athenian sources are in the majority and are not so noted. When a name is not known in Attica, note is made.

D 1 (P 3629). Pl. 7. Fragment from foot of large late Geometric vase, decorated outside with tooth pattern. Graffito on inside, upside down to pot; certainly written on the sherd. For a full discussion of this graffito, see Hesperia, Suppl. VIII, pp. 405-408 (Vanderpool). See also Jeffery, L.S.A.G., p. 70, pl. 2, no. 9 e.
Late VIII-early VII cent. в.c. Пıбi $\sigma\langle\tau\rangle$ ратоs (date of vessel only)
(retrograde)
D 2 (P 6578). Pl. 7. Fragment from wall of very large late Geometric vase, decorated with a row of hatched triangles between bands. Graffito on outside, obviously written on the sherd. Context: well of early 6 th century B.C. with much pottery of the 7th century b.c. (F 12:5).
Late VIII-early VII cent. в.c. M $\bar{\varepsilon}] v \varepsilon \sigma 9$ õı
Perhaps a tag accompanying a parcel addressed to a woman named M $\varepsilon v \varepsilon \sigma \vartheta \omega$ (assumed feminine form of Menestheus).
D 3 (P 13655). Pl. 7. Fragment from wall of coarse pot, preserving the stub of a handle on the outside. Graffito on inside, vertical with respect to the pot; obviously written on the sherd. Context: first half 7th century b.c. (T 19:3).
First half VII cent. b.c. 'Avépitos
On the rare name Aneritos see Bechtel, p. 195.
D 4 (P 4664). Pl. 7. Fragment from wall of large 7th-century b.c. amphora, with streaky red
glaze outside. Graffito on outside, probably written on the sherd. Context: 7th century b.c. (F-G 12:1). Hesperia, Suppl. II, pp. 126, 226; B 56.
Second half VII cent. B.c. Tpúmis ९õ̃०[s
The convivial sense of the inscription suggested in the original publication seems to us unlikely. We suggest instead two names, both attested elsewhere, the first in the nominative, the second probably in the nominative but possibly in the genitive.

D 5 (P 3534). Pl. 7. Fragment from wall of large plain amphora. Graffito on outside, diagonal with respect to the pot; probably but not certainly written on the sherd. Context: late 7th-early 6th centuries B.c.
Late VII-early VI cent. B.C. ]́ $\delta 1 \varphi \rho o s$
We may restore some name such as Archedikos.

D 6 (P 2030). Pl. 7. Fragment of light roof tile with dull reddish glaze on concave side. Graffito on the glazed side, obviously written on the sherd. Context: early 6th century b.c. Hesperia, Suppl. VIII, p. 407, pl. 60, d.
Early VI cent. b.c.
Гoprias ho $\sum u$ ưáp̣ıṣ (retrograde)

[^5]This reading of the mother＇s name seems preferable to the reading $\Sigma_{1} \beta$ akio given in the original publication．

D 7 （P 27741）．Pl．7．Base fragment from large amphora of early 6th－century B．c．type．Graffito on inside of base ring，upside down．Context： first half 6th century b．C．（I $10: 1$ ）．

## Early VI cent．b．c．Eủmpaxóis

D 8 （P 4794）．Pl．7．Fragment from wall of large coarse pithos．Graffito on outside，obviously written on the sherd．Context：early 6th century B．C．（F 12：5）．Hesperia，Suppl．VIII，p． 406.
Early VI cent．B．C．$\Delta \varepsilon ı \mu \varepsilon \varepsilon \varepsilon i ́ \alpha$
$\Delta \eta i ̈ \mu \varepsilon \varepsilon \varepsilon^{\alpha} \alpha$ would be the Attic feminine form of $\Delta \alpha \ddot{u} \mu \dot{v} \eta \eta$ s，of uncertain provenience（Diod．，XIV， 53，5）．
D 9 （P 13333）．Pl．7．Fragment from neck of coarse unglazed water jar．Graffito on outside， vertical with respect to the pot；certainly written on the sherd．Context：early 6 th century b．c．
Early VI cent．B．c．Пєраıaס［
This sherd may have been a tag accompany－ ing a parcel being sent to Peiraieus：Пєıраи̃̃бє． It is also possible that the name Пєıpáóסŋns （unattested）was written．

D 10 （P 18342）．Pl．7．Fragment from wall of large amphora with streaky glaze on outside， of 7th－to 6th－century b．c．type．Graffito on outside，vertical with respect to the pot，almost certainly written on the sherd．Context：first quarter 6th century b．C．（B 18：10）．
© First quarter VI cent．B．C．（a）EựpứTę
（b）$\Pi \rho \alpha \chi \sigma\langle i\rangle \nu \varepsilon$
The first graffito，which was written along one edge of the sherd，seems to have been delib－ erately trimmed off，so that only the lower parts of the letters remain．The sherd was then turned around，and the second graffito was written．Euryte is a mythological name；Praxine would be the Attic feminine form of Prexinos， known outside Attica．

D 11 （P 14687）．Pl．7．Fragment from wall of a Protogeometric pot．Graffito on inside，ob－ viously written on the sherd．Context：first quarter 6th century b．C．（S $21: 2$ ）．
First quarter VI cent．в．c．
ПYPOӨOPIADE $\Sigma$（boustrophedon）
Since the pottery from this well is consistently early 6 th century b．c．in date，we assume that the writing on the sherd dates from the same period，and is not contemporary with the sherd．

The interpretation is uncertain．Read as a single word，it would be ПupoЭoupiá⿱丶万仒⿰丿㇅s，a name otherwise unattested．Sir John Beazley suggested Пúppou Өoupiáסŋns，i．e．，patronymic and name．Another possibility might be Пuppà Өoupıód $\eta$ s，i．e．，two names，a woman＇s and a man＇s．Thouriades is not attested，but Thourios is known outside of Attica．

D 12 （P 14693）．Pl．7．Fragment from wall of large unglazed pot．Graffiti inside and outside， obviously written on the sherd．Context：first quarter 6th century b．c．（S 21：2）．
First quarter VI cent．b．C．（outside）E
（inside）$\quad$ Q $\delta \delta i \mu \alpha \times[\circ s$
On the outside several heavy strokes in the upper left corner have partially obscured the first two letters，but the reading seems fairly sure．On the inside much of the surface below the name has flaked away，and the ending of the name is not preserved．It might equally well have been genitive，as a patronymic，or dative， as an addressee．

D 13 （P 18271）．Pl．7．Part of flat handle of large Protoattic pot，with wavy lines down the outer face．Incised on the inner face，vertically with respect to the handle，and almost certainly on the sherd．Context：second quarter 6th century B．c．（A 17：1）．Cf．Hesperia，XXX，1961，p．323， F 2.
First half VI cent．b．c．＇Eópt［1os（retrograde）
Note the absence of the aspirate，as in the same name in I．G．， $\mathrm{I}^{2}$ ，579．The surface after the tau is almost completely destroyed．

D 14 （P 6067）．Pl．7．Fragment from wall of large pot with dull brown glaze outside．Graffito on inside，obviously written on the sherd．Context： mid－6th century b．c．（I 9：1）．Hesperia，Suppl． VIII，p． 406.
First half VI cent．B．c．$\Delta \varepsilon \mu o ́ q i \lambda o s$（boustrophedon）
D 15 （P 12212）．Pl．7．Fragment from wall of large amphora，with dull streaky glaze outside， of 7th－or early 6th－century в．c．fabric．Graffito on inside，written vertically to the pot and skipping over a wheelmade groove．Context： down to mid－6th century b．c．
First half VI cent．b．C．Eủ〈 $\rangle$ 〉○［（retrograde）
The original sherd is broken at the left and chipped at upper right．The third letter，which is perfectly clearly preserved，consists of an oval with a horizontal line across it．This is perhaps an incomplete theta，which would give a name like Euthron or Euthronios．Since both
of these are rare（for the latter cf．F 43），it seems preferable to read the third letter as phi and restore some more common name like Euphron or Euphronios．Phi＇s of this form are to be found on certain early 5th－century b．c． ostraka，e．g．，one of Themistokles Phrearrios （Agora inv．no．P 17682 －unpublished）；see also below， $\mathbf{F} 50$ ．It occurs occasionally even on stone，e．g．，the Kallimachos epigram（I．G．， $\mathrm{I}^{2}$ ， 609）；see also I．G．，I ${ }^{2}, 487$.

D 16 （P 13）．Pl．7．Fragment from wall of large closed pot with thin streaky glaze outside，of 7th－and early 6th－century b．c．fabric．Graffito on the outside，obviously written on the sherd， which has been broken on the left．Context： mid－6th century b．c．
First half VI cent．b．C．］$\mu \alpha \rho \varepsilon ́ \tau \varepsilon$
＇I甲о入＇үє（boustrophedon）
Probably two women＇s names．The first may be Timarete，Demarete or the like．In the second line the letters，which are perfectly clear，read Ipholuge．This strange name is not attested． Perhaps the writer intended＇Imто入úy $\eta$（also not attested，but less strange），writing phi for pi as was done in the name hiqoxpótos on an ostrakon（Hesperia，Suppl．VIII，p．403），and inadvertently omitting the rough breathing（or exchanging it with the aspirated pi）．

D 17 （P 26618）．Pl．8．Fragment from wall of coarse unglazed pot．Graffito on outside， obviously written on the sherd，which has a small fragment missing at the right．Context： first half 6th century b．c．

Perhaps a tag accompanying a parcel to Kallon．

D 18 （P 13360）．Pl．8．Fragment from wall of an unglazed porous water jar．Graffito on outside， almost certainly written on the sherd．Context： mid－6th century b．c．（H 10：2）．
Mid－VI cent．b．c．

Perhaps an invitation or summons of a man named Lokros．

D 19 （P 1993）．Pl．8．Fragment from base of black－ glazed skyphos，of a type common in the second quarter 6th century b．c．Graffito on floor inside，almost certainly written on the sherd because the cup was small and deep．Context： Q 13：2．


D 20 （P 24745）．Pl．8．Fragment of very large vase with thin black glaze on outside，of 7th－or early 6 th－century B．C．fabric．Graffito on outside， certainly written on the sherd．Context：third quarter 6th century b．c．（with D 21）．
Mid－VI cent．b．c．Auaías｜Muptó
The final sigma of Lysias was squeezed around the corner onto the second line．

D 21 （P 24746）．Pl．8．Fragment from wall of unglazed pot．Graffito on outside，probably written on the sherd，of which the upper right corner has been broken．Context：third quarter 6th century b．c．（with D 20）．
Mid－VI cent．b．c．Múpos
D 22 （P 10159）．Pl．8．Fragment from wall of large amphora with streaky glaze on outside， of 7th－to early 6th－century b．c．type．Graffito on outside，certainly written on the sherd，which appears to have been trimmed to a more or less circular shape．Context：7th－6th centuries в．c． Hesperia，Suppl．VIII，p． 406.
Mid－VI cent．b．c．＇Apiotiov
D 23 （P 26539）．Pl．8．Wall fragment from large closed pot，with thin，flaky，rather metallic glaze on the outside，perhaps Geometric． Graffito on inside，obviously written on the sherd，which is chipped below．Context：mid－ 6th century в．с．（T 18：3）．
Mid－VI cent．b．c．＇ApıбTetí $\delta(\varepsilon \varsigma) \quad$（retrograde）
The inscription was left unfinished．The filling in which this sherd was found is too early for it to be considered an ostrakon of Aristeides．
D 24 （P 2041）．Pl．8．Fragment from neck of unglazed water jar．Graffiti inside and out， obviously written on the sherd，which was then broken at one end．Context ：mid－6th century b．c． Mid－VI cent．b．c．

| （outside） | ］sí¢¢s | （boustrophedon） |
| :---: | :---: | :---: |
| （inside） |  |  |

Like D 23 this may have read Aristeides．The circumstances of finding，however，make the interpretation of this sherd as an ostrakon impossible．

D 25 （P 15664）．Pl．8．Fragment from wall of large open bowl with band of dull red glaze both inside and out．Graffiti on both sides，certainly written on the sherd，of which a piece is missing on one side．
VI cent．B．C．（outside）＇Aprsi［ $\delta \varepsilon s$
$\left.{ }^{\prime} A p\right] \gamma^{i} \delta\langle\varepsilon\rangle(s)$
（inside）＇Apriठes
］．$\varepsilon$ モoov

Each name is written along one edge of the sherd; also various scratchings. Three are repetitions of the same name, Argeides, which seems not to have been reported hitherto but may derive from Argeios, which is known in Attica. The fourth name will have been Mneson, Tleson or the like.

D 26 (P 13248). Pl. 8. Fragment from wall of large pot with traces of dull black glaze on the outside, probably Geometric. Graffiti on both sides, obviously written on the sherd. Context: second half 6th century b.c.

$$
\begin{array}{ll}
\text { VI cent. B.C. } & \begin{array}{l}
\text { (inside) } \\
\text { (outside) }
\end{array} \stackrel{\text { Пि }}{\text { MPAI }}
\end{array}
$$

Note the two forms of the letter sigma in the name Pausias. An incomplete name or word appears on the outside.
D 27 (P 13251). Pl. 8. Fragment from wall of large pot, with two bands of dull glaze outside, probably Geometric. Graffito on the inside, obviously written on the sherd. Context: late 6th century B.c.
VI cent. B.C. $\quad \Delta 1 a \tau^{\prime} \lambda \varepsilon s$
The name is not known.
D 28 (P 16812). Pl. 8. Fragment from wall of very large unglazed pot, probably a pithos. Graffito on inside, obviously written on the sherd. Context : end of 6th century b.c. (G 15:1).
VI cent. в.c.
Фpúvov
D 29 (P 15693). Pl. 8. Fragment from wall of large heavy pot or pithos, probably prehistoric, roughly cut into a round disc. Graffito on outside, centered on disc.
VI cent. B.c. B $\lambda$ óous
The only evidence for the date is the archaic letter forms. The name is not known.

D 30 (P 15694). Pl. 8. Fragment from wall of large closed pot. Graffito on inside, obviously written on the sherd, which is broken on the right. Context: 6th century b.c.
VI cent. b.c. Kí $10[s \quad$ i.e., Kíбoıos
The name is known only as an ethnic.
D 31 (A 2498). Pl. 8. Fragment from light roofing tile of Laconian type. Inscribed through glaze on upper surface; probably written on the sherd, which was later chipped on the left. Context: third quarter 4th century b.c.
VI cent. B.C. $\quad \Delta \alpha \mu \varepsilon ́ \alpha[s$
(retrograde)
Because of the direction of writing we assume that the sherd is considerably older than the deposit in which it was found.

D 32 (P 4627). Pl. 9. Fragment of pan tile, glazed on upper surface. Graffito on the under surface, obviously written on the sherd. Context: 6thearly 5th centuries b.c. Hesperia, Suppl. II, pp. 121-122, 226, no. B 47; Suppl. VIII, p. 400, note 20.
Late VI-early V cent. b.c.
Neok〈 $\lambda$ 〉éo(s)
Me $\lambda \alpha v$ Sis
(boustrophedon)
Although it is possible that the sherd is an abortive ostrakon, as suggested in Supplement VIII, it seems preferable to read two names, one of a man in the genitive and one of a woman in the nominative. The man's name (probably Neokles) was left incomplete; the woman's name is not attested.

D 33 (P 14130). Pl. 9. Fragment from base of lekane, preserving part of foot and lower wall, of late 6 th- to early 5th-century type. Graffito on wall outside and upside down to pot, probably written on the sherd.
Late VI-early V cent. b.c. A]lox́́ $\alpha v$
The reason for the accusative case is obscure.
D 34 (P 10717). Pl. 9. Fragment from rim of lekane, of late 6th- to early 5th-century b.c. type. Graffito on outside, probably written on the sherd, which seems to be broken at the lower right.
Late VI-early V cent. b.c. $\quad \Lambda u v k[$
Cf. $\Lambda[\dot{\prime}] u k o s$ from Larisa (I.G., $\mathrm{IX}^{2}, 568,18$ ).
D 35 (P 4696). Pl. 9. Fragment from wall of large closed pot, glazed on outside. Graffito on inside, obviously written on the sherd, which has been broken at left. Context: early 5th century B.C.

Early V cent. в.c. ] ]AK! $\Pi$ Ọ
Ionic letters. No likely names suggest themselves unless errors are assumed, e.g., $\Xi \varepsilon v \circ \rho \tilde{\omega} v$, "ААкıтттоS.

D 36 (P 19287). Pl. 9. Fragment from rim of lekane of late 6th- to early 5th-century b.c. type. Graffito on inside, upside down and then vertically to the pot, obviously written on the sherd. Context: 5th century b.c.
Early V cent. B.c.
]kєıO[ (drawing upside down)
D 37 (P 10809). Pl. 9. Fragment from rim of black-glazed kylix of early 5th-century b.C. type. Graffiti outside and in, obviously written on the sherd, which has been broken at one end.

| Early V cent. B.c. | (outside) <br> (inside) | $M \varepsilon \lambda \alpha[$ <br> Пupp[ |
| :---: | :---: | :---: |
|  |  |  |

Assuming that the same pair of names was written both inside and out, we may restore, for example, Melanippides and Pyrronides; neither of these has been reported from Attica.

D 38 (P 27844). Pl. 9. Wall fragment of large unglazed vessel. Graffito on outside, certainly written after the sherd was much worn. Context: early 5 th century в.c. (H 13:5).
Early V cent. b.c. 'Emiréves
D 39 (P 15209). Pl. 9. Fragment from wall of unglazed amphora. Graffito on outside, obviously written on the sherd. Context : ca. 490450 в.с. (F 19:4).
Second quarter V cent. b.c. Мєvéסєцos

| Xapias |
| :---: |
| Еаvงěs |
| 'Aupißodos |
| Про́тархоs |
| Пеvтаріоте |
| Ка入ıотро́т |

Note the mixture of Attic and Ionic letter forms. Xanthes and Amphiboulos have not been reported from Attica; for Pentariste see A.J.A., LI, 1947, p. 368.

D 40 (P 21583). Pl. 9. Fragment from wall of large unglazed pot. Graffito on outside, probably written on the sherd, which is certainly broken at the left. Context: second half 5th century в.c.
Late $V$ cent. b.c. ]. TAIAIA
D 41 (P 4791). Pl. 9. Fragment from wall of large open red-figured pot of early 5th-century b.C.
date. Graffito on inside, upside down to the pot; obviously written on the sherd, of which the upper right corner has broken off.

Late V cent. b.c. Kijuov

$$
\theta] \propto \lambda \tilde{n} s
$$

$$
\Phi] i \lambda \eta
$$

Presumably a list of three names which we have restored exempli gratia.

D 42 (P 16865). Pl. 9. Fragment from base of black-glazed bowl of late 5th-century b.c. type. Graffito on inside, almost certainly written on the sherd, which is broken above and at the right.

Late V cent. в.c. ]. . $\Sigma$

For possible confusion between eta and iota, compare the inscriptions found in Plato's Academy ("Epyov, 1958, pp. 12ff.; A.J.A., LXIII, 1959, p. 279).

D 43 (P 6799). Pl. 9. Fragment of cover tile with dull red glaze on the convex surface. Graffito on the glazed side, obviously written on the sherd. Context: second half 4th century b.c. (D-E 8-9:1).
Second half IV cent. в.c. $\quad \Sigma \tau \rho \alpha ́ t \omega \nu$
D 44 (P 10775). Pl. 9. Fragment from wall of unglazed amphora. Graffito on outside, obviously written on the sherd. Context: Roman (G 11:2 dump).

II cent. 'Ettíyovos Фi $\lambda$ ń $\mu$ ovos Ku $\delta \alpha 9 \eta v a ı \varepsilon u ́ s$
Two persons of this name are recorded, apparently a grandfather and a grandson. The former appears as an ephebe in the year a.D. 118/9 (I.G., $\mathrm{II}^{2}, 2030,10$ ), the latter as an ephebe in about A.D. 180 (I.G., $\mathrm{II}^{2}, 2107,10$ ). Which of these two is named on our sherd is uncertain.

## E. NUMERICAL NOTATIONS ON SHERDS

The criterion for admission to this category is that the notation shall have been written on the sherd, not on the complete vase. Although obviously it is not always possible to be absolutely certain on this point, in the case of numbers which could have borne no relation (of price, capacity or weight) to the pot of which the sherd was originally a part, it may be said probably if not certainly that they were written on the sherd.

The sherds here presented are only representative pieces, several of which were published in "Numerical Notations on Greek Vases," Hesperia, XXV, 1956, pp. 19-24. For other examples see that publication.

The numbers used on these sherds, which except for one later and uncertain example ( $\mathbf{E} \mathbf{1 6}$ ) date from the 5th and 4th centuries b.c., are acrophonic with one exception (mu as the number of weight drachmas on E 15). They include mu for myriad, pi-chi for 5000 , chi for 1000 , pi-eta for 500 , eta for 100 , pi-delta for 50 , delta for 10 , pi for 5 (also pi-sigma for 5 staters), and either the drachma sign or a simple upright stroke for the unit. For fractions of the drachma a simple stroke serves for the obol (ordinarily upright but once apparently horizontal on E 4), a C-form for the half-obol and a tau for the quarterobol. The only oddity in letter-shapes is the dotted delta of $\mathbf{E} 8$.
The names or words, mostly abbreviated, which on some sherds accompany the numbers, present no unusual features in letter-shapes or spelling. Since their significance and interpretation are so various, they can best be treated individually in the catalogue descriptions.

E 1 (P 12214). Pl.10. Fragment from wall of large krater, glazed inside. Graffito on inside, obviously written on the sherd. Context: 6th5th centuries в.c. Hesperia, XXV, 1956, p. 20, no. 86.
Early V cent. b.c.

| $\times^{\times 1} \times X X X$ | i.e., 9975 |
| :---: | :---: |
| ${ }^{\text {PHHHH }}$ |  |
| $\Gamma^{2} \Delta \Delta \Gamma$ |  |

E 2 (P 5133). Pl. 10. Foot of black-glazed kylix. Graffito on underside, probably written on the sherd. Context: second quarter 5th century b.c. (H 6:5). Cf. Sparkes-Talcott, p. 88, note 2.
Second quarter V cent. b.c.
$\mathrm{M} \times \mathrm{H}$ (retrograde)
I.e., $\quad \mu$ (úpıoı) $\chi$ (ỉ $\left.\lambda_{101}\right) h($ (Ekatóv)

E 3 (P 226). Pl. 10. Foot of a Corinthian-type skyphos of the second quarter 5th century b.c. Graffito on bottom, probably written on sherd.
 Nıкóvoop
Perhaps a tag accompanying a consignment (weighing five staters), belonging to Aischeas and perhaps certified by Nikanor. It is also possible that only one person is involved, namely Nikanor, son of Aischeas.
E 4 (P 27694). Pl. 10. Wall fragment from lekane. Graffito on inside, obviously written on the sherd, which was later broken at the left. Context: second quarter 5th century b.c. (P 14:3).
Second quarter V cent. b.c.

| $J \alpha$ |  |
| :--- | :--- |
| $\jmath \vdash \equiv$ | $H-H C$ |$\quad$ i.e., 4 dr., $13 / 4$ ob.

The writing of obol strokes horizontally instead of vertically is not usual.
E 5 (P 16981). Pl. 10. Fragment from rim of blackglazed skyphos, preserving one handle. Graffito on inside, obviously written on the sherd. Context: late 5th century b.c. (A-B 21-22:1). Hesperia, XXV, 1956, p. 19, no. 82.
Late V cent. в.c. кєрव́́pos $\Delta \Delta \Delta \Delta \Pi[$

Probably a tag indicating the number of pots or tiles rather than the price; the handle makes it particularly convenient to attach.
E 6 (P 12317). Pl. 10. Fragment of roofing tile with glaze on concave surface. Graffito, on glazed surface, probably written on the sherd, which was broken at the left. Context: fourth quarter 5th century b.c. (O 19:4). Hesperia, XXV, 1956, p. 19, no. 79.
Late V cent. в.c. ГトICT
Part of an informal abacus, with the symbols serving as headings for the placement of pebbles: 5 (drachmas), 1 (drachma), 1 (obol), $\frac{1}{2}$ (obol), $\frac{1}{4}$ (obol).
E 7 (P 4909). Pl. 10. Fragment from foot of black-glazed bowl of late 5th-century в.c. type. Graffito on underside, inside foot, probably written on the sherd.
Late V cent. b.c. $\Delta \Delta t+r$
Perhaps a price tag, since the units are drachmas.

E 8 (P 9177). Pl. 10. Fragment from lower part of black-glazed skyphos of Attic type of late 5th century в.с. Graffito on underside, within the foot. Hesperia, XXV, 1956, p. 16, no. 69.
Late V cent. b.c. $\quad \Delta \Delta I I I[$
Since the units are simple strokes, the reference is to something other than drachmas.

E 9 (P 25886). Pl. 10. Fragment from wall of plain storage jar. Graffito on outside, obviously written on the sherd. Context: 5th century b.c. (M 18:11).

$$
\begin{array}{ll}
\text { V cent. в.c. } & \jmath \mu \tilde{\sim} v \vdash+\vdash+\vdash \\
& \jmath \Gamma \vdash \vdash \vdash \vdash \\
& j \Delta \Delta \Delta \Gamma \vdash
\end{array}
$$

Perhaps the sherd represents the tallying of drachmas ( $\delta \rho \alpha \chi \mu \tilde{\omega} v)$ from different sources. The fact that the six drachmas of the first line have not been resolved into $\Gamma$ ㅏ suggests some kind of tallying.

E 10 (P 23873). Pl. 10. Base of lekane ( $=$ SparkesTalcott, no. 1810). Graffito in center on underside, probably written on the sherd. Context: ca. 420-390 в.c. (Q 15:2).
Early IV cent. b.c.
The graffito is repeated in smaller form at one edge.

E 11 (P 14622). Pl. 10. Fragment from lower part of black-glazed skyphos of early 4th-century b.c. type. Graffito on underside, within ring foot; probably written on the sherd.
Early IV cent. b.c. $\quad \mathrm{NiK}($ ) $\mathrm{HH} \Delta$ [
Perhaps a tag? or an I O U?
E 12 (P 18610). Pl. 10. Fragment from lower part of small black-glazed olpe. Graffito on underside, probably written on the sherd. Context: first half 4th century B.c. (C 19:5).
First half IV cent. B.c. $M \eta() \Delta \Delta$
E 13 (P 3512). Pl. 10. Small black-glazed ringhandled jug. Graffito on underside. Context: second half 4th century b.c. (F 11:2). Hesperia, XXV, 1956, p. 16, no. 68, pl. 3. Cf. SparkesTalcott, no. 1192.
Third quarter IV cent. B.C. $\quad \Gamma^{\nabla} \Delta$

The jug seems to have been used as a tag on a shipment of 60 pieces; the single drachma seems to be price, whether of the whole shipment or some part. Perhaps the shipment was pots of which the tag was the visible sample.

E 14 (P 6876). Pl. 10. Fragment from floor of black-glazed bowl or plate, with stamped palmettes on the floor, of the 4th century b.c. Graffito on floor, almost certainly written on the sherd. Hesperia, XXV, 1956, p. 19, no. 81.
IV cent. в.c. $\quad \Delta \Gamma$ ㅏㅏ
E 15 (P 25983). Pl. 10. Lower part of blackglazed kantharos of late 4th-century b.c. type. Graffito on underside, within foot, probably written on the sherd. Context: 3rd century b.c. (Q 19:2).
Late IV cent. b.c.
$\Delta_{10}() \delta \lambda_{k}(\alpha i) \mu^{\prime} \quad$ i.e., 40 dr . (weight)
It is likely that the first three letters are an abbreviated name rather than a commodity.

E 16 (P 6349). Pl. 10. Lower part of Pergamene bowl of the late 1st century b.c. Graffito on underside, perhaps written on the sherd. Context: 1st century b.c. (E 14:1).
Late I cent. B.C. $\quad \delta \rho(\alpha \chi \mu \alpha) \Delta \Delta \Delta \Delta \Delta$

## F. OWNERS' MARKS

The large number of what seem almost certainly to be marks of ownership inscribed on complete vessels makes possible some useful statistics ${ }^{1}$ of various sorts: changes in letter-shapes and spelling throughout the range from early 7th century b.c. to the 6th century of our era; nature of identification, ranging from simple initial of the name to a complete sentence asserting ownership (with consideration of the number and kinds of abbreviations); location of the marks on various types of vessels; and the nature of the writing, whether graffito or dipinto.

A more or less standard old Attic alphabet ${ }^{2}$ ( A or $\mathrm{AB} \triangle \triangle E I H \otimes I K L M N O \Gamma P S T V \Phi+$ or $X$ ) is used with only a few exceptions and variant forms through the second quarter of the 5th century b.c.: Ionic lambda or gamma appears only in $F$ 56, $F 59$ and $F$ 74; variants for theta include three dotted ( $F$ 12, $F$ 13, $\mathbf{F}$ 26) and one square ( $F$ 31); variants for rho include five apparently stemless ( $F 20, F 23, F 24, F 39, F 41$ ) and four with tails (F 43, F 61-63). "Foreign-educated" writers were probably responsible for the one example of a B-shaped epsilon ( $F$ 14), the two examples of psi-shaped chi ( $\mathbf{F} \mathbf{2 5}, \mathbf{F} 65$ ), one combination of closed eta as a vowel with Ionic xi ( F 53 ), and four cases ( $\mathrm{F} 56, \mathrm{~F} 72$ cursive, $\mathrm{F} 75, \mathrm{~F} 78$ ) in which omega is used. Other variants are most likely to be due to the difficulty of incising and lack of skill of the writer: misformed phi's (F 43, F 50 with almost horizontal crossbar, F 66 square), square omicron

[^6](F 64), and curved delta (F 50). Most interesting is the variation in sigmas; although the four-barred form is mostly the result of sporadic foreign influence ( $F 16, F 44$ with stemmed upsilon, $F 56$ with omega and Ionic lambda, F 75 with omega, F 77 in a Cretan name), the role of the earliest example (F 1) is perhaps best explained as an alternate to the reversed sigma which seems most often to have been used as a special form marking the end of the word (see above in introduction to Names on Sherds, pp. 16-17). So here the four-barred sigma at the ends of $\mathbf{F} 1$ and the five-barred sigma at the end of $\mathbf{F} 2$ combine with the reversed three-barred sigmas at the ends of $\mathbf{F} 12$, F 13, $\mathbf{F} 18$ and $\mathbf{F} 23$ to suggest a groping for a significant variant for this special purpose; the only other reversed sigma does occur in the middle of a name (F 6) and may indicate either individual idiosyncracy or the still fluid state of experimentation.

With the middle of the century the balance shifts so that the rule is a more or less standard Ionic alphabet ( $А В Г \triangle E I H \odot I K \wedge M N \equiv O П P\{T Y Ф X Y \Omega)^{3}$ with a gradually diminishing number of exceptions. Attic lambda or gamma occurs in no single example; there are three tailed rho's ( $\mathbf{F}$ 81, $\mathbf{F}$ 84, $\mathbf{F}$ 105) and one that is more likely influenced by the Latin form (F 219). The most persistent of the older lettershapes is the three-barred sigma (F 84, F 118, F 119, F 125) which occurs even with omega and eta as long vowels. Except for triangular and other odd phi's (F 126, F 151, F 152, F 161, F 211) and a unique broken-barred alpha in $\mathbf{F}$ 157, there is little change after the 5th century в.c. until the gradual infiltration of cursive forms beginning in the late 4th-early 3rd centuries b.C. : cursive zeta in $\mathbf{F}$ 178; lunate sigma in F 182 and $\mathbf{F} 209$; lunate epsilon in F 210; cursive omega in F 212, F 213. ${ }^{4}$ From the end of the 3rd century B.C. the non-cursive forms (at least of certain letters) are exceptional: alpha continues uncial, showing a broken bar or other oddities in F 254, F 271, F 280, F 299, F 302, and is cursive only in F 292, F 295 and mostly thereafter, particularly in dipinti; square epsilon occurs only in $\mathbf{F} 220$, F 221, $\mathbf{F} 228, ~ F 231, ~ F ~ 247, ~$ F 249, F 277, F 333, F 334; pi continues to be uncial for the most part, with the developed cursive form only in F 318; the four-barred sigma occurs only in F 222 and F 225, but there is an angular lunate form in F 301 and a rectangular form in $\mathbf{F}$ 319; omega is uncial only in $\mathbf{F} 220$ and $\mathbf{F}$ 231. Cursive ligatures also begin to occur: epsilon-iota in $\mathbf{F}$ 276, omicron-upsilon in $\mathbf{F}$ 330. The Latin letters, which occur on $\mathbf{F}$ 228, F 251, F 277, F 283, F 288, F 298, F 313 and F 328, are too few to show any notable development.

As might be expected, if we make allowance for the informality of these notations and the large and varied number of their writers compared to the formal stone inscriptions and their few inscribers (selected presumably for their skill), the change and development of letter-shapes in the early period is remarkably similar. For the later period such a comparison is not possible since stone-cutting is much less conducive to cursive forms even than scratching in fired clay and a completely different world from that of dipinti. Here a comparison may be made with texts written in ink on papyri; and again there is a remarkable similarity in letter-shapes between pots and paper, without so great a difference between our casual ownerscribes and the writers of casual letters and accounts as between the former and professional stone-cutters. As far as spelling is concerned, the first point to be considered, because of its close association with letter-shapes and the Ionic alphabet, is the use of eta as " $h$ " and of both eta and omega as long vowels. No eta appears as "h" after the second quarter of the 5th century b.c., and even before that time it is omitted once (F 54). The earliest use of eta as a vowel is late 6th century b.c. (F 15); in the first half of the 5th century b.c. it appears sporadically and in texts which show other foreign influences ( $F 53$, where it is combined with an Ionic xi, F 55, where it is misused for epsilon or the diphthong). After the middle of the century epsilon as eta is the exception (F 84, where the likely genitive singular in - $\bar{e} s$ should not be the Attic form after a rho, F 116, where the initial vowel of Hegesander is written as eta but the second vowel is written epsilon, and possibly $\mathbf{F} 123$ where the interpretation is not certain). The opposite mistake, writing eta for epsilon, which may reflect a confused and over-zealous effort to use the "new" vowel,

[^7]occurs in $F$ 127．A comparable confusion between the o－sounds is seen in $\mathbf{F} 160$ where an omega is used for an omicron．Generally，in the earlier period omega appears for the long vowel only in $\mathbf{F} 56, \mathbf{F} 72$ ， F 78 and for either short or long in F 75．After the middle of the 5th century b．c．the long vowel is con－ sistently written as omega except in $F$ 85，$F$ 132， $\mathbf{F} 145$ and possibly $F$ 123．Less consistency is apparent in the treatment of the diphthongs epsilon－iota and omicron－upsilon．Eimi is written with epsilon－iota except twice（ $\mathbf{F} 63$, F 65）；in the latter case the confusion is confounded by the writing of Aischeas＇ epsilon as a diphthong，but this is probably a Boiotian hand．The use of simple omicron for omicron－ upsilon（ordinarily in the masculine genitive singular）continues from earliest times（F 3，F 5，F 9，F 58， F 63－65，F 77，F 92，F 94，F 104，F 107，F 115，F 125，F 127，F 131，F 132，F 136，F 143，F 146）to well beyond the 5th century b．c．with only two exceptions（ $\mathbf{F} 23$, F 144）；only from the late 4th century b．c． does the diphthong omicron－upsilon come to be generally written（F 177，F 180，F 198，F 201，F 203， F 209， $\mathbf{F}$ 212，etc．）．

Single letters standing for doubled consonants are standard in the early period（F 3，F 58，F 62，F 103） and even occur sporadically in the 4th century b．c．（ $\mathbf{F} \mathbf{1 3 8}, \mathbf{F} 168$ ）when the usual practice is to write both consonants（F 124，F 131，F 146，F 198，F 201，F 205，F 214，F 217，etc．）．The reverse situation，where a single letter is doubled，occurs only in the case of sigma preceding a dental（ $\mathbf{F} \mathbf{2 6}, \mathbf{F} 77$ ）and so may reflect a felt difference of pronunciation more than uncertainty or confusion．Another reflection of pronunciation may be seen in the cases where letters are omitted：F 46 （ $\mathrm{M}_{\varepsilon} \lambda \alpha\langle\gamma\rangle$ кó $\mu \alpha$ ）and $\mathbf{F} 84$（ $\left.\Sigma_{1} \sigma_{\dot{\prime}}\langle\mu\rangle \beta p \varepsilon s\right)$ ．One insertion of an originally omitted letter also exists：Gogias corrected to Gorgias（ $\mathbf{F}$ 64）．Metathesis of aspiration almost certainly occurs once（ $\mathbf{F} 184 \mathrm{M} \eta ⿴ 囗 十 i k \eta$ for $M \eta \tau i \chi \eta$ ），perhaps as a reflection of pronun－ ciation，and only if we may assume the substitution of theta for tau in $\mathbf{F} 11$（ $9 \alpha 9$ i for tati）is an inter－ pretation of that owner＇s mark possible．
With regard to the way in which the letters of the names are arranged we should note both how the direction of writing is related to the chronology and how and when letters are joined together in ligatures or monograms．The retrograde inscriptions（ $\mathbf{F} 1, \mathrm{~F} 4, \mathrm{~F} 5, \mathrm{~F} 18, \mathrm{~F} 35$ ）continue into the early 5 th century B．c．and the only later example（second quarter of the 5th century b．c．）is also unique in every other way， being written in the Cypriote syllabary（ $\mathbf{F} 67$ ）．No true boustrophedon arrangement appears，but the cramped conditions of a small circular base sometimes produce a kind of false boustrophedon，as in F 76，F 91．Ligatures and monograms represent a more frequent departure from the normal linear writing from left to right；moreover，they persist sporadically from the 6th century B．c．to the 6th century of our era．A ligature，for our present purposes，may be defined as the joining（often by a common stroke or strokes）of two or more letters，whether side by side or above and below，thus leaving the term monogram for those cases in which all the letters of a name（abbreviated or in full）are interlaced and combined． The earliest cases are mostly monograms of three－letter abbreviations（F 14，F 15，F 19，F 27，F 45，F 48， F 52，F 69）or of two letters（F 73，F 89）．Only one case survives from this period of a two－letter ligature as part of a whole name（ $\mathbf{F} \mathbf{4 6}$ ）．Later examples are more various：a probably four－letter monogram （F 129）；four cases of two joined letters in a longer text（F 162，F 193，F 224，F 314）；${ }^{5}$ two monograms of three－letter abbreviations（F 190，F 221）；one monogram of a five－letter abbreviation（F 241）and one of a complete name of seven letters（F 214）．

Punctuation is rare in these short texts：two or three dots vertically arranged occur between words on two early pieces（F 18，F 24）；a long line marking off the end from the beginning of inscriptions that circle around on themselves appears on two later examples（ $\mathbf{F ~ 8 3}, ~ \mathrm{~F} \mathrm{92}$ ）．

Mention has already been made in passing of the non－Greek scripts which are included in this collec－ tion：one Greek name written in the Cypriote syllabary（ $\mathbf{F}$ 67）；and several Latin names written in Latin letters（F 228，F 251，F 283，F 288，F 298，F 313，F 328）as well as one which is apparently given in both Latin and Greek letters．Two other pieces seem to be non－Greek（F 99，F 100）．

[^8]The various ways in which owners express their claim may be categorized as follows, starting with the shortest and simplest and working up to the most elaborate:
Name abbreviated (ranging from 1 to 8 letters) ..... 148
Name in nominative case ..... 51
Name in genitive case ..... 72
Name in dative case ..... 4
More elaborate statement of ownership ..... 21
Incomplete or obscure ..... 46$342^{6}$

The abbreviations are especially to be noted since we have from no other source such abundant evidence for abbreviations in the early period. Of the 152 abbreviations occurring on 148 pots (four have more than one abbreviation) the lengths and chronological ranges are as follows:

| Number of |  |  |
| :---: | :---: | :---: |
| letters | Number ${ }^{7}$ | Dates |
| 8 | 1 | Late 4th-early 3rd centuries в.c. |
| 6 | 4 | From mid-5th into 4th century b.c. |
| 5 | 13 | From second quarter 5th century b.c. into Late Roman period |
| 4 | 47 | From 6th century b.c. into Late Roman period |
| $\bigcirc$ | 70 | From fourth quarter 6th century b.c. to 5th-6th centuries |
| (1) | 13 | From fourth quarter 6th century b.C. to mid-3rd century |
| . 1 | 4 | From early 5th century b.c. to 1st century b.c. |

The comparative scarcity of one and-two-letter abbreviations results from our criteria of selection (see Introduction, p.1) and is not at all a reflection of the actual state of affairs. There are vast numbers of pots or fragments with only one or two letters, but because the scope for interpretation is so wide they can give us little or no information. Of the four one-letter abbreviations which are included three have not only the initial but also the full name (F 163, F 185, F 245) and the other (F 40), although it has only the initial, is one of a group of pots all apparently marked by the same owner in various ways. Of the 13 two-letter abbreviations, one ( $\mathbf{F}$ 39) belongs to this same group, another ( $\mathbf{F}$ 213) was also found in the same context with a complete name, six occur together in pairs on three pots ( $\mathbf{F} \mathbf{8 9}, \mathbf{F} 112, \mathrm{~F} 228$ ), one (F 28) represents five different jars all marked in the same way, one (F73) is a unique monogram, one (F 127) shows the full name as well as the abbreviation, and the last two (F 242, F 296) seemed sufficiently unlike any other inscribed pots of the period to be interesting. ${ }^{8}$

[^9]With the 71 three-letter abbreviations we are on somewhat firmer ground, since the majority of them could not be numbers and all can be more easily interpreted as names than as common nouns. This is not to say that most of them can be identified with one particular name, since it is obvious from the makeup of personal Greek names that initial combinations like Eur-, Kri-, Men-, Nik-, and Phil- may easily stand for a great variety of names. How abbreviations so potentially ambiguous served any purpose at all is obviously the next question. The most likely answer is one which suggests that this collection of owners' marks may have sociological as well as epigraphic and alphabetic implications: the groups in which abbreviations of one, two, three, four and even five letters might be useful must necessarily have been small, and with the tendency for the same or similar names to be used repeatedly within a particular family, it is unlikely that the groups in question were families. Clubs suggest themselves as a possibility, with the members marking their own vessels, whether for drinking or pouring; another possibility is a group of customers of one small shop who left vessels to be filled. Perhaps other such groups might be thought of, depending on the kind of vessels marked. That the make-up of the group sometimes required more explicit or longer abbreviations is obvious from the variety of lengths which we actually find, e.g., Ar (F 112), Ari (F 219), Aris (F 81), Arist (F 153), Aristi (F 80). These pieces did not, obviously, belong to one group, but the variety suggests that there was a tendency to cut one's name to fit the circumstances. If, for instance, Aristogeiton was the founder of his club he might well have marked his drinking cup $A r$, while subsequent joiners named Aristotle, Aristeides, Ariston and Aristippos would have arrogated to themselves respectively the abbreviations Ari, Aris, Arist and Aristi.

The four-letter abbreviations are not for the most part much more particularizing than those with three, but the majority of those made up of five or more letters give almost certain identification with a particular name.

As was noted above, six of the abbreviated names are accompanied by what must be the same names in full: Dexio and De (F 127); Diphilou and Diphi (F 152); Menonos, Meno and M (F 163); Theon and Th (F 185); Nikolaou and $N$ (F 245); Eukarpos and Euk (F 323). This range of one, two, three and fourletter abbreviations alongside full names confirms us in our interpretation of the abbreviations as owners' names but still leaves us puzzled as to why these six owners saw fit to identify their property by both forms.

Whatever may be imagined as the intended grammatical case of the abbreviations, the variety among the names that are complete allows considerable choice: nominative $40 \%$; genitive $57 \%$; dative $3 \% \cdot{ }^{9}$ Since the nominative may always be considered as the subject of an understood verb of owning with the object inscribed as the understood object, and since both genitive and dative can express possession, the usage may depend on individual preference. The choice of case seems not to have been dictated by changing fashion, since it is apparent that nominative and genitive, at any rate, were both used pretty consistently from the beginning to the end of our period.

A few of the owners' names in the nominative and genitive are accompanied by additional identification: the father's name appears certain in F 231, F 304 (also grandfather), F 316, and possibly in F 117 and F 118; trade name, title or epithet appears in F 262, F 304 and F 316. Whether two names apparently in the same case suggest joint ownership or some kind of relationship perhaps varies according to the situation ( $\mathbf{F} \mathbf{1 5 0}, \mathrm{F}$ 165, F 180, F 332). More uncertain or incomplete are the additions in $\mathbf{F}$ 103, F 183, $\mathbf{F}$ 284, 285. Most frequent is the presence of one or two (or three) letters apparently used as numer-

[^10]als: alpha (1) in F 87, F 170; gamma (3) in F 317; delta (4) in F 162, F 282; epsilon (5) in F 98; stigmazeta (6-7) in F 104; kappa (20) in F 173; kappa-alpha (21) in F 297; nu (50) or pi-delta (50) or both in F 130, F 206, F 252; and epsilon-iota-rho (115) in F 315 and kappa-theta-tau (329) in F 250. The numbers need not all be used similarly and could not be expected to be so over so great a lapse of time and on such different types of vessels. It is possible that the smaller numbers might refer to quality or age of contents, that any of the numbers might indicate the particular vessel's place in a series, or give either a date or the capacity on the basis of some era or unit taken for granted. Finally, one vessel (F 198) on which the capacity is spelled out is catalogued here rather than under Ha (Capacity) because the first item in the inscription is the owner's name.

In addition to a few unexplained marks that are not even certainly letters or numbers on several pots, there is one small class of some interest, that is, names accompanied by either the chi-rho symbol or the cross: F 322, F 323 (on which the additional iota-epsilon might be either a number or the abbreviation for "priest" or "sacred"), F 324.

The most frequent formula among the more elaborate statements of ownership makes the vessel assert, "I am (the property) of ——_." This simple form occurs 13 times (although some texts are incomplete and so may have included more): F 5, F 12, F 13, F 18, F 32, F 56, F 58, F 63, F 65, F 107, F 115, F 144, F 177. One variant adds a predicate (F 3); another uses the adverb dikaiōs (F 94, F 131, F 132, F 139, F 154). F 103 may name itself as the property of Philippe; F 199 appears to record a conversation: "(This is the property) of Agathon the thief." "Cheap at a chalkous!" Two of these inscriptions also have additional information: F 65 may give the owner's ethnic; $\mathbf{F} 131$ may add a prohibition to the assertion of ownership - "I am really (the property) of Andriskos; [let not] anyone else [touch]." F 63 may indicate joint ownership.

The 46 incomplete or obscure texts can not profitably be treated as a group, since the uncertainties involved are so various. Most are names lacking case-endings (or more); ${ }^{10}$ there are a few where the names themselves are uncertain, if indeed they are names; ${ }^{11}$ and two texts are literally illegible because they employ non-Greek letters (F 99, F 100).
Since the kind of vessels and the location of the inscriptions thereon are most often related, it will be convenient to consider these two matters together. For our purposes the vessels do not need to (and often can not because of their fragmentary state) be separated into many individual categories of shape. It is sufficient (and often only possible) to distinguish open vessels (like cups, bowls, basins, plates) from closed (like amphoras, pitchers, jugs). In addition there are lamps and lids and one disc-stand, as well as three unexplained objects of clay.

The vast majority ( $73 \%$ ) of open vessels ${ }^{12}$ are inscribed underneath, on the base; on $19 \%$ the inscription appears on the side wall; the locations of the other $8 \%$ are various, with only a few examples of each : inside (often on floor), top of rim (of basins), top of foot or stem (kylix), handle. Two of the sidewall inscriptions are upside down to the vessel (F 6, F 25), and one runs vertically ( $\mathbf{F}$ 203). For the great number of inscriptions underneath the orientation is obviously a matter of indifference.

[^11]Inscriptions on closed vessels ${ }^{13}$ occur most often on the shoulder or side ( $67 \%$ ) or neck to mouth $(17 \%)$, less often underneath, on the base ( $9+\%$ ), and on the handle ( $6+\%$ ). Only one inscription (F 97) is upside down to the vessel, but three (F 9, F 65, F 298) run vertically. Handle inscriptions seem to read indifferently up or down.

If there is any chronological conclusion to be drawn from these figures, it is only the same one that may be derived from a general survey of the pottery of the Agora: that there are more examples of open shapes in the Greek period than in the Roman period.

The inscribed lamps number 15; four are inscribed on the nozzle (F 113, F 152, F 178, F 185); four underneath, on the base (F 42, F 93, F 197, F 214); three on top or around the rim (F 103, F 183, F 212); three on the side-wall ( $\mathbf{F}$ 129, $\mathbf{F}$ 177, $\mathbf{F}$ 211); one is inscribed on top, on the nozzle and on one side ( $\mathbf{F}$ 163). All lids (F 49, F 58, F 121, F 157, F 216) and one disc-stand (F 8) are inscribed on the top surface. The miscellaneous clay objects ( $\mathbf{F}$ 165, $\mathbf{F}$ 166, $\mathbf{F}$ 240) are inscribed on any convenient surface.

Because there are more fine wares inscribed in the Greek period and more coarse ones in Roman times, graffiti preponderate greatly in the centuries before Christ and are not even quite matched in frequency by dipinti in our era. That is, glazed ware can be most visibly marked by scratching through the glaze; unglazed ware not only lends itself more to paint but makes paint more visible. These proportions apply only to this category, since it is obvious that the graffito is a more home-made method of marking and that various commercial notations will have been made ${ }^{14}$ less laboriously and more professionally with a brush. Of our 334 owners' marks $289(86 \%)$ are graffiti and only $45(14 \%)$ are dipinti. ${ }^{15}$ Six of the graffiti were incised in the clay while it was still soft (F 216, F 259, F 261, F 288, F 306, F 318). One dipinto owner's mark ( $\mathbf{F} \mathbf{2 5 2}$ ) was supplemented with a graffito number.

We come finally to the names themselves and a consideration of the prosopographical value, if any, of these inscriptions. Actual identification of individual owners with known persons is not, except in very special circumstances, possible; nor would it be useful to know, for example, that a man whose only "claim to fame" was service in the Boule in a particular year had scratched his name on a pot. Only where there is more information than the name, or where the name is very rare indeed may identification be possible. For the rest our chief concern will be the name rather than the person, that is, whether it is known (1) from Athens, or (2) elsewhere, either (3) roughly contemporaneously with its appearance on the pot, or (4) some other time. Since most of the complete names belong to the first category (known at Athens) and also to the third (roughly contemporary) it will save space in the catalogue descriptions if this is assumed to be the case unless the contrary is noted. That is, a name is noticed only if a roughly contemporary Athenian is not known from Prosop. Att., I. G., or S. E. G. For the abbreviated names, it will be most often sufficient to indicate examples of possible Athenian names in the few cases where these are not obvious; only where none such exist will further discussion be required.

Of the complete Greek names (and the sufficiently complete abbreviations) only 19 are not attested anywhere at all as names: two of these ( $\mathbf{F} \mathbf{1 5 0}, \mathbf{F} \mathbf{3 2 5}$ ) are known in somewhat different forms; eight
 used as nicknames or titles; only nine (F 1, F 4, F 76, F 155, F 171, F 178, F 271, F 273, F 276) are without parallel. A fair number of names are attested not for Athens but elsewhere; ${ }^{16}$ a few are attested at Athens

[^12]for a different period from the one here represented (F 10, F 49, F 87, F 235, F 262). There are also several ethnics (F 44, F 62, F 63, F 77, F 170, F 203, F 257), some of which have not previously appeared in Attica; some of these may be slave names. ${ }^{17}$

As far as sex is concerned, the predominance of the male, whether in terms of possession or in the expression thereof (literacy), is clear: 127 names are pretty clearly masculine; only 19 are fairly certainly feminine, with an additional six that could be either sex; ${ }^{18}$ most abbreviations are obviously uncertain.

## PRIVATE OWNERSHIP (F)

F 1 (P 10151). Pl. 11. Fragmentary one-handled cup with plain rim, concave sides and flat bottom ( $=$ Brann, no. 194). Dull streaky black glaze inside and out; bottom reserved. Graffito on the side. Context: first half 7th century b.c. (T 19:3).
First quarter VII cent. b.c.
] $\lambda$ d́rixos
(retrograde)
Perhaps Elatichos (not known), but possibly third declension genitive rather than second declension nominative. If the chi is written for kappa, the possibilities become more numerous.

F 2 (P 26420). Pl. 11. One-handled cup with flaring lip and flat bottom. Graffito on upper wall. Context: second quarter 7th century b.c. (R 17:5). Hesperia, XXX, 1961, p. 377, S 17, pl. 87.
Second quarter VII cent. b.c. $\Phi$ i $\lambda$ ovos
F 3 (P 4663). Pl. 11. Skyphos with offset lip and low ring foot. Graffito on the side, just below level of handle. Context: 7th-6th centuries B.C. (F-G 12:1). Hesperia, Suppl. II, pp. 124125, figs. 89, 90. Cf. Sparkes-Talcott, p. 7.
Mid-VII cent. b.c. $\quad$-apio sipl потєpiov
F 4 (P 22709). Pl. 11. One-handled cup with offset lip ( $=$ Brann, no. 184). Graffito on upper wall. Context: third quarter 7th century b.c. (O 12:1). Third quarter VII cent. B.C.
'Atatalas
(retrograde)
The name is not known; compare Tataie on a lekythos from Cumae in the British Museum (Jeffery, L.S.A.G., p. 240, no. 3, pl. 47).
F 5 (P 23452). Pl. 11. Fragment from wall of cup.
Graffito on outside. Context: third quarter 7th century b.c. (R 8:2). Hesperia, XXX, 1961, p. 353, G 33, pls. 81, 89.

Third quarter VII cent. b.c. $] \lambda \varepsilon \circ \leq \varepsilon[\lceil\mu i$
(retrograde)

F 6 (P 17380). Pl. 11. Skyphos with offset lip, reserved handle zone and small spreading foot. Graffito on lower part of body, upside down to pot. Context: second half 7th century b.c. (M 11:3). Hesperia, XXX, 1961, p. 366, H 25, pls. 78, 89.
Second half VII cent. b.c. Фáoov
F 7 (P 14691). Pl. 11. Upper part of amphora of 7th-century b.c. type. Graffito on shoulder. Context: first quarter 6th century b.c. (S 21:2). Cf. Brann, p. 33.

> Late VII cent. в.c. 'Atp]óneт[0]ṣ

F 8 (P 989). Pl. 11. Black-glazed disc stand. Graffito on upper surface. Context: first half 6th century b.c. (I 16:4). Cf. Sparkes-Talcott, no. 1323.
First half VI cent. B.c. Фavíns
F 9 (P 195). Pl. 11. Fragment from upper body of black-figured olpe or small amphora, of the first half 6th century b.c. On reserved panel outlined by a single glazed line, the tail of an animal. Graffito beside panel vertical with respect to the pot.
First half VI cent. b.c. $\wedge u] \sigma \iota \delta E \mu$ o
The restoration is one of several possibilities, probably the most likely for 6th-century b.c. Athens.
F 10 (P 2029). Pl. 11. Fragment from base of open bowl, glazed inside and out, except under foot. Graffito on bottom. Context: 6th century B.C.

First half VI cent. b.c. Eủtex[
No such name is attested till the Roman period.
F 11 (P 24727). Pl. 11. Fragment from base of skyphos, of a type common in second quarter 6th century b.c., with red band above foot. Graffito on bottom. Context: fourth quarter 6th century b.c. (R 12:3).

[^13]Second quarter VI cent. B.c. $\theta \alpha \theta i$ i.e. tati?
Perhaps the "mistress' cup", inscribed by a servant of the house. An abbreviation is less likely, since names beginning thus are much later.
F 12 (P 17825). Pl. 11. Small black-glazed olpe with high-swung handle and large spreading foot (=Sparkes-Talcott, no. 251). Graffito on side. Context: mid-6th century b.c. (J 18:4).


Name attested for Carian from Ialysos (Ath., VI, 262).
F 13 (P 17826). Pl. 11. Unglazed oinochoe with trefoil mouth. Graffito on side. Context: mid-6th century в.c. (J 18:4). Cf. SparkesTalcott, no. 1637.
Mid-VI cent. b.c. $\quad \Theta a \mu \nu E ́ O$ عíhí
F 14 (P 8813). Pl. 12. Black-glazed stemmed dish ( = Sparkes-Talcott, no. 966). Graffito on underside. Context : ca. 520-490 в.с. (E 14:5).
Ca. 525 в.c. (a) $\Delta เ \varepsilon$ ( ) (monogram)
(b) $\mathrm{N} \quad$ (fragmentary letter)

Since $\Delta_{i} \beta($ ) gives no reasonable Greek name, we assume the alphabet to be a nonAttic one in which B equals $E$ or $H$, such as Megarian or Corinthian.
F 15 (P 8826). Pl. 12. Black-glazed kylix. Graffito on underside of foot. Context: ca. 520-490 B.c. (E 14:5).
Late VI cent. b.c. K $\mathrm{K} \eta($ ) (monogram)
F 16 (P 1206). Pl. 11. Shoulder fragment from large non-Attic amphora. Light buff clay, micaceous and hard baked, with red band at base of neck, turning downward at its right end. Graffito on shoulder. Context : late 6th century b.c. (G 15:1).
Late VI cent. b.c.
'Aplotioy
F 17 (P 5206). Pl. 11. Base of kylix with short thick stem; raised ring with added red; of late 6th-century b.c. type. Graffito on inner face of foot.
Late VI cent. b.c. $\quad \mathrm{B} \lambda \varepsilon($ )
F 18 (P 9055). Pl. 11. Base fragment of blackglazed bowl with torus ring foot. Graffito on underside.
Late VI cent. b.c. $]$ отоs : $\varepsilon[i \mu \mathrm{l}$ (retrograde)
There are not many names with genitives in - Tos; among them are Пaıס $\varepsilon \rho \omega \rho$, an Athenian vase-painter of mid-6th century b.c. (Hesperia, IX, 1940, pp. 225-226), and 'Apapف's (Prosop. Att., no. 1575).

F 19 (P 24882). Pl. 11. Glaze-banded amphora of 6th-century b.c. type. Graffito on shoulder. Context: ca. 520-490 b.C. (Q 12:3). Cf. SparkesTalcott, no. 1502.
VI cent. b.c. $\quad \Sigma u \mu() \quad$ (monogram) The most likely Athenian name is Symmachos.

F 20 (P 25922). Pl. 11. Handle from unglazed amphora. Graffito on outside of handle, written from bottom up. Context: 6th century b.c.
VI cent. B.c. 'Aypu ( )
A demotic ('A ${ }^{\prime} \rho \cup \lambda \mathrm{c}_{\mathrm{u}} \mathrm{s}$ ) or a name (unattested) derived from ở $\gamma \rho \cup \pi v \varepsilon \in \omega$ ?
F 21 (P 16585). Pl. 11. Black-glazed kylix base. Graffito on underside. Context: 6th-5th centuries b.c.
Early V cent. b.c. 'A ${ }^{\prime} \alpha($ )
F 22 (P 16869). Pl. 11. Black-glazed kylix foot. Graffito on underside. Context: 6th-5th centuries b.c.
Early V cent. b.c. 'Eop ( )
F 23 (P 2610). Pl.11. Base of small skyphos. Graffito on underside. Context: early 5th century b.c. (G 6:3). Hesperia, XV, 1946, p. 277, no. 19.
Early V cent. в.c. $\quad \Sigma \mu ı к \rho i v o ̣ v$
Too early for Sophocles' contemporary (Ath., XIII, 592b)?
F 24 (P 2759). Pl. 11. Black-glazed kylix stem, with slightly raised ring at lower end, marked off above and below by an incised line. Graffito carefully spaced around stem on this band, with punctuation between last and first letters. Context: early 5th century b.c. (G 6:3). Hesperia, XV, 1946, p. 277, no. 18.
Early V cent. b.c. $\quad$ X $\alpha$ plá $[\nu] \theta \varepsilon$
The nearest attested name is from Thasos: X $\alpha$ ]pıavezús (I.G. XII, 8, 285, 6).
F 25 (P 4232). Pl. 12. Lower body of skyphos. Graffito outside, upside down to pot. Context: late 6th to early 5th centuries b.c.
Early V cent. b.c. $\quad \mathrm{Xor}(\mathrm{O}$ e.g., $\mathrm{Xor}(\mathrm{pi} \lambda o u)$
Note the use of the non-Attic chi.
F 26 (P 4666). Pl. 12. Fragment from bottom of black-glazed cup kotyle of late 6th- to early 5th-century в.c. type. Graffito on underside.
Early V cent. b.c. 'A] $\lambda_{\kappa 1 \sigma}\langle\sigma\rangle \theta \in[\nu 0 S$
F 27 (P 6173). Pl. 12. Kylix foot, reserved beneath. Graffito on underside. Context: early 5th
century b.C. (E 15:6). Cf. Sparkes-Talcott, no. 439.
Early V cent. в.c.
$\operatorname{\Pi av}($ ) $\operatorname{\Pi av}($ ) (two monograms)
On another base (Agora inv. no. P 6633) from the same well is a fragmentary graffito which may be read $\Pi]$ av ( ) .

F 28 (P 24668, P 24911, P 24912, P 24922, P 24923).
Pl. 11. Five unglazed kadoi; P $24668=$ SparkesTalcott, no. 1601. On neck of each, a graffito of two letters, presumably the abbreviation of the owner's name. Context : ca. 520-480 в.c.(R12:4).
Early V cent. b.c. $\Lambda u()$
F 29 (P 24917). Pl. 11. Fragmentary unglazed amphora. Graffito on shoulder. Context: ca. 520-480 в.C. (R 12:4).
Early V cent. b.c. $K \lambda \varepsilon()$
F 30 (P 13462). Pl. 12. Black-glazed saltcellar. Graffito on underside. Context: early 5th century b.c. (N-P 20:1).

$$
\text { Early V cent. в.c. } \quad \Pi \alpha u(~)
$$

F 31 (P 14950). Pl. 12. Black-glazed kylix foot. Graffito on underside. Context: early 5th century b.c. (F 19 : 5).
Early V cent. b.c. $\quad \Pi \imath \theta()$
F 32-40. Pl. 12. In a well of the late 6th-early 5th century b.c. (R 12:1) were found no fewer than eight vases and fragments ( $\mathbf{F}$ 33-40) inscribed with the letters theta-rho-alpha, thetarho, or theta. In a dumped filling of the same period a short distance to the south (Q 13:2) was found the neck of a vase (F 32) which appears to have been inscribed with the same name written out in full, but unfortunately now incomplete. The owner of the house or shop was evidently given to marking his property.

F 32 (P 11392). Fragment from wall of deep cup with reserved band on the outside. Graffito on outside.
Early V cent. b.c. $\quad \Theta \rho \alpha[$ عi] ${ }^{\boldsymbol{l}}$
Since the second line appears to read ciui, we assume that the name is written out in full genitive form in the first line.

F 33 (P 20757). Black-glazed kylix ( $=$ SparkesTalcott, no. 404). Graffito on underside of foot. Early V cent. b.c. $\quad \Theta_{\rho \alpha}($ )

F 34 (P 20788). Foot of black-glazed kylix. Graffito on underside.
Early V cent. b.c. $\quad \Theta p \alpha()$
F 35 (P 20790). Fragment from mouth of pelike. Graffito on outside.
Early V cent. b.c. $\quad \Theta p \alpha$ ( ) (retrograde)
F 36 (P 20761). Small black-glazed stemmed dish ( = Sparkes-Talcott, no. 986). Graffito on underside of foot.
Early V cent. b.c. $\quad \Theta_{p \alpha( }$ )
F 37 (P 20768). Black-glazed saltcellar. Graffito on underside.
Early V cent. b.c. $\quad \Theta_{p \alpha}($ )
F 38 (P 20785). Black-glazed pelike. Graffito on neck, broken at right.
Early V cent. b.c. $\quad \Theta[\rho \alpha()$
F 39 (P 20789). Foot of black-glazed kylix. Graffito on underside.
Early V cent. b.c. $\quad \Theta \rho()$
F 40 (P 20791). Fragment from foot of blackglazed pelike. Graffito on underside.
Early V cent. b.c. $\quad \Theta()$
F 41 (P 20792). Pl. 12. Foot of black-glazed kylix. Graffito on underside. Context: early 5th century b.c. (R 12:1).
Early V cent. b.c. $\quad \Delta \varepsilon \rho()$
The rho, though misshapen, resembles some of the rho's on the "Thra" vases which come from the same well.

F 42 (L 1096). Pl. 12. Lamp ( = Howland, p. 33, no. 103). Graffito on underside. Context: early 5th century b.c. (H 5-6:1).
Early V cent. b.c. $\quad X \sigma \alpha()$
F 43 (P 8). Pl. 12. Fragment of black-glazed saltcellar of early 5th-century b.c. type. Graffito on underside.
Early V cent. b.c. E]ủOpoviọ[o
The name Euthron is known from the Dalmatian coast (Pape, s.v.), but perhaps here too the theta stands for phi; cf. D 15.

F 44 (P 137). Pl. 12. Base of lekythos of early 5th-century b.c. type. Graffito on underside. Early V cent. b.c. Tupoavós

The name, attested only as an ethnic adjective, as well as the non-Attic letter forms (alpha, sigma, upsilon), seems to indicate a foreigner.

F 45 (P 5012). Pl. 12. Wall fragment from blackglazed cup. Graffito on outside. Context: early 5 th century b.c.
Early V cent. в.c. K $\varepsilon \delta$ ( ) (monogram) Perhaps Kí $\delta(\omega \nu \circ \varsigma)$; names beginning $\Delta \varepsilon \kappa$ do not seem to be so early.

F 46 (P 5009). Pl. 12. Fragment from lower part and bottom of red-figured mug. Graffito on the side, partly on the glaze, partly on the figured scene. Context: early 5th century b.c. Beazley, A.R.V., p. 152.

Early V cent. B.c. $\quad M \varepsilon \lambda \alpha\langle\gamma\rangle$ кó $\mu \alpha$
Ligature of mu and epsilon at beginning. Probably the genitive of the masculine name, which has been reported outside of Attica (Pape, s.v.; Bechtel, p. 303).

F 47 (P 26180). Pl. 12. Part of spreading foot of black-glazed oinochoe. Graffito on inner face of foot. Context: early 5th century b.c.
Early V cent. b.c. $\Lambda \varepsilon u()$
F 48 (P 26179). Pl. 12. Fragment of black-glazed kylix foot. Graffito on underside. Context: early 5 th century b.c.
Early V cent. b.c. 'A $\gamma \alpha$ ( ) (monogram)
F 49 (P 26192). Pl. 12. Lid of small black-glazed pyxis. Graffito on top. Context: late 6th-early 5th centuries b.C.
Early V cent. b.c. 'Optu ( )
Ortygion is attested in Eretria in the late 4th century b.c.; Ortyx is known from Athens in the Late Roman period (I.G., III, 1163).
F 50 (P 20089). Pl. 12. Black-glazed base, probably from column krater. Graffito on inner face of foot. Context: early 5 th century b.c. Cf. Sparkes-Talcott, no. 54.
Early V cent. B.C. $\Phi_{i} \lambda_{0} \delta \tilde{\xi}^{\prime}{ }_{01}$
Presumably a dative of possession.
F 51 (P 20422). Pl. 12. Black-glazed kylix foot. Graffito on underside. Context: early 5th century b.c. (C 18:11).
Early V cent. b.c. $\Phi_{1} \lambda_{0}($ )
F 52 (P 24126). Pl. 12. Large unglazed amphora, of apparently non-Attic clay. Graffito on shoulder. Context: ca. 520-490 b.c. (Q 12:3).
Early V cent. в.c.
'Atu ( ) or Aút ( ) (monogram)
F 53 (P 7058). Pl. 12. Half of black-glazed kylix foot of type common in early 5th century b.c. Graffito on underside.

Early V cent. b.c. ' $E \xi \eta()$
Note combination of Ionic xi and closed eta used as a vowel. Presumably the writer was not an Athenian.
F 54 (P 24274). Pl. 12. Black-glazed kylix base. Graffito on underside.
Early V cent. b.c. 'Eqal ( )
All names derived from Hephaistos have rough breathing; no other names begin thus. The writer was therefore psilotic, but not Ionian.
F 55 (P 24735). Pl. 12. Shoulder fragment of redfigured oinochoe. Graffito on outside below band of leaf pattern.
Early V cent. b.c. Өnoү̣i[tovos] or Өnoס̣i[mov]
Note combination of crossbarred theta with eta for either epsilon-iota or epsilon alone.
F 56 (P 17677). Pl. 13. Fragmentary skyphos ( = Sparkes-Talcott, no. 339). Graffito on bottom. Context: first and second quarters 5th century в.c. (A 18-19:1).
Early V cent. b.c. Mì $\lambda \omega v o ́ s ~ \varepsilon i \mu ı ~$
Since only one Milon is known in Athens before the 4th century b.C., this owner may well be the grown-up version of that darling whose beauty was noted on a late cup of Oltos a generation earlier (Naples, no. 2617).
F 57 (P 15224). Pl. 13. Black-glazed one-handler ( = Sparkes-Talcott, no. 745). Graffito on lip between attachments of handle. Context: 490450 в.с. (F 19:4).
Early V cent. b.C. heo ( )
See F 68.
F 58 (P 5453). Pl. 14. Black-glazed pyxis lid with reserved, pierced knob ( $=$ Sparkes-Talcott, no. 44). Graffito around outer edge of top. Context: 470-425 b.c. (E 13:1).
Early V cent. b.c. 'Amo入oठópo $\varepsilon$ li í
F 59 (P 5137). Pl. 13. Black-glazed stemless kylix. Graffito on underside of base. Context: second quarter 5th century b.c. (H 6:5). Hesperia, V, 1936, pp. 339, 352. Cf. Sparkes-Talcott, no. 456. Second quarter V cent. b.c. 'O $\rho \varepsilon \lambda_{\mathrm{l}}($ )
F 60 (P 5174). Pl. 13. Unglazed amphora. Graffito on shoulder. Context: second quarter 5th century b.c. (H 6:5). Hesperia, V, 1936, pp. 345, 352.

Second quarter V cent. b.c. 'A ${ }^{\prime} \alpha$ ( )
Names beginning with these letters seem to be either heroic or later than the 5th century B.c., e.g., Amadokos, Amarantos.

F 61 (P 5175). Pl. 13. Unglazed amphora. Graffito on shoulder. Context: second quarter 5th century b.c. (H 6:5). Hesperia, V, 1936, pp. 345, 352.

Second quarter V cent. b.c. $\quad X \alpha \rho()$
F 62 (P 5168). Pl. 13. Fragmentary base of lekane. Graffito on underside. Context: second quarter 5th century b.c. (H 6:5).

## Second quarter V cent. b.c. Tpíßọ入os

A Thracian slave's name? It appears later in inscriptions (I.G., $\mathrm{I}^{2}, 4199,959 \mathrm{c}$ ). A long stroke (between tau and rho on one side and between omicron and sigma on the other) divides the base in half.

F 63 (P 7140). Pl. 13. Fragment of skyphos foot of second quarter 5th-century b.c. type, approximately like Agora inv. no. P 5145 (Hesperia, V, 1936, pp. 340f., fig. 8). Graffito on underside. Second quarter V cent. b.c. $\quad[\Lambda] \imath \pi \alpha \dot{\alpha} \rho o ~ \xi ̇ \mu[i]$ ]ías é ${ }^{\text {chi }}{ }^{\prime}$ ]
Only one Athenian so named is known to us: the father of a man who died before the middle of the 4th century b.c. (I.G., $\mathrm{II}^{2}, 12136 / 7$ ). Do the two names (?) indicate joint ownership?

F 64 (P 10805). Pl. 13. Kylix foot of second quarter 5th-century в.c. type, approximately like Agora inv. no. P 5116 (Hesperia, V, 1936, pp. 336f., fig. 4). Graffito on underside. Context: late 6th-early 5th century b.c.
Second quarter V cent. B.c. Гopyio
The rho was apparently omitted at first writing and inserted afterwards.

F 65 (P 15347, P 15348). Pl. 13. Unglazed amphora of non-Attic fabric. Graffiti on body: (a) under one handle, vertically with respect to the pot; (b) and (c) on shoulder. Context: ca. 490-450 в.c. (F 19:4).
Second quarter V cent. b.C. (a) Aiox
(b) BOI $\Pi \mathrm{E}$
(c) $B$

Note the non-Attic chi; if it is Boiotian, we should perhaps read Bol ('́tiov) as a reference to the vessel or its contents and take $\Pi \mathrm{E}$ as a number indicating capacity, e.g., $\pi\left(\varepsilon^{\prime} v \tau \varepsilon\right) \hat{\varepsilon}\left(\mu I \sigma v^{\prime}\right)$.
F 66 (P 15218). Pl. 13. Kylix foot similar to F 64. Graffito on underside. Context: ca. 490-450 B.C. (F 19:4).

Second quarter V cent. b.c. $K \varepsilon \varphi 1$ ( )
Presumably K Kqírios (e.g., Prosop. Att., no. 8286) or some one of the several compound names beginning Kephiso-.

F 67 (P 17463). Pl. 13. Fragment of black-glazed kylix foot of second quarter 5th-century b.c. type. Graffito on underside.
Second quarter V cent. b.c.
ku-po-ro-ta-mo, i.e., Kumpoठá́uo (signs of Cypriote syllabary, retrograde)

F 68 (P 15990). Pl. 13. Black-glazed skyphos with one vertical and one horizontal handle (= Sparkes-Talcott, no. 361). Graffiti on lip between attachments of horizontal handle (a) and between attachments of vertical handle (b). Context: ca. 490-450 в.c. (F 19:4).
Second quarter V cent. b.c.
(a) HE
(b) $\Sigma T$

The two graffiti are apparently to be taken together and read as heot( ). Cf. F 57 from the same well. The man's name will have been Hestiaios or the like.

F 69 (P 16024). Pl. 13. Small black-glazed bowl. Graffito on underside. Context: ca. 490-450 b.c. (F 19:4). Cf. Sparkes-Talcott, no. 855.

Second quarter V cent b.c.
Пар ( )
(monogram)
F 70 (P 27690). Pl. 13. Miniature one-handled bowl. Graffito on inside. Context: second quarter 5th century в.c. (P 14:3).
Second quarter V cent. B.c. $\Sigma_{\mathrm{Kl}}(\mathrm{)}$
Names beginning with these three letters are rare enough for us to imagine that this might have been a childhood possession of Skironides, the general of 412 в.с.

F 71 (P 27692). Pl. 13. Base fragment of banded oinochoe. Graffito on underside. Context: second quarter 5th century в.c. (P 14:3).
Second quarter V cent. B.C. Tı ( )
F 72 (P 15867). Pl. 13. Lekythos base in two degrees, as in Haspels, Athenian Black-Figured Lekythoi, Paris, 1936, p. 48, 3-5. Graffito on underside. Context: mid-5th century в.c. (C9:6). Hesperia, Suppl. V, p.142, fig. 70, a; 71, 38. Second quarter V cent. b.c. Mıкí $\omega v$

Note the use of omega, which makes it tempting to suppose that the writer was the Mikion who was praised by Lysitheos (I.G., $\mathrm{I}^{2}$, 924) and that he learned his letters from his admirer. That is, Lysitheos spells with an omega but retains epsilon for long e.
F 73 (P 15868). Pl. 13. Bottom of small olpe with disc foot of second quarter 5th-century b.c. type. Graffito on underside. Context: mid-5th
century b.c. (C 9:6). Hesperia, Suppl. V, p. 143, fig. 71, 37.
Second quarter $V$ cent. b.c.

$$
K \varepsilon(\quad)
$$

(monogram)
Since the name may be either $\mathrm{K} \varepsilon($ ) or $\mathrm{K} \eta()$, the possibilities are too numerous to be usefully suggested.

F 74 (P 15707). Pl. 13. Black-glazed skyphos. Graffito under foot. Context: 5th century b.c. (G 18:1). Cf. Sparkes-Talcott, no. 359.
Second quarter V cent. B.c. $K \lambda \varepsilon$ ( )
F 75 (P 10466). Pl. 13. Base fragment of blackglazed kylix of type common in the second quarter 5th century b.c. Graffito on underside. Second quarter V cent. b.c. $\quad \mathrm{N} k \omega \sigma[$

The name might be a feminine Nıк $\tilde{\sigma} \alpha$ with omega used correctly, but some masculine name with omicron (e.g., Nikosthenes, Nikostratos) is perhaps more likely.

F 76 (P 18337). Pl. 13. Base of a one-handler. Graffito on underside. Context: first half 5th century b.c. (C 18:4).
Second quarter V cent. B.c. K
Note change in direction of writing. Name not known. Although the sherd might have been convenient as a kleros (lot), the diminutive is not attested in this sense.

F 77 (P 21290). Pl. 14. Black-glazed skyphos of Attic type. Graffito on underside. Context: 460-440 в.C. (N 7:3). Hesperia, XXII, 1953, pl. 38, no. 134. Cf. Sparkes-Talcott, no. 342.
Second quarter V cent. b.c. $\Phi \alpha 1 \sigma\langle\sigma\rangle$ tío
Note doubled sigma (four-barred) and early form of alpha. This name in the form of an ethnic adjective has not previously been reported from Attica.

F 78 (P 17898, P 17971). Pl. 14. Red-figured mug with running Hermes, in the vicinity of the Alkimachos painter. Graffito on upper wall opposite figure. Cf. Sparkes-Talcott, no. 195. Second quarter V cent. b.c. Mí $\omega v$

Perhaps this is the father (or teacher) of Lamprokles mentioned in Schol. Ar., Nub., 968, after whom Alexis' Midon (Ath., XI, 491c) may have been named? The four vertical strokes beneath the name are unexplained.

F 79 (P 21399). Pl. 13. Base of semi-glazed bowl. Graffito on underside. Context: ca. 460-440
в.c. (N 7:3). Hesperia, XXII, 1953, pl. 38, no. 135.

Mid-V cent. b.c. $\quad \Sigma k u \theta \alpha()$
Probably $\Sigma \kappa \dot{\prime} \theta \alpha(\imath v \alpha)$, an ethnic known from elsewhere (Pape, s.v.); $\Sigma$ kư̈ns exists in 5thcentury b.c. Athens.
F 80 (P 21374). Pl. 13. Base of black-glazed bowl. Graffito on underside. Context: ca. 460-440 в.c. (N 7:3). Hesperia, XXII, 1953, pl. 38, no. 132. Mid-V cent. b.c. 'Apiनtı ( )

After the iota a sort of dot has been incised, perhaps the start of the next letter.

F 81 (P 21400). Pl. 13. Base of semi-glazed oinochoe. Graffito on underside. Context: ca. 460-440 в.c. (N 7:3). Hesperia, XXII, 1953, pl. 38, no. 133. Cf. Sparkes-Talcott, no. 152. Mid-V cent. b.c. $\quad$ 'Aplo( $\tau$ )

Note combination of tailed rho and fourbarred sigma. Presumably the same name as F 80, from the same well.

F 82 (P 21373). Pl. 13. Fragment of base of lekane. Graffito on underside. Context: $c a$. 460-440 в.c. (N 7:3). Hesperia, XXII, 1953, pl. 38, no. 136.
Mid-V cent. b.c. $\quad \mathrm{N}$ Jovtos
F 83 (P 21404). Pl. 13. Base and lower wall of black-glazed skyphos. Graffito on underside. Context: ca. 460-440 b.c. (N 7:3). Hesperia, XXII, 1953, pl. 38, no.137. Cf. SparkesTalcott, no. 343.
Mid-V cent. b.C. Koıvaí
If the word is complete, it must be nominative feminine plural and refer perhaps to a set of cups which were common property. A long line separates the end of the word from the beginning.

F 84 (P 5109). Pl. 14. Fragment of base of blackglazed bowl. Graffito on underside. Context: second half 5th century b.c.

## Mid-V cent. B.C. $\Sigma] \imath \sigma \dot{\prime}\langle\mu\rangle \beta \rho \varepsilon s$

The eta (written as epsilon) following rho suggests a foreigner. The nearest parallel for this name is $\Sigma$ ıớuppiov, (nick)name for an hetaira in Theophilos' Flute-lover (Edmonds, II, p. 575, fr. 11).

F 85 (P 772). Pl. 14. Skyphos foot of mid-5th century в.c. type. Graffito on underside. Context: third quarter 5th century b.c. (I 17:1). Mid-V cent. в.c. 'EXбакõv

F 86 (P 22998). Pl. 14. Foot of black-glazed kylix of second quarter 5th-century b.c. type. Graffiti on top and bottom. Context: 5th-4th centuries b.c. Hesperia, XXIII, 1954, p. 54. Cf. Sparkes-Talcott, no. 438.
$\begin{array}{lll}\text { Mid-V cent. b.c. } & \begin{array}{l}\text { (top) } \\ \text { (bottom) }\end{array} & \begin{array}{l}\text { Eí } \mu \omega v o s \\ \mathrm{M} \Omega \mathrm{NO}\end{array}\end{array}$
A quantity of hobnails found in the same area with this sherd suggests that this Simon may be the cobbler who was friend to Perikles and Sokrates (Diog. Laert., II, 122). The letters on the underside are almost certainly another version of the name which appears on the top. Why the first two letters were omitted is puzzling. Perhaps the writer started by using paint, then thought it might rub off and continued with a sharp instrument, forgetting to go over the first two letters. Perhaps the letters now visible were all that were ever written and represent the last part of the name used as a nickname.

F 87 (P 24698). Pl.14. Base of black-glazed stemless bowl. Graffito on underside. Context: third quarter 5th century b.c.
Third quarter V cent. B.C. A Map ( )
The first alpha may or may not belong to the name. Athenian names beginning Marseem to be Hellenistic and later (e.g., Marsyas, Maron, Markos).
F 88 (P 21694). Pl. 14. Large unglazed basin with projecting flat-topped rim, steep sides and ring foot ( $=$ Sparkes-Talcott, no. 1840). Graffito on top of rim. Context: third quarter 5th century b.c. (O 7:10).

Third quarter V cent. b.c. K $K \lambda_{1} \alpha$
No other restoration suggests itself. A Kliaretos is known from Orchomenos (Pape, s.v.).
F 89 (P 23283). Pl. 14. Fragmentary black-glazed skyphos. Graffiti on underside. Context: third quarter 5th century в.c. (O 16:1-2).
Third quarter V cent. B.c. Eư ( ) (monogram) Aủ ( ) (monogram)
Both monograms are partially erased with thin fine scratches.
F 90 (P 17961). Pl. 14. Black-glazed bolsal (= Sparkes-Talcott, no. 540). Graffito on underside. Context: 430-410 в.C. (B 19:7).

F 91 (P 10537). Pl. 14. Black-glazed saltcellar. Graffiti on inside (a) and outside (b). Context: fourth quarter 5th century b.c.(B 15:1). Hesperia,

XVIII, 1949, p. 330, fig. 6, pl. 93. Cf. SparkesTalcott, no. 935.
Fourth quarter V cent. в.c. (a) $\Sigma \mu \nu \cup$ ( )
(b) ПАРАMYN $\Omega$ TOE

Compare $\mathbf{F} 180$ for directions of writing.
F 92 (P 10803). Pl. 14. Small black-glazed bowl. Graffito on underside. Context: fourth quarter 5th century b.c. (H 12:6).
Fourth quarter V cent. B.c. Mvnoıuóxo
The writing exactly fills the circle of the base, and an incised line separates the end of the name from the beginning. At least two men of this name lived in Athens at this time (Prosop. Att., nos. 10333-4).

F 93 (L 3088). Pl. 14. Black-glazed lamp ( $=$ Howland, no. 175, Type 21 C ). Graffito on underside. Context: fourth quarter 5th century b.c. (H 12:6).
Fourth quarter V cent. b.c. $\quad \Delta \rho \alpha \pi \varepsilon ́ \tau \eta\rangle$
The name of a slave (?), perhaps one who came to Athens as a deserter or refugee?

F 94 (P 12030). Pl. 14. Fragment from base of black-glazed stemless cup. Graffito on inner face of foot. Context: fourth quarter 5th century b.c. (N-P 20:1).
Fourth quarter V cent. b.c. ]áto $\delta ı к[\alpha i \omega s$ ei $\mu i$
F 95 (P 13099). Pl. 14. Base of black-glazed bowl. Graffito on underside. Context: fourth quarter 5th century b.c. (O 19:4).
Fourth quarter V cent. в.c. $\Delta \eta \mu \eta()$
F 96 (P 15217). Pl. 14. Black-glazed one-handler. Graffito under foot. Context: 5th century b.c. (G 18:1).
Fourth quarter V cent. b.c.
. . PKE
F 97 (P 18620). Pl. 15. Part of shoulder of unglazed amphora. Graffito on top of shoulder, upside down to pot. Context: fourth quarter 5th century b.c. (C 19:9).
Fourth quarter V cent. B.C. 'Avסpi ( $\sigma \mathrm{Kou}$ )
F 98 (P 12510). Pl. 15. Fragment from bottom of black-glazed one-handler of late 5th-century B.c. type. Graffito on underside. Context: late 5th-4th centuries b.c.
Late V cent. B.C. E Meı E ( )
 ous such names are known in Athens from early in the 4th century b.C.

F 99 (P 16903). Pl. 15. Fragmentary black-glazed one-handler ( = Sparkes-Talcott, no. 754). Graffito on outside lower wall. Context: late 5th century в.с. (A-B 21-22:1).
Late V cent. b.c. (see drawing)
Perhaps non-Greek?
F 100 (P 16904). Pl. 15. Wall fragment from black-glazed skyphos. Graffito on outside. Context: late 5th century b.c. (A-B 21-22:1). Late V cent. B.C. (see drawing)

Second and third letters appear to be nonGreek? Compare F 99.
F 101 (P 16905). Pl. 15. Rim fragment of blackglazed skyphos. Graffito on outside. Context: late 5th century в.с. (A-B 21-22:1).
Late V cent. B.C. Kєкро[
Compare Kekropidon of the mid-4th century B.C. (Prosop. Att., no. 8264).

F 102 (P 26424). Pl. 15. Lower part of amphora handle with thumbprint impression. Graffito on outside, running vertically from bottom. Context: late 5th century b.c.
Late V cent. B.c. $\quad \Gamma \alpha$ ( )
F 103 (L 2653). Pl. 15. Fragmentary black-glazed lamp ( $=$ Howland, no. 215, Type 23A). Graffiti on rim (a) and nozzle (b).
Late V cent. b.c.
(a) $\kappa \alpha[\cup \sigma T \eta\rangle \rho] ~ \Phi i \lambda i \pi \eta s$
(b) $A N$

One expects kappa-alpha to begin a word for lamp, but kandelion is too late. The word restored above is one possibility; another is that kappa-alpha begins the name of a child of Philippe in the nominative case serving as subject of $\alpha v(\xi \theta \eta \kappa \varepsilon)$.
F 104 (P 27314). Pl. 15. Black-glazed saltcellar of late 5th-century b.c. type. Graffito on underside, within ring foot. Context: last quarter 5th century b.c. (S 16:1). Cf. Sparkes-Talcott, p. 135, note 5. Hesperia, XXXV, 1966, p. 83.

Late V cent. b.c. Tpoxĩo
This nickname may derive from the bird or from the comedy of Heniochos of the same name, dated by Edmonds to ca. 411 b.c. (Edmonds, I, p. 915, fr. 4; p. 997). More lightly scratched in center of foot two numerals may be distinguished: 5 l, i.e., 6 and 7.
F 105 (P 27353). Pl. 15. Fragmentary black-glazed bowl of late 5th-century b.c. type. Graffito on underside, within ring foot. Context: last quarter 5th century b.c. (S 16:1).

Late V cent. b.c. $\quad K \varepsilon \rho()$
The odd spacing results from the writer's avoidance of the black-glaze dot and circle in the center. Another scratch to the right does not seem to be a letter.

F 106 (P 24774). Pl. 15. Rim fragment of lekane. Graffito on top of rim. Context: latest 5th century в.c.
Latest V cent. b.c. $\Xi a v()$
F 107 (P 103). Pl. 15. Fragment of straight-sided black-glazed saltcellar of a type found chiefly in second half 5th century b.c.; compare, for example, Hesperia, IV, 1935, p. 508, no. 48. Graffito on underside.
Second half V cent. b.c. Eíuo عiц ${ }^{\prime}$

F 108 (P 1870). Pl. 15. Black-glazed saltcellar with flat bottom and slightly incurving walls of a type common in later 5th century b.C.; compare Hesperia, XVIII, 1949, p. 330, no. 69. Graffito on underside.

Names beginning thus seem generally very late (Roman period) or non-Athenian.

F 109 (P 3736). Pl. 15. Rim fragment of blackglazed bowl. Graffito on outside.
Second half V cent. b.c. $\Xi \alpha v()$
Note combination of Ionic xi with slantbarred alpha.

F 110 (P 19555). Pl. 15. Fragmentary black-glazed one-handler. Graffito on underside. Context: second half 5th century b.c. (C 19:5).
Second half V cent. b.c.
'Emiy ( )
F 111 (P 24265). Pl. 15. Black-glazed handle from small oinochoe, triangular in section. Graffito on outside, running down vertically. Context: second half 5th century b.c. (Q 8:1).
Second half V cent. b.c. $\Lambda \varepsilon u()$
We know several 5th-century b.c. Athenian names beginning with these letters, e.g., Leukades, Leukaios, Leukippos. Cf. also F 47.
F 112 (P 24691). Pl. 15. Base of semi-glazed onehandler. Graffito on underside. Context: second half 5th century b.c.
Second half V cent. b.c. 'Ap ( ) (ligature) Mo ()
Mo ( )
Mo ( )

Two crossing lines divide the circle inside foot into four sections; the ligature occupies one of these, and two of the thrice repeated two letters occupy two others.
F 113 (L 3269). Pl. 15. Nozzle of black-glazed lamp ( $=$ Howland, no. 220, Type 23A). Graffito on top of nozzle.
Second half V cent. b.c. $\quad \sum a u^{\prime} \mid$ pas
Probably feminine genitive. The Satyra who was hetaira to Themistokles (Ath., XIII, 576c) was probably no longer alive, but the name was an appropriate one for the trade.
F 114 (P 26866). Pl. 15. Upper part of handle of black-glazed oinochoe ( $=$ Sparkes-Talcott, no. 116). Graffito at mouth attachment.

Late V cent. B.c. $\quad$ 「 $\lambda \alpha$ ( )
F 115 (P 5203). Pl. 15. Lower wall fragment of black-glazed cup. Graffito outside.
V cent. b.c. ] $i \delta 0$ вi $\mu[i$
F 116 (P 7254). Pl. 15. Fragment from bottom of semi-glazed one-handler (?). Graffito inside, almost certainly written on the whole pot.
V cent. в.c. 'Hyधбо́v[
F 117 (P 8120). Pl. 16. Part of bottom of redfigured skyphos with ring foot. Graffito on underside.
V cent. B.C.

> J $\alpha \tau \alpha i ́ \eta$ ]s

Perhaps 'Ekatain (not known in Athens); non-Attic because of eta following iota?
F 118 (P 10512). Pl. 16. Fragmentary black-glazed saltcellar with concave sides and flat bottom. Graffito on outside wall.
V cent. b.c.

$$
\begin{gathered}
\text { По入]úkтороs } \\
\text { ]бо }
\end{gathered}
$$

The suggested name is heroic and nonAthenian.

F 119 (P 14938). Pl. 16. Base fragment of blackglazed kylix. Graffito on underside.
V cent. b.c. Aíoxl ( )
F 120 (P 17139). Pl. 16. Base of black-glazed stemless cup of 5th-century b.c. type. Graffito on underside.
V cent. b.c. Eịp( )
F 121 (P 19958). Pl. 16. Black-glazed pyxis lid of 5th-century b.c. type. Graffito on top. Cf. Sparkes-Talcott, no. 1307.
V cent. b.c. Nikn ( )

F 122 (P 20019). Pl. 16. Base fragment of blackglazed skyphos. Graffito on underside.
V cent. b.c. Jayu ( )
F 123 (P 21220). Pl. 16. Base and part of wall of small stemless black-glazed cup. Graffito on underside. Context: late 5th century b.c. (Q 10:4).
V cent. b.c. KOE
See drawing. Perhaps $K \omega \dot{\eta}(\varsigma)$ ?
F 124 (P 25822). Pl. 16. Black-glazed rim fragment, probably of mug. Graffito outside.
V cent. b.c. ]a $\lambda_{1 \alpha}[$
Perhaps K]a $\lambda \lambda i \alpha$ or K]a $\lambda_{1} \alpha \dot{\alpha}[\delta o u$.
F 125 (P 25892). Pl. 16. Fragment of black-glazed kylix base. Graffito on underside.
V cent. b.c. $\quad \Sigma \theta \varepsilon v i o[$
F 126 (P 83). Pl. 16. Base fragment of blackglazed bowl (?). Graffito on underside.
V cent. b.c. $\Phi_{1} \lambda(\quad)$
F 127 (P 2841). Pl.16. Black-glazed oinochoe with ring foot and trefoil mouth. Graffiti on shoulder. Context: ca. 410-390 в.c. (H 12:11).
Ca. 410-390 в.c. $\Delta \eta() \quad \Delta \eta \xi i o$
Compare F 136.
F 128 (P 18952). Pl. 16. Part of bottom of bowl or cup with ring foot, glazed black to red. Graffito on underside. Context: late 5th-early 4th centuries b.c. (C 19:9).
Late V-early IV cent. B.c. $\quad \Lambda \varepsilon \omega[$
Beautiful letters worthy of major epigraphy. Many names beginning in this way are known in 5th-century b.c. Athens: Leobotes, Leogoras, Leodamas, Leon, etc.

F 129 (L 4134). Pl. 16. Fragmentary black-glazed lamp ( $=$ Howland, no. 258, Type 24C). Graffito on side.
Late V-early IV cent. B.C.
Meik ( ) or Meki ( )? (monogram)
Perhaps for a name like Meixiades, etc., before the letter xi was obligatory.

F 130 (P 17059). Pl. 16. Fragment from shoulder of unglazed amphora. Graffito on outside. Context: 5th-4th centuries b.c. Hesperia, XXV, 1956, p. 23, no. 103.


F 131 (P 23821). Pl. 16. Fragmentary black-glazed oinochoe with ring foot and trefoil mouth. Graffiti on handle (a) and on wall (b). Context: ca. 400-390 в.с. (Q 15:2).
Ca. 400-390 в.с. (a) 'Avסpiбко єi $\mu i$ ठıкаíws
(b) $] \lambda \lambda \circ s$

For the assertion of ownership compare Hesperia, Suppl. VII, p. 31 and also F 132 below. Another black-glazed fragment (Agora inv. no. P 26389) from this deposit has part of what is probably the same name: ]loko[.
F 132 (P 23835). Pl. 17. Fragmentary lekane with flat-topped rim. Graffito on top of rim. Context: ca. 400-390 в.с. (Q 15:2).

Note use of omicron in the adverb, as compared with omega in F 131. (Part of the lekane could not be found when the final drawings were made, so that it was necessary to copy the -karos from the drawing on the catalogue card; the letters which were never found are dotted in to show the spacing and hence presumed order.)
F 133 (P 23872). Pl. 16. Fragmentary bolsal, glaze fired red all over. Graffito on underside. Context: ca. 400-390 в.c. (Q 15:2).
Са. 400-390 в.с. Піт ( )
F 134 (P 23874). Pl. 16. Base fragment of unglazed pot with ring foot. Graffito on underside. Context: ca. 400-390 в.c. (Q 15:2).
Ca. 400-390 в.c. $\quad \Sigma \omega \sigma$ [
F 135 (P 7977). Pl. 16. Part of base of blackglazed skyphos of early 4th-century b.c. type. Graffito on underside. Context: 4th century B.c. (E 6:3).

Early IV cent. B.C. $\Delta \varepsilon ı v i ́ \alpha s$
F 136 (P 8621). Pl. 16. Part of base of oinochoe like F 127. Graffito on underside. Context: 4th century b.c. (E 6:3).
Early IV cent. B.c. $\quad \Delta \varepsilon \xi i o[$ Compare F 127.
F 137 (P 23272). Pl. 16. Part of bottom of blackglazed one-handler (?). Graffito on underside. Context: latest 5th to 4th centuries b.c.
Early IV cent. B.c. $\quad \wedge \alpha \mu \alpha()$
F 138 (P 27566). Pl. 16. Base of black-glazed bowl of early 4th-century B.c. type. Graffito on inside. Context: late 5th-early 4th centuries b.c. (I 16:7).
Early IV cent. b.c. $\Pi u ̛ ̣ \rho \omega \nu$
Note angular form of omega.

F 139 (P 24024). Pl. 17. Base fragment of blackglazed skyphos of Corinthian type. Graffito on underside. Context: first quarter 4th century B.C. (G 13:5).

First quarter IV cent. B.C.

Toũ $\delta \varepsilon ı v \widetilde{\alpha}$ єịl $\delta 1]$ kaíws

F 140 (P 3721). Pl. 17. Fragmentary base of plastic vase with traces of figure attachment. Graffito on underside. Context: second quarter 4th century b.c. (H 7:3). Hesperia, VI, 1937, p. 89, fig. 46, f.
Second quarter IV cent. b.c. ] $\quad$ 'uovos
F 141 (P 12396). Pl. 17. Small roughly made saucer with thin glaze. Graffito on floor. Context: second quarter 4th century b.c. (G 12:23). Second quarter IV cent. B.C. छ $\varepsilon v o ́ \propto \alpha$ vȚOS
F 142 (P 14636). Pl. 17. Fragmentary black-glazed oinochoe. Graffito on neck. Context: second quarter 4th century b.c. (E 2:3).
Second quarter IV cent. b.c. Г ŕpuos
F 143 (P 14644). Pl. 17. One-handled bowl of a type common in the first half 4th century b.c.; cf. D. M. Robinson, Olynthus, V, Mosaics, Vases and Lamps, Baltimore, 1933, pl. 180, no. 923. Graffito on underside. Context : second quarter 4th century b.c. (E 2:3).
Second quarter IV cent. b.c. $\sum \omega \sigma \tau \rho \alpha \dot{t o}$
F 144 (P 14658). Pl. 17. Base fragment of blackglazed skyphos of Attic type. Graffito on underside. Context: second quarter 4th century b.c. (E 2:3).
Second quarter IV cent. b.c. $] \delta \alpha i o u$ si[ $\mu i$
F 145 (P 11798). Pl. 17. Fragmentary black-glazed one-handler (= Sparkes-Talcott, no. 759). Graffito on underside. Context: first half 4th century B.C. (BB 17:1).

First half IV cent. B.C. $\Xi \varepsilon \cup \circ \rho \square \tilde{o}(v t o s) \quad \Xi$
F 146 (P 18003). Pl. 17. Base of black-glazed skyphos of a type common in first half 4th century в.c.; cf. D. M. Robinson, Olynthus, V, pl. 85. Graffito on underside. Context: first half 4th century в.с. (С 19:5).
First half IV cent. b.c. 'А $\lambda \kappa$ кim то
F 147 (P 1444). Pl. 17. Base of black-glazed kantharos with rouletting on floor; mid-4th century b.c. type, approximately like Hesperia, VI, 1937, pp. 88-89, fig. 46, c. Graffito on underside, inside foot.
Mid-IV cent. B.C. $\Pi \alpha v \delta ı()$

F 148 (P 1458). Pl. 17. Handle of black-glazed oinochoe, triangular in section. Graffito near top, running down from above. Context: mid4th century b.c. (H 17:5).
Mid-IV cent. b.C. 'Apti ( )
F 149 (P 7502). Pl. 17. Base fragment of blackglazed bowl. Graffito on underside, within foot. Context: mid-4th century b.c. (C 12:2). Mid-IV cent. b.c. 'Aplotu[

F 150 (P 14705). Pl. 17. Base of black-glazed bowl, with stamped palmettes on floor, of mid-4th century b.c. type. Graffito on underside. Context: 4th century b.c. (F 20:1).
Mid-IV cent. b.C. $\Sigma \omega \varphi \rho o v a ̃ s ~ \Delta i o v$ 'voros
Do the two names perhaps represent joint owners? The first is not attested either as a masculine nominative or feminine genitive.

F 151 (P 19956). Pl. 17. Foot of black-glazed kantharos of mid-4th century b.c. type. Graffito on underside, within foot.
Mid-IV cent. B.C. 'A $\mathrm{A} \rho \mathrm{o}$ ( )
It seems more likely that the second letter is an incomplete triangular phi than either tau or chi.

F 152 (L 535). Pl. 17. Black-glazed lamp (= Howland, no. 283, Type 25A). Graffiti on left side of nozzle, unfinished because of lack of space (a), and on right side, upside down to lamp (b). Context : mid-4th century B.c. (G 14:2).
Mid-IV cent. B.C. (a) $\Delta_{i \varphi i}(\lambda \circ u)$
(b) $\Delta i \phi i \lambda o u$

F 153 (P 22914). Pl. 17. Black-glazed saltcellar with incurving rim and small ring foot (= Sparkes-Talcott, no. 947). Graffito on underside.
Mid-IV cent. b.c. 'Aplot ( )
F 154 (P 18619). Pl. 17. Wall and base fragment of small black-glazed pyxis with molded ring foot. Graffito outside on wall. Context: third quarter 4th century b.c. (B 18:7).
Third quarter IV cent. B.C.

F 155 (P 20283). Pl. 17. Base fragment of blackglazed closed pot. Graffito on underside. Context: third quarter 4th century b.c.
Third quarter IV cent. b.C. 'E $\omega \nu$ ( )
No name beginning thus is attested.

F 156 (P 20987). Pl. 18. Small black-glazed bowl. Graffito inside on floor. Context: third quarter 4th century b.c.
Third quarter IV cent. B.C. Nou ( )
F 157 (P 22218). Pl. 18. Black-glazed pyxis lid with groove around outer part of top and around outer edge ( $=$ Sparkes-Talcott, no. 1317). Graffito on top. Context: third quarter 4th century b.c.
Third quarter IV cent. в.C. 'Exєкраті完 $\alpha$
(See drawing for other symbols.) Note brokenbarred alpha; cf. so-called Darius vase, A. Furtwängler and K. Reichhold, Gr. Vasenmalerei, II, München, 1909, p. 146.
F 158 (P 22116). Pl. 18. Black-glazed stem of multiple kernos. Graffito around stem. Context: to third quarter 4th century B.C. (J 11:1). Cf. Sparkes-Talcott, no. 1364.

F 159 (P 26945). Pl. 18. Ring foot of blackglazed bowl of Hellenistic type. Graffito on underside. Context: third quarter 4th century B.C. (I 15:2).

Third quarter IV cent. B.c. ${ }^{\prime}$ Арt ( )
The third letter is smaller and more bluntly incised; perhaps it is an addition by another hand.
F 160 (P 266). Pl. 18. Base fragment of blackglazed plate with rouletting and stamped palmettes. Graffito on underside, within foot. Context : fourth quarter 4th century в.с. (H 6:9). Fourth quarter IV cent. B.c. T] $\mu \omega \xi \xi \nu[0 \cup$

Note use of omega.
F 161 (P 6889). Pl. 18. Base fragment of blackglazed plate with rouletting on floor, of late 4th-century b.c. fabric. Graffito on underside.
Late IV cent. b.c. Kє甲 $[$
F 162 (P 15446). Pl. 18. Black-glazed small stamped plate of late 4th-century b.c. type. Graffito on underside.
Late IV cent. B.C. Kapa ( ) $\Delta$
Reading very uncertain; first alpha and rho in ligature. The two attested Athenian names (Karaichos and Karaios) belong to the 2nd century b.c. More tempting is the 4th-century b.c. orator Kallimedon whose nickname was Karabos (Plut., Dem., 27).
F 163 (L 3042). Pl. 18. Red-glazed lamp ( $=$ Howland, no. 372, Type 26B). Graffiti on right side
of body (a), on top of nozzle (b), and on rim (c). Context: late 4th century b.c. (B 13:8). Hesperia, XXXVIII, 1969, p. 390.
Late IV cent. b.c.
(a) Mévowos Al
(b) $M \varepsilon \varepsilon v \omega(v \circ \varsigma)$
(c) $M(\varepsilon v \omega v \circ s)$

F 164 (P 897). Pl. 18. Base of black-glazed kantharos. Graffito on underside, inside foot. Context: second half 4th century b.c. (F 16:1).
Second half IV cent. b.c. Mévढ v
Mentioned in Hesperia, III, 1934, p. 317 where other graffiti which may be abbreviations of the same name and perhaps refer to the same person are cited. Compare also F 163, which is contemporary and was found not far away.

F 165 (MC 216). Pl. 18. Black-glazed terracotta object, beehive-shaped and vertically pierced, with neck on top and flat bottom. Graffiti around body (a) and on underside (b). Context: 4th to early 3rd centuries B.C. (D-E 8-9:1).
Second half IV cent. B.c. (a) $\Delta \eta \mu \eta \tau \rho i a s$
(b) Eủtuxi[as
(b) is perhaps more likely as a word than as a name.

F 166 (MC 224). Pl. 18. Red-glazed terracotta object with rounded bottom, concave top, central collar around vertical hole. Graffito on top. Context: 4th to early 3rd centuries B.C. (D-E 8-9:1).
Second half IV cent. B.C. Ka $\quad$ ( )
Names beginning thus are both late and too foreign to be likely. Possibilities are: Kamireus (man of Kamiros); kamineus (kilnmaster). But perhaps two lambdas have run together and it should be read K $\alpha \lambda \lambda i(\alpha s)$.

F 167 (P 133). Pl. 18. Base fragment of blackglazed plate with rouletting, of 4th-century b.c. type. Graffito on underside, within ring foot.
IV cent. B.C. П〕○入uєú(kTou)
F 168 (P 199). Pl. 18. Base of black-glazed skyphos of 4th-century b.c. type, as in D. M. Robinson, Olynthus, V, p. 185. Graffito on underside.
IV cent. b.c. 'H $\gamma \eta{ }^{\prime} \sigma 1 \pi(o s)$
Scratches on the rim suggest an attempt at a final sigma.

F 169 (P 6903). Pl. 18. Rim fragment of semiglazed saucer with plain rim. Graffito outside just below rim. Context: 5th-4th centuries B.C. IV cent. в.c. $\quad \sum \alpha \pi \rho \alpha[$

No such name is known. Perhaps a label for something "rotten'?

F 170 (P 7670). Pl. 18. Bottom of black-glazed skyphos of same type as F 168. Graffito on underside. Context: 2nd-4th centuries (C 13:2).
IV cent. b.c. Eúpos A
Probably a slave's name? or a metic's?
F 171 (P 9645). Pl. 18. Shoulder fragment from coarse amphora. Graffito outside. Context: 4th century b.c. and late Roman.
IV cent. b.c.

$$
\begin{aligned}
& \text { ]. OHT.[ } \\
& \text { ]MŋттүЕ }
\end{aligned}
$$

Metigenes is not known, but there seems to be no reason against such a compound.

F 172 (P 17794). Pl. 18. Rim fragment from black-glazed lidded bowl of 4th-century b.c. fabric. Graffito outside just below flange.
IV cent. b.c. NıкПб[
F 173 (P 17902). Pl. 18. Base fragment of blackglazed bowl of 4th-century b.c. fabric. Graffito on underside.
IV cent. B.c. $\quad \Pi \lambda \alpha() \quad$ K
F 174 (P 20846). Pl. 19. Base fragment of blackglazed plate with rouletting on floor, of 4thcentury B.c. fabric. Graffito on underside.
IV cent. b.c. $\quad X a \mathfrak{l}$ ( )
F 175 (P 22104). Pl. 19. Base of black-glazed olpe of 4th-century b.c. type. Graffito on underside.
IV cent. B.C. $\quad M \mu()$
F 176 (P 24859). Pl. 19. Base of black-glazed bowl. Graffito on underside. Context: 5th4th centuries b.c.
IV cent. B.c. Kahúkn
The name is borne by various mythical persons (Pape, s.v.) including the heroine of Stesichoros' poem of that name (from which was derived the name of a song, Aristox., Fr. Hist., 72); also a member of Lysistrata's conspiracy in Aristophanes' play (Lys., 322).

F 177 (L 4212). Pl. 19. Black-glazed lamp ( = Howland, no. 267, Type 25A). Graffiti on side (a), on other side, upside down to lamp (b), and on top of nozzle (c).
IV-early III cent. b.c.
(a) $\Delta_{10 k} \lambda$ ह́ous
(b) $\varepsilon i \mu i$
(c) EM

The drawing of a boukranion on this same piece is catalogued below as M14. On the bottom is an unidentified mark.

F 178 (L 3653). Pl. 19. Black-glazed lamp ( = Howland, no. 276, Type 25A). Graffiti on top (a) and on either side of nozzle (b,c).

IV-early III cent. B.C.
(a) $\sum \alpha$ ( )
(b) $\sum \alpha l()$
(c) $\sum \alpha Z$ ( )

A foreign name? None such is attested, to our knowledge.
F 179 (P 580). Pl. 19. Base of black-glazed bowl with molded foot. Graffito on underside, within foot. Context: late 4th to early 3rd centuries b.c. (H 16:3, Group B, Hesperia, III, 1934, pp. 330 ff .).
Late IV-early III cent. b.c. 'Ay $\alpha \theta$ ok $\lambda \varepsilon \varepsilon_{[ }[v]$ s
F 180 (P 633). Pl. 19. Base of black-glazed bowl with molded foot. Graffito on underside, within foot. Context: late 4th-early 3rd centuries b.c. (H 16:3, Group B, Hesperia, III, 1934, pp. 330 ff .).
Late IV-early III cent. b.c. $\sum$ Matu ( ) Míou
Two names, of successive or joint owners? For arrangement of letters compare $\mathbf{F} 91$ and L 12.

F 181 (P 1493, P 1538). Pl. 19. Rim fragment of black-glazed kantharos, of early Hellenistic type. Graffito on upper wall outside.
Late IV-early III cent. B.C. Ф]єıסобтp(ג́тou)
F 182 (P 7740). Pl. 19. Base of black-glazed bowl. Graffito on underside. Context: late 4th-early 3rd centuries b.C. (E 3:1).
Late IV-early III cent. b.c. $\Lambda \alpha \mu \dot{\prime} \alpha$ S $X$
F 183 (L 2229). Pl. 19. Unglazed lamp ( $=$ Howland, no. 296, Type $25 \mathrm{~A}^{\prime}$ ). Graffito on top. Context: late 4th-early 3rd centuries b.C. (E 3:1).
Late IV-early III cent. b.c. $\quad \sum_{1} \mu i \alpha$ ' $\mathrm{H} \varphi \boldsymbol{\alpha}$ ( )
It hardly seems possible that the second word is an abbreviation for the god.
F 184 (P 18009). Pl. 19. Disc base of black-glazed bowl or stemless cup. Graffito on underside. Context: late 4th-early 3rd centuries b.c. (A 18:6).
Late IV-early III cent. B.c. M $\quad$ 日ík $\eta$
Perhaps M ntíx $^{\eta}$, with a shift of aspirates? The only Metiche known to us is the courtesan who gave her nickname (Klepsydra) to a comedy
of Euboulos in the first half of the 4th century b.c. (Ath., XIII, 567d).

F 185 (L 2019). Pl. 19. Nozzle of black-glazed lamp (= Howland, no. 315, Type 25B). Graffiti on side (a) and top (b). Context: 3rd-2nd centuries B.C. (D $10: 2$ ).
Late IV-early III cent. b.c.
(a) $\Theta \varepsilon \omega \nu$
(b) $\Theta$
(and ligature)
See drawing for ligature. Theta used as an initial on top makes the personal name Theon more likely than $\theta \varepsilon \tilde{\omega} v$.

F 186 (P 14960). Pl. 19. Base fragment of blackglazed bowl (?). Graffito on underside. Context: late 4th to 3rd centuries b.c.
Late IV-early III cent. b.c. E E ̣ßí(ou)
F 187 (P 15397). Pl. 19. Base of black-glazed bowl of late 4th- or 3rd-century b.c. fabric. Graffito on underside.
Late IV-III cent. B.c. $\quad \Delta \eta \mu o ́ p i \lambda o s$
The letters are crowded together towards the end, with the sigma written over the omicron.
F 188 (P 18625). Pl. 19. Floor fragment of blackglazed plate with stamped palmettes and rouletting. Graffito on underside.
IV-III cent. b.c. Nıкผ́
Or it could be an abbreviation of a longer name.

F 189 (P 136). Pl. 19. Base of small glazed bowl of early 3rd-century b.c. type. Graffito on underside, within foot.
Early III cent. b.c. $\quad \Delta_{1} \delta($ (ou)
The two ligatures of delta with a stroke at the side (see drawing) may give a name such as the above. It is also possible that the first two letters of a name were written twice (cf. F 112).
F 190 (P 119). Pl. 19. Base of open bowl with brownish black glaze and ring foot, similar to F 189. Graffito on underside, within ring foot. Context: to mid-2nd century b.c. (H6:9).
Early III cent. b.C. $\operatorname{M\varepsilon v}($ ) (monogram)
Athenian names beginning thus in the third century b.C. range from Menaichmos to Menon.
F 191 (P 416). Pl. 19. Molded ring base from black-glazed cup of early 3rd-century B.C. type. Graffito on underside, within foot.
Early III cent. b.C. $\mathrm{H} \Omega \rho \mathrm{E}$
Compare F 192, same type of base, same inscription, found about 40 meters away.

F 192 (P 19170). Pl. 19. Molded ring base from black-glazed cup of early 3rd-century b.c. type. Graffito on underside, within foot.
Early III cent. b.c. $\mathrm{H} \Omega \Omega \mathrm{E}$
F 193 (P 7607). Pl. 19. Base of black-glazed bowl with molded ring foot of early 3rd-century b.c. type. Graffito on underside. Context: Hellenistic (C 14:1).
Early III cent. в.c. Парив ( )
The first two letters form a ligature.
F 194 (P 20216). Pl. 19. Fragmentary black-glazed plate with linked palmettes and rouletting on floor, of early 3rd-century B.c. shape. Graffito on underside.
Early III cent. B.c. 'Apo ( ) (retrograde)
F 195 (P 20848). Pl. 19. Base of black-glazed bowl with stamped linked palmettes and rouletting on floor. Graffito on underside. Context: early 3rd century в.c. (D 17:3).
Early III cent. b.c. Miк人 ( )
An abbreviation of some name like Mikalion or Mikalos has been assumed, but the four letters may be the complete nominative of the feminine name Mika; six women of this name were buried in Athens between the late 5th and early 3rd centuries b.c. (I.G., $\mathrm{II}^{2}, 12126-12131$ ).
F 196 (P 16295). Pl. 19. Shoulder fragment from unglazed pitcher. Graffito on outside. Context: 3rd century b.c. (N $21: 4$ ).
Second quarter III cent. b.c. $\quad N \eta \sigma()$
The abbreviated name is framed by a cartouche; see drawing. Nesiotes or Nesokles are possible names; no example of either is known to us from this general time, with the possible exception of a restored Nesiotes in S.E.G., XXI, 330.5 (307/6 в.c.).
F 197 (L 3293). Pl. 19. Black-glazed lamp base ( = Howland, no. 553, Type 43C). Graffito on underside. Context: second half 3 rd century b.c. (N 20:7).

Late III cent. B.C. Kp̣ ( )
F 198 (P 24935). Pl. 20. Unglazed tall-necked jug. Dipinto in black on shoulder. Context: second half 3 rd century b.c. (O 16:3).
Second half III cent. b.c.
${ }^{\prime}$ ЕриítтTou X(ósऽ) $\beta^{\prime} k(o ́ t v \lambda \alpha ı) ~ 1 \alpha^{\prime}$
The capacity is 10.200 liters to the lip. Two choes and eleven kotyles ( 35 kotyles), based on a kotyle of 0.2731 ., would be 9.5551 .

F 199 (P 5820, P 5925). Pl. 20. Flat handle from large unglazed amphora or pitcher. Graffito on outside, running from bottom up. Context: 3rd century b.c. (E 14:1).


That is, "(the property) of Agathon, a thief; a bargain for a penny." The writing may be in two different hands, as if after Agathon labeled the jar he himself was labeled a thief and responded with an assertion of the pot's worthlessness.

F 200 (P 5838). Pl. 20. Fragmentary black-glazed fish-plate. Graffito on underside. Context: 3rd century b.c. (E 14:1).
III cent. b.c. Nikı ( )
F 201 (P 5918). Pl. 20. Rim fragment of a West Slope kantharos with offset lip; 3rd-century B.C. fabric. Graffito on outside of lip. Context: Hellenistic.
III cent. b.c. Xpuọ[i] $] \pi$ rou
F 202 (P 8037). Pl. 20. Fragment of base of unglazed pot. Graffito on underside. Context: 3rd century в.с. (B 13:1).
III cent. b.C. Mév| $\bar{\eta}$ tos
F 203 (P 11202). Pl. 20. Fragmentary West Slope kantharos of 3rd-century b.c. type. Graffito on lower body, running downward. Context: 3rd century B.C. (B 13:1).
III cent. b.c. $\Sigma u ́ p o u$
The name appears in Athenian records (e.g., I.G., II, Add. 834b, c; 959c 16; II, Suppl. 4114b) but may well be a slave's name. Compare $\mathbf{F} 170$.
F 204 (P 20191). Pl. 20. Rim fragment from Megarian bowl. Graffito on outside, just under lip. Context: late 4th-3rd centuries b.C.
III cent. b.c. Mũs
The name may be complete, or it may be abbreviated from Mustion, Mustichides, etc.
F 205 (P 20329). Pl. 20. Rim and wall fragment of black-glazed bowl. Graffito on outside just above base. Context: 3rd century b.c.
III cent. b.c. 'A]pximmo[u
F 206 (P 25998). Pl. 20. Black-glazed bowl with stamped palmettes and rouletting on floor. Graffiti on underside (a) and on outside wall (b). Context: 3rd century b.C. (F 17:3).
III cent. b.c.
(a) $\Delta_{\mu \nu}()$
(b) N

If this is a name，Dimnos is a possibility－ not known in Athens，but a friend of Alexander the Great（Diod．Sic．，XVII，79）．

F 207 （P 26004）．Pl．20．West Slope kantharos． Graffito outside on wall below lip．Context： 3rd century b．c．（F 17：3）．
III cent．b．c．$\quad$ 人 $\alpha_{1}()$
Possible Athenian names include Laios（4th century b．c．，Prosop．Att．，no．8961）and Lais－ podias（5th century b．C．，Prosop．Att．，nos． 8962，8963）．

F 208 （P 26262）．Pl．20．Fragmentary black－glazed fish－plate．Graffito on underside．Context：ca． 200 в．с．（M 18：10）．
Ca． 200 в．c．＇AбK（ ）
F 209 （P 6128）．Pl．20．Fragment from rim of Megarian bowl of 3rd－to early 2nd－centuries B．C．type．Graffito outside．Context：Hellenistic．
III－early II cent．b．C．］s $\Delta$ iovoriou ．［
Not certainly an owner＇s name．Perhaps genitive is father＇s name．

F 210 （P 10729）．Pl．20．Fragmentary black－glazed bowl．Graffito on underside．Context：3rd－2nd centuries b．c．（F 5：1）．
Late III－early II cent．B．c．$\Gamma \varepsilon \nu()$
F 211 （L 2122）．Pl．20．Unglazed lamp（＝How－ land，no．464，Type 34 Var．）．Dipinto in black on side．
Late III－early II cent．b．c．$\Phi_{i} \lambda_{l}($ ）
F 212 （L 4194）．Pl．20．Black－glazed lamp（ $=$ How－ land，no．430，Type 32）．Graffito on rim． Context：late 3rd－early 2 nd centuries b．c． （M 21：1）．
Late III－early II cent．b．c．K ${ }^{\prime} \mu \mathrm{ou}$
Compare F 213 from same cistern．
F 213 （P 18756）．Pl．20．Base of black－glazed mug or bowl of Hellenistic fabric．Graffito on underside．Context：late 3rd－early 2 nd centuries B．C．（M 21：1）．
Late III－early II cent．B．C．K $\quad \mathrm{L}(\mu \mathrm{ov})$
See F 212 for the restored name．
F 214 （L 3077）．Pl．20．Black－glazed lamp（＝How－ land，no．445，Type 34A）．Graffito on underside． Late III－II cent．b．c．
See drawing for monogram，probably to be resolved thus：Ka入入ías

F 215 （P 1881）．Pl．20．Fragment from base of deep black－glazed bowl of 3rd－to 2nd－centuries B．C．fabric．Graffito on underside．Context： Hellenistic filling of the Middle Stoa，so prob－ ably not later than mid－2nd century b．c．
III－II cent．b．c．＇Ovnoiu［ou
F 216 （P 3163）．Pl．20．Fragment of coarse pot lid． Letters incised in soft clay．Context：Hellenistic． III－II cent．b．C．］$\downarrow$ тíiou
F 217 （P 3285）．Pl．20．Shoulder fragment of large coarse amphora．Dipinto in black．Con－ text：Hellenistic．
III－II cent．B．c．＇I $\pi \pi \alpha$（ ）
F 218 （P 3446）．Pl．20．Neck fragment of coarse amphora．Dipinto in red．Context：Hellenistic． III－II cent．b．C．＇Iєpoк［
F 219 （P 3788）．Pl．20．Small black－glazed handle from cup．Graffito on outside，running down from above．Context：Hellenistic．
III－II cent．b．c．＇Apl（ ）
F 220 （P 12200）．Pl．20．Base fragment of small bowl of Hellenistic fabric．Graffito on floor．

F 221 （P 14566）．Pl．20．Base fragment of large black－glazed plate of Hellenistic fabric．Graffito on underside．
III－II cent．B．C．$\quad \Pi \rho \varepsilon$（ ）（monogram）
F 222 （P 17425）．Pl．20．Base of large black－glazed bowl or plate of Hellenistic fabric．Graffito on underside．
III－II cent．B．C．$\quad \Sigma \tau \rho \alpha()$
F 223 （P 18264）．Pl．20．Rim fragment of bowl of 3rd－to 2nd－century b．c．type，with West Slope decoration inside；for the shape，cf．Hesperia， III，1934，pp． $348 \mathrm{ff} ., \mathrm{C} 7, \mathrm{D} \mathrm{14} ,\mathrm{D} \mathrm{15} D 28.$, Graffito outside just below lip．
III－II cent．B．c．＇Emir＇́vouṣ
F 224 （P 22836）．Pl．20．Shoulder fragment from coarse amphora．Graffito on outside．Context： Hellenistic．

The next to last letter may be either a ligature of iota－omicron or eta．If this is a name it is not attested，but Planetiades exists as an epithet of the Cynic Didymos（Plut．，def．or．，7）．
F 225 （P 23523）．Pl．20．Wall fragment of West Slope ware．Graffito on outside．
III－II cent．b．c．$\Phi i \lambda 1 \pi \pi$ os $\mathrm{H}[$

F 226 (P 5828). Pl. 20. Base fragment of blackglazed plate or bowl. Graffito on underside.
Hellenistic 'Epuı[
F 227 (P 17043). Pl. 20. Base fragment of lekane of Hellenistic fabric. Graffito on underside. Context: first half of 2 nd century b.c. (B 20:2). First half II cent в.c. 'A $\beta \rho \omega$ ( )
This may be not an abbreviation of a longer masculine name but a complete feminine name: 'Aßp'.

F 228 (P 6867). Pl. 21. Neck fragment of large Roman amphora, similar to Robinson, Chronology, M 14. Dipinto in red. Context: late 2nd century в.c. (C 9:7).
Late II cent. b.c. CO()$^{\prime}$ SE ( )
Since this abbreviation may stand for co(hors) se(cundus), we may wonder if this is a Latin owner's mark.

F 229 (P 526). Pl. 21. Base of black-glazed plate with stamped palmettes and rouletting. Graffito on underside, within foot. Context: 4th to 2nd century в.C. (G 14:2).
II cent. b.c. Eủvo ( )
Probably Eunomos.
F 230 (P 5738). Pl. 21. Base of large black-glazed plate of 2nd-century b.c. fabric. Graffiti on underside (a) and on floor (b). Context: 2ndearly 1st centuries b.c. (E 15:3).
II cent. B.C.
(a) $\Gamma \alpha \pi \tilde{\eta} \varsigma$
(b) X

Gales is not known as a name. Could it be a nickname-"female skunk"-in the genitive case?

F 231 (P 6034). Pl. 21. Fragment of small blackglazed bowl of 2nd-century b.c. fabric. Graffiti outside (a) and inside (b).
II cent. B.C.
(a) $\Theta p a \sigma \dot{v} v \omega$

(b) $\Theta \varepsilon \circ \mu\langle\varepsilon\rangle$

Perhaps written on the sherd; if so, a tag. For the name Thrasunon see S.E.G., XII, 123, 47 (2nd century b.c.).

F 232 (P 23045). Pl. 21. Rim fragment of blackglazed plate of Hellenistic type. Graffito on outside.

II cent. b.c. $\Delta 10 \gamma \varepsilon[$
F 233 (P 7082). Pl. 21. Part of neck and shoulder of large unglazed amphora. Dipinto in black
on shoulder. Context: late 2nd to early 1st centuries в.C. (B 11:1).
Late II-early I cent. B.C. $\Delta$ tovvoiou B
F 234 (P 6864). Pl. 21. Fragment preserving about a quarter of a very large gray-ware plate. Graffito on underside. Context: mixed Hellenistic to early Roman (D 12:2).
Late II-early I cent. B.C. Jıvóסou
F 235 (P 6717). Pl. 21. Neck and shoulder fragment of unglazed amphora. Dipinto in red. Context: Hellenistic.
II-I cent. b.C. $\quad \mathrm{Ni} \gamma()$
All names beginning with these letters seem to be Latin in origin and belong to the Roman period in Athens.
F 236 (P 23163). Pl. 21. Base fragment of blackglazed bowl with stamped palmettes and rouletting, of 2 nd- to 1 st-centuries B.c. type. Graffito on underside.
II-I cent. B.C. Eủ $\eta \mu(\varepsilon \rho \rho o u)$
F 237 (23227). Pl. 21. Base fragment of blackglazed bowl with rouletting on floor; 2nd- to 1st-centuries в.c. type. Graffito on underside.
II-I cent. b.C. 'Avסpl ( )
F 238 (P 6873). Pl. 21. Handle of coarse amphora. Graffito on outside, running down from above. Late Hellenistic 'Apiotcuv
F 239 (P 20361). Pl. 21. Neck fragment from coarse amphora. Graffito on outside, in shieldshaped frame.
Late Hellenistic $\Gamma \circ v($ )
The name Goneus is reported from Samos in the 3rd century b.c. (Bechtel).
F 240 (P 25816). Pl. 21. Small terracotta base. Graffito on side opposite notch for support tenon.
Late Hellenistic Xaı ( )
The second and fourth letters are uncertain and might be lambda and nu respectively. In any case no Athenian name is known.
F 241 (P 13386). Pl. 21. Shoulder fragment from amphora. Dipinto in black. Context: second quarter 1st century b.c. (T 27:1).
Early I cent. b.c. ${ }^{*} A \delta \rho \alpha \sigma(\tau о S) \quad$ (monogram)
F 242 (P 12100). Pl. 21. Base of red-glazed plate with flaring, molded foot. Graffito on underside. Context: second quarter 1st century b.c. (N 20: 4).

Second quarter I cent. b.c. $\mathrm{Ku}(\mathrm{C})$

F 243 (P 5726). Pl. 21. Small, partly glazed jug with angular shoulder. Graffito on top of shoulder. Context: mid-1st century b.c. (E 14:3).
Mid-I cent. b.c. Xрŋनтои̃
F 244 (P 4723). Pl. 21. One-handled jar similar to Robinson, Chronology, F 65. Graffito on shoulder below handle.
I cent. b.c. X X $\quad$ ( )
F 245 (P 4915). Pl. 21. Base of small Pergamene bowl. Graffiti on underside (a) and on floor (b).
I cent. B.c.
(a) N ıко $\lambda$ áou
(b) N

At least two men of this name are known from Athens in this century (Prosop. Att., nos. 10925, 10927).

F 246 (P 10634). Pl. 21. Base fragment of glazed plate, of Hellenistic type. Graffito on underside.
I cent. B.C. $\Phi_{1} \delta i$ ọu
F 247 (P 13307). Pl. 21. Fragmentary black-glazed plate. Graffito on underside. Context: 1st century b.c. Hesperia, Suppl. IV, p. 121, fig. 90, a.
I cent. b.c. ' $\mathrm{Ep} \mathrm{\omega}$ ( )
F 248 (P 16594). Pl. 21. Base fragment of blackglazed plate. Graffito on underside. Context: late Hellenistic.
I cent. b.c. $\quad \Pi \rho \omega()$
F 249 (P 2272). Pl. 21. Fragment of small Arretine bowl with stamp on floor (L. Titius). Graffito on underside.
I cent. b.c. 'ETIKT][
F 250 (P 18284). Pl. 21. Fragment from neck of amphora. Dipinto in red. Context: 1st century B.C. to 1st century (B 19:9).

I cent. b.C.-I cent. $\begin{gathered}\mathrm{K} \Theta \mathrm{T} \\ \text { A]l } \downarrow \omega \text { Tros }\end{gathered}$
The number might be a date on the Seleucid era (from 312/1 в.c.): 329 Secleucid = A.D. 17.

F 251 (P 3143). Pl. 21. Shoulder fragment of amphora. Graffito on outside. Context: 1st century b.c.-1st century (E 15:1).
I cent. B.C.-I cent. Marini
In the same channel was the upper part of a large amphora with the same inscription (Agora inv. no. P 3144). The name appears as Mapeivos in Greek.

F 252 (P 20719). Pl. 22. Upper part of amphora. Dipinto in black on shoulder and graffito above. Context : early 1 st century ( $\mathrm{R} 10: 1$ ).

$$
\begin{array}{ll}
\text { Early I cent. } & \text { (dipinto) } N \varepsilon \varepsilon_{i ́ k} \text { (graffito) } \Gamma^{\triangleright N}
\end{array}
$$

The spelling of this very common name with the diphthong instead of simple iota is frequent from the 1st century b.c. on. Since both signs in the graffito stand for 50 , this seems to be a "bilingual", but it is uncertain whether the number refers to price, capacity, or the fact that the jar is fiftieth in some series.

F 253 (P 21777). Pl. 22. Ovoid amphora with tall neck, offset shoulder and pointed toe. Graffito on shoulder. Context: early 1st century (R 10:1). Early I cent. 'Epu[
F 254 (P 7957). Pl. 22. Shallow bowl with wide ring foot. Graffito on underside. Context: first half 1st century (R 13:1).
First half I cent. 'Акıv ( )
Compare F 320. Akindunos occurs in Roman Athens.

F 255 (P 11249). Pl. 22. Small Samian A bowl with illegible stamp. Graffito on underside. Context: second half 1st century (B 14:3).
Second half I cent. $\quad \Pi \rho \circ \sigma()$
F 256 (P 11256). Pl. 22. Fragment of shallow bowl. Graffito on underside. Context: second half 1st century (B $14: 3$ ).
Second half I cent. Гра甲ıкои̃
F 257 (P 18435). Pl. 22. Upper part of amphora with tall neck, sloping shoulder and vertical handles. Dipinto in black on shoulder. Context: second half 1st century (C 18:2).
Second half I cent. "Eqєo $\alpha$
Masculine Ephesios exists in Roman Athens.
F 258 (P 10712). Pl. 22. Amphora with body tapering to flat base. Dipinto in red on shoulder. Context: late 1st century (E 14:2).
Late I cent. Mapias
Compare the Christian use of this name in F 322.

F 259 (P 7994). Pl. 22. Flat base of coarse pot. Incised on underside in soft clay. Context: 1st century ( $\mathrm{E} 11: 2$ ).
I cent. $\quad$ धıo $\sigma \omega$ !íßou
F 260 (P 9878). Pl. 22. Narrow-mouthed highnecked jug with ovoid body. Graffito on shoulder. Context: 1st century (K 18:1).

I cent. 'Aкu( )
Perhaps Aquila; in Roman Athens various related names exist: Akulanos, Akulas, etc.

F 261 (P 10032). Pl.22. Small amphora with body tapering to small flat base. Incised on shoulder in soft clay. Context: 1st century (K 18:1).
I cent. $\quad \Delta \eta \mu \mathrm{O}(\mathrm{O}$
F 262 (P 10035). Pl. 22. Shoulder fragment from closed pot. Incised on outside. Context: 1st century (K 18:1).

## I cent. Kikkou íp

Note archaizing Ionic genitive. The name may be an epithet, since the word kikkos is variously defined by Hesychios (LSJ, s.v.). But related names do exist in an earlier period: Kikos (I.G., XII 9, 222, 1-3rd century b.c.); Kikon (I.G., $\mathrm{II}^{2}$, 1953, 9-4th century B.C.); Kikkon (I.G., IV, 926, 45-4th century B.c.).

F 263 (P 14623). Pl. 22. Fragment from neck of plain amphora. Dipinto in black. Context: 1st century.
I cent. 'Poúqou
F 264 (P 17005). Pl. 22. Fragment from floor of gray-ware plate. Graffito on underside, within ring foot.
I cent. ] $\lambda \omega$ viou
F 265 (P 19007). Pl. 22. Base of Samian bowl with foot stamp on floor. Graffito on underside.
I cent. 'Ек ( )
Perhaps Eklektos.
F 266 (P 25245). Pl. 22. Amphora with ovoid body and flat bottom similar to Robinson, Chronology, M 50. Dipinto in black on shoulder. Context: 1st century (Q 17:4).
I cent. Ệ̉to[
F 267 (P 17144). Pl. 22. Amphora with tall cylindrical neck, vertical handles and body tapering to small concave base. Dipinto in black on shoulder. Context: 1st century (B 20:1).
I cent. $\wedge$ uóiou
F 268 (P 4498). Pl. 23. Narrow-mouthed highnecked jug like Robinson, Chronology, M 43, but with narrower neck and twisted handle. Graffito carefully incised on shoulder opposite handle. Context: 1st and 2nd centuries (F 11:1). I cent. 'Ovnбіфópou

For the name compare F 269 and F 279.

F 269 (P 11142). Pl. 23. High-necked jug with globular body and twisted handle. Graffito on shoulder. Context: late 1st to late 2 nd centuries (B 14:2).

F 270 (P 15296). Pl. 23. Unglazed jug with round mouth, profiled lip, cylindrical neck, somewhat like Robinson, Chronology, M 43, but with twisted handle, round body and ring foot. Graffito on shoulder. Context: mid-1st to mid-2nd centuries ( $\mathrm{N} 17: 2$ ).
Late I-mid-II cent. 'Eppaiou
F 271 (P 15302). Pl. 23. Jug similar to F 270. Graffito on shoulder. Context: mid-1st to mid2nd centuries ( N 17:2).
Late I-mid-II cent. Mála( $\theta \circ s)$
The name is incised over an earlier graffito: 'Ayalias. For the name cf. Fi274, F 278. We have found no evidence for this name.

F 272 (P 15303). Pl. 23. Jug similar to F 270. Graffito on shoulder. Context: mid-1st to mid-2nd centuries ( $\mathrm{N} 17: 2$ ).
Late I-mid-II cent. Eưy ( )
Compare F 275.
F 273 (P 15304). Pl. 23. Jug similar to F 270. Graffito on lower part of body. Context: mid1st to mid-2nd centuries ( $\mathrm{N} 17: 2$ ).
Late I-mid-II cent. Патıкй $о$ о
There is no evidence for this as either name or word.

F 274 (P 15305). Pl. 23. Jug similar to F 270, except that handle is ridged rather than twisted. Graffito around shoulder. Context: mid-1st to mid-2nd centuries (N 17:2).
Late I-mid-II cent. Móla0os
F 275 (P 15307). Pl. 23. Jug similar to F 270. Graffito on shoulder. Context: mid-1st to mid2nd centuries ( $\mathrm{N} 17: 2$ ).
Late I-mid-II cent. Eủvónou
F 276 (P 10447). Pl. 23. Upper part of ovoid amphora with narrow neck and flaring rim. Dipinto in black on shoulder. Context: late 1st to 2nd centuries (B 14:2).
Late I-II cent. Eidsiou
Perhaps Ilios, which is not, however, attested as a personal name.
F 277 (P 9513). Pl. 24. Upper half of large amphora with wide neck and vertical handles.

Dipinto in red in large letters on shoulder. Context: 1st-2nd centuries (M 18:1).
I-II cent. FEL( ) $\Phi[\eta \lambda()$
Bilingual, perhaps for Felix?
F 278 (P 13602). Pl. 24. Shoulder of round-bodied pot. Graffito on outside. Context: latter 1st and earlier 2nd centuries ( N 19:2).
I-II cent. Mála( $\theta \circ \mathrm{s}$ )
Cf. F 271, F 274.
F 279 (P 22234). Pl. 24. Shoulder fragment of round-bodied jug with narrow neck. Graffito on shoulder.

F 280 (P 9835). Pl. 24. Neck of large amphora with everted rim and vertical handles. Dipinto in red. Context: first half 2nd century (M 19:1).
Early II cent. 'A $\sigma \mu$ ( )
Perhaps Asmenos.
F 281 (P 9925). Pl. 24. Neck of amphora similar to F 280. Dipinto in red. Context: first half 2nd century (M 19:1).
Early II cent. 'Apm ( )
F 282 (P 12459). Pl. 24. Ovoid amphora with flat bottom. Dipinto in black on upper wall. Context: early 2nd century (N 20:5).
Early II cent. 'EmJíyovos $\delta$ '
F 283 (P 17133). Pl. 24. Jug with cylindrical neck and pear-shaped body on ring foot. Graffiti on shoulder (a) and neck (b). Context: first half 2nd century (B20:1).
First half II cent.
(a) DOM ( )
(b) (illegible)

F 284 (P 21393). Pl. 24. Shoulder fragment of large plain amphora (=Robinson, Chronology, H 33). Dipinto in black. Context: first half 2nd century ( $\mathrm{P} 8: 1$ ).
First half II cent. Пєрi申 $\varphi$
Eưpußi [

Bechtel notes a Periphos from Naxos under Periphanes.

F 285 (P 10040). Pl. 24. Amphora ( $=$ Robinson, Chronology, M 94). Dipinto in red on shoulder. Context: second half 2nd century (M 17:1).
Second half II cent. Ka[
Пoúdes

Perhaps Pudens? Outside Athens Mov́ $\eta \mathrm{\eta}$ s is attested (S.E.G., XV, 214).

F 286 (P 964). Pl. 24. Small wheel-ridged amphora with ring foot. Dipinto in red on neck. Context: late 2nd-early 3rd centuries (I 16:1). Late II cent. Kópitou

But compare He 17 where this word refers to contents. The name is very frequent at this time.
F 287 (P 16704). Pl.24. Amphora like F 267. Dipinto in red on shoulder. Context: 2nd century ( $\mathrm{N} 21: 1$ ).
II cent. 'Etíyovos
F 288 (P 770). Pl. 25. Shoulder fragment of large amphora. Letters incised in soft clay. Context: 2nd century в.c. with later intrusions (I 16:5). II-III cent.

$$
\begin{aligned}
& \text { CN ( ) } \\
& \text { TITIO }
\end{aligned}
$$

F 289 (P 7063). Pl. 25. Small wall fragment of small coarse pot with thin black wash outside. Graffito on outside.
II-III cent. ] ̛̣́ $\Phi \omega \nu 0[s$
F 290 (P 25224). Pl. 25. Amphora with elongated ovoid body and horned handles. Dipinto in black on neck. Context: late 2nd-early 3rd centuries (Q 17:4).
Late II-early III cent. 'A. v tíuox
F 291 (P 10778). Pl. 25. Two non-joining fragments of neck and shoulder of plain jug. Graffito on shoulder. Context: early 3rd century (G 11:2).

## Early III cent. Ẹioi[8]

F 292 (P 12352). Pl. 25. Tall narrow-bodied amphora with wide mouth and vertical handles, similar to Robinson, Chronology, M 177. Dipinto in red on shoulder. Context: early 3rd century ( $\mathrm{N} 20: 5$ ).
Early III cent. 'Emay $\alpha \theta 0$ ũ
F 293 (P 12354). Pl. 25. Amphora similar to F 292. Dipinto in red on shoulder. Context: early 3rd century ( $\mathrm{N} 20: 5$ ).
Early III cent. 'AxE ( )
F 294 (P 12357). Pl. 25. Amphora similar to F 292. Dipinto in black on shoulder. Context: early 3rd century ( $\mathrm{N} 20: 5$ ).
Early III cent. 'Hpp( )
Perhaps Fl. Herklanos (ephebe in I.G., $\mathrm{II}^{2}$, 2239, 241 of A.D. 238/9-243/4 ), since this is the only name we find beginning thus.
F 295 (P 13615). Pl. 25. Amphora with slender ovoid body on base ring. Dipinto in black on shoulder. Context : first half 3rd century (P 19:1). First half III cent. Eủtuxıavoũ

F 296 (P 19203). Pl. 25. Neck and shoulder of amphora with flaring rim. Dipinto in black on shoulder. Context: mid-3rd century (B 17:1).
Mid-III cent. $\Lambda u()$
F 297 (P 26410). Pl. 25. Amphora neck and part of shoulder. Dipinto in red on neck. Context: pottery of mid-3rd century.
Mid-III cent. Eủquxiou KA
The name is not attested in Athens. Kappaalpha may be a number: 21 .

F 298 (P 8040). Pl. 25. Shoulder fragment of amphora. Dipinto in black running down wall. Context: third quarter 3rd century (C 14:2).
Mid-III cent. ] GEMMIANO
F 299 (P 26127). Pl. 25. Small jug with narrow neck and ovoid body. Graffito on shoulder. Context: mid-3rd century (Q 19:1).
Mid-III cent. 'A $\lambda k \varepsilon$ ( )
Perhaps Alketes.
F 300 (P 2228). Pl. 25. Wall fragment of small jug. Graffito on outside.
Early Roman $\quad \Phi_{i} \lambda \eta \tau[$
F 301 (P 3549). Pl. 25. Base of small bowl of yellow clay once glazed red (Pergamene?). Graffito on underside, within ring foot.
Early Roman $\Sigma$ ákou
Sakos is not attested; perhaps foreign. Or a nickname from the common noun?

F 302 (P 3671). Pl. 25. Base fragment of redglazed bowl. Graffito on underside.
Early Roman 'A $\gamma \varepsilon$ ¢ [
Perhaps Agerros.
F 303 (P 6992). Pl. 26. Shoulder fragment from large amphora. Graffito on outside. Context: mixed Hellenistic to early Roman (D 11:4).
Early Roman Eụ̉ ( )
F 304 (P 15719). Pl. 26. Shoulder fragment of small coarse amphora. Dipinto in black.

Some letters were no longer visible when final drawing was made.

F 305 (P 18255). Pl. 26. Shoulder fragment of wheel-ridged amphora. Dipinto in red.
Early Roman 'H

F 306 (P 25475). Pl. 26. Shoulder fragment of large amphora. Letters incised before firing.
Early Roman Ḳappıvioṣ [
Compare a Roman lady in Spain (C.I.G., III, 6644); also Karphinas (Prosop. Att., no. 8261-4th century B.c.).

F 307 (P 10613). Pl. 26. Flat-bottomed jug similar to Robinson, Chronology, L 46. Graffito on shoulder. Context: third quarter 3rd century (G 11:2).
Third quarter III cent. Z $\quad$ ofíuou
Note branch following name.
F 308 (P 12257). Pl. 26. Shoulder fragment of small amphora. Dipinto in black.
Late III cent. 'lou $\lambda_{10}($ )
Presumably only the upsilon of the genitive is omitted.

F 309 (P 14024). Pl. 26. Small amphora similar to Robinson, Chronology, L 3. Graffito on shoulder. Context: 3rd century (M 18:4).

F 310 (P 11196). Pl.26. Neck and shoulder fragment of small amphora. Dipinto in black at base of neck. Context: late 3rd-early 4th centuries (C 14:4).
Late III-early IV cent. 'A $A \lambda i \omega \nu$
The name is known (Pape, s.v.) but not in Athens.

F 311 (P 16360). Pl. 26. Amphora preserved only up to shoulder ( $=$ Robinson, Chronology, L 32). Dipinto in black on shoulder. Context: early 4th century ( F 19:1).

F 312 (P 9794). Pl. 26. One-handled jar ( $=$ Robinson, Chronology, M 279). Dipinto in black under handle. Context: late 4th century (M 17:1).
Late IV cent. Z $\omega$ тikoũ
F 313 (P 13130). Pl. 26. Shoulder fragment from large plain pot. Graffito on outside. Found with late 4th-century coins.
Late IV cent. PASINI
F 314 (P 2281). Pl. 26. Rim fragment from small jug. Graffito on outside. Found with 4th-century lamps.
IV cent. Eủp ( ) (ligature)

F 315 (P 12306). Pl. 26. Wall fragment of amphora. Graffito on outside. Context: 4th century ( $\mathrm{N} 20: 3$ ).
IV cent. 'IEp $\omega$ U [
See M 20 for picture. The letters in the second line could be a number: 115 .

F 316 (P 15576). Pl. 27. Shoulder fragment from amphora. Dipinto in black. Context: 4th century (U 22:1).
IV cent. Aỉıavós
$\Delta p u ́ \mu o u$
ma入aıós
F 317 (P 12836). Pl. 27. Amphora with elongated ovoid body and low ring foot, similar to Robinson, Chronology, M 302. Dipinto in black on shoulder. Context: 4th century (O 19:1).

IV cent.

$$
\begin{aligned}
& \Sigma_{\varepsilon} \beta \eta() \\
& \Gamma
\end{aligned}
$$

Severus? Gamma may be number: 3 .
F 318 (P 12842). Pl. 27. Bell-mouthed jug with twisted handle and pear-shaped body on high ring foot. Graffito on shoulder in soft clay. Context: 4th century (O 19:1).
IV cent. 'Etifovos
F 319 (P 27211). Pl.27. Upper part of Roman jug. Graffito on shoulder. Context: 4th century (E 29:5).
IV cent. $\quad \Sigma \tau \rho \alpha \tau \omega[$
F 320 (P 11569). Pl. 27. Small cylindrical amphora ( = Robinson, Chronology, M 307). Graffito on neck. Context : early 5th century (M 17:1).
Early V cent. 'Aкıv. ( )
Compare F 254.
F 321 (P 12351). Pl. 27. Upper part of amphora with short neck and sloping handles. Graffito on shoulder.
V-VI cent.
'AvSpéa

F 322 (P 13149). Pl. 27. Wheel-ridged amphora with ovoid body on ring foot. Dipinti on shoulders, red on one side (a), black on the other (b). Context: late 5th-6th centuries ( O 18:1).
Late V-VI cent. (a) chi-rho Mapia
(b) chi-rho Mapị

F 323 (P 13466). Pl. 27. Amphora similar to Robinson, Chronology, M 328. Graffiti on upper wall. Context: late 5th-6th centuries (P 19:1).

Late V-VI cent.
(Cross) Eükaptos (Cross) Eủk ( ) IE
The iota-epsilon may be either an abbreviation, perhaps for ispeús, or a number: 15.
F 324 (P 25940). Pl. 28. Neck of amphora similar to Robinson, Chronology, M 333. Dipinto in red on side of neck.
V-VI cent. $\quad$ (Cross)
F 325 (P 26090). Pl. 28. Shoulder fragment of one-handled jar similar to Robinson, Chrono$\log y$, M 315. Graffito on outside. Context: 5th-6th centuries (Q 19:1).
V-VI cent. Ma入íkou
The name M ${ }^{\prime} \lambda \eta$ noos is known in 5th- and 4thcenturies b.C. Athens (S.E.G., X, 424, I; Prosop. Att., no. 9661).
F 326 (P 13365). Pl. 27. Wheel-ridged jug with flat bottom and trefoil mouth. Graffito on shoulder. Context: second half 6th century (S 19:6).
Second half VI cent. Tiypl()
Neither Tigris nor Tigrios is attested in Athens.

F 327 (P 26595). Pl. 27. Amphora with ovoid body and rounded bottom. Graffito below handle. Context: 6th century (Q 17:7).
VI cent. 'H $\lambda_{1} \alpha$ ( )
In this period the biblical Elias may be most likely, although Elianax (Prosop. Att., no. 6403) and Eliades (I.G., $\mathrm{II}^{2}, 1986$ ) are known earlier.

F 328 (P 22162). Pl. 28. Neck fragment of amphora. Dipinto in red.

Line 2: patronus? Line 3: traces may be part of a Roman numeral, since there is one X and perhaps another.
F 329 (P 12158). Pl. 28. Rim fragment of large pot. Graffito just below rim.
Late Roman 'Eptrivelo
Only Herpinikos is attested in Athens (I.G., III, 1202, 3526).
F 330 (P 10181). Pl. 28. Fragment of small bowl with flat bottom and keeled rim. Graffito on outside.

Late Roman Mayipou X［
The name is not known to us，but the com－ mon noun may well have been used as a proper name，nickname or title．

F 331 （P 5028）．Pl．28．Shoulder fragment from large amphora．Dipinto in red．
Late Roman Eủkap（ ）
F 332 （P 1850）．Pl．28．Neck fragment of large coarse amphora．Dipinto in red．

M
＇Hpak入1as
Joint ownership？or producer and city？
F 333 （P 1992）．Pl．28．Shoulder fragment of large jar．Graffito at base of neck．
Late Roman＇Epun［
F 334 （P 2095）．Pl．28．Shallow bowl with flat bottom．Graffito on underside．
Late Roman Eủx（ ）

## INTRODUCTION TO PUBLIC OWNERSHIP（Fa，Fb）

Except for the two pieces（Fa 25，Fa 26）which were found in late Roman fill，the finding places of the delta－epsilon pots may be considered significant．Fifteen（Fa 2－15，Fa 24）came from under the Stoa of Zeus；seven others（Fa 16－21，Fa 23）came from the Tholos area；the other two came from wells about 40 meters（ $\mathbf{F a} \mathbf{2 2}$ ）and about 70 meters（ $\mathbf{F a} \mathbf{1}$ ）southwest of the Tholos．

Since both the Tholos and the Stoa Basileios（which presumably used the well under the Stoa of Zeus before that stoa was built）were seats of governmental activity，it is not surprising that vessels marked as public property should be practically limited to their neighborhood．（There are also about a dozen vessels of the 5th or 4th century в．с．which are marked with the two letters delta－epsilon not in ligature． These come from various places in the Agora and are therefore more probably to be interpreted as abbreviations of personal names beginning thus．）

Three later pieces with the ligature delta－eta should be listed，since de（mosion）would be so written after the introduction of the Ionic alphabet．All three come from the neighborhood of the Hephaisteion． （Four pieces inscribed with delta－eta，not in ligature，come from this neighborhood or the Tholos area， but may again be abbreviations of personal names．）

Fa 1 （P 6139）．Pl．29．Base fragment from large open bowl with thin black glaze inside．Graffito on underside，within ring foot．Context：early 5th century b．c．（E 15：6）．
Early V cent．B．c．$\delta \varepsilon$（Hó⿱宀申८v）（ligature）
Eleven black－glazed kylikes or fragments（Pl．29）， all inscribed with the delta－epsilon ligature，were found in the well under the Stoa of Zeus（H6：5）， which produced many other inscribed pots（see List of Deposits）．The date of both pots and con－ text is 470－460 b．c．Hesperia，V，1936，pp．333ff． Fa $2=$ Sparkes－Talcott，no．436；mentioned there also are Fa 3－7，Fa 12，Fa 16－19；Fa 11 is referred to under no． 413.

Fa 2 （P 5117）．Graffiti on floor and underside of foot：$\delta \varepsilon(\mu \circ ́ \sigma 1 \circ v) \quad$（ligature） $\delta \varepsilon(\mu \delta ́ \sigma ı v) \quad$（ligature）

Fa 5 （P 5121）．Graffito on floor： $\delta \varepsilon$（ $\mu$ ó $\sigma$ וov）
（ligature）
Fa 6 （P 5123）．Graffito on floor： $\delta \varepsilon$（ $\mu$ óवıov）
（ligature）
Fa 7 （P 5125）．Graffito on floor： $\delta \varepsilon$（ $\mu$ ó $\sigma$ ıov）
（ligature）
Fa 8 （P 7575）．Graffito on floor： $\delta \varepsilon$（ $\mu$ ó $\sigma$ เov）
（ligature）
Fa 9 （P 5116）．Graffito under foot： $\delta \varepsilon(\mu o ́ \sigma เ \circ v)$
（ligature）
Fa 10 （P 5119）．Graffito under foot： $\delta \varepsilon$（ $\mu$ óбıov）
（ligature）
Fa 11 （P 5122）．Graffito under foot： $\delta \varepsilon$（ $\mu$ ó $\sigma$ ıv）
（ligature）
Fa 12 （P 5124）．Graffito under foot： $\delta \varepsilon(\mu$（́бıov）
（ligature）
（ligature）
Fa 4 （P 5120）．Graffito on floor： $\delta \varepsilon(\mu \delta ́ \sigma ı v)$

As will be seen from the drawings，more than half of the examples use the continued left stroke of the delta as the top stroke of the epsilon（Fa 2， Fa 4，Fa 7－9，Fa 11，Fa 12）．

Fa 13 （P 5140）．Pl．29．Partly glazed one－handler． Graffito on floor．Context：470－460 в．c．（H 6：5）． Cf．Sparkes－Talcott，no． 740.
Ca． $470-460$ в．c．$\delta \varepsilon$（ $\mu \circ ́ \sigma \imath v) \quad$（ligature）
The ligature here is made up of several strokes so that part of the epsilon appears to be within the delta．

Fa 14 （P 5158）．Pl．29．Small lekane．Graffito on underside，within ring foot．Context：470－460 b．c．（H 6：5）．
Ca．470－460 в．с．
$\delta \varepsilon(\mu \circ ́ \sigma \circ v) \delta \varepsilon(\mu \circ ́ \sigma 1 \circ v) \delta \varepsilon(\mu \circ ́ \sigma 1 \circ v)$
（ligatures）
The thrice repeated ligature appears in over－ lapping confusion．
Fa 15 （P 5181）．Pl．29．Shoulder fragment from unglazed amphora．Graffito on outside，side－ ways to pot．Context：ca．470－460 в．c．（H 6：5）． Ca．470－460 в．c．$\quad \delta \varepsilon(\mu \dot{\sigma}$ о⿱宀 $)$
（ligature）
Floor fragments of four black－glazed kylikes of the same type as Fa 2 and all inscribed with the delta－epsilon ligature（Pl．29），were found in a rubbish heap from the Tholos kitchen（G 12：22）． Graffiti are in each case on the floor．Context： 470－460 в．C．
Fa 16 （ P 10813）$\delta \varepsilon$（ $\mu$ ）
Fa 17 （P 10814）．
Fa 18 （P 10815）．$\delta \varepsilon$（ $\mu$ ó $\sigma \circ v$ ）（ligature）
Fa 19 （P 10816）．$\quad \delta \varepsilon$（ $\mu$ ó $\sigma$ © ）（ligature）
Fa 20 （P 10838）．Pl．29．Floor fragment of black－ glazed kylix similar to Fa 2．Graffito on floor． Context：second quarter 5th century b．c．（near Tholos）．
Second quarter V cent．B．c．$\delta \varepsilon(\mu \delta ́ \sigma ı v)$（ligature）
Fa 21 （P 10839）．Pl．29．Foot fragment of black－ glazed kylix similar to Fa 2．Graffito on under－
side．Context：second quarter 5 th century b．c． （near Tholos）．
Second quarter V cent．b．c．$\delta \varepsilon$（ $\mu$ ó $\sigma \circ v$ ）（ligature）
Fa 22 （P 10616）．Pl．29．Half of black－glazed saltcellar．Graffito on underside．Context：mid－ 5th century b．c．（near Tholos）．
Mid－V cent．b．c．$\delta \varepsilon$（ $\mu o ́ \sigma \circ \circ v$ ）（ligature）
Fa 23 （P 5458）．Pl．29．Half of black－glazed salt－ cellar．Graffito on floor．Context：ca．470－425 b．c．（E 13：1）．Cf．Sparkes－Talcott，no． 912. Mid－V cent．B．C．$\quad \delta \varepsilon(\mu o ́ \sigma ı v)$
（ligature）
Fa 24 （P 13227）．Pl．29．Base of black－glazed bowl or stemless cup．Graffito on floor．Context：to late 5th century b．c．（under Stoa of Zeus）．
V cent．b．c．$\quad \delta \varepsilon(\mu o ́ \sigma 1 \circ v) \quad$（ligature）
Fa 25 （P 10422）．Pl．29．Wall fragment of black－ glazed kylix．Graffito outside．
V cent．b．c．$\quad \delta \varepsilon$（ $\mu$ ó⿱宀申०v）（ligature）
Fa 26 （P 5595）．Pl．29．Base fragment of small black－glazed bowl．Graffito on underside．
V cent．b．c．$\quad \delta \varepsilon$（ $\mu$ ó $\sigma$ ıv）（ligature）
Fb 1 （P 8600）．Pl．29．Base fragment of black－ glazed bolsal．Graffito on underside．Context： 4th century b．c．（E 6：3）．
IV cent．в．c．$\quad \delta \eta$（ $\mu$ ó $\sigma \circ v$ ）（ligature）
Fb 2 （P 8611）．Pl．29．Black－glazed one－handler． Graffito on underside．Context：4th century B．C．（E 6：3）．
IV cent．b．c．$\quad \delta \eta(\mu o ́ \sigma t o v) \quad$（ligature）
Fb 3 （P 6825）．Pl．29．Neck fragment from un－ glazed amphora．Ligature incised in wet clay． Context：1st century b．c．
I cent．B．C．？$\quad \delta \eta$（ $\mu$ ó ${ }^{\circ} 1 \circ v$ ）（ligature）

## G．DEDICATIONS AND CONVIVIAL INSCRIPTIONS

The small number of graffito dedications is rather surprising in view of the many sanctuaries known to have been located in and around the Agora（see Wycherley，pp．48－125）．Besides the pieces published here there are only a few fragments on which part of the word ${ }_{\alpha}^{\alpha} v \in \vartheta \eta \kappa \varepsilon$ can be read．Parallels for informal pot－dedications of this sort may be found in most sanctuaries；see particularly E．A．Gardner，Nau－ cratis，London，1886－88，I，pp．54－64；II，pp．62－69；C．Waldstein，The Argive Heraeum，Boston and New York，1902－1905，II，pp．185－187；P．Wolters and G．Bruns，Das Kabirenheiligtum bei Theben， Berlin，1940－，I，pp．43－79；B．Graef and E．Langlotz，Die antiken Vasen von der Akropolis zu Athen， Berlin，1909，II，pp．114－124；C．Roebuck，Corinth，XIV，The Asklepieion and Lerna，Princeton，1951，
pp. 131-136; Ch. Dugas, Delos, X, Les Vases de l'Heraion, Paris, 1928; R. M. Dawkins, The Sanctuary of Artemis Orthia, London, 1929, pp. 371-382.

Drinking cups of the Hellenistic period are not infrequently inscribed with the name of some deity or some abstract idea, illustrating the banqueting practice attested by Athenaios (XV, 692e) of naming successive mixings of wine after various gods (presumably in the genitive case; see G 9-11). For some examples, see Hesperia, III, 1934, p. 339 and the bibliography cited there; also Hesperia, XVI, 1947,
 scriptions already painted; these belong to the study of Hellenistic pottery. Only the graffiti, or homemade versions, are included here.

The four pieces (G1-4) which are dated before the middle of the 5th century b. c. show letters typical of a standard old Attic alphabet (see above, p. 16) with eta as the aspirate, epsilon used for eta and omicron for omega. In the later pieces the regular Ionic alphabet is used, but in $\mathbf{G} \mathbf{6}$ and $\mathbf{G} 7$ omicron is still used for omega while in $\mathbf{G} \mathbf{6}$ (but not in G 7) epsilon is still used for eta. A lunate epsilon appears already in $\mathbf{G} 13$ (late 4th-early 3rd centuries b. c.); lunate sigma as well as epsilon and cursive omega appear on $\mathbf{G} 21$ ( 2 nd-1st centuries b. C.). An attempt at serifs is made on $\mathbf{G} 16$, and broken-barred alphas appear on G 22 and G 23.

Oddities in spelling include: one of the many varieties of Eileithuia in G8; an absence of iota subscript in G15 and G 21. Punctuation (three dots arranged vertically) appears only on $\mathbf{G 1 7}$, but there is a word-divider in G 7.

G 1 (P 12629). Pl. 30. Fragment from edge of heavy flat unglazed tile. Graffito on top, obviously written on the sherd. Context: third quarter 6th century b.c. (Q 18:1). Hesperia, VIII, 1939, p. 259, fig. 15 (no. 9).
Third quarter VI cent. B.c. hep $\overline{\text { ei }}$

$$
\mu^{\prime} \alpha \gamma \gamma \alpha \lambda \mid \mu \alpha
$$

An informal label on a dedication: "To Hermes (someone dedicated) me, a pleasing gift." The inscription is complete, so that it looks as if the writer, finding no room for his name, abandoned this attempt and looked for a larger piece of tile; thus the sherd was found "out of context, as far as Hermes is concerned." This interpretation is closest to that of Jeffery (L.S.A.G., p.78, no.33); for others see theHesperia reference above and H. R. Immerwahr, "Some Inscriptions on Attic Pottery," The James Sprunt Studies in History and Political Science, XLVI, 1964, pp. 16-19.

G 2 (P 9634). Pl. 30. Part of flat clay ring. Letters in black glaze on top.

## Late VI cent. b.c. $\mu \eta \delta \varepsilon ̀ v]{ }^{\alpha} \gamma \alpha v$

Compare G 3. These two pieces are included, even though as painted inscriptions they do not really belong, because they seem to be unique, do not fit with any other study and should not go unnoticed. It is assumed here that they served some purpose at the festal board (pot stands?) and were inscribed with appropriate maxims.

G 3 (P 13754). Pl. 30. Part of clay ring. Letters on top in black glaze (a); graffito on underside (b). Context: late 6th century b.c. (U 23:2).
Late VI cent. b.c. (a) ]коข
(b) Eủxs[

Compare G 2. The motto could be: $\varnothing \varepsilon \tilde{\cup} \gamma \varepsilon$ како́v $\tau$ т. The graffito is perhaps the owner's name. (The drawing is upside down.)
G 4 (P 24062). Pl. 30. Small black-glazed kantharos (= Sparkes-Talcott, no. 627). Graffito on outer face of one handle. Context: ca. 520-490 b.c. (Q 12:3).

Late VI-early V cent. b.c. 'Etróváoos hepuєĩ
The name is not known.
G 5 (P 14676). Pl. 30. Fragmentary red-figured pyxis lid. Graffito on top, around glazed band between central tongue and dot pattern and outer egg pattern.
Second half V cent. b.c. 'A] ${ }^{\prime}\left[\begin{array}{c}\alpha \\ ]\end{array}\right.$ коı $\mathrm{K}[\alpha \lambda \lambda i ́ \alpha s$
The name of the dedicator is supplied exempli gratia.
G 6 (P 12336). Pl. 30. Base fragment of blackglazed pyxis of a type found in the second half 5th century b.c. Graffiti on underside: on projecting flange (a); within ring foot (b). Graffito on floor (c).
Second half V cent. b.c.
(a) v] ̇̀ Tòv $\Delta i ́ \alpha$ каi Tòv ' $A[\pi \dot{\prime} \lambda \lambda \lambda o v \alpha$ ]的 тєїаито

```
(b) kaì tòv [
        vè tò [s à̛ \(\lambda \lambda\) os
        \(\theta \in \delta\) [s
(c) ]коя
```

Compare B. Graef and E. Langlotz, Die antiken Vasen von der Akropolis zu Athen, II, no. 1445. The oath of the first line of (a) may have included one or two other deities; it must have been followed by a wish that a certain person might be avenged or punished. The second inscription (b) was then added to include one more named deity and the rest of the Olympian gods. This inscription is included here because it has the gods in common with the convivial and dedicatory texts.

G 7 (P 12011). Pl. 30. Rim fragment from large open black-glazed bowl of 5th-century b.c. fabric. Graffito on outside, just below rim.

The proposed restoration is not the only possible one, but compare the roof tile (Agora inv. no. A 891) with a painted dedication to Hephaistos which was found about 20 meters away (Hesperia, VIII, 1939, pp. 214-215).

G 8 (P 19694). Pl. 30. Rim and wall fragment of lebes gamikos stand with red-figured decoration. Graffito on outside below rim.
Early IV cent. B.C. 'I $\lambda \cup \neq \varepsilon$ i[
Depending on the case restored this may be either a dedication or a "toast."

G 9 (P 7360). Pl. 30. Fragmentary black-glazed kantharos of a type found in the latter part of the 4th century b.C., approximately like Hesperia, III, 1934, p. 320, fig. 5, A 27, A 28. Graffito on upper part of body; apparently it ran all around the vase, passing under existing handle and probably starting and ending at the handle not preserved. Context: late 4th-early 3rd centuries b.c. (E 3:1).
Late IV cent. b.c.

'Ayäoũ $\Delta] \alpha \dot{\mu} \circ v[0 s]$ 'A[ $\gamma] \alpha \theta$ ñs Túx[ทs
G 10 (P 22483). Pl. 30. Rim fragment of blackglazed kantharos, similar to G9. Graffito on upper part of body, starting to right of handle and ending behind handle. Context: late 4th century в.c.
Late IV cent. b.c.
$\Delta r[o v u ́ \sigma o u ~ k a i ~ ' ~ ' A ~ p p o \delta i ́ t n s ~ i] e p a ̃ s ~ s$
Compare G11.

G 11 (P 22484). Pl. 31. Upper wall fragment of black-glazed kantharos, similar to G 9. Graffito on outside, going around body. Context: late 4th century b.c.

G 12 (P 27040). P1. 31. Neck fragment from blackglazed mug. Graffito on outside.

## IV cent. B.C. ]т $\omega \omega \gamma 0 \nu \tau[$

Since this can only be a participle from the verb "to eat," it seems likely that it is convivial in nature, or perhaps a maxim suitable to the feast. Compare Xenophanes, fr. 18 D, line 3:


G 13 (P 20424). Pl. 31. Lower wall fragment of large West Slope kantharos. Graffito on outside, going around body. Context: late 4th-early 3rd centuries b.c.
Late IV-early III cent. B.C. T]aĩv $\theta \varepsilon \alpha[i ̃ v$
G 14 (P 16236). Pl. 31. Rim fragment of West Slope kantharos. Graffito on outside below rim. Context: 3rd century b.c. (N $21: 4$ ).
III cent. b.c. $\quad \phi i \lambda i \alpha$
G 15 (P 18340). Pl. 31. Fragment from rim and upper body of West Slope kantharos. Graffito below ivy garland. Context: 3rd century b.c. III cent. в.c. $\quad \pi i \eta$ како $\alpha \alpha i \mu \omega \nu$

Perhaps hortatory subjunctive: "let the evilspirited one drink." This requires that the iota have been omitted, but it is easier than assuming a second person singular imperative ( $\pi$ it $\varepsilon$ ) with the adjective in the vocative case. An attempt has been made to erase some of the letters.

G 16 (L 3918). Pl. 31. Black-glazed lamp (= Howland, no. 626, Type 48A). Graffito on either side of nozzle and body.
Late III-II cent. b.c. íєpòs 'Aptépiסos
It is not possible to say in which of the many sanctuaries of Artemis this lamp was dedicated. Its finding place (some 75 meters south of the Tholos) might indicate Artemis Boulaia (in the Tholos precinct: Hesperia, Suppl. IV, pp. 139 ff .), but the sanctuary of Eukleia (thought by some to be Artemis Eukleia) was also in this general part of town (Judeich, Topographie von Athen, 2nd ed., Munich, 1931, p. 399). It is to be noted that G 21, dedicated to Dionysos and Artemis, was found only a few meters to the west of the spot where the lamp was discovered.

G 17 (P 12664). Pl. 31. Base fragment of blackglazed bowl of 3rd- to 2nd-century b.c. fabric. Graffito on underside.

## III-II cent. b.C. 'Ayop]áov:'Epuoũ

The use of punctuation at this period is unusual. The finding place is just south of the Altar of the Twelve Gods. See Wycherley, pp. 102-103 for the ancient testimonia about the shrine of Hermes Agoraios.
G 18 (P 23205). Pl. 31. Wall fragment of West Slope open vase. Graffito below band of painted checkerboard and crosshatching. Context: 3rd2nd centuries b.c.
III-II cent. B.C. ]as 'Apté[ $\mu \mathrm{I} \delta 1$
The ending is presumably that of the dedicator's name.
G 19 (P 605). Pl. 31. Hemispherical red-glazed bowl (= Hesperia, III, 1934, p. 371, D 14). Graffito on outside wall. Context: mid-2nd century b.c. (H 16:4).
Mid-II cent. b.C. Zeús
G 20 (P 21454). Pl. 31. Wall fragment of West Slope kantharos. Graffito outside.
II-I cent. B.C. íp 0 ب [

G 21 (P 6878). Pl. 31. Large West Slope krater with figured scene: hunting near sanctuary. Graffito below painted scene. Context: late 2nd-early 1st centuries b.c. (D 12:2). Hesperia, VI, 1937, p. 374, fig. 39. Cf. Sparkes-Talcott, p. 24, note 51.

Late II-early I cent. B.C.


## Compare G 16.

G 22 (P 19179). Pl. 31. Shoulder fragment of small unglazed pot of double conical shape. Graffito above angle at shoulder, going around pot. Context: latest Hellenistic (D 17:11).
I cent. B.C. ]evpa $\Delta \mathrm{ov}[$ Ú $\sigma \omega$
Found in the same general area as G 16 and G21, perhaps pointing to a shrine of Dionysos and Artemis just off the southwest corner of the Agora.

G 23 (P 17585). Pl. 31. Shoulder fragment from unglazed round-bodied pot. Graffito on outside. Context: second half 1st century (B 20:1).
Second half I cent. 'A] $\begin{aligned} & \eta \nu \tilde{\alpha}\end{aligned}$

## H. COMMERCIAL NOTATIONS

This group is divided into five sub-groups, of which the first four include vessels with only one notation of this sort : capacity $(\mathbf{H a})$, tare $(\mathbf{H b})$, date $(\mathbf{H c})$ and contents $(\mathbf{H d})$. The fifth sub-group $(\mathbf{H e})$ includes vessels which combine two or more of these notations. In order to facilitate comparison among inscriptions of one kind, references are given in the first four sub-groups' introductions to related notations not only in $\mathbf{H e}$ but also in any other category like that of Tax Notations (I).

Dimensions are included only when the vessel preserves either diameter or height, since no other measurements are meaningful. Weight and capacity are noted where relevant and available. In giving modern equivalents of ancient weights and measures it has seemed right to use the time-honored and generally accepted figures like 0.5461 . for the xestes (sextarius) and 327 gm . for the litra (libra), since variations from these, although developed with much subtlety, are far smaller than the variations immanent in the ancient standards of capacity and weight as exemplified in these common vessels of clay.

## INTRODUCTION TO NOTATIONS OF CAPACITY (Ha)

Notations of capacity here include not only those which show both a unit of capacity and a number but also those with only a number where the size of the vessel makes that number significant in terms of some obvious unit. Generally speaking, the notations of capacity may refer either to the amount which was in the jar at a particular time or to what it could hold. It is not therefore right to deduce the size of a unit by dividing the measured capacity of a vessel by the number marked on it, since the notation may have been made to record either a known amount being poured in (without filling the jar) or what was left after a known amount was decanted from an understood original total. Therefore, only if at least two
jars (preferably more) seem to require a certain size xestes, for example, will it be right to assume a different standard; otherwise, it is more likely that the notation refers to something less than full capacity.

Not included here are the following categories: (1) many vessels, mostly from the Greek period, already published in Hesperia, XXV, 1956, pp. 1-24; (2) many vessels which show inscriptions similar to the ones presented here but which are not measurable and so can add nothing; (3) many vessels which are included in other classes because of other notations (F 198; Hd 6, Hd 10; He 1-11, He 13, He 14, He 16, He 17, He 21, He 22, Не 26, He 29, He 30, Нe 32-37, He 39-44; I 5, I 10, I 12, I 18, I 21, I 23, I 24, I 26, I 32). These last are included in the present discussion. For other possible notations of capacity, see Hd 1, Hd 5, Hd 15 and $\mathbf{H d} 16$ for single letters which may indicate either quantity or quality.

Except where noted, the capacity was measured to the rim and so is excessive, at least in pots where restoration with modern plaster has not thickened the walls. The rim provides the only consistent upper limit for filling since necks are of various lengths and the transition from shoulder to neck is often hard to define. What may have been the upper limit for filling in the ancient measurements can occasionally be determined: in Ha 9 the capacity to the rim is 2.150 1.; the seven and one-half kotyles marked thereon should be 2.0471 . or about $95 \%$ of the up-to-rim capacity. It would however be too much to expect consistency from the various measurers over the centuries represented here.

In the Greek period, that is, before Christ, numbers may be expressed by simple tallying strokes (Ha 3-7, Ha 11), or by acrophonic numerals in the 5th and 4th centuries (Ha 5, Ha 6, Ha 9; He 1-3) and by alphabetic numerals both in the 5th century (Ha 7) and later ( $\mathbf{F} \mathbf{1 9 8 ; ~ H a ~ 1 4 ; ~ H e ~ 4 ) . ~ W h e r e ~ c h o u s ~}$ and kotyle are counted as units (also staters and mnas), their initial letter is used instead of the simple stroke in acrophonic numerals (Ha 6, Ha 7, Ha 9; He 1, He 3); similarly both $\eta \dot{\eta} \mu^{\prime} \sigma u$ and eis $^{\prime}$ are recorded acrophonically (Ha 6, Ha 7, Ha 9, Ha 10; He 2).

Chous is abbreviated as $X$ (F 198; Ha 2, Ha 6, Ha 10; He 1, He 2) or $\chi$ O( ) (Ha 14), or it is
 Ha 9, На 10, На 35; Не 1) ог ко ( ) (На 29, Ha 40; He 17); other words used for the same unit may be $\mu \dot{\varepsilon}(\tau \rho \alpha)$ (Ha 19) and $\pi \alpha \dot{\prime} v(\tau \alpha v \alpha)$ (He 21). Both units (kotyle and chous) continue to be used occasionally in the Roman period; on the other hand, the Roman modius begins to appear in the 1st century b. с. (He 4). Capacity is also measured by the mna-weight of the contents (He 3; see also He 5 for mna-weight in the Roman period).
The vessels of the Greek period, largely fragmentary, provide only scanty evidence for the size of the chous and kotyle, but what there is can be reconciled with the standard kotyle of 0.2731 . and chous of 3.276 1. (F 198; Ha 9), even the "new chous" of Ha 2, which is only slightly undersize and is more likely to be a joke than an official standard.

In the Roman period, except for some tallying (He 16, $\mathrm{He} \mathrm{17}$,He 33 ), numbers are mostly alphabetic (Ha 18, На 19, Ha 21, На 22, На 24-26, На 29-31, На 33-52, На 54-56; He 5-11, He 13, He 14, He 17, He 21, He 22, He 25, He 26, He 29, He 30, He 32, He 33, He 35-37, He 39, He 42-44; I 5, I 10, I 12, I 18, I 21, I 23, I 26, I 32) with $\left\langle\right.$ or $C$ as one-half and $\delta^{\prime \prime}$ as one-quarter. A few Roman numerals are also used (He 19, He 20, He 41).

The most frequent unit of capacity in this period is the xestes, which appears both written out in full (Ha 17, Ha 20, Ha 23, Ha 28) and abbreviated in various ways: ${ }^{1}$
$\xi($ (Ha 30, Ha 56)
$\xi$ (Ha 37; He 36, He 44; I 5, I 26; K 13)
X (Ha 38, Ha 43, Ha 45, Ha 46, Ha 48, Ha 50-52; He 41; I 18, I 21, I 23, I 45)
Xestes is defined as a sixth (sextarius) of the Roman chous (congius) and thus the equivalent of two kotyles or heminai. ${ }^{2}$ The standard xestes of the first two centuries of our era seems to have been $0.5461 .{ }^{3}$

[^14]or twice the old standard kotyle of $0.2731 .:$ Ha 21, Ha 22. In the third and following centuries the most frequent xestes is one which is larger by one-third, i. e., 0.728 1.: На 23, На 24, На 27, На 30, На 32, Ha 34, Ha 45, Ha 50; He 30; I 18. This is presumably the xestes known as the Hellenic oil xestes (Metrolog. Script., I, 208, 213; called Alexandrine, I, 264) which had 24 ounces or two litrai ( 654 gm .). As long as wine is being measured, two litrai require a capacity of 0.6541 ., which is larger than the old xestes by only one-fifth. But since the weight of oil is only $9 / 10$ that of wine or water, the new $6 / 5$ wine xestes of 0.6541 . had to be multiplied by $10 / 9$ to get an oil xestes weighing two litrai, which in capacity had to be $4 / 3$ the original 0.5461 ., that is, 0.728 . We may imagine that the old wine xestes may have been increased by one-fifth for the sake of easy conversion to litrai ( 1 xestes $=2$ litrai), but it is interesting that the number of our vessels which seem to employ a xestes of 0.654 1. (Ha 47, Ha 52) ${ }^{4}$ are far fewer than the vessels based on its companion oil xestes which weighed the same but was $1 / 9$ larger in capacity (Ha 23, Ha 24, На 27, На 30, На 32, На 34, На 45, На 50; He 30; I 18).

Furthermore, the smaller standard xestes ( 0.546 1.) seems to continue in use (Ha 44, Ha 45, Ha 48; He 36, He 39, He 41; I 5) in the 4th, 5th and 6th centuries. One jar (Ha 45) even seems to provide a double standard, giving the number of both the 0.5461 . xestai $(241 / 2)$ and that of the 0.728 . xestai (19). The apparently contemporaneous use of all three xestai is complicated by the fact that the one which the metrological writers specifically label an oil xestes is the very one which our pot-notations designate as a wine-measure : not only does the jug (Ha 27) labeled oivnpòs סíkaıs hold 0.728 1., but also $\mathbf{H e} 30$ holds 18 such xestai of something "honeyed" which is almost certainly wine. Thus the application and definition of standards seem to be in confusion, but we must remember how very scanty our evidence is and how large a role chance plays in what has survived. There may have been well-understood conventions about the use of different xestai for different commodities or in different kinds of trading at different times. And in addition we are at the mercy of any sharp operator who wished to cheat or any wag who wished to fool his neighbor by labeling his oil-measure as a wine-measure.

This brings us to the three vessels which appear to be based on still other standard xestai. In the case of $\mathbf{H a 2 8}$, which is labeled $\xi \mathfrak{\xi} \sigma \tau_{\eta} \delta i ́ k \alpha 10 s$, are we to take the word of some ancient scribbler whose motives are unknown and solemnly assume a still larger xestes, because its measured capacity is 0.890 1.? Or can we say that here is a cunning customer who liked to take his own jug to the shops and set his own standards? Luckily, we have some other evidence: one kotyle is defined (Metrolog. Script., I, 236) as being three-fourths of a standard xestes or 0.4091 .; if another xestes was based on such an outsize kotyle, it would be 0.818 1. and fit reasonably into Ha 28. A sextarius of $21 / 2$ litrai or 30 ounces ( 0.818 1.) is also mentioned by one of the Roman writers (Metrolog. Script., II, 128). Also, only if the 15 xestai of $\mathbf{I} 21$ were of this size $(15 \times 0.8181 .=12.2701$.) would they fit the measured capacity of 12.7501 . No one of these bits of evidence is particularly convincing by itself, but it may be that all together allow us to presume a xestes of 0.8181 . Still one other xestes, based on the $71 / 2$ ounce kotyle (Metrolog. Script., I, $216,235)$ is $0.4091 .(2 \times 71 / 2 \times 27.3 \mathrm{gm} .=0.4091$.) or one-half of the 0.8181 . xestes. This seems to be exemplified in Ha 43 , which is marked as holding $271 / 2$ (xestai); its measured capacity is 11.5001 ., while $271 / 2 \times 0.4091$. = 11.247 1. Compare Ha 35, which may use this same $71 / 2$ ounce kotyle.

The next most frequent measure used in our capacity notations of the Roman period is the modius, always abbreviated to the first two letters (Ha 16, $\mathrm{Ha} \mathrm{44} ,\mathrm{Ha} \mathrm{53;} \mathrm{He} \mathrm{4} ,\mathrm{He} \mathrm{8-11;} \mathrm{I} \mathrm{24)}$. nine vessels thus marked are sufficiently preserved to provide measurable capacities, but these give evidence of two different modii. The first is the regular Roman equivalent of the Greek hekteus ( 8 choinikes or 32 kotyles) which is defined (Metrolog. Script., I, 203, 205, 258) as both 16 sextarii and onethird of a Roman cubic foot, i. e., 8.736 1.; the vessels based on this modius are $\mathbf{H a} 53$ (with a measured capacity of 9.250 1.) and $\mathbf{H e} \mathbf{8 - 1 1}$, all of which are labeled as holding three modii (that is, one cubic

[^15]foot) and are closely similar in size and shape; the one measurable one (He 10) is 27.320 1. or just about $4 \%$ over the calculated $3 \times 8.7361 .=26.2081$.

The second modius is the Cypriote modius, which is said (Metrolog. Script., I, 261, 272) to contain 17 and a fraction xestai. That the fraction may be more closely defined as two-thirds is shown by one of our
 over the calculated $172 / 3 \times 0.5461 .=9.6461$. Ha 16 has only the modius label, but its capacity of 10.200 1. suggests that it too is Cypriote. Two other fragments of jars similar in fabric to Ha 44 are also marked as containing $17^{2} / 3$ xestai (Ha 36, Ha 42). He 39, also similar in fabric, is marked $171 / 2$ and has a capacity of 9.800 . That these jars were made in Cyprus on a local standard seems likely; since they were to be exported, for example, to Athens, they were marked with their equivalent on a more generally accepted standard. We may assume that in the Cypriote metrological system the xestes was $1 / 16$ of the modius ( 9.6461 .) or 0.6031 ., that is, about $1 / 10$ greater than the normal xestes.

It will be noted that both the regular modius and the Cypriote modius were based on the 0.5461. xestes. It is likely therefore that $\mathbf{H a} 50$ with its inscription of $17 \frac{1}{2}$ (xestai) and capacity of 12.9301 . $(171 / 2 \times 0.7281 .=12.7401$.) is not a Cypriote modius, especially since the fabric is different from that of Ha 36, Ha 42, Ha 44 and He 39.

Other possible measures also are noted on our vessels. Stamnos, variously abbreviated, appears on three jars ( $\mathrm{Ha} 54 ; \mathbf{H e} \mathbf{1 4}, \mathrm{He} 39$ ), only the last of which has a measurable capacity ( 9.8001 .); but since this same vessel is marked $171 / 2$ and is like the Cypriote modii noted above in fabric it only confuses the metrological value of the stamnos, which is elsewhere defined both as ten and as four xestai (Metrolog. Script., I, 277; II, 102). A possible knidion is exemplified by Ha 15 with a measured capacity of 8.4001 ., but for the other three measure-names which appear on these vessels there is no evidence as to the vessels' capacity: keramion (Ha 18, Ha 56); hydria (Ha 18); medimnos (Ha 55).

The capacity of a vessel was often defined not by the number of standard units it could hold but by the net weight of the particular contents. That this practice was fairly general may be assumed from the careful way in which the metrological writers (passim) defined the comparative weights of wine (or water), oil and honey: i.e., the 0.5461 . xestes of wine weighs 20 Roman ounces while the same amount of oil weighs 18 Roman ounces, and the same amount of honey weighs 27 Roman ounces. Thus the weight of oil is to that of wine as $9: 10$, and the weight of honey is to that of wine as $131 / 2: 10$. Net weight
 sense of net weight, just as óбtpókou indicates the weight of the vessel or tare. Of the other eight, four indicate the nature of the contents: oil in He 7 ; honey in $\mathrm{He} 29, \mathrm{He} 33$ and He 34 . Two of the remaining four (He 26, He 40) give tare weight in addition to net weight, but in the case of the last two (Ha 26; He 32) there is no indication of what the weight refers to, although it is fairly easy to guess by hefting the jar or measuring its capacity. For example, Ha 26 is marked simply "eight litrai"; $8 \times 327 \mathrm{gm} .=$ 2.616 kg . or 2.6161 . of wine or water, which is the measured capacity of the jug if the remnant of modern plaster left from restoration is discounted. He 32 is marked "nine litrai"; $9 \times 327 \mathrm{gm} .=2.943 \mathrm{~kg}$. or 2.9431 . of wine or water; but because the jar's capacity is $c a .3 .3001$. it seems clear that the contents is oil: $10 / 9 \times 2.9431 .=3.2701 .{ }^{7}$ Thus, in He 7 where the contents is specified as 20 litrai and 5 ounces of oil, the calculated weight is $20^{5} / 12 \times 327 \mathrm{gm} .=6.676 \mathrm{~kg}$.; to get oil capacity the formula is $10 / 9 \times 6.676=$ 7.4201 ., which compares neatly with the measured capacity of the vessel ( 7.4001 .). For further discussion of net weight, particularly in connection with honey pots, see the introduction to Tare Notations below.

[^16]Ha 1 (P 8842). Pl. 32. Small black-glazed olpe of late 6th- and early 5th-century b.c. type. Graffito on shoulder. Context: ca. 520-490 в.c. (E 14: 5). Cf. Sparkes-Talcott, p. 78, note 12. H. 0.105 m. ; D. 0.059 m .

Early V cent. b.c. $\quad \mu \eta \dot{\tau} \tau \rho ı$
For the eta-epsilon combination compare I.G., $\mathrm{I}^{2}$, 623, 710; Lejeune, Revue des études anciennes, LI, 1949, pp.11f. For a similar graffito, see Clara Rhodos, III, 1929, 111.

The capacity of the jug is 0.1101 . As the inscription suggests, this is not a measure ( $\mu \varepsilon ́ \tau \rho \circ v$ ), but a middle-sized vessel ( $\mu \dot{\varepsilon} \tau \rho ı \circ v$ ). The well deposit in which it was found contains many examples of olpes which may be roughly divided into three sizes, of which this is indeed the middle. There is a possibility, however, that it is the contents that are designated as "medium" rather than strong or weak, or heavily seasoned or unseasoned.

Ha 2 (P 21553). Pl. 32. Black-glazed oinochoe with trefoil mouth. Graffito on neck. Context: third to fourth quarter 5th century b.c. (P 8:2). H. $0.24 \mathrm{~m} . ;$ D. 0.175 m .

Fourth quarter V cent. b.c. кaıvè $\chi$ (oũs)
The capacity of the oinochoe filled to the rim is 3.2001 ., somewhat less than the standard chous of 3.2761 . So the chous it could reasonably hold while being carried might not be more than 3.1001 . and so might have been "new"-whether in all metrological seriousness or as a cynical joke; see Agora, X, p. 48.

Ha 3 (P 27513). Pl. 32. Neck and shoulder of Chian amphora. Graffito on neck. Context: fourth quarter 5th century b.c. (S 16:1).
Late V cent. b.c. IIII
Four tally strokes presumably counted measures as they were poured in. Since Chian amphoras ordinarily held more than four choes, this might not be a permanent record of total capacity but a temporary note about a smaller quantity put in (or taken out).

Ha 4 (P 27515). Pl. 32. Neck of Chian (?) amphora. Graffiti on side: (a) vertical; (b) horizontal. Context as of Ha 3.
Late V cent. b.c. (a) III = II (irregularly arranged)
(b) IIIIIII

These may be two stages of tallying, the one (a) rough and casual as choes (?) were poured in, the other (b) a neat permanent record. Both add up to the seven choes to be expected; see Ha 5.

Ha 5 (P 27517). Pl. 32. Neck and handles of Chian (?) amphora. Graffito and dipinto on one side, with latter spreading beyond handle. Context as of Ha 3.
Late $V$ cent. b.c. (graffito) $\pi \varepsilon v(\tau \varepsilon)$ IIIII
(dipinto).$\Delta \Gamma \vdash$
The graffito seems to be tally strokes with summation (5) of what the owner had poured in or out, although it is conceivable that, after a five-unit measure had been poured in and recorded as such, five additional single units were counted. In the dipinto a fragment of some sign precedes the numeral, which may well give the price of the amphora with its original contents of seven or eight choes. Compare the seven-chous Chian jar costing 14 drachmas (He 3 below).
Ha 6 (P 27525). Pl. 32. Fragmentary upper part of Mendean (?) amphora. Graffiti on upper shoulder, both sides (a and b). Context as of Ha 3.
Late V cent. B.c. (a) !!!!IIII
(b) ${ }^{\mathrm{m}} \times \mathrm{X} X X H$
$\wedge E$
The tally strokes of (a) are presumably recorded formally in (b), with the addition of a final half-chous: $\pi(\dot{\varepsilon} \nu \tau \varepsilon) \chi$ (óss) $\chi$ (oũs) $\chi$ (oũs) $X$ (oũs) $\eta(\mu i \sigma u)$. This looks like a permanent record of the jar's capacity (eight and one-half choes), made probably by the owner, whose name may be abbreviated in the two letters scratched below: $\Lambda \varepsilon\left(\right.$ ) or $\Gamma_{\varepsilon}()$.
Ha 7 (P 26070). Pl. 32. Amphora handle. Graffito on outer face, from top down.
V cent. b.c. JIIIIIII I E KK
The seven strokes with summation by means of the letter zeta (7) represent the number of choes which the jar would hold. The fractions of an eighth chous are represented by epsilon for Eqiou and two kappas for two kotyles. For the use of epsilon for aspirated eta compare C8. For similar capacity inscriptions with tallying, see Hesperia, XXV, 1956, p. 5.

Ha 8 (P 26181). Pl. 32. Fragment from neck and rim of partly glazed chous of late 5th-century B.C. type. Graffito on neck.

Late V cent. b.c. Xõs
Note the three-barred sigma and omicron for contracted omicron-upsilon.
Ha 9 (P 18609). Pl. 32. Small plain amphora with ring foot and ovoid body ( $=$ SparkesTalcott, no. 1463). Graffito on neck. Context:
first half 4th century b.c. (C 19:5). H. 0.222 m .; D. 0.16 m. Hesperia, XXV, 1956, p. 11, no. 47, pls. 2, 6.

## First half IV cent. b.c. $\quad \Gamma^{\boldsymbol{R}} \mathrm{K}$ K H

The present capacity to the rim is 2.1501 . Seven and one-half kotyles, $\pi(\dot{\varepsilon} v \tau \varepsilon) k$ (отט́入aı) $\kappa() \kappa() \dot{\eta}(\mu i \sigma v)$, of 0.2731 . would be 2.0471 . or about $95 \%$ of the capacity to the rim. We may wish to use this percentage elsewhere to give us the proportion of our up-to-rim capacity that was used by the original measurers.

Ha 10 (P 24760). Pl. 32. Neck of amphora of Mendean type. Graffiti on neck (a) and on opposite shoulder (b). Context: third quarter 4th century b.c. (O 16:4).
Third quarter IV cent. B.C.
(a) $\quad \Pi \Theta \ominus$
(b)
$\times H \leqslant[$
(a) may be a number: 89; (b) may be read: $x$ (oũs) $x$ (oũs) $\dot{\eta}(\mu i \sigma v) k$ (oтú $\lambda \eta$ ).

Ha 11 (P 25742). Pl. 32. Neck of large amphora of Naxian type (?). Graffito on neck. Context: third quarter 4th century b.c. (A 16:1).
Third quarter IV cent. B.c. $\quad$ II =
Since vertical and horizontal strokes may represent different units of capacity (cf. Hesperia, XXV, 1956, pp. 4-6) or differentiate as in Mycenaean counting between tens and units, several interpretations are possible, e.g.:
$\mu(\xi$ т $\rho \alpha): 2$ large, 2 small; $1 \mu(\varepsilon \tau \rho \eta \tau ท ่ s), 2$ ( $\chi$ óss), 2 (котú $\lambda \alpha 1$ ); $\mu(v a i ̃) 22$ (as either net weight or tare).
Ha 12 (P 27367). Pl. 32. Upper part of blackglazed oinochoe handle of 4th-century b.c. fabric. Graffito on outer part of top.
IV cent. B.C. $\quad \mu \varepsilon ́ t \rho I(o v)$

## Compare Ha 1.

Ha 13 (P 20903). Pl. 32. Fragment from profiled foot of a large open bowl. Dipinto under foot. Context: down to 200 b.c. (Q 8-9).
III cent. b.c. TETp]óxouv
There is no way of judging the capacity of the bowl from the foot, but the restoration above seems most likely. Since the fragment was found in a layer over the floor of the Square Peristyle, which presumably continued the law-court function of its predecessor, it is likely that the bowl was used to receive the water from a klepsydra. So that there would not be wastage or mess, bowls whose capacity could not always be known at a glance would be marked so that a large enough one would
be used to catch all the water. Compare the klepsydra which is marked $X \times$ for two choes (Hesperia, VIII, 1939, pp. 274ff.).
Ha 14 (P 25474). Pl. 33. Fragment from neck and shoulder of amphora. Graffito on shoulder.
Hellenistic $\quad \chi o ́(\varepsilon 5) \beta^{\prime}$
Ha 15 (P 16723). Pl. 33. Amphora with profiled mouth and deep ovoid body. Dipinto in black on shoulder. Context: early 1st century ( $\mathrm{N} 21: 1$ ). H. 0.465 m .; D. 0.24 m .

Early I cent. $\quad k \nu\langle i\rangle \delta 1(\circ v)$
The reading is doubtful. The capacity of the jar is 8.400 1., which is very nearly a modius ( 8.736 1.). The knidion was known as a measure but the only indication of its size (P.Oxy., XV, 1896, 22; 1951) suggests that it held eight xestai ( 4.368 1.) or half a modius. Perhaps a beta for "two"' has disappeared.
Ha 16 (P 14117). Pl.33. Wide-necked amphora of 1st-century type. Dipinto, in red, on neck. Context: second half 1 st century (O 17:1). PH. 0.62 m .; D. 0.27 m .
Second half I cent. $\quad \mu \mathrm{o}(\mathrm{s} / \mathrm{l} \pi \mu \mu \eta$
The capacity of the jar is 10.2001 ., presumably a Cypriote modius; see above, p. 58. The second line may give the producer's name or the contents in abbreviated form; easiest would be $\varepsilon] \pi r \mu \eta(\nu i o v)$, i.e., monthly (ration or offering). See three other jars of this same shape with chi-rho and phi dipinti (L28).
Ha 17 (P 11258). Pl. 33. Fragmentary roundbodied jug, similar to Robinson, Chronology, G 182. Graffito on lower body, upside down to pot. Context: second half 1st century (B 14:3).

Note zeta-form of xi. For restoration compare Ha 28. The jug is too fragmentary to be measured.

Ha 18 (P 19491). Pl. 33. Fragment from shoulder of large amphora with inset neck. Dipinti in red on shoulder.
I cent. a) $] \varepsilon$
b) $\dot{\text { sjpial }} \mu \varepsilon^{\prime} \eta \mu(1 \sigma v)$ i.e., $451 / 2$ hydrias кєрव́uıı [ ? keramia
It is likely that the inscription records the amount of a whole shipment, of which this jar was one, since the hydria is reported (Metrolog. Script., I, 323) to be half an Attic metretes or six choes (i.e., 19.656 1.). The keramion, which
is the Roman amphora of eight choes (26.616 1.), must here be used as an alternate (or translated) summation. The number of keramia should then have been something over 34.
Ha 19 (P 12458). Pl. 33. Amphora with cylindrical neck and cone-shaped body. Dipinto, in red, on shoulder. Context: late 1st-early 2nd centuries ( $\mathrm{N} 20: 5$ ). PH. 0.48 m .; D. 0.253 m .
Late I-early II cent. $\quad \mu^{\prime}(\tau \rho \alpha) \lambda \alpha^{\prime}$
The capacity of the jar, which lacks upper neck and mouth, is 8.000 1. Thirty-one kotyles of 0.2731 . would be 8.4631 . Evidence for the use of metron as kotyle is not known to me. This jar may have been intended as a modius ( 32 kotyles) and was marked to show its variation from the standard.
Ha 20 (P 17130). Pl. 33. Fragment from the shoulder of an amphora. Dipinto, in black, on shoulder. Context: early 2nd century (B20:1). Early II cent.

そ́qtas [
The number of xestai is not preserved, nor is it clear why the form is accusative.
Ha 21 (P 19400). Pl. 33. Amphora with cylindrical body, similar to Robinson, Chronology, G 197. Dipinto, in black, on neck. Context: early 2nd century (E $17: 1$ ). H. 0.445 m .; D. 0.26 m . Early II cent. $\kappa^{\prime}<$
The capacity of the jar is 11.0701 . Twenty and one-half xestai of 0.5461 . would be 11.1931 . Some plaster remaining inside from reconstruction explains the scantness of the present capacity.

Ha 22 (P 15682). Pl. 33. Wide-necked small amphora, similar to Robinson, Chronology, M 77. Dipinti, in black, on either side of neck. Context: second half 2nd century (S $21: 3$ ). H. 0.23 m .; D. 0.17 m .

Second half II cent.
(a) $\delta^{\prime}<$
(b) (illegible)

The capacity of the jar is 2.5001 . Four and one-half xestai of 0.5461 . amount to 2.4571.
Ha 23 (P 7860). Pl. 33. High-necked, round-bodied jug on small ring foot. Graffito on shoulder. Context: late 2nd-early 3rd centuries (D 12:1). H. 0.155 m .; D. 0.125 m .

Late II-early III cent. $\quad \xi \varepsilon\langle\sigma\rangle$ тns
The capacity of the jug is 0.760 1. This is larger by some 0.2001 . than the regular 0.5461 . xestes, perhaps representing an increase by one-third (from 0.5461 . to 0.7281 ., which is approximately $95 \%$ of the up-to-rim capacity). Since several later inscribed jars also require a
xestes of this size, we must presume a change in standard; see above, p. 57.
Ha 24 (P 9919). Pl. 33. Small amphora, Robinson, Chronology, M 123. Faint dipinto, in black, on neck. Context: early 3rd century (M17:1). H. 0.336 m.; D. 0.187 m.

Early III cent. $5^{\prime}$
The capacity of the amphora is 4.3501 . Six xestai of 0.728 1. (see Ha 23) make 4.3681.
Ha 25 (P 14917). Pl. 33. High-necked jug, similar to Robinson, Chronology, M 120. Graffito on neck. Context: mid-3rd century (N 17:1). H. 0.336 m .; D. 0.24 m .

Mid-III cent. $\beta^{\prime}$ Xoũ $\delta i ́ k \varepsilon$ i.e., $\chi o u ̃(s) \delta i ́ k\langle\alpha 1\rangle(O S)$
The capacity of the jug is 6.4001 ., almost twice the old standard chous of 3.2761 .
Ha 26 (P 9902). Pl. 33. Round-mouthed jug, Robinson, Chronology, M 169. Dipinti, in black, on neck (a) and under foot (b). Context: mid3rd century (M 17:1). H. 0.256 m .; D. 0.171 m .
Mid-III cent. (a) $\lambda_{i}(\tau \rho \alpha 1) \eta^{\prime}$
(b) $\lambda i(\tau p \alpha)^{\prime} \eta^{\prime}$

The capacity of the jug is 2.500 1. (i.e., 2.500 kg. of wine or water). Eight Roman pounds (litrai) of 327 gm . would be 2.616 kg . Some of the plaster with which the jug was restored was not smoothed away on the inside and so accounts for the discrepancy of 116 gm . (From the same context there is another similar jug [Robinson, Chronology, M 170] with the same dipinto under the foot.)
Ha 27 (P 928). Pl. 33. Small wheel-ridged jug of mid-3rd century type, like Robinson, Chronology, M 151. Graffito on shoulder. Context: mid-3rd century (I $16: 1$ ). H. 0.15 m .; D. 0.12 m . Mid-III cent. o[i]unpòs סíkoıo[s] i.e., honest wine-measure
The capacity of the jug is 0.760 1. Oivnpós, as an adjective, requires that a masculine noun be understood. The inscription and comparable shape and capacity of Ha 23 make it clear that the word to be supplied here is xestes. For a xestes of this size see p. 57. Note also that the labeling of this vessel as a wine-measure might suggest that it would otherwise be thought of as something else; see above, p. 57.
Ha 28 (P 17499). Pl. 34. Round-bodied jug, similar to Robinson, Chronology, M 150. Graffito on shoulder. Context: mid-3rd century (J 18:1). H. $0.145 \mathrm{~m} . ;$ D. 0.132 m . Illustrated in Hesperia, XVII, 1948, p. 191, pl. LXIX, 2.
Mid-III cent. $\begin{aligned} & \text { ध́otns } \\ & \text { סíkaıos }\end{aligned}$

The capacity of the jug is 0.890 1. to the rim. To explain a xestes so large both absolutely and relatively to the old standard of 0.5461. and to the preserved contemporary examples holding 0.760 1. (Ha 23, Ha 27) requires invoking the so-called "georgic" standard of Metrolog. Script., I, 236 to authorize a xestes that is twice the kotyle that is three-quarters of the regular xestes: $2 \times 3 / 4(0.546)$ is 0.8181 . See above, p. 57.

Ha 29 (P 4914). Pl. 34. Fragment from rim and neck of a closed pot. Graffito on neck. Found in a layer of the 3rd century.
III cent. ко(T'̇ $\lambda \alpha$ ) $\lambda \eta^{\prime}<\quad$ i.e., $381 / 2$ kotyles
Ha 30 (P 17867). Pl. 34. Micaceous pointed jug similar to Robinson, Chronology, M 240. Graffito on shoulder. Context: 3rd century (M 20:2). PH. 0.44 m .; D. 0.20 m .
III cent. $\quad \xi(\sigma \tau \alpha 1) \eta^{\prime}$
Filled to the mouth, the jug holds 6.3001. Eight xestai of 0.7281 . would be 5.8241 . and leave a reasonable margin for air and a stopper.

Ha 31 (P 9672). Pl. 34. Fragment from neck and shoulder of a small amphora. Dipinto, in black, on shoulder. Context: late 3rd-early 5th centuries ( N 18:5).
Late III-early IV cent. Xóes $5^{\prime} \quad$ i.e., 6 - choes
Ha 32 (P 10556). Pl. 34. Wheel-ridged jug, similar to Robinson, Chronology, M 219. Graffito on neck. Context: first half of 4th century (B $14: 4$ ). H. 0.16 m .; D. 0.112 m .

First half IV cent. $\delta$ íkєo[ i.e., $\delta i k\langle\alpha 1\rangle \circ[s \xi \in \tau \eta S]$
The capacity of the jug is 0.760 1. Cf. Ha 23, Ha 27.

Ha 33 (P 11579). Pl. 34. Wheel-ridged, roundbottomed amphora, Robinson, Chronology, M 273. Graffito on shoulder. Context: late 4th century (M 17:1). H. 0.59 m .; D. 0.335 m . Late IV cent. $\quad \lambda \tau^{\prime}<\quad$ i.e., $371 / 2$ (xestai)

The capacity of the jar is 25.740 1., but some plaster remaining inside from the restoration probably makes the difference (less than $6 \%$ ) between the present measurement and the presumed original 27.300 1. ( $371 / 2 \times 0.7281$.). It should be noted that $371 / 2$ xestai of this size are equal to 50 xestai of the 0.5461 . size, which may explain the rather odd number here. But see above, p. 57.
Ha 34 (P 21840). Pl. 34. Cylindrical amphora, similar to Robinson, Chronology, M 273. Con-
text: 4th century (C 13:2). H. 0.54 m. ; D. 0.357 m .

IV cent. $\quad \lambda \varepsilon^{\prime} \quad$ i.e., 35 (xestai)
The capacity of the jar is 27.040 1. The most likely xestes will be that of 0.728 1., giving a total of 25.4801 ., but it is also possible that the dipinto does not record the total capacity but merely the amount that was currently inside. In this latter case the xestes could be smaller.

Ha 35 (P 638). Pl. 34. Small gouged jug like Robinson, Chronology, M 293. Graffito on neck. H. 0.175 m. ; D. 0.125 m .
Early V cent. к $\delta \quad$ i.e., $k(о т \dot{\prime} \lambda \alpha 1) \delta^{\prime}$
The capacity of the jug is ca. 0.8001 ., suggesting the $71 / 2$ ounce kotyle ( 0.204 1.) of Metrolog. Script., I, 235. The dipinto may, however, be a single number (i.e., 24) with a variety of possible interpretations. For example, 24 weight ounces ( $24 \times 27.3 \mathrm{gm}$. is 0.655 kg .) of oil would require a capacity of $10 / 9$ the same weight of wine, or 0.7281.

Ha 36 (P 5671). Pl. 34. Shoulder fragment from wheel-ridged amphora of same type as Robinson, Chronology, M 333. Dipinto, in red.

Apparently a Cypriote modius. Cf. Ha 44 and above, p. 58. Beta with $a_{1}^{\prime}$ stroke is the regular symbol for the fraction $2 / 3$ (Metrolog. Script., I, 174).

Ha 37 (P 8050). Pl. 34. Fragment from shoulder of large amphora. Graffito near handle. Found with coins of late 4th and 5th centuries.
$V$ cent. $\quad \xi(\dot{\varepsilon} \sigma T \alpha l) \lambda \alpha^{\prime} \quad$ i.e., 31 xestai
Ha 38 (P 12010). Pl. 34. Top of storage amphora, similar to Robinson, Chronology, M 302. Dipinto, in red, on shoulder.
V cent. $\quad$ ( $\begin{aligned} & \text { б } \sigma \alpha 1) ~\end{aligned} \delta^{\prime} \quad$ i.e., 24 xestai
Ha 39 (P 21310). Pl. 34. Fragment from the shoulder of an amphora. Dipinto, in red. Context: 5th century ( $\mathrm{P} 7: 4$ ).

$$
V \text { cent. } \quad \kappa \theta^{\prime}<\delta^{\prime \prime} \quad \text { i.e., } 293 / 4 \text { (xestai) }
$$

The jar may well have been of a size to hold so many xestai.

Ha 40 (P 469). Pl. 34. Fragment from the shoulder of a small jar of 5th- to 6th-century fabric. Red dipinto.

$$
\text { V-VI cent. lyou ко(Tú入al) } \mathfrak{i t}^{\prime}
$$

i.e., 19 kotyles of [contents]

Ha 41 (P 13150). Pl. 34. Upper part of amphora, similar to Robinson, Chronology, M 328. Dipinti in red on neck (a) and shoulder (b).
Context: late 5th to 6 th centuries (O 18:1).
Late V-VI cent. (a) $1 \delta^{\prime} \beta^{\prime \prime}$ i.e., $14 \frac{1}{3}$ (xestai)
(b) $1 \delta^{\prime} \beta^{\prime \prime}$

See Ha 36 for the fraction.
Ha 42 (P 13152). Pl. 35. Upper part of amphora of same type as Ha 41. Dipinti, in red, on neck (a) and shoulder (b). Context: late 5th to 6th centuries (O 18:1).
Late V-VI cent. (a) $i^{\prime} \beta^{\prime \prime}$ i.e., $172 / 3$ (xestai)
(b) $i^{\prime} \beta^{\prime \prime}$

## Cf. Ha 36, Ha 41.

Ha 43 (P 13164). Pl. 35. Wheel-ridged amphora, similar to Robinson, Chronology, M 333. Dipinto, in red, on shoulder. Context: late 5th to 6th centuries ( $\mathrm{O} 18: 1$ ). H. $0.49 \mathrm{~m} . ;$ D. 0.253 m .
Late V-VI cent. $\quad \xi(\xi \sigma T \alpha l) k l^{\prime}<$ i.e., $271 / 2$ xestai
The capacity of the jar is 11.5001 . Twentyseven and one-half xestai of 0.4091 . would be 11.247 1. Cf. Ha 35, and see above, p. 57. A graffito alpha may be interpreted variously.

Ha 44 (P 13463). Pl. 35. Wheel-ridged amphora, similar to Ha 43. Dipinti, in red, on shoulder. Context: late 5th to 6th centuries (P 19:1). H. 0.463 m. ; D. 0.235 m .

Late V-VI cent.
(a) ..] $\xi \in \sigma \tau \alpha l] l l^{\prime} \beta^{\prime \prime}$
(b) $\mu \dot{o}(\delta 105)$

The capacity of the jar is 9.8001 ., a good Cypriote modius of $172 / 3$ xestai $(172 / 3 \times 0.5461$. = 9.646 1.). Cf. На 36, Ha 42.

Ha 45 (P 26598). Pl. 35. Amphora, similar to Robinson, Chronology, M 327. Dipinti, in red, on neck (a) and in black, on shoulder (b). Context: early 6th century (Q 17:7). H. 0.55 m .; D. 0.282 m .

Early VI cent. (a) $\xi(\xi \sigma \tau \alpha 1) \kappa \delta^{\prime}<$ i.e., $241 / 2$ xestai (b) $1 \theta^{\prime}$ (faded before drawing)

The capacity is $c a .141$. The two inscriptions suggest that this vessel was used in a time of double standards: $241 / 2 \times 0.5461 .=13.3771$.;

$$
19 \times 0.7281 .=13.8321 .
$$

Ha 46 (P 26693). Pl. 35. Amphora, similar to Robinson, Chronology, M 327. Dipinto, in red, on shoulder. Context: early 6th century (Q 17:7). H. 0.54 m.; D. 0.282 m .
Early VI cent. (chi-rho)
$\xi(\xi \in \tau(\alpha)) k \alpha^{\prime} \delta^{\prime \prime} \quad$ i.e., $211 / 4$ xestai

Because of its weak state this jar could not be measured; see Ha 45, which is slightly larger.
Ha 47 (P 11558). Pl. 35. Storage amphora, Robinson, Chronology, M 327. Dipinto, in red, on shoulder. Context: early 6th century (M 17:1). PH. 0.42 m .; D. 0.262 m .
Early VI cent. $\quad 1 \eta^{\prime}<\delta^{\prime \prime} \quad$ i.e., $183 / 4$
The jar is preserved only to the beginning of the neck and has a present capacity of about 12 liters. Since $183 / 4$ xestai of 0.5461 . are equivalent to only 10.2381 ., the unit here must be a larger xestes, perhaps 0.654 1. ( $\times 183 / 4=$ 12.262 1.). But see above, p. 57.

Ha 48 (P 9784). Pl. 35. Small storage amphora, Robinson, Chronology, M 324. Dipinti, in black, on shoulder, upside down to the pot. Context: early 6th century (M 17:1). H. 0.38 m .; D. 0.215 m .

Early VI cent. $\xi(\xi \sigma \tau \alpha 1) \theta^{\prime}<$ i.e., $91 / 2$ xestai
The capacity of the jar is 5.1501 . Nine and one-half xestai of 0.5461 . are 5.187 1. The drawing appears in its orientation to the pot, hence upside down.
Ha 49 (P 3044). Pl. 36. Fragment from shoulder of early 6th-century jar, like Robinson, Chronology, M 328. Dipinto, in red.
Early VI cent. $\quad \kappa \delta^{\prime}<\delta^{\prime \prime} \quad$ i.e., $243 / 4$
The capacity of similar complete jars of this type makes it clear that the number here records the jar's capacity in xestai.
Ha 50 (P 12695). Pl. 36. Wheel-ridged amphora similar to Robinson, Chronology, M 328. Dipinto, in red, on shoulder. Context: early 6th century (O 19:1). H. 0.545 m .; D. 0.258 m .
Early VI cent. $\xi\left(\varepsilon^{\prime} \sigma \tau \alpha l\right) \tau^{\prime}<$ i.e., $171 / 2$ xestai
The capacity of the jar is 12.9301 . Seventeen and one-half xestai of 0.7281 . are 12.7401.

Ha 51 (P 12157). Pl. 36. Fragment from shoulder of a closed pot. Dipinto, in black. Context: O-Q 18-19.
VI cent. $\quad\left(\xi_{\sigma} \tau_{\alpha l}\right) k Z^{\prime} \quad$ i.e., 27 xestai
Ha 52 (P 14055). Pl. 36. Wheel-ridged amphora, similar to Ha 43. Dipinto, in red, on shoulder. Context: 6th century (Q 18:2). H. 0.51 m .; D. 0.31 m .

VI cent. $\quad\left(\right.$ ( $\sigma$ б大al) $k \varepsilon^{\prime} \quad$ i.e., 25 xestai
The capacity of the jar is 17.5801 . Twentyfive xestai of 0.7281 . are 18.2001. ; twenty-five xestai of 0.6541 . are 16.3501 . See above, p. 57. (The drawing shows only the faded remnant of the original letters.)

Ha 53 (P 22512). Pl. 36. Fragmentary amphora, lacking neck. Dipinto, in black, at base of neck (a) and below one handle (b). Context: 6th-7th centuries (Q 17:1). PH. 0.40 m .; D. 0.22 m .
VI-VII cent. (a) illegible
(b) $\mu \dot{\prime}(\delta 1 \circ s)$

The capacity of the jar (up to the neck) is 9.250 1., so that it might be either the ordinary modius ( 16 xestai $=8.7361$.) or the Cypriote modius ( $172 / 3$ xestai $=9.6461$.). It is not the same clay as the Cypriote modii above (Ha 36, Ha 39, Ha 42, Ha 44).
Ha 54 (P 5663). Pl. 36. Fragment from neck and shoulder of large closed pot. Graffito at junction of neck and shoulder.

Late Roman $\sigma \tau^{\prime} \alpha \mu(v o i) 5^{\prime} \eta(\eta)(i v a l) \gamma^{\prime}$
i.e., 6 stamnoi, 3 heminai

The stamnos is variously defined as equal to four or ten xestai (heminai) (Metrolog. Script., I, 277; II, 102).

Ha 55 (P 9318). Pl. 36. Fragment from rim of a very large pithos. Graffito on top of rim.
Late Roman $\mu \dot{\varepsilon}(\delta ı \mu v o l) ~ i \alpha^{\prime}$
The abbreviation might also be completed as $\mu \varepsilon(\tau \rho \eta \tau \alpha i)$.

Ha 56 (P 9322). Pl. 36. Fragment from the shoulder of a very large amphora. Graffito on shoulder.
Late Roman $\kappa(\varepsilon) \rho(\alpha \dot{\alpha} \mu \alpha) \beta^{\prime} \xi \xi(\sigma \tau \alpha 1) \delta^{\prime}<$

## INTRODUCTION TO NOTATIONS OF TARE (Hb)

Tare, or the weight of the empty vessel, is inscribed on pots presumably for the sake of determining quickly and easily the net weight of contents from the total weight of the filled jar. This would be useful both at the time of the original sale and in later re-use of the jar when it was taken to be refilled. These two different uses are perhaps reflected in the two different kinds of inscription, the dipinto tare being written by the merchant and the graffito more casually inscribed by the householder. In both cases the presence of the tare notation makes it evident that the liquids which the jars held were sold by weight.

In addition to the 31 tare notations classified here, there are 19 more which have been included with the He group (Combinations of Commercial Notations) and one more with the I group (Tax Notations) because they are only one part of texts which combine two or more items: He 3, He 5, $\mathrm{He} 6, \mathrm{He} 12$, He 13, He 17, He 22, He 25, He 26, He 28, He 29, He 31, He 33, He 34, Нe 37-40, He 43; I 7). The present discussion is based on these 20 as well as on the 31 numbered $\mathbf{H b}$ below.

Tare notations from the Greek period are both fewer and less standardized than those from the Roman period. Earliest is He 3 with what is most likely to be both tare and net weight, since this is the only reasonable interpretation of two numbers, one preceded by ${ }^{\circ} \mu$ ( $p o p s u{ }^{\prime}$ ), which use mu as the acrophonic unit, that is: am(phora) - 12 mnas; ( ) - 20 mnas. Probably also tare is $\mathbf{H b} 1$ 's graffito of acrophonic numerals with simple upright strokes as units. $\mathbf{H b} 2$ and $\mathbf{H b} 3$ are completely different, the one being labeled " 100 drachmas" and the other " 20 ounces," both using alphabetic numerals. The 650 gm . weight of $\mathbf{H b} 2$ probably confirms the hundred-drachma notation, if we may invoke the emporic mna of 654 gm . And Hb 3's use of Roman ounces is paralleled by the appearance of at least one lead weight based on the Roman standard in a contemporary context. Hb 4 introduces for the first time in Athens ${ }^{8}$ one of the tare-formulas (cf. He 5, He 22) of the Roman period: $\sigma \dot{\eta} \kappa \omega \mu \alpha=$ "jar", with the weight specified.

In the Roman period tare notations are of three general kinds: 1) a word designating the empty jar, often in the genitive case, followed by a weight-unit symbol and a number; 2) simple vertical strokes which seem to be a tally of the number of weight-units; 3 ) weight-unit word or symbol followed by a number. The first kind declares that it is tare. The second kind is proved to be so in various ways: Hb 15 and He 33 both have their tallies reinforced by notations of the "empty jar" sort with the number

[^17]of weight-units agreeing; of the ten vessels with tallies that are complete enough to weigh $\mathbf{( H b} \mathbf{8 - 1 0}$, $\mathbf{H b} 16, \mathrm{Hb} 19, \mathrm{Hb} 24, \mathbf{H b} 25, \mathrm{Hb} 31 ; \mathrm{He} \mathrm{17}$,He 33 ) only three ( $\mathbf{H b} \mathbf{1 6}, \mathbf{H b} 24, \mathbf{H b} 31$ ) have weights which do not substantially agree with the tally strokes, ${ }^{9}$ two perhaps because of incrustation inside, the other because the last stroke was inadvertently omitted; and finally, seven of these jars with tallies $\mathbf{( H b \mathbf { ~ 9 } , \mathbf { H b } \mathbf { 1 5 } , \mathbf { H b } \mathbf { 1 6 } \text { , }}$ $\mathbf{H b} 24, \mathbf{H b} 25, \mathbf{H b} 31 ; \mathrm{He} 33$ ) are of the same general shape, which they share with five of the vessels with "empty jar" weight (Hb 14, Hb 21, Hb 22; He 34, He 37), and were probably used in a similar way over many generations. The third kind includes a variety of texts so that the reasons for interpreting them as tare differ: some are obviously tare weight because they are coupled with notations of net weight ( $\mathbf{H e} \mathbf{2 6}$, He 29); others are completely unaccompanied but must be tare because they are confirmed by the present weight of the vessel $(\mathbf{H b 5} \mathbf{5} \mathbf{H b} \mathbf{1 8}, \mathbf{H b} \mathbf{2 9} \mathbf{;} \mathbf{H e} 39)$; others are uncertain but seem more likely to be tare than anything else (He 6, $\mathrm{He} \mathrm{12} ,\mathrm{He} \mathrm{13} ,\mathrm{He} \mathrm{38;} \mathrm{I} 7$ ).
Tare notations of the first kind use five different words for the empty jar: 1) twelve vessels have oj $\sigma$ -
 $\mathbf{H b} 23, \mathbf{H b} 26 ; \mathbf{H e ~ 3 1 , ~} \mathrm{He} 34$ ) or abbreviated to five or six letters ( $\mathbf{H b} \mathbf{7 , ~} \mathbf{H b} \mathbf{3 0} \mathbf{~} \mathbf{H e} 33 ; \mathrm{He} 37$ is incomplete); 2) on five vessels the adjective коúqou or its abbreviation кoup( ) appears ( $\mathbf{H b} \mathbf{2 2 ; ~} \mathbf{H b} \mathbf{1 1}, \mathbf{H b} \mathbf{2 8}$; $\mathbf{H e ~ 2 5 , ~ H e ~ 2 8 ) ; ~ 3 ) ~ t w o ~ s h o w ~ a b b r e v i a t i o n s ~ o f ~} \sigma \eta \kappa \omega \mu \alpha$ тоs of either two or five letters (He 5, He 22 ); 4) another two may perhaps be read as $\sigma$ таЯ 10 ( $\mathrm{He} \mathrm{40} ,\mathrm{He} \mathrm{43);} \mathrm{and} \mathrm{5)} \mathrm{one} \mathrm{jar} \mathrm{is} \mathrm{almost} \mathrm{certainly} \mathrm{to} \mathrm{be}$ read as $\varepsilon$ en $\eta$ uou ( $\mathbf{H b} \mathbf{6}$ ). Although this last occurs in the 2nd century and the Hellenistic sekoma we have already noted has its parallels in the 1st and 3rd centuries, there is no real chronological distinction among the terms used; for example, ostrakou appears in the 2nd, 4th, 5th and 6th centuries; kouphou occurs in the 3rd to 6th centuries. The numbers used in these inscriptions are all of the Greek alphabetic sort; occasionally the symbol for the weight-unit is omitted $(\mathbf{H b ~ 1 5 , ~} \mathbf{H b} \mathbf{3 0} \mathbf{;} \mathbf{H e ~ 4 0})$. The great majority of these inscriptions are dipinti; only three are graffiti ( $\mathbf{H b} 23 ; \mathbf{H e ~ 3 1 , ~ H e ~ 4 3 ) . ~}$

Tare notations that are made up of tally strokes, always scratched and never painted, appear on
 which two ( $\mathbf{H b} \mathbf{1 5}$; He 33 ) also have "empty jar" notations. Twelve of these have only simple upright strokes, with occasionally a half stroke or a horizontal stroke for a fractional unit, but the other three (Hb 10, Hb 17, Hb 19) used the Roman sign for "ten." Since these three are the only ones where the weight is over ten litrai, we should perhaps think that all the tallying was done on the Roman system. This would be reasonable since the Greek alphabetic symbol for "ten" was a simple upright stroke indistinguishable from the "ones." ${ }^{10}$ The Roman "ten" also suggests that a ten-litra weight was first put on the balance and noted as such before the single-litra weights were added. This kind of notation continues from the 2 nd century forward.

Tare notations with simple numbers appear on the following: $\mathrm{Hb} 5, \mathrm{Hb} 18, \mathrm{Hb} 29 ; \mathrm{He} 6, \mathrm{He} \mathrm{12}$,He 13 , He 25, He 26, He 29, He 38, He 39; I 7. The chronological range is from the first to the sixth century, and the numbers are all on the Greek alphabetic system.
In all the tare texts where it appears the litra is abbreviated either to a simple lambda or to a lambda with a diagonal stroke (variously placed) which may sometimes be thought of as the following iota. Ounce (oưkía) appears as either gamma enclosing omicron (e. g. Hb 3; He 22, He 39) or omicron surmounted by upsilon (Hb 22).

[^18]Hb 1 (P 9753). Pl. 37. Neck of coarse amphora. Graffito on neck. Context: late 4th-early 3rd centuries b.c. (B 13:8). Hesperia, XXV, 1956, p. 17, no. 73.

IV-III cent. B.C. $\Delta \Delta I I I I I I \quad$ i.e., 26 (mnas)
For the interpretation see $\mathrm{He} 5 ; 26$ mnas are less than 11 kg . and a reasonable weight for such an amphora. Tare seems to be the right interpretation on two grounds: weight of contents is comparatively useless except in conjunction with tare; a capacity of 26 choes is not possible.

Hb 2 (P 5792). Pl. 37. Small amphora. Graffito on shoulder. Context: 3rd century b.c. (E 14:1). PH. $0.315 \mathrm{~m} . ;$ D. 0.157 m .
III cent. B.c. $\delta \lambda$ (kai) $\rho^{\prime}$ i.e., 100 drachmas
The present weight of the amphora, which lacks one handle and the rim, is 650 gm . The complete jar may have been equal to a mna ( 100 drachmas, like Pernice, Gr. Gewichte, Berlin, 1894, nos. 598, 599, 605) on the commercial standard which made up a mna of 150 coin drachmas ( $150 \times 4.36 \mathrm{gm} .=654 \mathrm{gm}$.). See also Agora, X, pp. 19f. This commercial mna is not, however, attested before the 2nd century в.c.

Hb 3 (P 5929). Pl. 37. Shoulder and neck of small amphora. Graffito beside base of handle. Context: 3rd century b.c. (E 14:1).
III cent. B.C. $\kappa^{\prime}$ o(び) $)$ (kíaı) i.e., 20 ounces
The use of the Roman ounce at this period in Athens may also be seen in Agora, X, p. 31, no. 70. It is impossible to tell from the graffito itself whether it refers to capacity ( 20 ounces $=1$ xestes) or to the weight of the jar, but the presence of a tare notation on $\mathbf{H b} \mathbf{2}$ in the same deposit suggests that it might be the latter. Although only a small part of the jar survives, comparison for size with $\mathbf{H b} 2$ suggests a possible weight of about 546 gm . or 20 ounces.

Hb 4 (P 16404). Pl. 37. Rim and wall fragment of wide-mouthed coarse jar. Dipinto, in black, just below lip. Context: 1st century b.c. (F 19:3).
I cent. в.c. $\quad \sigma \dot{\alpha} k \omega \mu[$
For sekoma (sakoma in Doric) as weight of the vessel, cf. He 5, He 22, and also pots from Corinth (Hesperia, XVIII, 1949, p. 152, pl. 16, $15-17)$ where the writing is very similar. The meaning "jar" is attested in P. Oxy., XVI, 1896, 19.

Hb 5 (P 3467). Pl. 37. Early Roman amphora, lacking much of mouth and one handle. Di-
pinto, in red, on neck. Context: early 1st century ( $\mathrm{G} 8: 1$ ).
Early I cent. $\quad \mu \nu(\alpha i ̃) 1 \alpha^{\prime} \quad$ i.e., 11 mnas
The jar at present weighs 8.150 kg . and must originally have weighed somewhat more. The mna used here must be that of 150 coin drachmas, that is, the commercial mna of 654 gm .; cf. Hb 2 above. Eleven such mnas are 8.194 kg .

Hb 6 (P 17129). Pl. 37. Upper part of unglazed amphora of 2nd-century type, like Robinson, Chronology, G 197. Dipinto, in black, on shoulder. Context: late 1st-early 2 nd centuries (B 20:1).

i.e., (weight) of empty: 15 litrai

The fragmentary state of the jar makes its present weight irrelevant.

Hb 7 (P 23389). Pl. 37. Fragment from the wall of a closed pot. Dipinto, in black. Found with pottery of the 1 st and 2 nd centuries.
II cent. ó] $\sigma$ тр́́(коч) $\lambda$ (íтраı) $\theta^{\prime}$
i.e., (weight) of jar: 9 litrai

Hb 8 (P 10469). Pl. 37. Small wheel-ridged amphora; handles, mouth and some wall pieces and most of neck missing. Graffito on shoulder. Context: mid-3rd century (M 18:4). PH. 0.24 m .; D. 0.19 m .

Mid-III cent. IIIII- i.e., 5 (litrai), 1 (ounce)
The weight of the jar in its present fragmentary state is 1.235 kg . The recorded weight is 1.662 kg .

Hb 9 (P 26602). Pl. 37. Small amphora, intact, like Robinson, Chronology, M 238, but earlier. Graffito on shoulder. Context: early 4th century (Q 17:7). H. $0.425 \mathrm{~m} . ;$ D. 0.20 m .
Early IV cent. (a) $\Delta \mathrm{l}$ (written in soft clay with blunt instrument)
(b) IIIIIIIII i.e., 9 (litrai)
(a) may be either number or abbreviation. (b) The jar weighs 3.065 kg ., about $4 \%$ over the 2.943 kg . recorded. A non-soluble deposit inside may account for the discrepancy. (The first of the tally-strokes is shorter than the rest and somewhat separated from them.)
Hb 10 (P 9881). Pl. 37. Amphora with lip and some of neck missing, Robinson, Chronology, M 232. Graffito on shoulder. Context: early 4th century (M 17:1). PH. $0.452 \mathrm{~m} . ;$ D. 0.298 m .
Early IV cent. XIII III =
i.e., 16 (litrai), 2 (ounces)

The present weight of the jar, without the lip and part of the neck, is 5.030 kg . The recorded weight is 5.287 kg .

Hb 11 (P 10267). Pl. 37. Unglazed amphora, missing handles and lip, of early 4th-century type, like Robinson, Chronology, L 31. Dipinto, in black, on shoulder. Context: early 4th century (M 18:4). PH. $0.46 \mathrm{~m} . ;$ D. 0.257 m .

i.e., (weight) of empty: 13 litrai

The present weight of the jar, without handles and lip, is 3.935 kg . The recorded weight is 4.251 kg .

Hb 12 (P 25170). Pl. 37. Amphora with narrow neck, vertical handles and a body like Robinson, Chronology, M 236. Dipinto, in black, on shoulder. Context: Q 17:4. H. 0.54 m. ; D. 0.195 m .

Early IV cent. ȯ $\sigma$ тpóknns $\lambda i(\tau p \alpha ı)\left\langle\theta^{\prime}\right\rangle$
i.e., (weight) of jar: 9 litrai

The present weight of the complete jar is 2.870 kg .; the recorded weight is 2.943 kg . The number, which must be taken as theta, looks like a rectangular epsilon, which is most unlikely to occur at this period. The form óotpókn is not attested.

Hb 13 (P 11193). Pl. 37. Upper part of amphora, of a type related to Robinson, Chronology, L 31. Graffito on shoulder. Context: early 4th century (C 14:4).
Early IV cent. IIIIII i.e., 6 (litrai)
The jar is too fragmentary for its present weight to be significant. Others of this type weigh about six litrai.

Hb 14 (P 11194). Pl. 37. Upper part of wheelridged amphora of 4th-century type, like Robinson, Chronology, L 55 and M 238. Dipinto, in black, on shoulder, very faint. Context: early 4th century (C 14:4). PH. 0.299 m .; D. 0.224 m .

Early IV cent. ó ơṬ̛̣̣́kou $\lambda$ (ítpaı) $\tau^{\prime}$

$$
\text { i.e., (weight) of jar: } 7 \text { litrai }
$$

The preserved upper two thirds of the jar weigh 1.710 kg .; seven litrai are 2.289 kg . (Some letters had faded completely before the final drawing.)

Hb 15 (P 11197). Pl. 37. Shoulder fragment of small wheel-ridged amphora like Hb 14. Dipinto, in black, and graffito on shoulder. Context: early 4th century (C 14:4).

Early IV cent. (dipinto) óotpákou $5^{\prime}$ i.e., (weight) of jar: 6 (litrai) (graffito) 'IIIII
Five strokes tallying for the first five litrai, with a sixth stroke slantwise.

Hb 16 (P 12825). Pl. 37. Wheel-ridged amphora of late 4th-century type, between Robinson, Chronology, M 238 and M 305. Graffito on shoulder. Context: late 4th century (O 19:1). H. $0.308 \mathrm{~m} . ;$ D. 0.214 m .

Late IV cent. IIIIII i.e., 6 (litrai)
The jar, which lacks only a part of the lip, now weighs 2.180 kg . or $10 \%$ more than six litrai ( 1.962 kg .). It is possible that it was marked underweight by a merchant who wished to give short weight on the contents. Or there may be a considerable deposit inside.
Hb 17 (P 7884). Pl. 37. Fragment from neck of amphora. Graffito on neck. Found in a layer with pottery and coins of the 4th century.
IV cent. XIIIIII < i.e., $171 / 2$ (litrai)
Hb 18 (P 14110). Pl. 38. Small amphora of earlier date but same type as Robinson, Chronology, M 324, M 325. Graffito on shoulder. Context: 4th century (O 19:1). PH. 0.40 m .; D. 0.22 m . IV cent. $\quad \lambda_{i}(\tau \rho \alpha 1) \tau^{\prime} \quad$ i.e., 7 litrai

The present weight of the jar, which lacks a mouth and is partly restored in plaster, is 2.075 kg .; seven litrai are 2.289 kg .

Hb 19 (P 14113). Pl. 38. Amphora of 4th-century type, like Robinson, Chronology, M 230. Graffito on shoulder. Context: 4th century (O 19:1). PH. 0.46 m .; D. 0.28 m .

$$
\text { IV cent. } \quad \text { XXIIIII< } \quad \text { i.e., } 151 / 2 \text { (litrai) }
$$

The present weight of the jar, which lacks a mouth and has been partly restored in plaster, is 4.750 kg .; $15 \frac{1}{2}$ litrai are 5.068 kg .
Hb 20 (P 26114). Pl. 38. Amphora top, comparable to Robinson, Chronology, L 54. Graffito on shoulder. Context: Q 19:1.
IV cent. IIIIIIII i.e., 8 (litrai)
The fragmentary state of the jar makes its present weight irrelevant.
Hb 21 (P 10710). Pl. 38. Wheel-ridged amphora, missing neck and handles, of 4th-century type, like Robinson, Chronology, L 55, M 238. Dipinto in black on shoulder. Context: 4th-5th centuries (E 15:5). PH. 0.34 m .; D. 0.20 m .

i.e., (weight) of jar: 7 litrai

The present weight of the jar without handles and lip is 2.025 kg .; seven litrai are 2.289 kg .

Hb 22 (P 16079). Pl. 38. Small amphora of 4thcentury type, like Robinson, Chronology, M 238. Dipinto, in black, on shoulder. Context: 4th century (F 15:1). PH. 0.38 m .; D. 0.215 m .
IV cent. $\quad$ коú $\langle\varphi\rangle$ ou $\lambda i(\tau \rho \alpha ı) 5^{\prime} /$ oú $(\gamma k i \alpha ı) \gamma^{\prime}$
i.e., (weight) of empty: 6 litrai, 3 ounces

The present weight of the jar, which lacks mouth, one handle and has been partly restored in plaster, is 1.910 kg .; six litrai and three ounces are 2.043 kg . The use of pi for phi was in earlier times a barbarism; in the Roman period, spellings like इолфíкıs and 'Aфpıavós for Sulpicius and Appianus (Meisterhans ${ }^{2}$, p. 60) suggest that there were some individuals to whom phi and pi sounded alike. Compare what seems to be the reverse confusion on I 19.

Hb 23 (P 26699). Pl. 38. Fragment from shoulder of small ribbed amphora. Graffito and dipinto, black. Context: 4th century (Q 17:7).
IV cent. (graffito) ỏ of]tpóxкou $\lambda i(\tau \rho a 1) \theta^{\prime}$ i.e., (weight) of jar, 9 litrai (dipinto) illegible

Hb 24 (P 11355). Pl. 38. Wheel-ridged amphora of early 5th-century type, like Robinson, Chronology, M 305. Graffito on shoulder. Context: 4th-5th centuries (E 15:5). H. 0.396 m .; D. 0.216 m .

Early V cent. IIIIII i.e., 6 (litrai)
Restored with plaster and with some plaster inside, the jar now weighs 2.315 kg ., more than one litra more than the recorded 1.962 kg . Compare Hb 16; but here it is possible that as each litra weight was added to the balance a stroke was made on the jar until the last, which was forgotten in the bustle of removing weights and jar alike.

Hb 25 (P 13472). Pl. 38. Small amphora of 5thcentury type, like Robinson, Chronology, M 305. Graffito on shoulder. Context: 5th-6th centuries (P 19:1). H. 0.333 m .; D. 0.173 m . V cent. IIIII i.e., 5 (litrai)

The present weight of the jar, with some plaster restoration, is 1.615 kg .; five litrai are 1.635 kg .

Hb 26 (P 13477). Pl. 38. Amphora, lacking mouth, one handle and wall pieces, of 5th-century type, like Robinson, Chronology, M 302. Dipinto, in black, on shoulder. Context: 5th-6th centuries (P 19:1). H. 0.505 m .; D. 0.26 m .

i.e., (weight) of jar: 12 litrai

The present weight of the jar, with several pieces missing, is 3.410 kg .; twelve litrai are 3.924 kg .

Hb 27 (P 14016). Pl. 38. Small amphora top of 5 th- to 6th-century fabric. Graffito on shoulder. Context: 3rd to 6th centuries (M 18:4).
V-VI cent. IIIIII i.e., 6 (litrai)
The fragmentary state of the jar makes its present weight irrelevant.

Hb 28 (P 12914). Pl. 38. Narrow-bodied jug of 6th-century type, like Robinson, Chronology, M 315. Dipinto, in very faint black, on shoulder. Context: 5th-6th centuries (P 18:1). H. 0.595 m .; D. 0.203 m .

VI cent. кợ́ $\varphi($ ou $) \lambda(i \not \tau \rho \alpha ı) i^{\prime}$
i.e., (weight) of empty: 10 litrai

The weight of jug, complete except for minor fractures, is 3.120 kg .; ten litrai are 3.272 kg .

Hb 29 (P 12936). Pl. 38. Amphora of 6th-century type, like Robinson, Chronology, M 325. Dipinto in black, on shoulder. Context: 5th-6th centuries (P $18: 1$ ). H. $0.451 \mathrm{~m} . ;$ D. 0.205 m .
VI cent. $\quad \lambda(i \tau \rho \alpha 1) \quad \theta^{\prime} \quad$ i.e., 9 litrai
The complete jar weighs 2.935 kg .; nine litrai are 2.943 kg . (Since the dipinto had completely faded before the final drawing, this was copied from the original reading, which bears little relation to what was seen by me in 1960 .)

Hb 30 (P 13464). Pl. 38. Body of amphora, lacking most of shoulder, neck and handles, of 6th-century type, like Robinson, Chronology, M 325. Dipinto, in black, on shoulder. Context: 5th-6th centuries (P 19:1).
VI cent. ỏoțp̣ák (ov) 5'

$$
\text { i.e., (weight) of jar: } 6 \text { (litrai) }
$$

The jar is too fragmentary for its present weight to be of significance.

Hb 31 (P 14056). Pl.38. Amphora of the 6th century, a later example of the type of M 305, M 306 in Robinson, Chronology. Graffito on neck. Context: 5th-6th centuries (Q 18:2). H. 0.44 m. ; D. 0.23 m .

VI cent. IIIIIIII i.e., 8 (litrai)
The present weight of the complete jar is 3.330 kg .; eight litrai are 2.616 kg . See Hb 16 and $\mathbf{H b} 24$ for possible explanations of the discrepancy.

## INTRODUCTION TO NOTATIONS OF DATE (Hc)

Of all the categories of commercial notations dates are the least satisfactory and convincing, largely because they are far more relative to and dependent on a temporal context than are the notations of capacity, tare and contents. Indications of time appear on the 26 vessels included in this category, ${ }^{11}$ on seven which are classified with Combined Notations (He 4, He 18, He 23, He 24, He 37, He 41, He 42), and on one with Owner's Marks (F 250), and on three (I 17, I 23, I 44) of the Tax Notations, over and above the indiction dates which appear regularly in that series. Nineteen of these 37 give dates by era; 12 date by magistrates or emperors; five give month dates; the one remaining is a possible indiction date. Greek alphabetic numerals are used throughout, but in some consular dates the Latin language and alphabet take the place of Greek.

Most of the dates by era consist of simply a number; the particular era is a matter of interpretation. Eight examples may be assigned with a fair degree of certainty to the Actian era: He 10-14, Hc 16, Hc 18, He 19. Four of these (He 10, Hc 16, Hc 18, Hc 19) are on wheel-ridged jars of dark micaceous clay with one handle and high-collared ring foot like the 25 examples published as "Dated Jars of Early Imperial Times" (Hesperia, XXIV, 1955, pp. 277-285). Only Hc 19 has any remnant of the era designation which appeared on two of the pieces published earlier: ( $\boldsymbol{\xi}^{\boldsymbol{\tau}} \mathrm{O}$ ) $\mathrm{Ni}(\mathrm{k} \eta 5)$, but all four have numbers which give dates in the Actian era that fit well into the larger group. The other four notations which are here interpreted as Actian era dates are more various: two dipinti (Hc 11, Hc 12) and two graffiti (Hc 13, He 14). In the case of all four there seems to be no other easy explanation for the number; for two of the vessels (Hc 11, Hc 12) the ceramic date agrees with the assumed Actian date; the other two are fragments too small to be assigned a date on ceramic grounds, and they have no dated context.

Of the 11 other dates by era, three ( $\mathbf{F} \mathbf{2 5 0} \mathbf{;} \mathbf{H c} \mathbf{1 7}, \mathbf{H c} 25$ ) seem to be Seleucid, four may be based on Diocletian's accession (Hc 22, Hc 23; He 37; I 44), one appears to be Christian (He 24) and three are uncertain (Hc 26; $\mathrm{He} 23, \mathrm{He} 24$ ). The bases for these assignments are outlined in the individual catalogue descriptions.

The 12 dates by magistrates or emperors include two of the Greek period (He 1, Hc 2), six consular dates (Hc 3, Hc 4, Hc 6-8; He 4), two imperial (Hc 5, Hc 15) and two uncertain (Hc 20, Hc 21). Ordinarily in the Greek period jars were dated by stamps on the handles; these two, with incision in the soft clay on one and dipinto on the other, are unusual. Jars with consular dates in both Greek and Latin have long been known in Pompeii and Rome (C.I.L., IV, 2551 ff ., 5510 ff ., 9313 ff .; XV, 3636 ff .). Of the two which use ह̈́tous, one continues in Greek (Hc 4) with the abbreviated name of Gaius Cassius, while the other seems to continue, although much is lost, in Latin, ending with the regular Latin abbreviation for consuls (Hc 7). Both of these, like three of the four purely Latin texts, are dipinti. The exception (Hc 6), being lightly and casually scratched just below the handle, may well have been the work of an Athenian owner rather than a foreign shipper or seller: Druso et Crispino (9 b.c.). He 3 and Hc 8 can not be read well enough to give definite dates, but He 4 is clearly assignable to 17 b.c. (C. Furnio).

The two imperial dates are given as the sixth (year) of Augustus (Hc 5) and the fourteenth year of Hadrian (Hc 15). ${ }^{12}$ The two uncertain dates of this sort (Hc 20, Hc 21) are incomplete, one using the émí formula, the other हैTos.

The five month dates are as follows: July (Hc 9), nones of August (He 18), June 17 (He 41), first month (I 17), and the sixth day of the sixth month (I 23). Possible references to months also occur on Hc 5 and Hc 11. The one possible indiction date seems to combine a day "before the Ides" with an indiction year (He 42).

[^19]As far as abbreviations are concerned the usage with regard to etos should be noted: of nine examples, the four ( $\mathbf{H c} \mathbf{4}, \mathbf{H c} \mathbf{7 , H c} \mathbf{1 5}, \mathrm{Hc} 21$ ) which are dated earlier than the late 3rd century show the word written in full; the five dated to the late 3rd century and later abbreviate the word to its first two letters (He 22-24; He 23, He 24). The word for month ( $\mu \eta^{\prime} v$ ) is abbreviated either as $\mu()$ (He 9; I 17) or $\mu \eta()$ (He 41; I 23).

Hc 1 (P 7699). Pl. 39. Toe of plain amphora, neatly profiled. Letters incised on underside while clay was soft. Context: late 4th to early 3rd centuries b.c. (E 3:1).

The writing is cramped and changes orientation. An archon of this name served in Athens in the year 319/18 в.c., but either another provenience or another magistracy is a possibility. The fact that the inscription was made before firing suggests that this date served one of the purposes of the stamp usually found on handles.

Hc 2 (P 9754, P 9755). Pl. 39. Chian amphora. Dipinti in black on shoulder (a) and inside handle (b). Context: late 4th-early 3rd centuries в.с. (B 13:8). PH. $0.79 \mathrm{~m} . ;$ D. 0.355 m .

Late IV-early III cent. B.c.

(b) Поגvóno

If the archon is Athenian, there are two possible years: $332 / 1$ or $225 / 4$ b.c. The name under the handle may be that of potter, producer of contents, middleman or even owner.
Hc 3 (P 8108). Pl. 39. Amphora of Roman type. Dipinto in red on neck. Context: late 2nd century в.с. (C $9: 7$ ). H. 1.017 m .; D. 0.291 m .
Late II cent. b.c.


Obviously a date by consulship, but the dipinto is now too faded to be drawn. Another jar of this type (Agora inv. no. P 8105) found in the same context has an inscription which has survived a little better but gives less immediate sense: ] $\mathbf{B} \cdot \mathbf{C}$ [ (presumably an abbreviated name ending in " $b$ " followed by the abbreviation for consul).

Hc 4 (P 3215). Pl. 39. Shoulder fragment of small jar. Dipinto in brown. Found with much Hellenistic material and a little Late Roman.
I cent. b.c. Ë́rous Г(aíou) Kaббi(ou)
(illegible)
A Gaius Cassius was consul in 124, 96 and 73 в.c. Since the colleague is not here preserved, it is impossible to determine which is meant.

Hc 5 (P 9670). Pl. 39. Chian amphora ( $=$ Robinson, Chronology, F 92). Dipinto in black on shoulder. Context: 1st century b.C. (N 19:1). PH. 0.86 m. ; D. 0.309 m.
I cent. B.c. Aủyoú $\sigma\left(\right.$ tou) $5^{\prime}$ $\mu(\eta v o ̀ s)$ 'Apt( $\varepsilon \mu \imath \sigma i o v)$
The sixth year of Augustus would be 21 b.c. The reading of the second line is uncertain.

Hc 6 (P 16206). Pl. 39. Micaceous one-handled jar, similar to Robinson, Chronology, F 65. Graffito under handle. Context: first half of 1st century ( $\mathrm{N} 20: 1$ ). PH. 0.47 m .; D. 0.265 m .
First half I cent. DRUSO ETT CRISPINO That is, 9 b.c.
He 7 (P 21791). Pl. 39. Ovoid amphora with short wide neck, horned handles and short toe. Dipinti in black on shoulder. Context: early 1st century (R $10: 1$ ). H. $0.533 \mathrm{~m} . ;$ D. 0.28 m .
Early I cent.
घं]tous[ ]BA( ) COSS

Perhaps 6 b.C.: D. Laelius Balbus, C. Antistius Vetus. Or A.D. 22: D. Haterius Agrippa, C. Sulpicius Galba.
Hc 8 (P 16199). Pl. 39. Micaceous one-handled jar, similar to Robinson, Chronology, F 66. Dipinto in black below handle. Context: first half of 1st century ( $\mathrm{N} 20: 1$ ). H. 0.46 m .; D. 0.245 m .

Early I cent. NERONE BỌ. . (traces)
If this is dating by consul, the possible dates are: 13 b.c. (Ti. Claudius Nero, P. Quinctilius Varus); 9 b.c. (Nero Claudius Drusus, T. Quinctinus Crispinus); 7 b.c. (Ti. Claudius Nero II, Cn. Calpurnius Piso). The word begining "bo.." is uncertain both in reading and interpretation.
Hc 9 (P 15559). Pl. 39. Upper part of amphora with collared rim. Dipinto in black on shoulder. Context: 1st century (R 21:2).
I cent. $\quad \mu(\eta v o \dot{s})$ 'lou入iou
Hc 10 (P 24853). Pl. 39. Shoulder fragment of brown micaceous jar, similar to Robinson,

Chronology, M 125. Graffito below handle attachment. Context: late 1st century (B 13:2).
Late I cent.
pка'
Year 121 of Actian era = A.D. 91.
Hc 11 (P 10048). Pl. 40. Upper part of amphora ( $=$ Robinson, Chronology, M 102). Dipinti in black on shoulder (a) and under one handle (b). Context: second half of 2nd century (M 17:1).
II cent.
(a) $E P() \varepsilon^{\prime}$
$\rho \lambda \theta^{\prime}$
(b) $\sigma \omega ̃ s$

Year 139 of Actian era = A.D. 109, which is perfectly suitable to the jar itself, which finds its nearest parallels in late 1st and early 2nd centuries (Robinson, Chronology, G 197, H 20). Its later context date is unexpected but not impossible. The first part of (a) might be interpreted in two ways: as a month date (Hermaios 15) or as tare (ép $\dot{\mu} \mu \mathrm{ou}$ 15). (b) The jar is sound?

Hc 12 (P 5774). Pl. 39. Neck and shoulder of small amphora. Dipinto in red on shoulder. Context: second half of 1st century to 2nd century ( $\mathrm{F} 13: 2$ ).
II cent.
$\rho v^{\prime}$
ATOE[

The number is likely to be a date in the Actian era, i.e., A.D. 120.

Hc 13 (P 11545). Pl. 39. Wall fragment of closed vessel. Graffito on outside.
Roman
$\rho \nu \varepsilon^{\prime}$
Year 155 of Actian era would be A.D. 125. The nu is written in reverse.

Hc 14 (P 2518). Pl. 39. Shoulder fragment from a large unglazed vessel. Graffito on outside.
Early Roman $\rho \nu[$
Presumably an Actian date, ca. A.D. 120-130.
He 15 (P 7583). Pl. 39. Amphora ( $=$ Robinson, Chronology, J 5). Dipinto in black on shoulder. Context: mid-2nd century (C 12:1). PH. 0.549 m. ; D. 0.295 m .

Mid-II cent. ËTous $\delta \mathfrak{l}^{\prime}$ 'A ${ }^{\prime}$ pıavoũ éviaualaĩov
Whether the date was based on Hadrian's accession or his first visit to Athens is uncertain; cf. Kubitschek, Real-Encyclopädie, Suppl. III, cols. 28-29. The word in the second line presumably refers to the age of the contents, probably wine.

Hc 16 (P 25464). Pl. 40. Upper part of micaceous one-handled jar similar to Robinson, Chronol$o g y, ~ M ~ 125 . ~ G r a f f i t o ~ b e l o w ~ h a n d l e . ~$
II cent.
$\rho \circ \beta^{\prime}$
Year 172 of Actian era = A.D. 142.
Hc 17 (P 13599). Pl. 40. Upper part of onehandled jar. Dipinto in black on shoulder. Context: second half of 1st century to 2 nd century ( N 19:2).
II cent. $\quad \Sigma \varepsilon] \lambda \varepsilon \cup K() \varphi \beta^{\prime}$
Year 502 of Seleucid era (from 312/1 b.c.) would be ca. A.D. 190, perhaps too late for this context.

Hc 18 (P 21631). Pl. 40. Fragment from shoulder of micaceous one-handled jar similar to Robinson, Chronology, M 125. Graffito on outside. Context: 2nd to early 3rd centuries (U 22:1). II-early III cent. $\sigma K \theta^{\prime}$

Year 229 of the Actian era = A.D. 199.
He 19 (P 22211). Pl. 40. Fragment from the shoulder of a micaceous one-handled jar, similar to Robinson, Chronology, M 125. Graffito on outside.
III cent. ËTos N] l( $\mathrm{k} \eta$ ) $\sigma \mu \alpha^{\prime}$
Year 241 of the Actian era = A.D. 211.
Hc 20 (P 7785). Pl. 40. Shoulder fragment from large plain amphora. Dipinto in black.
$\begin{array}{cc}\text { Roman } & \varepsilon \in \pi i \operatorname{Zau\lambda }[ \\ & \triangle I A \Pi \Lambda ̣[ \end{array}$
What magistrate of what city is here used for dating is obscure, as is the word or phrase in the second line.
He 21 (P 11752). Pl. 40. Top of amphora. Dipinto in black on shoulder. Context: 3rd century ( $\mathrm{K} \mathrm{18:3} \mathrm{)}$.
III cent.

$$
\begin{aligned}
& \alpha[ \\
& \text { हैTOS[ }
\end{aligned}
$$

The incompleteness of the inscription makes any conjecture of emperor or era difficult.
He 22 (P 3140). Pl. 40. Shoulder fragment of large amphora. Dipinto in red.
Late Roman

$$
\text { (chhi-ṛhọ) } \begin{aligned}
& \text { हैT(Oऽ) } \\
& \text { ka[ }
\end{aligned}
$$

Year 21 based on the era of Diocletian would be A.D. 305. Ginzel (Handbuch der mathematischen und technischen Chronologie,

II, Leipzig, 1906, pp. 229-231) notes that this era was used in private documents in Egypt throughout the 4th and 5th centuries. But the kappa-alpha may begin a word like Kaisaros.

Hc 23 (P 14093). Pl. 40. Round-bottomed cylindrical amphora ( $=$ Robinson, Chronology, M 333). Dipinti in red on shoulder. Context: 5th-6th centuries (P 18:1). H. 0.495 m .; D. 0.211 m .

V-VI cent. ${ }^{\text {ËT}(O S) ~}$
$\rho v^{\prime}$
$\Psi A$
Perhaps year 150 of the era of Diocletian (A.D. 434)?

Hc 24 (P 9660). Pl. 40. Round-bottomed amphora (= Robinson, Chronology, M 372). Dipinto in black on shoulder. Context: late 6th century (M 17:1). H. 0.467 m. ; D. 0.148 m .
Late VI cent. ${ }_{\varepsilon}^{\mathrm{z} T}$ (os) ] $\phi \pi^{\prime}$
If only one number (from alpha through theta) is lost at the beginning, this may be 58 ? in the Christian era, which was "invented" in
A.D. 532 and known to be in use before this time (Bickerman, pp. 74, 81).
Hc 25 (P 25054). Pl. 40. Small jug with gouged decoration similar to Robinson, Chronology, M 361. Graffito on wall near handle. Context: 6th ( -7 th? ) century (Q 17:4). H. 0.175 m .; D. 0.13 m .

VII cent.

$$
\leqslant \xi \delta^{\prime}
$$

The year 964 of the Seleucid era is A.D. 642. (The Seleucid era continued in use in various places till near modern times; cf. Ginzel, op.cit., I, p. 263.) The context date need not militate against the assignment to A.D. 642 since the jug was found near the top of a well which continued into the 8th century.
Hc 26 (P 3457). Pl. 40. Shoulder fragment from amphora. Dipinto in red on neck, inside handle. Context: 6th-7th centuries (L 14:2).

```
VI-VII cent. X\rho(óvos) I\delta'[
mp( ) [
```

What era or emperor the year refers to is perhaps not worth conjecturing. The abbreviation in the second line may be either an addition to the date or some other kind of notation.

## INTRODUCTION TO NOTATIONS OF CONTENTS (Hd)

In addition to the 23 texts grouped together here, contents is specified in the following notations classified elsewhere: one in Dates (He 15); 19 in Combined Notations (He 7, He 13, He 15, He 17, He 18, He 21, He 23, He 24, He 26, He 27, He 29, He 30, He 32-34, He 36, He 40, He 41, He 44); and 12 in Tax Notations ( $\mathbf{1 0 - 1 2 , I}$ 16, I 19, I 20, I 25, I 29, I 40-42, I 45). The present discussion concerns all 55 texts.

Wine is apparently the most important single commodity since reference is made to it on 27 vessels, if we include the nine occurences in Tax Notations of one abbreviated word (ả $\mu v \nu v$ ) which can perhaps best be interpreted as a kind of wine. ${ }^{13}$ Olvos alone, without modification, is used only once (Hd 13), perhaps to distinguish the wine jug from jugs used for other commodities and not necessarily washed in between or perhaps to indicate that this was a wine measure rather than an oil or honey measure (see Ha 27: oivnpòs סíkolos). That this notation is graffito rather than dipinto is an indication of its informal nature and incidental purpose. All other wine notations indicate particular kinds of wine and all except one (Hd 23) are dipinti and may be thought of as labeling the original contents. The kinds of wine range from a cheap őछos (vin ordinaire) of the 5th century b.c. (Hd 1) to the wine made from the finest Aminnaean grapes (Pliny, N. H., XIV, 4, 21, Principatus datur Aminaeis firmitatem propter senioque proficientem vini eius utique vitam.) of the 5th and 6 th centuries of our era (I 10, I 16, etc.). Most frequent in appearance, after the Aminnaean, if abbreviations are correctly interpreted, is mó $\sigma \sigma o v$ (raisin wine): Hd 9 (written in full); Hd 12 (abbreviated to first three letters); He 13, He 40 (first two letters). Next in frequency, with the same proviso about abbreviations, is Pramnian wine: Hd 5 (written in full); Hd 17,

[^20]He 26 (first three letters). Honeyed wine is noted twice: oîvou $\mu \varepsilon \lambda_{\imath}$ tivou (He 21); $\mu \varepsilon \lambda_{\imath} \tau(\quad)(H e ~ 30)$. Falernian appears once (He 27). Three other kinds of wine may be indicated by three abbreviations:


Wine is described in somewhat different terms on four other vessels: k $\alpha 9 \dot{\alpha} \rho \circ$ as an indication of net weight rather than of purity (Hd 10); द̇viauolaiov (He 15), and $\pi \varepsilon \rho$ (volwós) (Hd 20) seem to indicate the age of the wine; $\operatorname{vin}(u m) \operatorname{saec}(\quad) \operatorname{car}(\quad) v i l(l a ?)$ Terg(estina?) seems to indicate use (?) and provenience (He 18). See also below for miscellaneous and uncertain contents which might be wines.

Four of the above wine notations are accompanied by single letters which may perhaps be most readily explained as indications of quality: alpha on Hd 1 and Hd 20 ; gamma on Hd 15 ; delta on Hd 5. Perhaps similar in significance is the $\delta \varepsilon \dot{\prime} \tau \varepsilon \rho o s$ which appears along with a price mark on He 15.

Six vessels are marked as containing oil. Three of these inscriptions are graffiti and indicate merely that the contents was oil: Hd 2 from the 4th century b.c. seems to say that the oil is for external rather than internal use; Hd 4 and $\mathbf{H d} 18$, of the 1st and 3rd centuries respectively, have the same abbreviation, $\varepsilon \lambda \alpha \prime(\circ v)$. The three dipinti, on the other hand, indicate the kind or quality of the oil: on He 7 pom $\rho \rho\left(\alpha v \varepsilon^{\prime}-\right.$ $\lambda \alpha 10 v)$ or radish oil, weighing $20^{5} / 12$ litrai ( 6.676 kg .), is equated with 27 kotyles ( 7.371 ., of which the oil weight is $9 / 10$ or 6.655 kg .); on He 15 the price is given for what may be second quality white oil; on He 32 oil-lees or $\tau \rho v\left(\gamma^{\prime} \alpha\right)$, weighing nine litrai ( 2.943 kg .), occupies a vessel of $c a .3 .3001$. capacity (oil weight of a 3.2761 . chous is $9 / 10$ or 2.943 kg .).
Five jars are marked as honey pots, either implicitly or explicitly. Implicit in the combination of Hd 6's weight notation with its capacity is the fact that its contents was honey: that is, the 14 litrai ( 4.578 kg .) indicated on the shoulder could be contained in the ca. 3.2001 . capacity only if the contents' weight was $4 / 3$ that of wine $(4 / 3 \times 3.052=4.578)$. Honey is explicitly noted as contents of three other jars: sufficient traces of the word Hymettos appear twice on He 29 and combine with the noted net weight to confirm the nature of the contents. On He 33 and He 34 the genitive of honey ( $\mu \dot{\varepsilon} \lambda_{1}$ ros) is followed by the weight in litrai. Somewhat different is He 36 , which notes the number of xestai of "tawny honey" ( $\xi \alpha v \vartheta \circ$ ũ $\mu \varepsilon ́ \lambda ı$ ıTOs).

The variety of miscellaneous contents is great, ranging from fish-sauce (garum) to milk ( $\gamma \dot{\alpha} \lambda \lambda \alpha$ ). Perhaps most certain are the three jars marked as containing Italian millet: He 23, He 24 ( $\mu \varepsilon \lambda \hat{i} i v(o s)=\mu \dot{\lambda} \lambda ı v o s=$ $\mu \varepsilon \lambda i ́ v \eta$, LSJ); He $41 \mu \varepsilon \lambda i v \eta s$. Two vessels probably contained garum: Hd 3 reads $\operatorname{coc}(t u m)$ ab Auso( ), employing a formula elsewhere used for fish-sauce (C.I.L., IV, 2576, 2643, 5671 ff ., 9418 f .); the ligature of Hd 8 may be reasonably resolved as $\gamma \dot{\alpha} \rho(o u)$. Preparations of a medical nature may perhaps be seen in Hd 11 ("20 parts darnel to four parts asparagus') and Hd 21 ("diuretic'). More puzzling are Hd 14, a cookie-jar shape with the inscription maícia, presumably in the sense of "goodies," and Hd 19 which
 inscription is to alert the reader either to the fact that dry materials are elsewhere or that the measure (30 units) is wet rather than dry. Hd 22 reads $\gamma \dot{\alpha} \lambda \alpha$, a clear and unambiguous label in contrast to the generalized кर́p

Four other vessels show notations which may well be of contents, but certain identification is not possible since the abbreviations are difficult to resolve. The kopl( ) of $\mathbf{H e} 44$ may be something flavored
 in nine other Tax Notation texts and so might be wine. No expansion of $\psi \omega \nu 0$ ( ) suggests itself, but
 honeyed Mendaean.

It is possible that in Miscellaneous (K) and Unclassified (L) Notations lurk other indications of contents which have not been recognized. For other possibilities see Ha 1, Ha 16 and Ha 40.

Hd 1 (P 11021). Pl. 41. Upper part of 5th-century b.c. type wine amphora. Dipinto in black on shoulder. Context: last quarter 5th century b.C. (B 15:1). Hesperia, XVIII, 1949, p. 336, no. 102, pls. 97, 98.
Last quarter V cent. b.C. öoxos A i.e., ő $\xi \circ$ s
Sigma-chi for xi is found also on ostraka of Kallixenos; see Hesperia, XIX, 1950, p. 387, no. 22. Alpha may perhaps be taken as a number indicating capacity (one amphora or metretes) or quality.

Hd 2 (P 20294). Pl. 41. Part of shoulder and upper wall of small black-glazed olpe. Graffito written vertically.
 тก̃s $\pi$ ] $\alpha \lambda \alpha i \sigma T[p a s$
Restoration is not certain but for example only.

Hd 3 (P 7529). Pl. 41. Amphora of late Koan type, like Robinson, Chronology, F 93. Dipinto in black on shoulder. Context: late 1st century B.C. to early 1st century (D $11: 1$ ). H. 0.72 m .; D. 0.275 m .

Late I cent. B.C.-early I cent. coc(tum) ab Auso [
Probably (garum) coc(tum) ab Auso[. This use of the participle is not known to me from elsewhere, but the ablative of agency with factum is familiar from Pompeii; e.g., C.I.L., IV, 5671 ff. : g(arum) f(actum) ab Umbricio.

Hd 4 (P 15380). Pl. 41. Small jug with rounded body, narrow neck and ridged handle. Graffito on shoulder. Context: 1st century (R $21: 2$ ). PH. 0.15 m. ; D. 0.129 m .
I cent. Ė $\lambda \alpha i(\circ v)$
Hd 5 (P 9671). Pl. 41. Top of small coarse amphora, like Robinson, Chronology, G 197. Dipinto in black on shoulder. Context: 1st-2nd centuries (M 18:1).

$$
\begin{array}{lc}
\text { Late I-early II cent. } & \Pi_{\rho} \alpha \mu \varphi ̣[ \\
\Delta
\end{array}
$$

That is, Pramnian wine. The isolated delta may relate to capacity or quality.

Hd 6 (P 12373). Pl. 41. Wide-mouthed amphora similar to Robinson, Chronology, M 41. Dipinto in black on side. Context: late 1st-early 2nd centuries (N 20:5). H. 0.195 m .; D. 0.188 m . Late I-early II cent. $\begin{aligned} & \lambda_{i}^{i}(\tau \rho a 1), \delta^{\prime} \\ & \xi(\dot{\varepsilon} \sigma \tau \alpha I)\end{aligned}$

Since the jar holds 3.2001 ., the contents can weigh 14 litrai ( 4.578 kg .) only if it is honey, which is four-thirds the weight of wine or water. Four-thirds of 3.200 gives only 4.264 kg ., but it seems likely that although this was only a scant chous (properly 3.276 1.) it was thought of as six xestai, which may have been indicated in the largely faded second line. Six xestai of wine were ten litrai; six xestai of honey would be $131 / 3$ litrai, which might in turn have been called 14 litrai. There is no question of the 14 litrai being the weight of the jar, which is only 1.100 kg .

Hd 7 (P 3058). Pl. 41. Upper part of amphora like Robinson, Chronology, G 197. Dipinto in black on shoulder. Context: 1st-early 3rd century (J 12:1).
I-II cent. Kav ( )
Perhaps kavөapitns olvos, but other possibilities exist: owner's name; $\operatorname{kav(i\delta ıov)~for~kvi\delta ıov;~}$ etc.

Hd 8 (P 13601). Pl. 41. Amphora preserved only to shoulder. Dipinto in red on shoulder. Context: mid-1st to mid-2nd century ( $\mathrm{N} 19: 2$ ).
Mid-I to mid-II cent. (ligature) $\gamma$ dop(ou)
Hd 9 (P 21381). Pl. 41. Neck and shoulder of plain amphora (=Robinson, Chronology, H 20). Dipinto in black on shoulder. Context: first half 2nd century ( $\mathrm{P} 8: 1$ ).
First half II cent. (illegible)
Túooov
(illegible)
That is, raisin wine. Cf. C.I.L., IV, 5594.
Hd 10 (P 10064). Pl. 41. Upper part of widemouthed amphora. Dipinto in black on shoulder. Context: 2nd century (M 18:1). PH. 0.37 m .; D. 0.25 m .

II cent. kaӨapọũ $\lambda$ (itp $\left.{ }^{2}\right)$ [
That is, weight of contents net.
Hd 11 (P 963). Pl. 41. Wide-mouthed jar, similar to Robinson, Chronology, M 118. Dipinto in black on shoulder. Context: late 2nd-early 3rd centuries (I 16:1). H. 0.23 m .; D. 0.18 m . Late II-early III cent. $\alpha$ aip $\omega(\nu) \kappa^{\prime}$
áótiapóyou $\delta^{\prime}$
Apparently a decoction of herbs made up of 20 parts of darnel to four parts of asparagus. Cf. Dioscorides, II, 122, 152 for uses of the two herbs separately.

Hd 12 (P 965). Pl. 41. Fragment from neck and shoulder of a large amphora. Dipinto in red on shoulder. Context: late 2nd-early 3rd centuries (I 16:1).
Late II-early III cent. $\quad \pi \alpha ́ \sigma(\sigma o v)$
Hd 13 (P 17894). Pl. 41. Small wheel-ridged jug like Robinson, Chronology, M 122. Graffito on shoulder. Context: late 2nd to mid-3rd centuries (C 20:1). H. $0.201 \mathrm{~m} . ;$ D. 0.128 m .
Late II-mid-III cent. oilvou
Hd 14 (P 9918). Pl. 41. Wide-mouthed jar (= Robinson, Chronology, M 118). Dipinto in black below lip. Context: early 3rd century (M 17:1). H. $0.217 \mathrm{~m} . ;$ D. 0.165 m .
Early III cent. mai $\quad$ via (illegible)
Cf. Ephippus, fr. 24 (Kock) for this word listed among other good things of the table.

Hd 15 (P 12359). Pl. 41. Shoulder fragment of wheel-ridged amphora. Dipinto in black on neck behind handle, running down. Context: early 3 rd century ( $\mathrm{N} 20: 5$ ).
Early III cent. $\alpha \rho \omega()$

$$
\Gamma
$$

Perhaps áp $\omega(\mu \alpha \pi i \pi t s ~ o l v o s) ; ~ c f . ~ C . I . L ., ~ I V, ~$ 5583: aroma( ). The gamma may refer to quality or quantity.

Hd 16 (P 13605). Pl. 41. Upper part of amphora with thick rounded lip, narrow neck and sloping shoulder. Dipinto in black on shoulder. Context: first half of 3rd century (P 19:1).
Mid-III cent. $\mathbf{~ U ́ \delta \alpha т \alpha ~}$

$$
\lambda^{\prime}
$$

That is, liquids: 30 (probably litrai).
Hd 17 (P 25195). Pl. 41. Amphora with pointed toe similar to Robinson, Chronology, M 236. Dipinto in black on shoulder. Context: mid-3rd century (Q 17:4).
Mid-III cent. Пpá( $\mu v \in 1 \circ$ olvos)

Hd 18 (P 5717). Pl. 41. Shoulder fragment from storage amphora. Graffito. Context: dumped fill going into 3rd century (E 14:1).
III cent. Ề $\lambda$ 人 (Ov)
$\pi 0$ ( )
The significance of the second abbreviation is obscure.

Hd 19 (P 11198). Pl. 42. Neck and shoulder fragment of amphora with short neck and rounded rim. Dipinto in black on shoulder. Context: late 3rd-early 4th centuries (C 14:4). Late III-early IV cent. $\theta \dot{\varepsilon} \mu \alpha \tau \alpha$
Preserves?
Hd 20 (P 1027). Pl. 42. Small storage amphora like Robinson, Chronology, M 237. Dipinto in black on shoulder. Context: 5th century (I 16:1). H. $0.57 \mathrm{~m} . ;$ D. 0.19 m .
Late IV cent. A
Ṭॄן(voivós)

If the dipinto refers to the contents, the word suggested above is most probable. The isolated alpha may refer to quantity or quality.

Hd 21 (P 8001). Pl. 42. Neck and mouth of small amphora. Graffito on lower part of neck. Found with coins of late 4th and 5th centuries.
IV-V cent. $\delta$ ooup( $\eta$ тıкóv)
Hd 22 (P 14086). Pl. 42. Amphora preserved only up to shoulder, with squat plump body and rounded bottom. Dipinto in black and graffito on shoulder. Context: 5th-6th centuries (P 18:1). PH. $0.43 \mathrm{~m} . ;$ D. 0.38 m .
V-VI cent. (dipinto) $\gamma \alpha \dot{\lambda} \lambda \alpha$ (graffito) $\mu[$

Hd 23 (P 7985). Pl. 42. Fragment from neck and shoulder of plain amphora. Graffito on shoulder.
Late Roman ở $\psi ı v($ )


## INTRODUCTION TO COMBINED NOTATIONS (He)

For the most part these 44 texts are made up of notations of capacity, date and contents and so have already been discussed along with those categories. There are two chief exceptions: notations of price; and proper names, perhaps producers, sellers or owners.

The three prices from the Greek period are fairly consistent and are expressed in known terms: about two drachms or one didrachm (stater) for each chous of wine (Ha 5; He 1, He 2). The six possible prices from the Roman period are more uncertain both as readings and with regard to units and values. Three seem to employ the asterisk-shaped symbol for denarius (He 16, He 17, He 38), but the three prices for
amounts of commodities averaging about two choes are two, fifteen and fifteen denarii. The first two both date from the 2 nd century while the third is from the 4 th- 5 th centuries, but the commodities may be different in either kind or quality, so that no real indication of price fluctuation exists. Some confirmation of the higher price may be found in another 2nd-century price (He 15): 16 drachms ${ }^{14}$ for a small jar (probably not more than two choes) of oil. It may be noted that in the Edict of Diocletian the price-ranges for wine and oil are similar to each other.

The two other possible price inscriptions are even less certain: 200 ро $\lambda \lambda$ हis (if doubled phi may be so taken) for six choes ( $\mathbf{H e} \mathbf{3 5}$, 4th century); 500 keratia for an uncertain amount ( $\mathbf{H e} \mathbf{2 5}$, 3rd century). The 4th-century follis is variously equated (Mattingly, Roman Coins, p. 229) with twenty-four, ten or four denarii, making possible prices per chous of 800,333 or 133 denarii. The keration is equated with the siliqua ( 100 denarii) so that the price per chous for the possible contents of $\mathbf{H e} 25$ (perhaps three choes) would be a highly improbable 16,666 denarii. Furthermore, the date of this vessel seems to be earlier than the Constantinian introduction of the siliqua, so there is some possibility that keration was used for denarius (Metrolog. Script., I, 274), in which case the price per chous(at 500 denarii for three choes) would be about 166 denarii. The cumulative uncertainties of readings, equations and commodities make these priceindications (if such they are) of little value. For what may also be price-notations see $\mathrm{K} \mathbf{8 , K} \mathbf{1 6 - 1 8 ; L} \mathbf{2 0}$.

The names which occur on some of these vessels have little in common with each other but can perhaps be grouped as follows: personal names, either abbreviated or in the genitive case, which being painted on are most likely to be original and so producer or seller rather than owner (He 6, $\mathrm{He} \mathrm{11} ,\mathrm{He} \mathrm{12} ,\mathrm{He} \mathbf{1 4}$, He 25 , He 26, He 28); place-names (?), mostly abbreviated, which may give the provenience of the commodity ( $\mathrm{He} \mathrm{14} ,\mathrm{He} \mathrm{18} \mathrm{He} 23,, \mathrm{He} 24$ ). In addition, there are other notations which may be serial numbers (He 8-10, He 19, He 20), one Christian monogram (He 39) and one text which may add to the amount delivered an amount still owed ( He 30 ).

He 1 (P 11382). Pl. 42. Mouth and neck of Men-daean-type amphora. Graffito on either side of neck. Context: third quarter 5th century b.c. (R 13:4). Hesperia, XXV, 1956, p. 10, no. 44.
Third quarter $V$ cent. B.c.
$\chi(o ́ \varepsilon s) \delta(\dot{\varepsilon} \kappa \alpha) k\left(\circ \tau^{\prime} \lambda \eta\right) k\left(\circ \tau^{\prime} \lambda \eta\right)$
$\delta($ éka) $\sigma(\tau \alpha т \tilde{p} p \nsubseteq)$
A combination of capacity and price: 10 choes, 2 kotyles; 10 staters.
He 2 (P 2366). Pl. 42. Chian amphora. Graffito on neck, running downward. Context: third quarter 5th century b.c. (R 13:4). H. 0.79 m .; D. 0.31 m. Hesperia, IV, 1935, p. 496, fig. 17, no. 86; p. 516, fig. 28; XXV, 1956, p. 12, no. 58.
Third quarter $V$ cent b.c.

$$
\pi(\xi v T \varepsilon) \varepsilon(i \varsigma) \varepsilon(i \varsigma) x(o ́ \varepsilon s)
$$

סєкатє́тарєs
Both the capacity (seven choes) and the price ( 14 drachms) appear on this jar. In the Chian dialect the aspirate would be omitted.
He 3 (P 23948). Pl. 42. Upper part of amphora with spreading lip and broad shoulder. Graffiti near base of neck on both sides. Context:

400-390 в.c. (Q 15:2). Hesperia, XXV, 1956, p. 17, no. 71, pl. 4.

Early IV cent. B.c.
(a) $\alpha_{\alpha}^{\alpha} \mu(\varphi \circ \rho \dot{\varepsilon} \omega \varsigma) \mu(\nu \alpha \tilde{i}) \delta(\xi \kappa \alpha) \mu(\nu \tilde{\alpha}) \mu(\nu \tilde{\alpha})$
(b) $\mu(v \alpha i ̄) \delta(\hat{k} \alpha \alpha) \mu(\nu \alpha i ̄) \delta(\hat{k} \alpha \alpha)$

The two weights should be tare and net. On a goods-mna of $457 \mathrm{gm} .{ }^{15}$ the jar will have weighed 5.484 kg . and the contents 9.140 kg . If the contents was wine, the capacity must have been less than three choes ( 9.8281. ); if oil, rather more (three choes of oil would weigh only 8.845 kg .); the breadth of the shoulders makes a dry material less likely.
He 4 (P 21792). Pl. 43. Body of large cylindrical amphora, missing bottom, handles and neck. Dipinto in black on shoulder. Context: early 1st century (R $10: 1$ ). PH. 0.652 m .; D. 0.305 m .
Late I cent. B.c. MO(DII) $\delta^{\prime}$
C. FURNIO COS. ANTEA
A combination of capacity and date. For the opposite combination of Greek letters with Roman numerals see $\mathrm{He} 19, \mathrm{He} 20$. The meaning of antea in this context is not readily apparent.

[^21]He 5 (P 21788). Pl.42. Upper part of large amphora with angular handles and profiled lip. Dipinti between handles on both shoulders. Context: early 1st century ( $\mathrm{R} 10: 1$ ).
Early I cent.

$$
\text { (a) } \begin{gathered}
\sigma \prime(k \omega \mu \alpha) \mu(v \alpha i ̃) ~ \\
\varepsilon^{\prime}< \\
\chi \omega \rho . .
\end{gathered}
$$

(b) $\sigma \dot{\prime}(k \omega \mu \alpha) 1 \varepsilon^{\prime}<\mu(v a i ̃) ~ 1 \varepsilon^{\prime}$

Tare is written on both sides; what must be capacity ( $\mathrm{x} \omega \dot{\rho} \eta \mu \alpha$ ?) appears on only one side, and the amount (?) is largely illegible.

He 6 (P 21789). P1. 43. Amphora with ovoid body, short neck and angular lip. Dipinto in black on shoulder. Context : early 1st century (R 10:1). PH. 0.438 m .; D. 0.338 m .
Early I cent. $\lambda i(\tau \rho a ı)$ !̣̣'
$\Delta$ ioveroviou
$\theta$
The weight of the jar, which lacks the lower third of the body, is 4.235 kg . or about 13 litrai; 18 litrai are 5.886 kg . Dionysius is presumably the name of producer or seller; for assimilation of the vowel to the ending, cf. Meisterhans ${ }^{2}$, p. 22. Theta, which is no longer visible, may give the capacity: nine (choes).
He 7 (P 21793). Pl. 43. Ovoid amphora with long narrow neck, vertical handles and ring foot. Dipinti in black on both shoulders. Context: early 1st century (R $10: 1$ ). H. 0.447 m .; D. 0.217 m .

Early I cent.

(b) $] \kappa Z^{\prime}$

The lower part of the kappa in (a) is lost in the break; the abbreviation of ounce is an angular C-shaped gamma with omicron. The jar holds 7.400 1. Twenty-seven kotyles of 0.273 1. (as in the second inscription) are 7.371 1. ; oil of this amount would weigh 6.633 kg ., or something over 20 litrai ( $20 \times 327$ $\mathrm{gm} .=6.540 \mathrm{~kg}$.).
He 8 (P 12361). Pl. 43. Amphora of late Koan type with horned handles ( = Robinson, Chronology, M 54). Dipinti in red on shoulder (a) and on body below handles (b). Context: second half 1st century ( $\mathrm{N} 20: 2$ ). H. 0.775 m .; D. 0.305 m .

Late I cent.

| (a) (one shoulder) | $\varepsilon^{\prime}$ |
| :--- | :--- |
| (other shoulder) | $\tau^{\prime}$ |
| (b) (one side) $\mu \dot{\prime}(\delta 101)$ | $\gamma^{\prime}($ monogram $)$ |
| (other side) | . $\mu \mu 5^{\prime}$ |

The letters epsilon and zeta are probably numbers. The monogram may be read as the number three and the abbreviation of modius.

The jar is too weak to be measured for capacity, but cf. He 10. The number on the other side might possibly be a date on the Actian era (i.e. A.D. 116), but the doubtful first letter and the comparable notations on He 9-11 suggest that it might better be taken as a serial number.
He 9 (P 12468). Pl. 44. Amphora of late Koan type similar to Robinson, Chronology, F 93. Dipinti in red on shoulder (a) and on body below handles (b). Context: second half 1st century (N 20:2). H. 0.893 m. ; D. 0.28 m .
Late I cent.
(a) $\varepsilon^{\prime} \quad$ (no longer visible)
(b) (one side) $\mu \hat{o}^{\prime}(\delta 101) \gamma^{\prime}$ (monogram) (other side) ، $\alpha \sigma \mu \varsigma^{\prime}$
For drawing of monogram, see $\mathrm{He} \mathrm{8} ,\mathrm{He} \mathrm{10}$, He 11; see the same for capacity. The second inscription on the body might be a serial number (1246).
He 10 (P 12469). Pl. 43. Amphora of late Koan type like He 9. Dipinti in red on shoulder (a) and on body below handles (b). Context: second half 1st century (N 20:2). H. 0.915 m .; D. 0.25 m .

## Late I cent.

(a) (one side) $\delta^{\prime}$
(other side) $\circ^{\prime}$
(b) (one side) $\mu o ́(\delta 101) \gamma^{\prime}$ (monogram)
(other side) , iv $0^{\prime}$
Compare He 8, He 9, He 11 for capacity. The second inscription on the body (with the horizontal stroke above the first two letters) might be a very large number $(10,474)$ or an abbreviation of the name (?) which appears in the same position on He 11 . The capacity of the jar is 27.320 .; three modii are 26.2081 .
He 11 (P 12471). Pl. 43. Amphora of late Koan type, like He 9 . Dipinti in red on body below handles. Context: second half 1st century ( $\mathrm{N} 20: 2$ ). H. 0.92 m ; D. 0.285 m .
Late I cent. (one side) $\mu \dot{\prime}(\delta 101) \gamma^{\prime}$ (monogram) (other side) 'Ispoúסou
Compare He 8-10 for capacity. The second inscription might be a name, not known to me, or an abbreviation: 'iєpoũ $\delta \circ u{ }^{( }(\lambda \circ \cup)$.
He 12 (P 13617). Pl. 44. Upper part of late Koan amphora, similar to Robinson, Chronology, F 93. Dipinto in red on neck inside handle. Context: late 1st century (P 19:1). PH. 0.44 m .; D. 0.23 m .

Late I cent. $\quad \Delta \operatorname{lov}()$ $\lambda$ (itpal) $\mathrm{Ks}^{\prime}$
Combination of personal name (?) with tare.

He 13 (P 3297). Pl. 44. Upper part of large early Roman amphora with neck tapering toward top and handles ribbed. Dipinti in green on neck (a) and shoulder (b). Context: 1st-2nd centuries ( $\mathrm{F} 11: 1$ ).
I cent.
(a) $\pi \dot{\alpha}(\sigma \sigma \circ v)$
(b) $] \mu^{\prime} o(v) \gamma(k i \alpha ı) i^{\prime}$

The first notation is here taken as contents, i.e., raisin wine; there are obviously other possibilities (e.g., ma入auós, for which compare vet(us) in C.I.L., IV, 5526, 5536-8, etc.). The weight ( 40 litrai, 10 ounces) in the second notation may be either tare or net weight; no similar jar survives complete to be measured.

He 14 (P 12460). Pl. 44. Ovoid jar preserved only up to shoulder. Dipinto in black on shoulder. Context: early 2nd century (N 20:5). PH. 0.28 m .; D. 0.25 m .

Early II cent. $\sigma \tau \alpha ́(\mu v o ו) K u ́ \lambda \lambda o u ~ ' E \rho \varepsilon v \varepsilon i ́ \alpha ̣ ̣ ̣ ~$

$$
\gamma^{\prime}
$$

Similar jars hold between six and seven liters so that these three stamnoi of Kyllos of Ereneia might be like those reported by Epiphanius (Metrolog. Script., II, 102) to hold four xestai each. Twelve xestai are 6.5521. Whether Kyllos made jars or wine is uncertain. The name, not attested at Athens, may be a meaningful nickname.

He 15 (P 17128). Pl. 44. Rim and neck of an amphora. Dipinti in black on shoulder (a) and base of neck on other side (b). Context: early 2nd century (B 20:1).
Early II cent.

(b) $\delta \varepsilon \cup ̛ ́ t \varepsilon \rho \circ \bigcirc$
 white oil, a word not attested but analogous in form with ó $\gamma p 1 \varepsilon \in \lambda \alpha 1 o s$ and in meaning with
 drachms; for áprupis as drachm, see Heraclides Lembicus, frag. 6. The second inscription may describe the quality of the contents or the position of the jar in some series.

He 16 (P 11634). Pl. 44. Amphora (=Robinson, Chronology, M 90). Graffito on shoulder. Context: second half 2nd century (M 17:1). H. 0.36 m .; D. 0.254 m .

Second half II cent. (see drawing)
Since the capacity of the jar is 7.0001 ., it is possible that the first two strokes stand for two choes ( 6.552 1.) and the two crossed strokes for two additional kotyles (0.546 1.).

The next sign is certainly that for denarius, with two strokes following presumably indicating the price.

He 17 (P 10067). Pl.44. Amphora similar to Robinson, Chronology, L 31 but fuller and earlier. Dipinto in black on shoulder; graffito on neck above. Context: 1st-2nd centuries (M 18:1). H. $0.346 \mathrm{~m} . ;$ D. 0.225 m .
II cent. (dipinto) kג̣́p̣Tou * ${ }^{\prime} \varepsilon^{\prime}$ $1 \theta^{\prime}{ }^{\prime} \kappa \circ\left(\tau^{\prime} \lambda \alpha 1\right) \mathrm{Ku}(\alpha \theta \circ \varsigma)$
(graffito) 'IIIIII
The price of the contents is 15 denarii; the capacity, now measured as 5.500 1. to the lip, is just over $191 / 6$ kotyles of 0.2731 . ( 5.2331 .). The weight of the vessel is 2.185 kg ., or something over six litrai ( 1.962 kg .), as the six and one-half (?) tally strokes indicate. (If it is $15^{1 / 6}$ kotyles they must be half of 0.7281 . xestes $[151 / 6 \times 0.3641 .=5.5201$.$] .)$
He 18 (P 7925). Pl. 44. Shoulder fragment from an amphora. Dipinto in black. Context: late 2nd-early 3 rd centuries (D 12:1).
Late II-early III cent. Aug(usti) N(onae)
vas stig(matum)
vin(um) saec( ) car( )
vil(la) Terg(estina)
The expansions of the abbreviations are not certain but seem to give date, contents and provenience.
He 19 (P 11992). Pl. 44. Large Roman amphora with pear-shaped body like Robinson, Chronology, M 14 but longer body and almost no neck. Dipinti in red on neck (a) and below (b). Context: early Roman (R 19:2).
II-III cent. (a) X X V (see drawing)
(b) $\Phi \mathrm{l}$ (written down the side)
For Roman numerals written in this fashion see J. Egbert, Introduction to the Study of Latin Inscriptions, New York, 1923, p.75. It is unlikely that the number indicates capacity, which can not be measured because the jar is both weak and very large, since 25 choes is too much and 25 xestai too little. It is most likely a serial number. The second inscription may be a trade mark, kind of wine, or even a number. Cf. He 20.

He 20 (P 12991). Pl. 44. Large Roman amphora like He 19. Dipinti in red on neck (a) and body, running down the side (b). H. 0.95 m .; D. 0.40 m .
II-III cent. (a) X X I I I
(b) $A \Phi$

Cf. He 19.

He 21 (P 10247). Pl.44. Ovoid jar with one handle, short neck and projecting lip ridged on top. Dipinto in red on shoulder. Context: 3rd century (B 14:1). H. 0.362 m .; D. 0.255 m . Mid-III cent. $\quad \pi \alpha u(\tau \alpha ́ v \alpha a) ~ \lambda \gamma^{\prime}$ oìvou $\mu \in \lambda_{1 t i v o u}$
(two lines illegible)
The inscription combines capacity ( 33 mavtó$\nu \alpha_{l}=\tau \rho u ́ \beta \lambda_{1} \alpha$ or kotyles) and contents (honeyed wine). The capacity of the jar is 8.2501 . to the base of the neck, which is broken above; 33 kotyles of 0.2731 . are 9.0091 .

He 22 (P 9897). Pl. 44. Small amphora ( $=$ Robinson, Chronology, M 199). Dipinto in black on shoulder. Context: late 3rd century (M 17:1). H. 0.295 m. ; D. 0.188 m .

Late III cent.

$$
\begin{aligned}
& \sigma \eta \kappa \omega ́ \mu(\alpha \text { тоs }) \lambda i(\tau \rho \alpha ı) \gamma^{\prime} \text { o(v̉) } \gamma\left(\text { кíaı }^{\prime}\right) \eta^{\prime} \\
& \text { каӨар(oũ) } \lambda i(\tau p a ı) ı^{\prime}
\end{aligned}
$$

The vessel weighs 1.116 kg .; three litrai and eight ounces are 1.199 kg . The capacity is 3.3001 . to the lip; ten litrai of wine or water would weigh 3.270 kg . and have a volume of 3.2701 .

He 23 (P 26599). Pl. 45. Amphora, lacking neck, with slender ovoid body and pointed toe. Dipinto in black on shoulder. Context: late 3rd century (Q 17:7). PH. 0.51 m .; D. 0.238 m . Late III cent. $\quad$ है $\tau(\circ \varsigma) \rho \rho \delta^{\prime}$

This and the following are written in different hands but have the same date. The context date of the jars is late 3rd century, so that the era on which the date is based must have its beginning in the second half of the 1 st century. Unfortunately, the name of the persons or places from which the millet comes are so uncertain that the era can not be localized.

He 24 (P 26601). Pl. 45. Amphora with ovoid body, tall neck and vertical handles; bottom missing. Dipinto in black on shoulder. Context: late 3rd century (Q $17: 7$ ). PH. 0.54 m .; D. 0.235 m .

Late III cent. $\quad$ ह̇̃ ( OS ) $\rho \rho \delta^{\prime}$

See He 23.
He 25 (P 7405). Pl.45. Upper part of amphora similar to Robinson, Chronology, K 112. Dipinto in black on shoulder.
III cent. Tतथıviou
$\operatorname{koup(~)~} \lambda(i t \rho \alpha ı) 1 \varepsilon^{\prime}$ $\kappa \varepsilon\left({ }^{\prime}\right) \varphi^{\prime}$

The name in the genitive may be the producer; the tare of 15 litrai is possible but can not be demonstrated because of the jar's present state. It may be that the third line gives the price: 500 keratia (see above, p. 76).
He 26 (P 9675). Pl.45. Amphora with ovoid body tapering to ring foot. Dipinti in black on shoulder (a) and body (b). Context: 3rd century (N 18:5). PH. 0.425 m. ; D. 0.26 m .
III cent.
(a) $\mathrm{A} / \lambda_{1}(\tau \rho \alpha 1) \mu^{\prime}$
$\lambda_{i}($ tp $\alpha \mathbf{l}) \gamma^{\prime}$
(b) $\Pi \rho \alpha \dot{\alpha}(\mu v \in \iota \circ s)$

The capacity of the jar is $c a .131$. ; if the jar held wine, the net weight would be just about 40 litrai ( 13.080 1.). The second weight must be tare; 13 litrai is 4.251 kg .; the jar, without mouth and handles, now weighs 4.550 kg .; presumably there is considerable non-soluble deposit inside. The identification of the contents is uncertain, as is the name of producer or seller.
He 27 (P 9676). Pl. 45. Upper part of amphora, similar to He 26. Dipinto in black on shoulder. Context: 3rd century (N 18:5). PH. 0.375 m .; D. $c a .0 .28 \mathrm{~m}$.

III cent. $\Phi a \lambda \varepsilon \rho v(o ́ s)$
(see drawing)
The second line is very obscure.
He 28 (P 17799). Pl. 45. Upper part of amphora with arching handles from shoulder to midneck. Dipinto in black on shoulder.
III cent. Өєо甲 ( )
коب̣́ $\varphi(o v) \lambda_{i}^{\prime}(\tau \rho \alpha ı) \theta^{\prime}$
Combination of name and tare, if reading is correct.

He 29 (P 11195). Pl. 45. Fragmentary amphora similar to Robinson, Chronology, L 31. Dipinto in black on shoulder; graffito near handle. Context: 3rd-4th centuries (C 14:4). PH. 0.336 m. ; D. 0.223 m .

III-IV cent. (graffito) $\lambda_{i}\left(\right.$ tpal) $\lambda \beta^{\prime}$
(dipinto) $] \lambda l(\tau \rho a 1) \theta^{\prime}$
] $\lambda i($ (Tpal) $) \gamma^{\prime}$
]. $\mu$. ттои
$\left.\mu \dot{\lambda} \lambda^{\prime} \tau\right]$ Oos ${ }^{2} Y \mu . \tau \omega$
Presumably the graffito gives the total weight of jar and contents ( 32 litrai). The first line of the dipinto must be the weight of the jar ( 9 litrai) and the second the weight of the contents (23 litrai). The present weight and capacity of the jar provide some confirmation for these figures although it is very much restored in
plaster (which is lighter than clay) and still has no mouth. The jar weighs 1.935 kg . (instead of 2.943 kg .) and holds $c a .5 .5001$. Even without the two words which may be most convincingly restored as 'Yuŋंtтou, we should have known that the contents was honey, since the metrological writers emphasize the fact that honey weighs heavier by a third than an equal quantity of wine or water. Twenty-three litrai of honey ( 7.521 kg .) will fit into a jar which holds three-fourths of 7.521 1. or 5.6401 . (The jar could not be located for the final drawing, which is therefore based on an earlier sketch.)

He 30 (P 26119). Pl. 45. Amphora with ovoid body and pointed toe. Dipinto in black on shoulder. Context: 4th century (Q 19:1). H. 0.56 m .; D. 0.30 m .

Late III-early IV cent.

$$
\mu \varepsilon \lambda \imath \tau(\text { ivov }) i \eta^{\prime} / \partial \not \partial \lambda \lambda \eta(\mu \alpha) \xi^{\prime}
$$

The capacity of the jar is 14.1001. ; eighteen xestai of 0.7281 . are 13.1041 . It is likely that the contents is honeyed wine ( $\mu \mathrm{\varepsilon} \boldsymbol{\lambda}$ itivos olvos) rather than honey; cf. He 21. The above interpretation of the second line is somewhat speculative and assumes that the contents of this jar are part payment only of a debt or shipment of which the greater part is still owing.
He 31 (P 9806). Pl. 45. Amphora ( $=$ Robinson, Chronology, M 230). Graffiti on shoulders, front (a) and back (b). Context: early 4th century (M 17:1). H. 0.44 m .; D. 0.285 m .
Early IV cent.
(a) $\quad \dot{\sigma} \sigma\langle\sigma\rangle$ tpókoou $\lambda i(\tau \rho \alpha 1) 1 \varepsilon^{\prime}$
(b) $\alpha \sim \underset{\alpha}{(C)}$ ) IIIII

The present weight of 5.125 kg . is somewhat heavier than the calculated weight of $15 \times 327$ $\mathrm{gm} .=4.905 \mathrm{~kg} .$, probably because of large amounts of pitch inside the jar.
He 32 (P 12841). Pl. 46. Tall narrow amphora with handles from shoulder to below rim. Dipinto in red on neck. Context: 4th century (O 19:1). H. 0.542 m. ; D. 0.17 m .
Second half IV cent. $\lambda$ (iтpaı) $\theta^{\prime}$
$\tau \rho \cup\left(\gamma^{i} \alpha\right)$
$\Phi$
The weight is not tare, since the jar weighs only 2.480 kg ., or only about seven and onehalf litrai. The capacity, however, is just about one chous ( 3.3001 .), and although one chous of wine weighs ten litrai, one chous of oil weighs nine. Hesychios (s.v.) provides evidence of the use of tpuyia for oil as well as for wine. The phi is unexplained.

He 33 (P 11301). Pl. 46. Upper part of small amphora, similar to Robinson, Chronology, M 238. Dipinto in black and graffiti on shoulders. Context: 4th century (G11:2).
IV cent. (graffito on one shoulder) IIIIIII (graffito on other shoulder) illllil (dipinto, now largely illegible) OM ö $\sigma t \rho(\alpha ́ к o u) \lambda i(\tau \rho \alpha l) 5^{\prime}<$ $\mu \dot{1} \lambda_{1} \tau 0 s \lambda_{i}(\tau \rho \alpha 1) \kappa \delta^{\prime}<$
Both tallies and the dipinto indicate that the jar weighed six and one-half litrai. The contents weighed $241 / 2$ litrai; and since it was honey, the capacity must have been only three-fourths the amount of water or wine needed to weigh that $(241 / 2 \times 327 \mathrm{gm} .=8.010 \mathrm{~kg} . \times 3 / 4=6.0061).$.
He 34 (P 27220). Pl. 46. Small wheel-ridged amphora similar to Robinson, Chronology, M 238. Dipinto in black on shoulder. Context: 4th century (E 29:5).
IV cent. ó $\sigma$ tpákou $\lambda_{i}(\tau \rho \alpha)$ )[(now partly illegible) $\mu \dot{\mu} \lambda_{1}$ tos $\lambda i($ (tpaı)
The number of litrai is no longer legible on either line, but compare $\mathbf{H e} 33$.
He 35 (P 16728). Pl. 46. Shoulder fragment from large amphora. Dipinto in black. Context: 4th century (N 21:1).
IV cent. $] \Phi \Phi \sigma^{\prime}$

$$
] x\left(0 \text { oss) } 5^{\prime}\right.
$$

If the doubled phi stands for $\varphi 0 \lambda \lambda \varepsilon i$ s, the price for six choes (of wine?) will depend on the particular value assigned to the follis; see above, p. 76.

He 36 (P 25175). Pl. 46. Amphora similar to Robinson, Chronology, M 234. Dipinto in black on shoulder. Context: 4th century (Q 17:4). H. 0.42 m .; D. 0.22 m .

The expansion of the first letter is only tentative. The jar holds almost exactly 7.0981. or 13 xestai of the 0.5461 . capacity.

He 37 (P 124). Pl. 46. Neck and shoulder fragment of a small wheel-ridged amphora similar to Robinson, Chronology, M 238. Dipinto in black on lower neck and shoulder, now almost completely faded.
IV-V cent. óotp ['́kou,
$\mu \varepsilon(\tau p \alpha) 5^{\prime}$
$p \lambda \theta^{\prime}$
The inscription combines tare, capacity, and perhaps a date in the era of Diocletian: $139=$ A.D. 423.

He 38 （P 11357）．Pl．46．Upper part of small wheel－ridged amphora．Graffiti on shoulders． Context：4th－5th centuries（E 15：5）．
$\begin{array}{lll}\text { IV－V cent．} & \begin{array}{l}\text {（one shoulder）} \\ \text {（other shoulder）}\end{array} & \varepsilon^{\prime}< \\ & 1 \varepsilon^{\prime}\end{array}$ （see drawing for other signs）
The jar is small enough so that five and one－ half（litrai）may represent tare；the other inscription may be either price or the weight of the contents．

He 39 （P 12866）．Pl．46．Wheel－ridged amphora similar to Robinson，Chronology，M 333．Di－ pinti in red on shoulder（a）and inside handle on neck（b）；graffito on neck．Context：5th century（O 19：1）．H． 0.464 m. ；D． 0.235 m ．
V cent．（dipinto）（a）（chi－rho monogram）
$\sigma \tau \alpha \dot{\alpha} \mu v o ̣() / \imath L^{\prime}<$
（b）（almost illegible and not drawn）
（graffito）$\quad i^{\prime} \circ\left({ }^{(v)} \gamma\left(\right.\right.$ kíaı $\left.^{\prime}\right) \delta^{\prime}$
Despite what is apparently the name of the jar（stamnos），this is certainly a Cypriote modius of 17 plus xestai（Metrolog．Script．，I，263，272）， i．e．， 9.646 1．；its capacity is 9.8001 ．to the lip． The almost illegible dipinto（b）might be the abbreviation for $\varepsilon \pi m \iota \varepsilon \mu \eta \dot{\eta} \sigma \omega s$ ；cf．He 42．The present weight of the jar（somewhat light because restored in plaster）is 3.165 kg ．；ten litrai and four ounces are 3.383 kg ．
He 40 （P 26104）．Pl．47．Miniature amphora simi－ lar in shape to Robinson，Chronology，M 306. Dipinto in black just above toe ring．Context： 4th－5th centuries（Q 19：1）．H． 0.24 m ．；D． 0.115 m ．

V cent．$\quad \sigma T(\alpha \theta \mu \partial ̀ s) \beta^{\prime} \pi \alpha \dot{\alpha}(\sigma \sigma \circ v) \circ\left({ }^{\prime}\right) \gamma\left(\right.$ kíaıı $\left.^{\prime}\right) \lambda^{\prime}$
The actual weight of the jar is 648 gm ．or very nearly two litrai（ 654 gm ．）．The capacity is 0.8301 ．or slightly over 30 ounces（ 0.8181 ．）． The abbreviation taken here as contents might be something else．Particularly notable is the location of the dipinto，suggesting that it was to be read while the jar lay undisturbed on a shelf with only the toe visible．

He 41 （P 12707）．Pl．47．Amphora with ovoid body similar to Robinson，Chronology，M 235. Dipinto in red on neck（a）；in black below（b）； in black on shoulder（c）．Context：late 5th－ early 6th centuries（O 19：1）．H． 0.482 m ．； D． 0.293 m ．

Late V－early VI cent．
（a）（ $\left.\xi \in \notin \tau \alpha \_\right) \mathrm{XXV}$
（b）$\mu \in \lambda i v \eta!$
（c）$\mu \eta(v o ̀ s) ~ ' l o u v i o u ~ \imath r ' ~$
व̛̉ד⿰⿱亠乂寸
The capacity is 14.5301 ．，very close to $25 \times 0.546$ 1．（ 13.460 1．）．The contents was apparently millet．The date of the month is perfectly clear，and the line below seems to be a command：＂Let him put it up for sale from this（time）until the ．．．．＂Perhaps the line which appears to connect the $\varepsilon \omega \rho$ s toũ to the date is to convey that June 17 is the terminal date；in that case árito toũ must be＂now．＂It is also possible that the dipinto has been lost at the end．

He 42 （P 1567）．Pl．47．Shoulder fragment of am－ phora similar to Robinson，Chronology，M 333. Dipinti in red on shoulder（a）and on neck behind handle（b）．
VI cent．（a）］$\tau^{\prime} \beta^{\prime \prime}$
（b）$\pi \rho(\dot{\circ}) i \delta[\tilde{\omega} \nu$


For the capacity see He 39．For the date by indiction year see Tax Notations（I 1－45）；here however its use appears to be different．

He 43 （P 4618）．Pl．47．Amphora neck．Graffito and dipinto in red．

The first gives tare，carelessly scratched by the owner，and the second gives capacity， formally painted by producer or seller．The presumed size of the amphora is compatible with a weight of $131 / 2$ litrai and a capacity of 22 xestai（12．012 1．）．

He 44 （P 22833）．Pl．47．Wall fragment of am－ phora．Two dipinti in black．

```
Roman kov［
корі（ ）§（ \(\varepsilon \sigma T \alpha 1) \theta^{\prime}\)
```

The first line might be the producer＇s name， but since it is in a different hand it might be the contents of second use：e．g．，коvбвітоv． The second must give contents，whether some－ thing flavored with coriander or a trade name like Corinthian．

## I. TAX NOTATIONS

The typical text in this group has two elements: an indiction date and an estate name. One or the other element is missing on some vessels, perhaps because it was worn away or because of a missing fragment, but it is both possible and probable that on all except I 1 both were originally present. In almost half of the texts something further has been added to the two elements, but since these additions are far less uniform and constant than the indiction date and estate name, they may be considered separately below.

The indiction date is most often expressed by an abbreviation of $\varepsilon$ zmivźu Of the 37 texts which preserve the date in whole or in part 35 show this form; the two variants seem to use the Latin word spelled with Greek letters, i. e., ivסıkтı$\dot{v}$ with alphabetic numerals (I 12, I 44). The abbreviation of $\dot{\varepsilon} \pi i v \varepsilon \mu \eta \sigma ı s$ is most often $\dot{\varepsilon} \pi i v \varepsilon($ ) with the epsilon suspended over the nu; next most frequent is $\dot{\varepsilon} \pi i v()$ with or without a stroke over the nu. There are two exceptions: an early text gives
 often written in this order, but they are reversed in four examples (I 17, I 24, I 39, I 43). For the chronology of indiction cycles, see Kubitschek, pp. 106 ff .; it is not possible to identify the particular cycles to which the years inscribed on the jars belong.

The estate name is most often prefaced by an abbreviated form of $x \omega$ piov. Of the 33 texts which seem to use this formula, 27 show a chi with a suspended omega; four lack this part of the text (I9, I 10, I 23, I 38); the variants are $\chi \omega \rho(i o v)$ (I 32) and $\chi(\omega) \rho(i o v)(\mathbf{I} 45)$. Another formula appears on three vessels from the early 4th and 5th centuries: ómó with the genitive plural (I 4) or with abbreviations (I 11, I 12). Often the estate names with $\chi$ wpiou too are abbreviated, but those given in full are all in the genitive case (I 5, I 9, I 10, I 19, I 20, I 23-25, I 27-29, I 31, I 32, I 34, I 36-38, I 40, I 41). And since some of these are adjectives, it may be right to assume that $\chi \omega$ piov itself is in the genitive case. Concerning estate names generally the best sources are I.G., $\mathrm{II}^{2}, 2776$ and the cadastral inscriptions from Lesbos (I. G., XII 2, 76 ff .), Astypalaia (I. G., XII 3, 180ff.), Thera (I.G., XII 3, 343 ff .), Kos (I. G. R. P., IV, 1083), Tralles (B. C. H., IV, 1880, pp. 336-338) and Magnesia (O. Kern, Inschriften von Magnesia am Maeander, Berlin, 1900, no. 122). Estate names on these jars, like those in the cadastral inscriptions, seem to be of various kinds. Most have reference to natural features such as a spring (I 27), or hills ( $\mathbf{I} \mathbf{4}, \mathbf{I} 5$ ), the sea (I 33, I 35), kinds of trees (I 19, I 34, I 45) or some more general aspect of the scene (I 18, I 36, I 37, I 40, I 41, I 43). A few are known by the names of persons (I 20, I 25), officials (I 9), nearby shrines (I 28, I 29, I 31) or a relevant place name ( $\mathbf{I} 23$ ). Many are too abbreviated or uncertain to be categorized.

The combination of indiction dates and estate names of the sort found in the tax registers makes clear the original function of these vessels as containers for taxes in kind paid in various tax years by various estates. It was Diocletian who instituted the system of annual payments in kind based on elaborate census records of the sort we have from Lesbos, etc., but the actual beginning of the fifteen-year indiction cycles came only in A. D. $312^{1}$ so that it is no coincidence that our earliest tax notations date from the early 4th century. ${ }^{2}$

Not only do the inscriptions on the jars indicate that they represent the payment of taxes in kind but also the remarkable concentration of the inscribed jars in and around one building suggests the use to which the contents must have been put. Twenty-five of the jars below were found in wells located in four squares of the Agora grid (O-P 18-19); ${ }^{3}$ fifteen more were found in squares either adjacent or one re-

[^22]moved. ${ }^{4}$ The building in question is a Late Roman structure mostly in squares O-P $18-19$ with some outlying parts in adjacent squares. The large size of the building makes likely a public function; its domestic features (wells, courtyards) suggest that it was no tax collector's warehouse; and the presence of so many inscribed jars in the wells may indicate that they were emptied on the spot. Some kind of official household with a large resident population is likely, either civil or military, to whom the taxes in kind could have been issued as rations.

Of the other notations on these jars the most frequent is probably that indicating contents. Nine vessels (I7, I 10, I 16, I 19, I 20, I 25, I 29, I 40, I 45) show some form of 'A ${ }^{\prime}$ from the very special vines (Pliny, N. H., XIV, 4, 21) originally grown in Aminaea, a region in Picenum, but later grown everywhere (loc. cit., 4, 36). The presumption is that only special wines were labeled, but that all these similar vessels had wine as their contents. The other abbreviations which might be special


Capacity or net weight is noted on I 5, I 10, I 12, I 18, I 21, I 23, I 24, I 26, I 32. Tare appears only on I 7, whole notations of date occur on I 17, I23, I 44. All these are discussed in the introductions to the appropriate categories. Additional and unexplained notations are found on I 8, I 11, I 24.

The jars on which all these inscriptions appear are of four main types; only the first and the last ( $\mathbf{I} 1, \mathbf{I} 45$ ) are demonstrably different; three others ( $\mathbf{I} 8, \mathbf{I} 10, \mathbf{I 1 4}$ ) are too fragmentary to be classified. Within the general uniformity the variations in fabric and in the thin-glaze wash and the slight differences in the treatment of feet and handles seem to indicate a variety of proveniences which coincides well with the interpretation of these jars as payment of taxes in kind from various estates in a fairly large area. The largest group (Type I) ${ }^{6}$ is made up of tall jars with narrow necks and one handle. Next most numerous are the jars (Type II) ${ }^{7}$ with two handles and ovoid body narrowing sharply to a small pointed toe: these belong to the late 5th and 6th centuries and seem to have replaced the third type. The jars of Type $\mathrm{III}^{8}$ are similar to those of Type II except that they have a small ring foot. Fewest of all are the twohandled jars (Type IV) ${ }^{9}$ of soft orange clay with wheel-ridged body tapering almost without a curve from the shoulder to the toe. Because of the general uniformity not only of shapes but also of contexts for these vessels, it seems unnecessary to give individual context dates. Instead, the type as in the above classification is given.

All inscriptions are written on the shoulder of the jar with black paint unless indicated otherwise.

11 (P 9681). Pl. 48. Rim and wall fragment of pithos. Dipinto in black on upper wall. Context: N 18:5.
Late III cent. $\quad \chi \omega$ (piou) $\beta \circ[$
I 2 (P 12261). Pl. 48. Amphora with ovoid body, similar to Robinson, Chronology, pl. 40, P 16704. Early variant of Type II. Context: N 20:5. H. 0.515 m. ; D. 0.254 m .

Early IV cent. $\quad \varepsilon \pi \tau \nu\left(\varepsilon \mu \eta \eta^{\prime} \sigma \varepsilon \omega \varsigma\right) \varepsilon^{\prime}$
(traces)

I 3 (P 9808). Pl. 48. Amphora with ovoid body on false ring foot ( $=$ Robinson, Chronology, M 233). Type III. Context: M 17:1. H. 0.466 m .; D. 0.271 m .

Early IV cent. Ėmı ( $\nu \in \mu \eta \dot{\sigma} \sigma \omega \varsigma) \eta^{\prime}$
I 4 (P 10265). Pl. 48. Narrow-necked ovoid jar with one handle and small flat bottom, predecessor of Robinson, Chronology, M 315. Type I. Context: M 18:4. PH. $0.54 \mathrm{~m} . ;$ D. 0.26 m .

[^23]Early IV cent. á̛тò Tрıко入ف́vตv

The variant forms of both estate name and indiction date mark this out as an early example, perhaps before standardization. "Three hills" seems a possible name for an estate.
I 5 (P 12874). Pl. 48. Narrow-necked ovoid jar with one handle and small flat bottom, similar to I 4. Type I. Context: O $19: 1 . \mathrm{H} .0 .562 \mathrm{~m}$.; D. 0.228 m .
 $\xi\left(\right.$ ह́OTal $\left.^{\prime}\right) \delta^{\prime}$
Gamma is probably right for the date, although it is obscured by a diagonal stroke, which may indicate that the previous word is abbreviated or that the gamma itself is a number. For the estate name, cf. Bouvòs èv Bapop from Tralles (B.C.H., IV, 1880, pp. 336ff.) and Bouviov (Kern, Inschriften von Magnesia am Maeander, no. 122); the reference is obviously topographical. The jar now holds 7.800 1.; 14 xestai of 0.546 1. are 7.6441.

I 6 (P 12827). Pl. 48. Amphora with ovoid body and small ring foot, similar to $I 3$ but plumper. Type III. Context: O 19:1. H. 0.47 m. ; D. 0.308 m .

Late IV cent. $\quad X \omega$ (piov) $\dot{\cup} \pi(\quad$ ) $k \alpha(\quad)$
Note that the dots above upsilon and kappa may indicate abbreviations. It is unclear whether the estate name is made up of two words, e.g., vimò $\mathrm{K} \alpha\left(\lambda \lambda_{1} \rho \rho o ́ n \nu\right)$ or whether the second element
 21, perhaps indicating capacity.
17 (P 12262). Pl. 48. Narrow-necked ovoid jar similar to I 4. Type I. Context: N 20:5. PH. 0.465 m .; D. 0.238 m .

IV cent. $\quad$ ह̇াıve( $\left.\mu \eta^{\prime} \sigma \varepsilon \omega \varsigma\right) \varepsilon^{\prime}{ }^{\prime} A \mu \nu v(v a i o s)$

$$
\lambda \varepsilon(i \tau p \alpha 1) ı \beta^{\prime}
$$

The jar, which lacks mouth and bottom, weighs 2.950 kg . The 12 litrai of the second line, if this reading is correct, are 3.924 kg .
I 8 (P 3002). Pl. 48. Shoulder fragment of jar of coarse grayish clay. Found with pottery and coins of 4th century (Q 15).
IV cent. (traces)

$$
] \pi \circ \mu() \varepsilon e^{\prime} \pi \imath v(\varepsilon \mu \eta \dot{\eta} \sigma \omega \varsigma) \delta^{\prime}
$$

The word abbreviated before the indiction year may be the estate name.
I 9 (P 13590). Pl. 49. Amphora with tapering body and pointed toe, like Robinson, Chronology, M 236. Early variant of Type II. Context: P 19:1.

Late IV-V cent. $\quad \varepsilon[\pi \nu v(\varepsilon \mu \eta \dot{\eta} \varepsilon \omega s)] \delta^{\prime}$ $\mu \approx \lambda \varepsilon \delta \omega[\nu \tilde{\omega}] \nu \varepsilon \bar{\varepsilon} \pi\left\llcorner\nu(\varepsilon \mu \eta \dot{\sigma} \sigma \omega \varsigma) \delta^{\prime}\right.$
It is not clear that anything like $\chi \omega$ (piou) or ámó was written in front of the word for "stewards." It might be that the jar was marked not with its provenience but with its prospective users-a special vintage too good for ordinary rations.

I 10 (P 15766). Pl. 49. Wall and shoulder fragment of amphora with ovoid body. Context: N 21:1. Early V cent. $\quad[x \omega(p i o v)---] \alpha ́ v \omega \nu v^{\prime} A \mu v(v a i ̃ o s)$

$$
\kappa l^{\prime} \varepsilon \pi \pi \nu v\left(\varepsilon \mu \eta^{\prime} \sigma \varepsilon \omega \varsigma\right) i \beta^{\prime}
$$

The beginning of the estate name, which seems to be genitive plural, is lost. The contents follow on the same line. In the second line the number 27 seems to be too large for capacity ( 27 xestai are 14.742 1.) or tare ( 27 litrai are 8.829 kg .) ; it could be the weight of the contents (i.e., 8.829 kg . would be about 16 xestai of wine). The theta between the lines is probably the number nine, but its application is obscure.
I 11 (P 15784). Pl. 49. Tall amphora with wheelridged body tapering to pointed bottom, like Robinson, Chronology, M 334. Type IV. Context: N $21: 1$. H. $0.59 \mathrm{~m} . ;$ D. 0.20 m .

ámò Oủık ( ) Ạヘ̣

The word after the indiction year might be expected to give the kind of wine but seems not to be otherwise known. For the abbreviated estate name cf. Bıкıavós at Magnesia on the Maeander (Kern, loc. cit. [I 5]). The reading and interpretation of the following two letters are uncertain.

I 12 (P 16679). Pl. 49. Upper part of amphora like I 11. Type IV. Context: N 21:1.
Early V cent.

$$
\begin{aligned}
& \text { ǻTo Not( ) } \\
& \text { (graffito) } O Y
\end{aligned}
$$

Line 1: the number after the abbreviation is uncertain; a similar jar (I 11) holds about 20
 or $\alpha \dot{\alpha} \pi)^{2} \tilde{a}$ tov (wine flavored with celery). (From this same well came shoulder fragments of two other amphoras of this shape and fabric with inscriptions in black paint, now illegible: P 16677, P 16678.)
I 13 (P 3754). Pl. 49. Upper part of amphora, similar to Robinson, Chronology, M 302, but with narrow mouth. Type III. Context: late Roman (I 15:1).

Early V cent. $\quad \chi \omega$ (piov) $\pi \alpha \lambda($ ) (traces)
The ways in which the estate name could be completed are various; cf. L 43. The traces below might be Пpọ́⿰亻̣ (veios).

I 14 (P 5623). Pl. 49. Neck fragment of narrowmouthed jar. Context: N 13:1.
V cent. $\quad \chi \omega$ (piov) $\underset{\sim}{\pi} \pi 0 \varphi[$
The indiction year may have been written below.

I 15 (P 12710). Pl. 49. Amphora with ovoid body similar to I 17. Type III. Context: O 19:1. PH. $0.368 \mathrm{~m} . ;$ D. 0.237 m .

The first part of the line could as well be $\chi^{\prime}(\varepsilon s) \theta^{\prime}$ from the palaeographical point of view, but the certainty of the indiction date may make the estate interpretation easier. The estate may have been known by a number rather than a name.

I 16 (P 14018). Pl. 49. Amphora with ovoid body and false ring foot, similar to I 17. Type III. Context: M 18:4. PH. 0.37 m .; D. 0.23 m .
 Only indiction year and contents are now visible.
I 17 (P 13178). Pl. 50. Amphora with ovoid body and small ring foot, similar to Robinson, Chronology, M 324. Type III. Context: O 18:1. H. 0.456 m . ; D. 0.26 m .

Late V-VI cent. $\mu$ ( $\eta \nu o ̀ s) \alpha^{\prime}$ ह̇mive( $\left.\mu \eta \dot{\eta} \sigma \varepsilon \omega \varsigma\right) \varepsilon ı^{\prime}$
I 18 (P 13148). Pl. 50. Amphora with ovoid body, similar to I17. Type III. Context: O 18:1. H. 0.407 m .; D. 0.24 m .
 $\chi \omega$ (píou) ór $\gamma \mathrm{p} \dot{( }($ ou) $\xi(\xi \sigma T \alpha l) \imath^{\prime}$
The estate may be ójop<ai>ou; see Meisterhans ${ }^{2}$, p. 27 for the spelling. The jar holds 7.800 1., which would be slightly more than ten of the 0.7281 . xestai (see above, p. 57).
I 19 (P 13158). Pl. 50. Amphora, similar to I 17. Type III. Context: O 18:1. PH. 0.39 m .; D. 0.24 m .

Late V-VI cent. 'A ${ }^{\prime}$

$$
x \omega(p i o u) \Phi u \xi \omega ̃ v o s
$$

The estate name should probably be read as $\langle\Pi\rangle \cup \zeta \tilde{\omega} v o s$ since in this period the frequent interchange of phi and pi in Egypt and Asia Minor (E. Schwyzer, Gr. Gram., München,

1939-71, p. 204) must have influenced even Attic purists.
I 20 (P 13433). Pl. 50. Amphora with ovoid body and short rounded toe. Type II. Context: P 19:1. H. $0.385 \mathrm{~m} . ;$ D. 0.215 m .
Late V-VI cent. X $\quad$ (píou) Пaбímou

The estate is apparently that of Pasippus; for the single instead of the double consonant in this period see Meisterhans ${ }^{2}$, p. 73.
I 21 (P 13468). Pl. 50. Amphora, similar to I 20. Type II. Dipinti in both black and red. Context: P 19:1. H. 0.47 m. ; D. 0.28 m .


$$
\begin{array}{ll} 
& \chi \omega(\text { (piou })[ \\
\text { (red) } & \xi(\xi \sigma T \alpha ı) ~ \\
\varepsilon^{\prime}
\end{array}
$$

The capacity is 12.7501 ., which is somewhat more than 15 xestai of the 0.7281 . size ( 10.9201 .). (Dipinti now barely visible.)
I 22 (P 13474). Pl. 50. Amphora, similar to I 20. Type II. Context: P 19:1. PH. 0.42 m .; D. 0.275 m .

Traces of letters on the broken edge above may be the remnants of the estate name.
I 23 (P 13160). Pl. 50. Upper part of amphora like I 20. Type II. Context: O 18:1.
Late V-VI cent.


A complete jar of similar shape and approximate size (I 20) holds 6.500 1., so that the present xestai might have been either size: 10 and $3 / 20 \times 0.5461 .=5.5421$. or 10 and $3 / 20 \times 0.7281 .=7.3621$.
I 24 (P 13147). Pl. 50. Upper part of amphora, similar to I 20. Type II. Dipinto in red. Context: O 18:1.
Late V-VI cent.

$$
\begin{aligned}
& \mu o ́(\delta 1 \circ \varsigma)
\end{aligned}
$$

$$
\begin{aligned}
& \Delta 1 о к \lambda() \text { ) } \Delta \text { aнокрव́tous }
\end{aligned}
$$

Both the reading and significance of the third line are uncertain.
I 25 (P 13465). Pl. 51. Tall tapered jar with one handle, like Robinson, Chronology, M 315. Type I. Context: P $19: 1$. H. $0.51 \mathrm{~m} . ;$ D. 0.205 m .
Late V-VI cent. $\quad \chi \omega$ (piou) Mo $\lambda$ т̣о $\tilde{u}^{\prime}$ A $\mu \mathrm{l}$ (vvaĩos) $\dot{\varepsilon} \pi เ v\left(\varepsilon \mu \eta \eta^{\prime} \sigma \varepsilon \omega \varsigma\right)!̣^{\prime}$
The last word in the first line seems to be a shorter than usual abbreviation of 'A ${ }^{\prime}$ ivvaĩos.

I 26 (P 13467). Pl. 51. Tapered jar, similar to I 25. Type I. Context: P 19:1. PH. 0.535 m .; D. 0.198 m .

$\xi(\varepsilon \in \sigma \tau a) \alpha 1^{\prime}$
The capacity is $6.2101 . ; 11 \times 0.5461$. $=$ 6.0061.

I 27 (P 25064). Pl. 51. Tapered jar, similar to I 25.
Type I. Context: Q 17:4. PH. 0.505 m .; D. 0.205 m .

Late V-VI cent. $\quad \chi \omega$ (píou) $\pi \eta \gamma \tilde{\eta} s$
(ĖாI) $\nu E\left(\mu \eta^{\prime} \sigma \varepsilon \omega \varsigma\right) \gamma^{\prime}$
128 (P 13182). Pl. 51. Tapered jar, missing neck and mouth, similar to I 25. Type I. Context: O 18:1. PH. 0.432 m .; D. 0.225 m .
Late V-VI cent. ह̀m! [ $\chi \omega$ (piou) $\beta($ ) Mị $\theta \rho o u$
The beta in the second line may be a number, e.g., the second field of Mithras, or an abbreviation of $\beta$ ópsios or $\beta \omega \mu$ ós or $\beta$ ouko $\lambda \varepsilon i ̃ o v$.

129 (P 13188). Pl. 51. Shoulder fragment of jar like I 25. Type I. Context: O 18:1.
 $x \omega$ (píou) $\beta$ ( ) Mi $\theta_{\rho}[o u$
130 (P 13170). Pl. 51. Shoulder fragment of jar like I 25. Type I. Context: O 18:1.
Late V-VI cent. $\chi \omega$ (piou) Прıa[ e.g., Прıameiou
I 31 (P 13171). Pl. 51. Shoulder fragment of jar like I 25. Type I. Context: O 18:1.
Late V-VI cent.

I 32 (P 13151). Pl. 51. Shoulder fragment of jar like I 25. Type I. Context: O 18:1.
Late V-VI cent. Ėmiv( $\left.\varepsilon \mu \eta \eta^{\prime} \sigma \varepsilon \omega \varsigma\right) 1 \alpha^{\prime}$ $k \alpha \theta(\alpha \rho 0 \tilde{u}) \rho(\hat{u}) \gamma($ ( $i \alpha 1) \sigma^{\prime}$

The capacity of similar jars is about $5 \frac{1}{2}$ liters, which would give a net weight of 200 ounces ( 5.460 kg .) or 10 xestai of wine. For a personal name (?) with ơ $\gamma \rho o u$ as an estate name cf. Tralles (B.C.H., IV, 1880, pp. 336-338).
I 33 (P 13157). Pl. 52. Shoulder fragment of jar like I 25. Type I. Context: O 18:1.
 $\varepsilon \pi \pi \nu\left(\varepsilon \mu \eta^{\prime} \sigma \varepsilon \omega S\right) \theta^{\prime}$

I 34 (P 13169). Pl. 52. Shoulder fragment of jar like I 25. Type I. Context: O 18:1.

Late V-VI cent. $\quad \chi \omega$ (piou) Ḅat $\omega v$
Cf. $\chi \omega$ (piou) Baías in Magnesia (Kern, loc. cit. [I 5]).

I 35 (P 12863). Pl. 52. Tapered jar similar to I 25. Type I. Context: P 18:2. PH. 0.555 m .; D. 0.231 m .

VI cent. द̇ாाレย( $\left.\mu \eta^{\prime} \sigma \varepsilon \omega \varsigma\right) \theta^{\prime}$
(traces)
$\chi \omega$ (piov) map $\alpha \lambda i ́ o u$
(traces)
The traces in the second and fourth lines look like earlier (more faded) versions of the first and third lines.

I 36 (P 13063). Pl. 52. Mouth and neck fragment of jar like I 25. Context: P 18:2.
VI cent. $\quad X \omega$ (piov) $\kappa \varepsilon v \tilde{\eta} s \quad \varepsilon \pi \pi[\nu v(\varepsilon \mu \eta ́ \sigma \varepsilon \omega s)$
Perhaps kaıvñs? Cf. I 18.
I 37 (P 13065). Pl. 52. Tapered jar like I 25.
Type I. Context: P 18:2. PH. 0.465 m .; D. 0.205 m .

I 38 (P 1461). Pl. 52. Wall and shoulder fragment of jar like I 25. Type I. Context: mixed fill (G-H 16-17).
VI cent. ]gou

$$
\varepsilon \bar{\varepsilon}] \pi \nu \varepsilon(\mu \eta \dot{\sigma} \varepsilon \omega \varsigma) \delta^{\prime}
$$

I 39 (P 25048). Pl. 52. Tapered jar like I 25. Type I. Context: Q 17:4. PH. 0.555 m .; D. 0.20 m .

The estate name might be anything from трокєі́цеvоv to Про́кдоч.

I 40 (P 26691). Pl. 52. Tapered jar like I 25. Type I. Context: Q 17:7. PH. 0.47 m. ; D. 0.21 m .

VI cent. Ėmive( $\left.\mu \eta^{\prime} \sigma \varepsilon \omega \varsigma\right){ }^{\prime} \gamma^{\prime}$

Perhaps $\sigma \dot{\prime} \gamma \kappa \omega \lambda$ os or $\sigma \dot{\gamma} \gamma \kappa 0 \lambda \lambda о s ?$
I 41 (P 13064). Pl. 53. Upper part of amphora similar to I 20. Type II. Context: P 18:2.
VI cent. $X \omega$ (piou) [N] $\bar{\mu} \omega \tau$

142 (P 12152). Pl. 53. Shoulder fragment of amphora similar to I 20. Type II. Context: Late Roman.

VI cent. Mev[ $\mu \in \lambda_{1}[$
$\chi \omega[$
(traces)
Perhaps Mendaean wine with honey?
I 43 (P 26083). Pl. 53. Amphora similar to I 20, with more elongated body. Type II. Context: Q 19:1. H. $0.42 \mathrm{~m} . ;$ D. 0.18 m .

The cross may be Christian. The estate name may be variously completed, e.g. वैкєขтpos, ákaivๆ.

I 44 (P 26694). Pl. 53. Amphora of same fabric as I 11 and of same general shape but shorter and with small flat base. Type IV. Context: Q 17:7. H. $0.43 \mathrm{~m} . ;$ D. 0.128 m .
VI cent. ivס(ıктiడ̃vos) $\gamma^{\prime}$
(written vertically) $\theta \lambda \sigma^{\prime}$

Year 239 of Diocletian was A.D. 523; the third year of the appropriate indiction cycle began in September A.D. 524. This might be an error? Or the number has some other significance?

I 45 (P 26690). Pl. 53. Amphora with wheelridged cylindrical body and round bottom like Robinson, Chronology, M 333. Dipinti in black and red on shoulder. Context: Q 17:7. H. 0.47 m .; D. 0.27 m .

VI cent.
 ßouvaios ảं. . ívios
(red) (faint traces of abbreviation for xestes)
This jar, as the only one of its kind with an indiction date, was probably re-used. Presumably an alternate spelling of 'Amıvaios and a special vintage from the hills.

## J. CHRISTIAN INSCRIPTIONS

Included here are vessels which have Christian inscriptions only. Symbols that are most easily interpreted as Christian also appear in company with other notations on $\mathbf{F}$ 322-324, Ha 46, Hc 22, He 39, I 43. For parallels and general discussion see C.I.L., XV, 4889 ff . and F. Cabrol and H. LeClerq, Dictionnaire d'archéologie chrétienne et de liturgie, Paris, 1924-53, s.vv. amphores, chrisme, inscriptions. For the specific problem presented by X M Г, see W. K. Prentice, Cl. Phil., IX, 1914, pp. 410-416, who argues
 Prentice's view, since $9 \varepsilon(\circ \tilde{)})$ or $9(\varepsilon \circ \tilde{)})$ is substituted for the mu.

J 1 (P 7544). Pl. 53. Fragment of small amphora preserving part of rim, neck and shoulder with one handle. Dipinto in black on shoulder. Found with coins of 4th-5th centuries.
IV-V cent. 'In] (chi-rho monogram) $\sigma o u ̃$
J 2 (P 9766). Pl. 53. Amphora neck and shoulder with plain thickened rim. Dipinto in red on shoulder. Context: 4th-5th centuries (K 18:1).
IV-V cent. X M 「
J 3 (P 16313). Pl. 53. Wall fragment from tall one-handled jar like Robinson, Chronology, M 315. Context: 4th-5th centuries (K 18:1).
IV-V cent. $\quad \begin{array}{ll}\text { X } \\ \prod \quad & \text { (vertical to jar) }\end{array}$
J 4 (P 25133). Pl. 53. Small ribbed pitcher similar to Robinson, Chronology, M 291. Graffito on shoulder. Context: early 5th century (Q 17:4). H. $0.175 \mathrm{~m} . ;$ D. 0.13 m . Hesperia, XXV, 1956, p. 54, pl. 14, b.

Early V cent. (chi-rho monogram) Tท̃s $\pi$ apó́vou
J 5 (P 9756). Pl. 53. Amphora neck. Dipinto in red. Context: 5th century (B 14:1).
V cent. X M 「
J 6 (P 12713). Pl. 53. Amphora like Robinson, Chronology, pl. 40, P 16074. Dipinto in black on shoulder. Context: 5th century (O 19:1). H. $0.503 \mathrm{~m} . ;$ D. 0.246 m .

V cent.

M $\theta$ zòs ßon | ós |
| :---: |

The mu might stand for 40 (kotyles) or "modius"; both measures would be possible. Or it might be for contents, e.g., $\mu \dot{\varepsilon} \lambda_{\mathrm{I}}$.

J 7 (P 13060). Pl. 54. Small amphora with cylindrical wheel-ridged body and short narrow neck. Dipinti in red on neck (a) and body (b), (c). Context: 5th-6th centuries (P 18:1). PH. $0.49 \mathrm{~m} . ;$ D. 0.202 m .

V-VI cent. (a) $X \Gamma$
(b) $\quad \begin{aligned} & \theta \varepsilon(\mathrm{oũ}) \\ & \left(\mathrm{n}()^{2}\right)\end{aligned}$
(c) $\kappa \alpha \lambda \alpha \pi \sigma$ ( )

J 8 (P 13087). Pl. 54. Fragment from neck and shoulder of amphora. Dipinto in red on neck. Found with pottery of 6th century.
VI cent. $\quad X \in \Gamma$
J 9 (P 10564). Pl. 54. Tall one-handled jar (= Robinson, Chronology, M 315). Graffito on wall. Context: late 6th century (D 15:2). H. 0.52 m .; D. 0.183 m .

Late VI cent.
(chi-rho monogram)

J 10 (P 3756). Pl. 54. Shoulder fragment from small amphora. Dipinto in black on shoulder. Late Roman XM Г

J 11 (P 15075). Pl. 54. Neck and shoulder of amphora. Dipinto in black at base of neck.
Late Roman XM Г
J 12 (P 15560). Pl. 54. Shoulder fragment of amphora. Dipinto in red.
Late Roman XM 「

## K. MISCELLANEOUS NOTATIONS

Included in this group are texts which can be read and interpreted but which do not belong to one of the larger classes. Probable prices ( $\mathbf{K} \mathbf{8 ,} \mathbf{K} \mathbf{1 6 - 1 8})^{1}$ are more numerous than anything else. Numbers without definition are also frequent ( $K 9, K 14, K 15, K 19$ ). Others are one or two of a kind : vessel name (K 1, K 10); message (K 2, K 3); signature ( K 4, K 6); game counter ( K 12); equation ( K 13, K 14). All of these can be most conveniently discussed under the individual items.

K 1 (P 18276). Pl. 54. Wellhead. Graffiti on side wall, outside. Context: second quarter 6th century b.c. (A 17:1). Hesperia, XVIII, 1949, p. 119.

Second quarter VI cent. B.C.
(a) (upside down) $\mathfrak{i} \sigma[\theta] \mu 1 \circ \nu\langle\varphi\rangle \rho \varepsilon ́ \alpha T(O S)$
(b) Eủk $\tilde{e ̃}^{\text {s }}$
"Neck of well." The Greek term is perhaps more sensible than our "wellhead." The name may be of the owner.

K 2 (P 4233). Pl. 54. Black-glazed fragment, perhaps from lower wall of skyphos. Graffito on outside. Found with 6th- to 5th-century b.c. pottery.
VI cent. b.c. عi $\theta$ ]íyous pút[pas
Compare C.I.G., I, 545: Кท甲ıбора̃vтоs ท่


 D. A. Amyx, University of California Publications in Classical Archaeology, I, 8, Berkeley and Los Angeles, 1941, pp. 179-206.

K 3 (P 27724). Pl. 54. Wall fragment of large black-figured amphora preserving central part of a shield with whirling radii. Graffito starts at center and goes out and around.

VI cent. B.C. ájoṿıò̀v тópo[v
Perhaps a mascot prepared by a boy entering a contest: "agonistic resource."
K 4 (P 12181). Pl. 54. Wall fragment from thinwalled vessel, with brownish glaze inside and out. Graffito on outside.
Late VI-early V cent. b.c. ]s है $\gamma \rho \alpha[\rho \sigma \varepsilon$
Presumably signature of owner, since it is incised.

K 5 (P 16791). Pl. 54. Fragment from base and floor of black-glazed stemless bowl. Graffito on inside, almost certainly written when the vessel was whole since it follows the curve of the wall; subsequently broken in half and chipped around the edges. Context: late 6th century b.c. (G 15:1). Cf. Sparkes-Talcott, no. 446.
Ca. 500 в.с. ]оı $\gamma \rho \alpha \varphi[$
Perhaps to be restored as tõı $\gamma p \alpha \dot{\alpha} \rho o v i t$ and
 the prosecutor."
K 6 (P 15108). Pl. 55. Upper part of amphora with bulbous neck and vertical handles. Graffito on neck and shoulder. Context: second half 5th century b.c. (E 19:5).


[^24]The second line is written retrograde. "So and so checked the account''?

K 7 (P 25909). Pl. 55. Fragment from floor of black-glazed bowl. Graffito on inside.
V cent. b.c. XE $\Sigma$
"You pour" ( $\chi$ еїs) is perhaps more proper but less sensible than $\chi \dot{\varepsilon} \sigma(\mu \alpha)$, whether as expletive or definition of the vessel's use.

K 8 (P 19389). Pl. 55. Part of flat-topped rim and shoulder of a large pithos. Graffito on upper surface of rim.
IV cent. b.c. IIIIIIII! П+H+
Tallying and price: nine drachmas (and one obol?).

K 9 (P 20373). Pl. 55. Shoulder fragment from jug. Dipinto in black. Found with sherds of 4th-3rd centuries b.C.
IV-III cent. B.c. $\Delta K Y$
Presumably a number, but since the last sign might be seen either as upsilon (400) or the drachm-symbol, the reading might be either " 424 " or " 24 drachms."

K 10 (P 3983). Pl. 55. Amphora with almost cylindrical body and small toe. Letters incised before firing at base of neck. Context: 3rd-2nd centuries B.C. (G $11: 1$ ). PH. 0.615 m. ; D. 0.314 m . III-II cent. B.C. $\alpha_{\alpha \mu(p o p \varepsilon u ̀ s) ~}^{\Delta i o t i \mu o u ~}$
The part of the handles where a stamp might have been is missing, but the inscription made before firing may give the potter's name.

K 11 (P 17070). Pl. 55. Amphora handle. Graffito on top. Found with Hellenistic sherds.
Hellenistic $\quad \dot{\alpha} \mu(\varphi o \rho \varepsilon u ́ s)$
Perhaps the other handle carried the potter's name; cf. K 10. The abbreviation might be expanded in other ways.
K 12 (P 22976). Pl. 55. A roughly circular disc cut from the wall of a pot, glazed inside and out. Graffiti on both sides.
Hellenistic (inside) 'Hpar $\quad \begin{array}{ll}\text { éous / "Apeos } \\ & \text { (outside) }\end{array}$ (outside) Movбడ̃v / Nıкడ̃v
Piece for a game like checkers? Cf. British Museum, Guide to the Exhibition Illustrating Greek and Roman Lifes, London, 1929, p. 203.

K 13 (P 5506). Pl. 55. Fragment from base of large amphora neck. Graffito on outside.
Late Hellenistic Xoũs $\xi(\xi \sigma \tau \alpha 1) 5^{\prime}$

Not a statement of capacity but a note of equivalence: one chous equals six xestai. Perhaps written on the sherd.

K 14 (P 19861). Pl. 55. Fragment from neck of large amphora with profiled lip. Dipinto in red on neck.

Late Hellenistic J $\mu^{\prime}$
X L] V
Obviously Greek and Roman numerals, perhaps equated.

K 15 (P 21773). Pl. 55. Fragment from neck of large amphora with profiled rim. Dipinto in red on neck. Context: early 1st century ( $\mathrm{R} 10: 1$ ).
Early I cent. X X X V [
Compare He 19 for the method of writing the tens.

K 16 (P 12478). Pl. 55. Amphora similar to Robinson, Chronology, M 12. Dipinto in black on shoulder. Context: first half 1st century (N 20:5). H. $0.395 \mathrm{~m} . ;$ D. 0.28 m .
First half I cent. $\quad \delta \eta(v \alpha ́ \rho i \alpha) \rho[$
Presumably price, probably of contents.
K 17 (P 10268). Pl. 55. Amphora similar to Robinson, Chronology, M 234. Dipinto in black on shoulder. Context: 4th century (M 18:4). H. (restored) 0.53 m ; D. 0.27 m .

IV cent. $\quad v o(\mu i \sigma \mu \alpha \tau) \alpha \sigma^{\prime}$
See Metrolog. Script., I, p. 253 for equivalence between nomisma and denarius.

K 18 (P 11307). Pl. 55. Fusiform wheel-ridged jar with one handle, like Robinson, Chronology, M 240. Dipinto in black beneath handle. Context: 4th century (G $11: 2$ ).

$$
\begin{array}{ll}
\text { IV cent. } & \kappa \alpha \lambda \pi!(\delta(o s) \\
\delta \rho(\alpha \chi \mu \alpha) \varepsilon^{\prime}
\end{array}
$$

This form of the word is more frequent than either $\kappa \dot{\alpha} \lambda \pi \eta \eta$ or $\kappa \dot{\alpha} \lambda \pi \pi o s$. The inscription presumably records the price of the jar.

K 19 (P 7628). Pl. 55. Neck and shoulder of onehandled jar similar to Robinson, Chronology, M 315. Graffiti on either side of shoulder.
VI cent.
XII

$$
\beta^{\prime}<
$$

The number is given in both Latin and Greek; why the Greek should be larger by one-half is obscure.

## L. UNCLASSIFIED NOTATIONS

Little can be said of this group as a whole since the various items have only their obscurity in common. But because unintelligibility is only relative to the reader's understanding, it has seemed necessary and worthwhile to include them in the hope that some at least will come clear.

L 1 (P 14670). Pl. 56. Wall fragments of pithos with incised decoration, similar to Brann, no. 609. Graffito on outside. Context: early 5th century b.c. (G 3:1).
VII-VI cent. b.c. ].EAIHA
]ANIA
L 2 (P 24998). Pl. 56. Roughly oblong piece cut from the side wall of a large pot (wheel marks visible) while the clay was still soft. Letters incised outside, also in soft clay. Context: mid-6th century b.c. (Q 13:5).
Mid-VI cent. b.c. A $\Theta$
Was the piece cut out and fired with the intention of using it as a plug? Or is it a counter? If so, why is it cut from a pot?

L 3 (P 7867). Pl. 56. Part of ring foot of blackglazed bowl. Graffito on reserved resting surface of foot.
VI cent. b.c. JẠ! HOṂIBYYT
Possible readings: o $\Lambda_{i} \beta \cup \sigma \tau[1 \kappa o ́ s, ~ i . e . ~ t h e ~$ Libyan (bowl, boy, wine?); ó $\delta i$ j $\cup \sigma \tau[1 \kappa o ́ s, ~ i . e . ~$ this saving (drink?).

L 4 (P 7820). Pl. 56. Wall fragment of heavy lekane with black glaze inside. Graffito inside. VI cent. b.c. ]ETẠO[

Not apparently part of a name. Perhaps a phrase, e.g., $\mu \varepsilon \tau \dot{\alpha} \dot{\theta} \theta \tilde{\omega} v$ ? Or a fragment of a spelled-out abecedarium: zeta eta theta?

L 5 (P 9483). Pl. 56. Rim fragment from large krater decorated with slanting palmette band. Graffiti in reserved bands above (a) and below (b) band of palmettes. Context: mid-5th century b.c. (C 9:6). Hesperia, Suppl. V, p. 142, fig. 69,$30 ; 70, \mathrm{~b}$.
First half V cent. в.c. (a) (see drawing)
(b) (see drawing)

Apparently meaningless. They may represent practice letters for formal inscriptions elsewhere on the pot, some of which were retrograde.

L 6 (P 9994). Pl. 56. Part of black-glazed saltcellar with concave sides. Graffito on underside.

Context : fourth quarter 5th century в.c.(B13:5). Fourth quarter 5th cent. b.c. ]EIE
]HEHE
The letters are very uncertain. Perhaps a name in the vocative with a negative command,

L 7 (P 12965). Pl. 56. Rim fragment of largemouthed vessel with broad shoulder and short vertical rim. Graffito on shoulder.

But why a "spit in the open air'? A cookout? Or is it ímai $\theta$ pios ó ßó̀os?
L 8 (P 17125). Pl. 56. Black-glazed skyphos. Graffito beside handle. Context: late 5th century b.c. (A 20-21:1). Hesperia, XVI, 1947, p. 212.
Late V cent. B.c. $\quad \pi \dot{\varepsilon}\langle\nu\rangle \tau \varepsilon\lceil\alpha(\mu \alpha ́ \alpha \tau \mid \alpha)$
L 9 (P 14703). Pl. 56. Fragment of black-glazed kylix base. Graffito on underside (a) and on top (b).
V cent. в.c
(a) $] \mu[$ ]окоs к[
(b) $\quad \mathrm{u}:$
(retrograde)
A name like Demodokos?
L 10 (P 23130). Pl. 56. Wall fragment of lekane. Graffito on inside, probably written on the sherd. Found with 5th-century b.c. pottery.
V cent. b.c. ПOY ПE
The scored triangle above (see drawing) may have been a letter?
L 11 (MC 1011). Pl. 56. Small terracotta plaque, broken at one end; daub of clay added to other end. Graffito on back face.
V cent. b.c.
]!иıкı
Dative for a tag? E.g., т $\uparrow$ Фоívıкı?

L 12 (P 9986). Pl. 56. Part of base of heavy blackglazed skyphos. Graffito on underside.
V cent. в.c. $\quad \Pi \alpha \sigma()$ ó $l \sigma \theta[\mu]\llcorner\langle 0\rangle v i(\mathrm{k} \eta \mathrm{S})$
Probably two inscriptions, because of different depths of incision. Perhaps the owner's ligature, with the epithet added by another as a joke? Compare C 5.

L 13 (P 8203). Pl. 56. Three fragments from upper wall of black-glazed skyphos, one (a) with traces of handle attachment, and two (b,c) with rim. Graffito on outside. Context: second quarter 4th century в.C. (B $12: 5$ ).
Second quarter IV cent. b.c. $\Delta I[] . I \Omega[$ ]ENEIA [
Many restorations are possible, e.g., $\Delta_{i}\left[0 v^{\prime} \sigma \omega\right.$ $\left.\Sigma_{1 \mu}\right] i \omega[\nu \varepsilon \dot{\mu} \mu] \varepsilon \varepsilon \varepsilon i \alpha$ is uncertain.
L 14 (P 6904). Pl. 56. Base of black-glazed bowl with ring foot. Graffito on underside, circling around. Found with 5th- to 4th-centuries b.c. pottery.
IV cent. B.c. $\alpha \dot{\alpha} v o\langle\rho\rangle \theta o i n g s \pi \alpha ́ p o s ~ t \alpha ́ ~$
The writer did not finish the inscription, probably because he had come almost full circle and there seemed to be no room for the object of the verb. Letters are not oriented in any consistent direction; generally the work looks incompetent enough to suggest that the syntax might be so too. Perhaps a message hoping that the addressee might restore the fragments of the pot as before!
L 15 (P 18420). Pl. 56. Base of black-glazed skyphos. Graffito on underside.
IV cent. B.C. (see drawing)
Perhaps to be read as mo ( ) and the sign for two drachms written twice. The sherd may have been used as a tag or label on a shipment.
L 16 (P 19124). Pl. 56. Rim fragment of blackglazed kantharos. Graffito on outside.

## IV cent. b.c. ] ] $\mu u s$

It is tempting to invent a proverb, e.g., $\gamma \lambda u$ кósıs © ©pıús, but both could be good Athenian names, e.g., Epilukos and Mus.

L 17 (P 21714). Pl. 56. Half of foot and part of lower wall of black-glazed bowl. Graffiti on outside, on lower wall (a) and inside foot (b).
IV cent. b.c. (a) JBE
(b) $] \mathrm{NHO} \underset{\sim}{c}$

See drawing. The letters are too uncertain to allow of easy restoration.
L 18 (MC 961). Pl. 56. Fragment from the rim of a banded plate (?). Graffito on underside.

The inscription may not be complete. Whether the word in the second line is complete is obscure.

L 19 (P 23274). Pl. 56. Fragment of plain lid with flat-topped knob. Dipinto in black near rim.

кд́ $\lambda \cup \mu \mu \alpha$
Perhaps cover of vessel containing various kinds of fish (cf. Ath., VII, 306c).

L 20 (P 15741). Pl. 57. Mouth and part of neck of amphora with heavy profiled rim. Dipinto in black on neck.
II-I cent. B.c. (monogram) $\delta \rho \alpha(\chi \mu \alpha i) \gamma^{\prime}$
L 21 (P 15200). Pl. 57. Fragment from flat bottom of heavy coarse pot. Graffito on underside.
Late Hellenistic IETA[
PIAE[
Perhaps an imperative of i $\sigma$ T $\eta \mu$ ?
L 22 (P 20839). Pl. 57. Neck fragment of amphora. Black dipinto at base of neck.

## Late Hellenistic EủGuqóvou[s <br> (illegible)

Name of producer or seller?
L 23 (P 20657). Pl. 57. Upper part of amphora with rolled rim and vertical handles. Dipinto in red on neck (a) and upper shoulder (b). Context: last quarter 1st century b.c. to early 1st century (R 13:2).
Late I cent. B.C.-early I cent.

(a) | $i \beta^{\prime}$ |
| ---: |
|  |
| $\rho \beta^{\prime}$ |
| $\varepsilon^{\prime}$ |

(b) TEI
$\Lambda \Sigma$
KE!
Almost certainly number in (a); perhaps the 12th day of 111th year (Actian era?), 5th month. The obscurity of (b) is less suggestive.

L 24 (P 21776). Pl. 57. Ovoid amphora with tall vertical handles and pointed toe. Graffiti on shoulder. Context: early 1st century ( $\mathrm{R} 10: 1$ ).
$\begin{array}{ll}\text { Early I cent. } & \text { (a) (see drawing) } \\ & \text { (b) JKOINOA乏 }\end{array}$
(b) JKOINOA乏
(a) Possibly a number? (b) Perhaps this jar was held in common (koivós) or held wine (olvos)?
L 25 (P 16202). Pl. 57. Amphora similar to Robinson, Chronology, F 93. Dipinto in black on shoulder. Context: first half 1st century ( $\mathrm{N} 20: 1$ ). H. 0.73 m .; D. 0.30 m .

First half I cent. ó ópuo[
$\theta \varepsilon \circ[$

Perhaps ápuotinf, a liquid measure. The second line might be a personal name or a month.

L 26 (P 4480). Pl. 57. Shoulder fragment of large storage amphora. Dipinto in black. Context: 1st century ( F 11:1).
I cent. $\Sigma$ TPA AMIN[
Possible that some letters of an original óotpókou $\lambda_{i}\left(\tau p \alpha_{1}\right)$ have faded completely. It is possible that the second line might be 'Apivvaios.
L 27 (P 26675). Pl. 57. Part of neck and shoulder of amphora. Dipinto in red on shoulder.
First half II cent. ja( )
ó§( )
ő $\xi$ os for cheap wine?
L 28 (P 16703, P 16706, P 19401). Pl. 57. Three similar amphoras with tall cylindrical neck, angular ridged handles, body which tapers sharply to small concave foot. Large dipinti in red on either side of neck. Context: early 2nd century (N 21:1; E 17:1). Average H. 0.55 m. ; D. 0.26 m .

Early II cent.
$\underset{\Phi 1}{\text { (chi-rho monogram) }}$
Too early for Christian use of chi-rho, so perhaps abbreviation of producer's name or of contents (e.g., хpuoattikòv olvov, хрïца). The second inscription might also be either of these. Many other possibilities might be imagined, for example, фiбK xpécs: "owed to the Treasury." For ФI see also He 19.

L 29 (P 18434). Pl. 57. Fragment from shoulder of large plain amphora. Dipinto in black. Context: 2nd century (C 18:2).
II cent. $\quad \operatorname{\sigma op}() \Gamma \alpha \mu() \varepsilon$ ) $\pi i l i \gamma^{\prime}$
Perhaps a date: 13th day of Gamelion.
L 30 (P 17113). Pl. 57. Neck and upper shoulder of amphora. Dipinto in black on shoulder. Context: 2nd century (B 20:1).
II cent. KIXḤTOY
$\Delta P \cdot v Z^{\prime}$
 $v \omega \tau$ ós. The second line may not be " 57 drachms" but it is likely that the last letter at least is a number.

L 31 (P 25218). Pl. 58. Amphora with tall narrow neck and body tapering to small ring foot. Dipinto in red on shoulder. Context: early 3rd century (Q 17:4). H. $0.485 \mathrm{~m} . ;$ D. 0.243 m .

Early III cent. OYA乏 غ่тั̃v $\gamma^{\prime}$
Perhaps Greek letters for Latin vas? And age of jar? or contents?

L 32 (P 16700). Pl. 58. Amphora with tall cylindrical neck and elongated ovoid body, small spur on top of handle. Dipinto in black on shoulder. Context: early 3rd century (N 21:1). PH. 0.58 m .; D. 0.19 m .
Early III cent. кর̛̣ıкп̃̃
Cf. Hesychios, карıкク่• áoúvetos, каì ả̛ $\mu \pi \varepsilon \lambda о$. Or карúкт?
L 33 (P 14077). Pl. 58. Upper part of small amphora with short neck and plain thickened lip. Dipinto in black on shoulder. Context: P18:2.
First half III cent. ]piveías $\gamma^{\prime}$
Uncertain reading: Corinthian measures?
L 34 (P 12314). Pl. 58. Small amphora similar to Robinson, Chronology, M 177. Dipinti in red on shoulder. Context: 3rd century (N 20:3). H. 0.41 m. ; D. 0.195 m .

Mid-III cent. $\tau \rho\left(\right.$ ) $\alpha \pi^{\prime}$ or $\tau \rho \alpha \pi$ ( )
See drawing. The abbreviated word may be followed by numbers. Or a two-letter abbreviation may have been expanded to four: тратптто́s?
L 35 (P 3218). Pl. 58. Shoulder fragment from large plain amphora. Dipinto in black.
Early Roman JASHA
JANI
L 36 (P 7525). Pl. 58. Upper wall fragment of plain pot. Graffito on outside.
Early Roman JTAPA. $\Delta H$
L 37 (P 7843). Pl. 58. Neck fragment of widemouthed jar; profiled rim with piecrust decoration on lower side. Letters incised in soft clay below rim.

Word in genitive case restored exempli gratia.
L 38 (P 11991). Pl. 58. Amphora with narrow neck and elongated ovoid body on ring foot. Dipinti in black (charcoal) on shoulder.
Early Roman XXXXV
Cf. L 39, which also has Roman numerals which do not apparently relate to capacity or weight. Perhaps serial numbers in a shipment.

An abbreviated name seems most likely for the second line, e.g., Tolmides or Tollios (Tullius).
L 39 (P 17883). Pl.58. Amphora similar to Robinson, Chronology, K 114. Dipinti in black (charcoal) on shoulders.

## Early Roman (see drawing) XIL

Uncertain letters might be Greek or Latin. If the second line is supposed to be a Roman numeral the order of numbers is peculiar. (The two lines are reversed in the drawing.)
L 40 (P 14725). Pl. 58. Wall fragment of large amphora. Graffito on outside, vertical to pot. Found with early Roman pottery.
Early Roman

Line 2: perhaps an era date first and then the Delphi month name seems to be written over traces of the Attic month Boedromion.

L 41 (P 22293). Pl. 58. Part of tall narrow amphora neck with flaring rim and heavy ridge below. Dipinto in red on neck.
Early Roman

$$
\begin{aligned}
& \text { S [E } \\
& \text { D F C }
\end{aligned}
$$

Perhaps sepulchral: $s(i t u s)[e(s t)] / d(e) f(u n) c$ [tus].

L 42 (P 26120). Pl. 58. Ovoid wheel-ridged amphora with ridged handles and narrow neck. Dipinto in black on shoulder. Context: 3rd4th centuries (Q 19:1). H. 0.48 m. ; D. 0.26 m .
Late III cent. (see drawing)
]tupos
L 43 (P 9800, P 11582, P 11583, P 22009, P 11590, P 22008, P 11584, P 11594). Pl. 59. Eight jars or fragments of jars with fusiform bodies ( $=$ Robinson, Chronology, M 256, M 278, M 259, M 258, M 242, M 257, M 255, M 241). Dipinti in black under the handle of each. Context: M 17:1. Average H. 0.49 m .; average D. 0.19 m .

IV cent.

| (a) | $\pi \rho \circ(~)$ | (e) $\pi \alpha \lambda(~)$ |
| :--- | :--- | :--- |
| (b) | $\pi \rho \circ(~)$ | (f) $\pi \alpha \lambda(~)$ |
| (c) | $\pi \rho[$ | (g) $\pi \alpha \lambda(~)$ |
| (d) $\pi \rho \circ(~)$ | (h) $\pi \eta(~)$ |  |

The abbreviations all seem to be written by the same hand. Unfortunately, the range of possibilities is too large to allow any convincing completion of the abbreviations. If, as seems likely, the abbreviations refer to contents, $\pi \rho \circ$ and $\pi \alpha \lambda$ might be $\pi \rho \circ \pi \varepsilon \rho v \sigma i v o ́ s ~ a n d ~$
manaıós but the only similarly temporal parallel for $\mu \eta$ would be unviaĩos. (Drawing includes only samples.)

L 44 (P 11119). Pl. 59. Shoulder fragment of small wheel-ridged jug similar to Robinson, Chronology, M 266. Graffito on shoulder. Context: 4th century (B 14:2).
IV cent.
ПІРВ
L 45 (P 12837). Pl. 59. Amphora similar to Robinson, Chronology, M 234. Dipinto in black on shoulder. Context: 4th century (O 19:1). H. 0.455 m. ; D. 0.275 m .

IV cent. $\quad$ трò Bıßß入ị̣ou
Perhaps imitation Bybline wine; for the spelling see Hesychios, s.v.

L 46 (P 12870). Pl. 59. Body of ovoid amphora. Dipinto in black on shoulder. Context: 4th century (O 19:1). PH. 0.345 m. ; D. 0.272 m . IV cent. $\quad$ $\quad$ í $\varepsilon \rho \alpha$

Perhaps a Latin adjective in Greek letters used as a name? But the blurred letters could as well be Aióga.

L 47 (P 13585). Pl. 59. Tall one-handled jar, an earlier form of Robinson, Chronology, M 315. Dipinto in black on shoulder. Context: 4thearly 5th centuries (P 19:1). H. 0.60 m .; D. 0.245 m .

IV-V cent. $\quad \beta \alpha \dot{p}(o s) 5^{\prime}$
Perhaps better as $\gamma$ 人́p(ou) with the last "letter" taken as the sign of abbreviation?

L 48 (P 27050). Pl. 59. Rim fragment of shallow dish of Late Roman red ware. Graffito on inside, below rim.
IV-V cent. (see drawing)
Uncertain scratchings of which only a few look like letters. Unreadable.

L 49 (P 1026). Pl. 59. Rim fragment of amphora with heavy rolled lip. Dipinto in black on neck just below rim. Context: 5th century (I 16:1). V cent. $\quad A \wedge \Xi O N$

L 50 (P 2097). Pl. 59. Fragment of coarse lid. Letters incised in the soft clay. Context: 5th century (H-I 7-8:1).
$\begin{array}{ll}\text { V cent. } & \text { ]orum } \\ & \text { ]tuis } \mathrm{a}[ \\ & \text { ]ciri[ }\end{array}$
Perhaps a proverb or motto.

L 51 (P 1944). Pl. 59. Upper part of small gouged jug, similar to Robinson, Chronology, M 359. Graffito on neck.
VI cent.

## ANKZB[

L 52 (P 7507). Pl. 59. Neck of amphora similar to Robinson, Chronology, M 333. Dipinto in red on neck below handle. Found with 6th-century coins.
VI cent. TYחA
L 53 (P 7638). Pl. 59. Shoulder fragment of large amphora. Dipinto in red.

Roman
]APENTE[ ¿OY

L 54 (P 481). Pl. 59. Rim fragment of open bowl. Graffiti on top of outturned rim (a) and outside on wall below rim (b).
Late Roman (a) $] \mathrm{H} \wedge \Phi \mathrm{BE}[$
(b) ]ENHӨHTO[

An illiterate attempt at an abecedarium?
L 55 (P 3076). Pl. 59. Shoulder fragment of unglazed amphora. Graffito on outside.
Late Roman $\alpha \delta($ ) $\mu \varepsilon \rho($ )
L 56 (P 25852). Pl. 59. Shoulder fragment from closed pot. Graffito on outside.
Late Roman $\quad \pi \cup($ ) $v \in($ ) $\dot{\delta} \sigma t[$

## M. PICTURES

Commentary seems superfluous, since the pictures speak best for themselves. It is possible to speculate on the motives behind each drawing, but such speculation is likely to be more productive of amusement than of profit.

M 1 (MC 907). Pl. 60. Pyramidal loomweight (A1). VIII-VII cent. B.c. (horse and rider)

M 2 (P 1001). Pl. 60. Black-figured skyphos with lotus-bud pattern on reserved band at handle zone. Graffito on inside wall, upper part. Context: first half 6th century b.C. (I 16:4). First half VI cent. B.C. (fish)
M 3 (P 24999). Pl. 60. Wall fragment from blackglazed kylix of "komast" shape. Graffito in reserved handle zone. Context: mid-6th century в.c. (Q 13:5).
Mid-VI cent. b.C. (grotesque head)
M 4 (P 3533). Pl. 60. Wall fragment from blackglazed kylix. Graffito on outside. Context: 6th century в.c.
VI cent. в.c. (head)
M 5 (P 16789). Pl. 60. Wall fragment from blackglazed skyphos. Graffito on outside. Context: 6th century b.c. (G 15:2). Hesperia, XV, 1946, p. 278, under no. 30.

VI cent. B.c. (ithyphallic satyr)
M 6 (P 2714). Pl. 60. Fragmentary black-figured skyphos. Graffito on outside lower wall. Context: late 6th-early 5 th centuries b.C. (G 6:3). Hesperia, XV, 1946, p. 278, no. 30.
Late VI-early V cent. b.c. (head)

M 7 (P 9889). Pl. 60. Wall fragment of blackglazed kylix of 6th- to-5th centuries b.c. fabric. Graffito on inside (a) and outside (b). Hesperia, XV, 1946, p. 278, under no. 30.
VI-V cent. B.c.
(a) (two figures facing left and a tree)
(b) (small round holes and theta)

M 8 (P 7103). Pl. 60. Fragment from rim and body of small semi-glazed krater. Graffito inside. Hesperia, XV, 1946, p. 273, no. 16.
Early V cent. b.c. K $\alpha \lambda \lambda i / \chi \sigma \varepsilon / \nu[0] s$
(head with wreath and beard)
An ostrakon.
M 9 (P 27698). Pl. 61. Half of hemispherical black-glazed stand (C 15). Incised before glazing and firing.
Second quarter V cent. B.C. (act of sodomy) For the verbal text see $\mathbf{C} 15$.

M 10 (P 10352). Pl. 60. Fragment of blackglazed lid with incised tendril border. Graffito on upper surface. Context: fourth quarter 5th century b.c. Cf. Sparkes-Talcott, no. 1261.
Fourth quarter V cent. b.c.
(at right, pygmy fighting; at left, part of crane)

The drawing seems to have been done with a fine point before the glaze was applied, so that the head and upper body of the crane, which were too lightly drawn, are no longer visible. The tendril pattern was done in the same way.

M 11 (P 19312). Pl. 60. Wall fragment of blackglazed skyphos (?). Graffito on outside. Context: late 5th century b.c.
Late V cent. b.c. (head)
M 12 (P 23242). Pl. 60. Neck and shoulder fragment of red-figured oinochoe. Graffito on outside of neck. Context: late 5th century b.c. Late V cent. b.c. (swastika)

M 13 (L 2450). Pl. 61. Nozzle and parts of rim of black-glazed lamp ( $=$ Howland, no. $176=$ C 30 above). Graffito on top of nozzle. Context: 4th century b.c. (E 6:3).
Late V-early IV cent. b.c. (phallus)
For verbal text see C 30.
M 14 (L 4212). Pl. 60. Black-glazed lamp (= Howland, no. $267=$ F 177 above). Graffito on sides of body and top of nozzle.
IV-early III cent. B.c. (boukranion)
For verbal text see F 177.
M 15 (P 20374). Pl. 60. Shoulder fragment from unglazed amphora. Graffito outside and sideways to pot, probably drawn on the sherd.
Context: 4th-3rd centuries b.c.
IV-III cent. B.C. (herm)
M 16 (P 23231). Pl. 60. Wall fragment of West Slope plate or saucer, with checkerboard pattern inside. Graffito on outside. Context: Hellenistic.

III cent. B.C. (head)
Perhaps Kairos, with hair in front and bald behind.

M 17 (P 14323). Pl. 60. Rim fragment of Megarian bowl. Graffito on outside. Context: Hellenistic. III cent. B.C. (head)

M 18 (P 3817). Pl. 61. Fragment from large Pergamene plate. Graffito on inside.
I cent. b.C.-I cent. (costume-design?)
M 19 (P 9880). Pl. 61. Wheel-ridged jug. Graffito on shoulder. Context: 1st century.
I cent. (boukranion?)
M 20 (P 12306). Pl. 61. Wall fragment of amphora ( $=$ F 315). Graffito outside. Context: 4th century ( $\mathrm{N} 20: 3$ ).
IV cent. (something with head and wings)
For verbal text see F 315.
M 21 (P 7048). Pl. 61. Wall fragment of large unglazed pot. Graffito on outside. Context: Late Roman.
Late Roman (uncertain letters; dolphin)
M 22 (P 9873). Pl. 61. Base of low-footed bowl. Graffiti inside and outside. Context: Late Roman.
Late Roman
(inside) (head with helmet?)
(outside) (letters, perhaps alpha beta gamma)
M 23 (P 15343). Pl. 61. Wall fragment of large unglazed pot. Graffito on outside. Context: Late Roman.
Late Roman (face)

## DEPOSITS

The letter and first number of each deposit give the grid-square of its location (see Pl. 62). The second number gives its serial position within that square. Since the dating of deposits has largely been the work of specialists in the particular periods, the indication given here is only a brief summary of fuller descriptions appearing in relevant Agora volumes, which are listed in each case, or of study-notes by excavators and others in the Agora. Where deposits consist of several fillings, ordinarily only those in which objects from this volume were found are included. The catalogued objects are listed for each deposit or part thereof, except that in the case of those stratified over centuries no attempt is made to list chronologically, but the usual class and numerical order is retained. Differences in context descriptions here and under individual items are those between the general and immediate context.

Abbreviations used include: POU, use filling, or Period of Use; L, M, U, dumped fillings, Lower, Middle and Upper.

A 16:1 Bronze Casting Pit (Agora, XII)
A 17:1 Well (Agora, IV, VIII, XII)
A 18:6 Pit
A 18-19:1 Ostrakon fill (Agora, IV, XII)
A 20-21:1 Drain fill (Agora, XII)
A-B 21-22:1 Terrace fillings (Agora, XII)
B 11:1 Channel mouth
B 12:5 Well (Agora, IV, XII)
B 13:1 Cistern shaft (Agora, V, VII, XII)
B 13:2 Well (Agora, V)
B 13:5 Well (Agora, XII)
B 13:8 Well (Agora, IV, XII)
B 14:1 Well (Agora, V, VI)
B 14:2 Well (Agora, V, VI, VII)
B 14:3 Cistern (Agora, IV, V, VII)
B 14:4 Well
B 15:1 Well (Agora, IV, VIII, XII)
B 17:1 Destruction debris (Agora, VII)
B 18:7 Well (Agora, IV, XII)
B 18:10 Well (Agora, IV)
B 19:7 Construction filling (Agora, IV, XII)
B 19:9 Well
B 20:1 Well (Agora, V, VII)

B 20:2 Cistern (Agora, XII)
BB 17:1 Well
C 9:6 Construction filling (Agora, IV, XII)
C 9:7
C 12:1 Well (Agora, V, VI, VII)
C 12:2 Well (Agora, IV, VIII, XII)

Third quarter 4th century b.C. Ha 11
Second quarter 6th century b.c. D 13; $\mathbf{K} 1$
Late 4th to early 3rd century b.c. F 184
First and second quarters 5 th century b.c. F 56
Fourth quarter 5th century b.c. L 8
Ca. 420-390 в.с. E 5; F 99-101
Late 2 nd into early 1 st cent. b.C. F 233
Ca. 380-350 в.с. L 13
Fourth quarter 3rd cent. b.c. (L) F 202, F 203
Late 1st to early 3rd cent. (POU) Hc 10
Fourth quarter 5th cent. b.C. L 6
Ca. 325-300 в.с. (POU) F 163
Ca. 300-275 b.c. (U) Hb 1; Hc 2
Mid-1st to early 3rd cent. (POU) He 21
5th cent. (U) J 5
Late 1st to late 2nd cent. (POU) F 269, F 276
4th cent. (U) L 44
Second half 1st cent. F 255, F 256; Ha 17
First half 4th cent. (POU) Ha 32
Fourth quarter 5th cent. b.c. F 91; Hd 1
Mid-3rd cent. F 296
Ca. 350-325 в.c. (POU) F 154
First quarter 6th cent. B.C. D 10
Ca. 430-410 в.C. F 90
1st cent. b.c. to 1st cent. F 250
Second half 1st to mid-2nd cent. (POU) F 267, F 283; G 23; Ha 20; Hb 6; He 15; L 30
First half 2nd cent. b.c. F 227
First half 4th cent. b.C. F 145
Ca. 450 в.C. C 14; F 72, F 73; L 5
Late 2 nd cent. b.c. F 228; Hc 3
Mid-2nd to early 3rd cent. (POU) B 18; Hc 15
Ca. 375-325 в.с. F 149

C 13:2 Well (Agora, XII)
C 14:1
C 14:2 Cistern (Agora, VII)
C 14:4 Well (Agora, IV, VII)
C 18:2 Well (Agora, V)

C 18:11
C 19:5

C 19:9
C 20:1
D 10:2
D 11:1
D 11:4
D $12: 1$
D 12:2
D 15:2
D 15:3
D 17:3
D 17:11
D-E 8-9:1
E 2:3
E 3:1
E 6:3 Cistern (Agora, X, XII)
E 11:2 Well (Agora, IV, V)
E 13:1
E 14:1

E 14:2
E 14:3
E 14:5
E 15:1
E 15:3
E 15:5
E 15:6
E 17:1
E 19:5
E 29:5
F 5:1
F 11:1
F 11:2
F 12:3
F 12:5
F 13:2

C 18:4 Construction filling (Agora, IV, XII)
C 18:7 Construction filling (Agora, XII)
Cistern

Drain (Agora, XII)
House fillings (Agora, XII)

Well (Agora, IV, XII)
Well (Agora, V, VI, VII)
Channel
Well (Agora, IV, V, VI, VII)
Cistern (Agora, IV, XII)
Well (Agora, IV, V, VI, VII)
Cistern (Agora, IV)
Well (Agora, V, VII)
Cistern (Agora, IV, XII)
Cistern (Agora, IV, XII)
Well
Cistern (Agora, XII)
Foundry pit (Agora, IV, XII)
Cistern (Agora, IV, X, XII)

Well
Cistern (Agora, IV, V, VI, X, XII)

Well (Agora, IV, V, VI)
Cistern (Agora, IV)
Well (Agora, IV, XII)
Well (Agora, V)
Cistern (Agora, IV)
Well
Well (Agora, IV, XII)
Well
Pit
Well
Cistern (Agora, IV, XII)
Well (Agora, V, VI, VII)
Well (Agora, IV, XII)
Well (Agora, IV, XII)
Well (Agora, IV, VIII, XII)
Well (Agora, IV, VI, VII)

Late 2nd to 4th cent. (POU) F 170; Ha 34
Hellenistic F 193
Third quarter 3rd cent. F 298
First half 2 nd to second quarter 4th cent. (POU) F 310; Hb 13-15; Hd 19; He 29
Second half 1st to early 3rd cent. (POU) F 257; L 29
First half 5th cent. b.c. F 76
Second quarter 5th cent. B.C. C 23
Ca. 490-480 в.С. F 51
a) Second half 5th cent. b.c. B 8; F 110
b) Late 5th and first half 4th cent. в.C. E 12; F 146; Ha 9
Ca. 425-400 в.C. (POU) F 97
Ca. 400-390 в.c. (U) F 128
Early 2nd to mid-3rd cent. (POU) Hd 13
3rd to 2 nd cent. b.c. F 185
Late 1st cent. b.c. to mid-1st cent. Hd 3
Middle filling: mixed late Hellenistic to early Roman F 303
Bottom filling 3: late 2 nd to mid-3rd cent. Ha 23; He 18
Late 2nd to early 1st cent. b.c. (L) G 21
Late Hellenistic to early Roman (M) F 234
6th cent. (POU) J 9
Ca. 375-330 в.с. C 33
Ca. 300-290 в.c. F 195
1st cent. b.c. (L) G 22
Ca. 330-305 в.C. D 43; F 165, F 166
Ca. 375-350 в.C. F 142-144
Late 4th to early 3rd cent. b.C. F 182, F 183; G 9; Hc 1
Ca. 375-310 в. C. C 30 (M 13); F 135, F 136; Fb 1, Fb 2
Lower filling: 1st cent. F 259
Ca. 470-425 в.c. C 26; F 58; Fa 23
a) Late 4th and 3rd cent. b.c. F 199, F 200; $\mathbf{H b} 2, \mathrm{Hb} 3$
b) Late 1st cent b.C. E 16
c) Dumped filling of 3rd cent. Hd 18

1st cent. (POU) F 258
Mid-1st cent. b.c. (M) F 243
Ca. 520-490 в.c. F 14, F 15; Ha 1
Construction filling in 1st cent. F 251
Late 2nd to early 1st cent. b.c. (POU) F 230
4th and 5th cent. (POU) Hb 21, Hb 24; He 38
Ca. $500-480$ в. C. F 27; Fa 1
Early to late 2nd cent. (POU) Ha 21; L 28
Second half 5th cent. b.c. K 6
Early 4th cent. F 319; He 34
3rd to 2nd cent. b.c. F 210
1st and early 2nd cent. F 268; He 13; L 26
Second half 4th cent. b.C. (POU) E 13
Second half 4th cent. b.c. B 13
7th cent to $c a .570$ b.C. D 2, D 8
Second half 1 st cent. to end of 2 nd cent. (POU) He 12

F 15:1
F 16:1
F 17:3
F 19:1
F 19:2
F 19:3
F 19:4
F $19: 5$
F $20: 1$
F-G 12:1
G 3:1
G 6:3
G 8:1
G 11:1
G 11:2
G 12:22
G 12:23
G 13:5
G 14:2
G 15:1
G 15:2
G 18:1
H 5-6:1
H 6:5
H 6:9
H7:3
H 10:2
H 12:6
H 12:11
H 13:5
H 16:3
H 16:4
H 17:5
H-I 7-8:1
I9:1
I 10:1
I 15:1
I 15:2
I 16:1

I 16:4
I 16:5
I 16:7
I 17:1
J 11:1
J 12:1
J 13-14:1
J 18:1
J 18:4

Well (Agora, V)
Cistern (Agora, IV, XII)
Well (Agora, XII)
Well (Agora, V, VI, VII)
Cistern (Agora, IV, XII)
Well
Well (Agora, IV, XII)
Well (Agora, IV, XII)
Filling (Agora, XII)
Road levels (Agora, IV, VIII, XII)
Pit (Agora, IV, XII)
Rock-cut Shaft (Agora, IV, X, XII)
Well (Agora, IV, VII)
Cistern (Agora, V)
Well (Agora, V, VI, VII)
Pit (Agora, IV, XII)
Pit (Agora, IV, XII)
Well
Well (Agora, IV, X, XII)
Well (Agora, IV, X, XII)
Well (Agora, IV, XII)
Well (Agora, IV, XII)
Fillings (Agora, IV, XII)
Well (Agora, XII)
Pit (Agora, IV, X, XII)
Construction filling (Agora, IV, XII)
Pit (Agora, IV, VIII, XII)
Well (Agora, IV, VII, XII)
Well (Agora, IV, XII)
Pit
Cistern (Agora, IV, XII)
Pithos (Agora, IV, XII)
Filling (Agora, IV, XII)
Filling (Agora, VI)
Drain (Agora, IV, VIII)
Well
Well
Filling
Well (Agora, V, VI, VII)

Well (Agora, IV, XII)
Cistern (Agora, IV)
Settling basin
Well (Agora, XII)
Filling (Agora, XII)
Well (Agora, V, VII)
Drain (Agora, XII)
Well (Agora, V, VI, VII)
Pit (Agora, IV, XII)

4th cent. (POU) Hb 22
Ca. 350-310 в.с. F 164
End of 4th cent. to ca. 225 в.c. (second POU)
F 206, F 207
Late 3rd and 4th cent. (POU) F 311
Ca. 375-340 в.с. А 6; В 10
1st cent. b.C. Hb 4
Са. 490-450 в.с. В 7; C 24; D 39; F 57, F 65, F 66, F 68, F 69
Ca. 520-480 в.C. F 31
4th cent. b.c. F 150
7th and 6th cent. b.c. D 4, D 32; F 3
Ca. $500-470$ в.c. L 1
Ca. 510-480 в.с. (U) A 5; B 2; F 23, F 24;

## M6

1st cent. (POU) Hb 5
Early 3rd to late 2nd cent. b.C. (POU) K 10
Late 2nd to early 6th cent. (POU) D 44; F 291,
F 307; He 33; K 18
Ca. $470-460$ в.C. Fa 16-19
Ca. 375-350 в.с. F 141
First quarter 4th cent. b.C. (U) F 139
Early 4th into 2nd cent. b.C. F 152, F 229
Ca. 500 в.c. (POU) D 28; F 16; K 5
Ca. $550-525$ в.c. (POU) M 5
Ca. 425-400 в.c. (with some earlier) F 74, F 96
Early 5th cent. b.c. F 42
Са. 470-460 в.с. C 16-22; E 2; F 59-62; Fa 2-15
End of 4th cent. b.c. (L) F 160
2nd cent. B.c. F 190
Ca. 375-350 в.с. F 140
Ca. 575-525 в.с. D 18
Ca. 425-400 в.C. F 92, F 93
Ca. 410-390 в.с. (POU) F 127
Са. 480 в.с. В 6; C 13; D 38
Ca. 320-275 в.C. F 179, F 180
Ca. 150 в.c. G 19
Ca. 375-340 в.с. F 148
5th cent. L 50
Second and third quarters 6th cent. B.C. D 14
First half 6th cent. b.c. D 7
Late Roman I 13
Third quarter 4th cent. b.c. F 159
Late 1st to mid-3rd cent. (POU) F 286; Ha 27; Hd 11, Hd 12
4th and 5th cent. (POU) Hd 20; L 49
Ca. 600-540 в.c. (POU) F8; M 2
2nd cent. b.c. with some later intrusions F 288
Late 5th to early 4th cent. B.C. F 138
Ca. 450-425 в.C. F 85
Ca. $400-340$ в.c. F 158
Late 1st to early 3rd cent. (POU) Hd 7
Fourth quarter 5th cent. B.C. B 9
3rd century before a.d. 267 (POU) Ha 28
Mid-6th century b.c. (lower fill) B 1; C 4;
F12, 13

K 18:1 Well (Agora, V, VII)

K 18:3 Cistern
L 14:2 Well
M 11:3 Well (Agora, IV, VIII, XII)
M 17:1 Well (Agora, IV, V, VI, VII, XII)

M 18:1 Well (Agora, V, VI, VII)
M 18:4 Well
M 18:10 Well (Agora, XII)
M 18:11
M 19:1
M 20:2
M 21:1
N 7:3
N 11:6
N $13: 1$
N $17: 1$
N 17:2
N $18: 5$
N 19:1
N 19:2
N 20:1
N 20:2
N 20:3
N 20:4
N 20:5

N 20:7 Cistern (Agora, IV)
N 21:1 Well (Agora, V, VI, VII, XII)
N 21:4 Cistern (Agora, IV, XII)
N-P 20:1
O 7:10 Pit (Agora, XII)
O 12:1 Well (Agora, IV, VIII, XII)
O 16:1-2 Construction filling (Agora, XII)
O 16:3 Well
O 16:4 Pit (Agora, XII)
O 17:1 Cistern (Agora, V, VII, XII)
O 18:1 Well (Agora, V, VI, VII, XII)
O 19:1 Well (Agora, V)

O 19:4 Well (Agora, XII)

Late 1st to early 2nd cent. (POU) F 260-262; M 19
4th to early 5th cent. (POU) J 2, J 3
11th cent. (POU) G 2
Dumped filling of 3rd cent. Hc 21
6th and 7th cent. He 26
Second half of 7th cent. b.c. F 6
Mid-1st to late 6th cent. (POU) B 17; F 285, F 312, F 320; Ha 24, На 26, На 33, На 47, Ha 48; Hb 10; Hc 11, Hc 24; Hd 14; He 16, He 22, He 31; I 3; L 43
1st and 2nd cent. (POU) F 277; Hd 5, Hd 10; He 17
3rd to 6th cent. (POU) F 309; Hb 8, Hb 11, Hb 27; I 4, I 16; K 17
Hellenistic ca. 200 b.c. F 208
5th cent. b.c. E 9
First half of 2nd cent. F 280, F 281
3rd cent. Ha 30
Late 3 rd and early 2 nd cent. B.c. F 212, F 213
Ca. 460-440 в.c. F 77, F 79-83
Late 8th into early 4th cent. b.c. A 1 (M 1)
5th cent. (POU) I 14
Mid-3rd into 5th cent. (POU) Ha 25
Mid-1st to mid-2nd cent. (POU) F 270-275
Late 3rd to 4th cent. Ha 31; He 26, He 27; I 1
Second quarter to end of 1st cent. He 5
Mid-1st to first half of 2nd cent. (POU) F 278; He 17; Hd 8
First half of 1st cent. (POU) Hc 6, He 8; L 25
Second half of 1st cent. He 8-11
3rd cent. before A.D. 267 (POU) L 34
4th cent. (POU) F 315 (M 20)
Second quarter 1st cent. b.C. F 242
First half of 1 st to early 3 rd cent. (POU) F 282, F 292-294; Ha 19; Hd 6, Hd 15; He 14; K 16
4th cent. I 2, I 7
Second half of 3rd cent. B. C. F 197
Early 1st to 5th cent. (POU) F 287; Ha 15; He 35; I 10-12; L 28, L 32
3rd cent. b.C. F 196; G 14
a) Late 6th to early 5 th cent. b.c. F 30
b) Fourth quarter of 5th cent. в.C. F 94

Ca. 450-425 в.C. F 88
Third quarter 7th cent. b.c. F 4
Third quarter 5 th cent. b.c. $\mathbf{F} 89$
Second half of 3rd cent. b.c. F 198
Ca. 350-325 в.с. На 10
Second to fourth quarter 1st cent. Ha 16
4th to 6th cent. (POU) F 322; Ha 41-43; I 17-19, I 23, I 24, I 28-34
Early 4th to 6th cent. (POU) F 317, F 318; На 50; Hb 16, Hb 18, Hb 19; He 4, He 32, He 39, He 41; I 5, I 6, I 15; J 6; L 45, L 46
Fourth quarter 5th cent. b.c. (POU) E 6; F 95

P7:4
P8:1
P8:2
P 14:3
P 18:1
P 18:2 Well (Agora, V, VI, VII)
P 19:1 Well (Agora, V, VI, VII)

Q 8:1
Q 10:4
Q 12:3
Q 13:2
Q 13:3
Q 13:5
Q 15:2
Q 17:1
Q 17:4

Q 17:7
Q 18:1
Q 18:2
Q 19:1
Q 19:2
R 8:2
R 10:1
R 12:1
R 12:3
R 12:4
R 13:1
R 13:2
R 13:4
R 17:5
R 19:2
R 21:2
S 16:1
S 19:6
S 21:2
S $21: 3$
T 18:2
T 18:3
T 19:3
T 27:1
U 22:1
U 23:2

Well (Agora, VII)
Filling (Agora, V, VI, VII)
Pit (Agora, IV, XII)
Deposit over floor (Agora, XII)
Well (Agora, V, VII)

Pit (Agora, IV, XII)
Well
Well (Agora, X, XII)
Cistern
Footing-trench (Agora, VII)
Well (Agora, VIII, XII)
Well (Agora, XII)
Well
Well (Agora, V, VI, VII)

Well (Agora, VI)
Well (Agora, IV, XII)
Well
Well
Pit
Well (Agora, IV, VIII, XII)
Well (Agora, IV, V, VII)
Well (Agora, IV, VIII)
Well (Agora, XII)
Well (Agora, XII)
Well (Agora, IV, V, VII, XII)
Well (Agora, IV, VII)
Well (Agora, IV, XII)
Well (Agora, VIII)
Drain
Cistern (Agora, IV)
Well (Agora, XII)
Well
Well (Agora, IV, VIII, XII)
Well (Agora, IV, V, VI, VII)
Well (Agora, XII)
Filling (Agora, XII)
Pit or well (Agora, IV, VIII, XII)
Filling
Well
Well (Agora, IV, XII)

Late 5th to early 6 th cent. Ha 39
First half of 2nd cent. F 284; Hd 9
Third quarter into fourth, 5 th cent. B.C. Ha 2
Ca. $470-460$ в.с. E 4; F 70, F 71
5th to 6th cent. (POU) Hb 28, Hb 29; Hc 23; Hd 22; J 7
First half of 3rd cent. (POU) L 33
4th to 6th cent. (POU) I 35-37, 141
Late 1st cent. (POU) He 12
Early 3rd to 6th cent. (POU) F 295, F 323; Ha 44; Hb 25, Hb 26, Hb 30; Hd 16; I9, I 20-22, I 25, I 26; L 47
Third quarter 5th cent. b.c. (into fourth) F 111
Late 5th cent. b.C. F 123
Ca. $520-490$ в.с. F 19, F 52; G 4
Dumped filling of 6th cent. b.c. D 19; F 32
5th cent. B 21
Са. $575-540$ в.с. L 2; M 3
Ca. 420-390 в.c. C 31; E 10; F 131-134; He 3
6th and 7th cent. Ha 53
Early 1st to 6th cent. (POU) F 266, F 290
Hb 12; He 25; Hd 17; He 36; I 27, I 39;
J4; L31
3rd to 6th cent. (POU) F 327; Ha 45, Ha 46;
Hb 9, Hb 23; He 23, He 24; I 40, I 44, I 45
Ca. 550-525 в.c. (POU) G 1
5th and 6th cent. (POU) Ha 52; Hb 31
3rd to 6th cent. (POU) F 299, F 325; Hb 20;
He 30, He 40; I 43; L 42
3rd cent. в.c. $\mathbf{E} 15$
Third into fourth quarter 7th cent. b.c. F5
Early 1st cent. F 252, F 253; Hc 7; He 4-7
K 15; L 24
Ca. 520-430 в.с. C 7; F 33-41
Ca. 525-500 в.c. (POU) F 11
Ca. 520-480 в.с. C 5; F 28, F 29
Late 1st cent. b.c. to mid-1st cent. F 254
Late 1st cent. B.C. to early 1st cent. L 23
Ca. $440-425$ в.c. He 1, He 2
Second quarter 7th cent. b.c. C 1; F 2
Early Roman He 19
1 st cent. Hc 9 ; Hd $\mathbf{4}$
Fourth quarter 5th cent. b.c. F 104, F 105;

## На 3-6

Second half 6th cent. F 326
Ca. 600-570 в.c. D 11, D 12; F 7
First half 1 st to first half 3rd cent. Ha 22
Ca. 575-550 в.c. D 17
Ca. $600-550$ в.c. D 23
Later 8th to mid-7th cent. B.C. D 3; F 1
Second quarter 1st cent. b.c. F 241
a) 2nd to early 3rd cent. Hc 18
b) 4th cent. F 316

Ca. $525-500$ в.с. (POU) G 3

## CONCORDANCE

| $\begin{aligned} & \text { Inv. No. } \\ & \mathrm{P} 8 \end{aligned}$ | Cat. No. F 43 | $\begin{aligned} & \text { Inv. No. } \\ & \text { P } 2022 \end{aligned}$ | Cat. No. B 9 | $\begin{aligned} & \text { Inv. No. } \\ & \text { P } 4233 \end{aligned}$ | Cat. No. K 2 | Inv. No. P 5458 | Cat. No. <br> Fa 23 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| P 13 | D 16 | P 2029 | F 10 | P 4480 | L 26 | P 5506 | K 13 |
| P 83 | F 126 | P 2030 | D 6 | P 4498 | F 268 | P 5595 | Fa 26 |
| P 103 | F 107 | P 2041 | D 24 | P 4618 | He 43 | P 5623 | I 14 |
| P 119 | F 190 | P 2095 | F 334 | P 4627 | D 32 | P 5663 | Ha 54 |
| P 124 | He 37 | P 2097 | L 50 | P 4663 | F 3 | P 5671 | Ha 36 |
| P 133 | F 167 | P 2145 | A 10 | P 4664 | D 4 | P 5717 | Hd 18 |
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$\Delta$［ B 3
ćdup B 10

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ciui（variously spelled and preserved）F 3 F 5 F 12 F 13 F 18 F 32 F 56 F 58 F 63 F 65 F 94 F 107 F 115 F 131 ［F 132］F 144 F 177； Hd 2 ［ $\mathfrak{\varepsilon} \sigma T 1]$
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 I 7－11 I 15－18 I 20－29 I 31－33 I 35－41 I 43 I 45


Emi［ B 10
＇Ерєveía：He 14 ＇Epeveías

€ $\rho \mu[$（ 10
EP（ ）He 11
हैтоs［Hc 19］He 21；He 4 He 7 He 15 żtous；

ย ${ }^{\text {un }} \mathbf{C} 33$
${ }^{\mathrm{E}} \mathrm{\omega}$ S He 41
E（ ）F 98；He 2 ع（1s）
E［ B 10
亿 $\alpha \mu \dot{\alpha}$ тıov：L 8 l $\alpha(\mu \alpha ́ r ı \alpha)$
П̋ $\kappa \omega$ ： $\mathbf{B} 7{ }_{7} \mathrm{~K}[\varepsilon]$


ппцıбv：Ha 18 गो $\mu($ ）；see also Index Numerorum
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$\theta \varepsilon \alpha ́: ~ G ~ 13 ~ \theta \varepsilon \alpha[i v] ~] ~$
$\theta \in \mu \alpha$ ：Hd 19 өєцата

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＇loúvios：He 41 ＇louviou


IITA［ L 21
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I 32 к $\alpha \theta$（ $\alpha \rho о \tilde{u})$

kai：C 7 C 14 C 34 G 6 ［G 10］G 21
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какоסаí $\omega$ ， $\mathbf{G} 15$
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C 31；С 3 C 11 ка入દ̇；C 29 C 31 ка入ท̀
ка入тis：K 18 ка入т！і（оs）
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кก̃тоऽ：B 1 кव́тто
KIXḤTOY L 30

к $\lambda \tilde{1} \sigma เ \varsigma: ~ D ~ 18[k] \lambda \tilde{\varepsilon} \sigma เ s$
$\kappa \lambda ı v \tau \eta ̃ \rho: ~ B 2 k \lambda[\iota v \tau \varepsilon ̃ \rho] \alpha s$
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Hb 28 Hb 29 Hd 6 Hd 10 He 6 He 7 He12
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He 43 I 7 I12


$\lambda \dot{\prime} \omega:$ B 10 घ̇ $\lambda \cup \mathfrak{\sigma} \sigma \alpha$ то
$\mu \dot{\varepsilon} \gamma \alpha 5:$ B $14 \mu \varepsilon \gamma^{\prime} \lambda_{\eta}$

$\mu \varepsilon \lambda \varepsilon \delta \omega v \sigma_{S}$ I $9 \mu \varepsilon \lambda \varepsilon \delta \omega[\nu \omega ̃] \nu$
$\mu \varepsilon \lambda \in ̇ i v(o s)$ He 23 He 24

I $42 \mu{ }^{\prime} \lambda_{1}$［
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$\mu \eta() \mathbf{L} 43$
$\mu i \sigma \gamma \omega: \mathbf{C} 8 \mu i \sigma \gamma \eta$
$\mu$ їптоऽ： $\mathbf{C} 1$ цібєтоs
$\mu \nu \tilde{a}:$ Hb $5 \mu v(\alpha i ̆) ;$ He 3 He $5 \mu(v a i ̃)$
$\mu \dot{(\delta 1 \circ \varsigma) ~ Н а ~} 16$ Ha 44 Ha 53 He 4 He 8－11 I 24
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$\xi \varepsilon \sigma T \eta s$（in various spellings or abbreviations）：
На 17 Нa 20 На 23 На 28 На 30 На 32 На 37
На 38 Ha 43 Ha 45 Ha 46 На 48 Ha 50－52
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K 5 L 14 （various oblique cases）

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ôtriov B 19

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Hb 30 Нe 31 Не 33 Нe 34 Не 37 ò $\sigma$ трákou
（variously preserved，spelled，abbreviated）
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ab Hd 3
antea He 4
Aug（ ）He 18
a［ L 50
bọ He 8
car（ ）He 18
coc（tum）Hd 3
co（n）s（ul）He 3 He 4
co（n）s（ule）s Hc 7
$\mathrm{d}(\mathrm{e}) \mathrm{f}(\mathrm{un}) \mathrm{c}($ tus $) \mathbf{L} 41$
［e（st）］L 41
et Hc 6
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N（onae）He 18
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s（itus）L 41
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Terg（ ）He 18
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121：Hc 10 рка＇
139：Hc 11 He $37{ }^{2} \lambda \theta^{\prime}$
146：Не 8 р н $^{\prime}$
150：Hc 12 Hc 23 р $v^{\prime}$
155：Hc 13 р $\varepsilon^{\prime}$

15？：Hc 14 pv［
172：Hc 16 ро $\beta^{\prime}$
194：He 23 Нe 24 р $\delta^{\prime}$
200：He 35 I 32 K $17 \sigma^{\prime}$
210：E $11 \mathrm{HH} \Delta$［
229：Hc 18 ok $\theta^{\prime}$
230：L $23 \lambda \sigma^{\prime}$
239：I $44 \theta \lambda \sigma^{\prime}$
241：Hc $19 \sigma \mu \alpha^{\prime}$
329：F $250 \mathrm{k} \theta \mathrm{T}^{\prime}$
424：K 9 бкu＇
500：He $25 \phi^{\prime}$
502：Hc $17{ }^{\prime} \beta^{\prime}$
580：Hc $24 \boldsymbol{\varphi}^{\prime \prime}$
701：Hc $23 \psi \alpha^{\prime}$
964：He 25 だ $\delta^{\prime}$
1246：Не 9 ，$\alpha \sigma \mu 5^{\prime}$
9975：E $1{ }^{\times 1} X X X X{ }^{\text {P }} H H H H \Gamma^{\wedge} \Delta \Delta \Gamma$
10474：He 10 ， 1 Uסo＇
11100：E 2 MXH

## INDEX SIGILLORUM

（half）：see Index Numerorum （denarius）：He 16 He 17 He 38 （？） （drachm）： K 9 （？）see Index Numerorum （litra）：Ha 26 Hb 12 Hb 18 Hb 21－23

Hb 26 Hd 6 He 6 He 22 He 26 He 28 He 29
He 31 He 33 He 34 He 43 I 12 （xestes）：Ha 37 He 36 He 44 K 13 （xestes）：На 38 Ha 43 На 45 На 46 На 48

Ha 50－52 He 41 I 18 I 21 I 23 I 45
$\xi$（xestes）：Ha 30 Ha 56
「o（ounkia）：B 19 Hb 3 He 13 He 22 He 39 He 40 I 23132
（ounkia）： He 7
（cross）：F 323 F 324143
（chi－rho）：F 322 Ha 46 He 22 He 39 J 1 J4 J 9 L 28
ХӨГ（see text）：J 8
ХМГ（see text）：J 2 J 3 J 5 J 10－12

## Plates

PLATE 1


PLATE 2


PLATE 3


PLATE 4



Love Names and Hate Names


PLATE 7


PLATE 8


PLATE 9




PLATE 12


PLATE 13


PLATE 14


PLATE 15


PLATE 16




PLATE 19


PLATE 20


PLATE 21


PLATE 22



F 259


F 266


F 260
Dor do
F 263

F 267
Owners' Marks

PLATE 23


$$
\begin{aligned}
& \text { Erl. }
\end{aligned}
$$

$$
\begin{aligned}
& \text { mosioc } \Delta \\
& \Delta ⿴ 囗 十 \\
& \lim _{i=10}
\end{aligned}
$$










Fa 1

## 正 $\mathbb{L}$

Fa 2



Fa 4

元
Fa 5


Fa 6

Fa 3


Fa 7

Fa 8


Fa 9


Fa 10


Fa 11


Fa 12


Fa 16
Fa 17 Fa 18 Fa 19 Fa 20 Fa 21


Fa 25


Fa 26



Fa 13


Fa 14


Fa 24


FD 1


FD 2


FD 3

Owners' Marks: De (mosion) Ligatures
HAD Giccccicher


ETGNAYQ SHEPMEI
G4
L

KAIT
$N E T O$
NE

$\sum_{610}^{\operatorname{DA} \leq \Delta I}$
$\frac{\text { OOIANEOHKEN }}{G 7}$

$$
\begin{aligned}
& \text { G } 9
\end{aligned}
$$



Dedications and Convivial Inscriptions

PLATE 32





外奴
Ka<u Plom







He 3
FTrinileme.


He 6



He 12 1:4


He 14 1:4

PLATE 40



Hd 2

Hd 1 1:2

Cocar nuck
Hd 3


Hd 6

是
Hd 7



Hd 13


Hd 16


Hd 5

$\prod_{\text {Hd } 14}$


PLATE 42



PLATE 44



He 26

$\lambda \lambda B$
He 29
He 26


He 28


He 31


Commercial Notations: Combinations



Commercial Notations: Combinations



## PLATE 50



I 19


I 21



PLATE 52




PLATE 55


PLATE 56




P14日明 $=1$
L 33


L 31
L 34 1:2


L 37


L 39 1:2




L 36


L 41


Unclassified


PLATE 60



M 6
M4



Pictures

PLATE 62


Actual State Plan of the Agora


[^0]:    ${ }^{1}$ Digamma is not used alphabetically but only numerically; koppa is used more exceptionally than regularly; xi and psi are regularly indicated by the combination of chi and phi, respectively, with sigma.

[^1]:    ${ }^{2}$ Xi with or without the center upright occurs indifferently；the tailed upsilon is not immediately general and can not always be certainly distinguished in careless writing．

[^2]:    ${ }^{1}$ C 3，C 4，C 7，C 10，C 11，C 13，C 15－17，C 19，C 21，C 28，C 29，C 31.
    ${ }^{2}$ Feminine names with these initial letters are very rare．
    ${ }^{3}$ C 1，C 2，C 5，C 8，C 12，C 14，C 18，C 22－27，C 33，C 34.

[^3]:    ${ }^{4}$ See Edmonds＇note（op．cit．，I，p．864，d）：＂It is thought possible that this man，by giving his name to his profession，originated the stock character of mediaeval Italian comedy from whose dress comes our word pantaloon，now in its shortened form＇pants＇．．．＂

[^4]:    ${ }^{1}$ For the arguments concerning the date of the origin of ostracism see K.J.Dover, Cl.Rev., XIII, 1963, pp. 256-257 with bibliography and J. T. Keaney, Historia, XIX, 1970, pp. 1-11. For a general account see E. Vanderpool, "Ostracism at Athens," Lectures in Memory of Louise Taft Semple, second series, no. 4, Cincinnati, 1970.
    ${ }^{2}$ The previous count of ca. 1500 (see Hesperia, Suppl. VIII, pp. 408-411) has recently been greatly augmented by an estimated 4000 found in the Kerameikos (cf. B.C.H., XCII, 1968, pp. 732-733; $\Delta_{\varepsilon} \lambda_{\tau}$., XXIII, 1968, Xpovikó, pp. 24-32; S.E.G., XXIV, 1969, no. 74, pp. 29f.).

[^5]:    ${ }^{3}$ It is unlikely that this differentiation is in any way related to the later development of two sigmas, one initial or medial and the other final; that is almost certainly a result of cursive writing. Comparable usage in the early period may be seen on the Dipylon Jug and in the Nikandra inscription (cf. Jeffery, L.S.A.G., pp. 68, 291).

[^6]:    ${ }^{1}$ Although the number may be sufficient for statistical purposes, it is still true that the extreme brevity of the texts and relative rarity of some letters and forms decreased the value of the results.
    ${ }^{2}$ Digamma is not used alphabetically but only numerically; no opportunity for psi arises in these texts; xi is indicated by a combination of chi and sigma.

[^7]:    ${ }^{3} \mathrm{Xi}$ with or without the center upright occurs indifferently; the tailed upsilon is not immediately general and can not always be certainly distinguished in careless writing.
    ${ }^{4}$ The hourglass sigma, if such it is, of $\mathbf{F} 183$ must be foreign or idiosyncratic?

[^8]:    ${ }^{5}$ Not included here are the cursive joints，as for example between the letters of the diphthongs epsilon－iota（F 276）and omicron－ upsilon（F 330）．

[^9]:    ${ }^{6}$ This total exceeds the number of catalogued items by eight because so many both have abbreviations and belong to another category: F 91, F 127, F 152, F 163, F 180, F 185, F 245, F 323.
    ${ }^{7}$ Eight letters: F 181
    Six letters: F 80, F 145, F 167, F 308
    Five letters: F 59, F 79, F 97, F 108, F 119, F 147, F 153, F 193, F 237, F 241, F 320, F 326, F 331
    Four letters: F 20, F 49, F 51, F 54, F 66, F 68, F 71, F 81, F 88, F 90, F 91, F 95, F 98, F 110, F 114, F 121, F 129, F 137, F 148, F 151, F 152, F 162, F 163, F 166, F 180, F 186, F 189, F 195, F 200, F 206, F 211, F 217, F 222, F 227, F 229, F 236, F 240, F 244, F 254, F 255, F 261, F 271, F 278, F 299, F 317, F 327, F 334

    Three letters: F 14, F 15, F 17, F 19, F 21, F 22, F 25, F 27, F 29-31, F 33-37, F 41, F 42, F 45, F 47, F 48, F 52, F 53, F 57, F 60, F 61, F 69, F 70, F 74, F 87, F 102, F 105, F 106, F 109, F 111, F 120, F 126, F 133, F 155, F 156, F 159, F 173-175, F 178, F 190, F 194, F 196, F 197, F 207, F 208, F 210, F 219, F 221, F 235, F 239, F 247, F 248, F 260, F 265, F 272, F 277, F 280, F 281, F 283, F 293, F 294, F 303, F 314, F 323

    Two letters: F 28, F 39, F 73, F 89 (2), F 112 (2), F 127, F 213, F 228 (2), F 242, F 296
    One letter: F 40, F 163, F 185, F 245.
    ${ }^{8}$ Actually this two-letter abbreviation could as well refer to contents or give a date or other number and so serves as an example of these abbreviations' elusiveness.

[^10]:     F 170, F 176, F 183-185, F 187, F 188, F 204, F 214, F 224, F 225, F 231, F 238, F 250, F 252, F 257, F 274, F 282, F 285, F 287, F 290, F 291, F 309-311, F 316, F 318, F 322, F 323, F 329.

    Genitive: F 2, F 4, F 9, F 23, F 64, F 67, F 77, F 84, F 86, F 92, F 104, F 113, F 118, F 125, F 127, F 136, F 140-143, F 146, F 152, F 157, F 158, F 163, F 165, F 179, F 180, F 182, F 198, F 201-203, F 212, F 216, F 223, F 230, F 233, F 234, F 243, F 245, F 246, F 251, F 256, F 258, F 259, F 262-264, F 267-270, F 273, F 275, F 276, F 279, F 286, F 292, F 295, F 297, F 301, F 304, F 306-308, F 312, F 321, F 325, F 330, F 332.

    Dative: F 50, F 284, F 288, F 298.

[^11]:    ${ }^{10}{ }^{10}$ F 10, F 26, F 38, F 43, F 55, F 75, F 101, F 116, F 124, F 128, F 130, F 134, F 149, F 160, F 161, F 169, F 172, F 205, F 215, F 218, F 220, F 226, F 232, F 249, F 253, F 266, F 289, F 300, F 302, F 305, F 315, F 319, F 324, F 328, F 333.
    ${ }^{11}$ F 82, F 91, F 96, F 122, F 123, F 171, F 191, F 192, F 209.
    ${ }^{12}$ There are 183 examples, of which three are inscribed in two places, so the percentages are based on 186 inscriptions. Under base: F 10, F 11, F 14, F 15, F 17, F 18, F 21-23, F 26, F 27, F 30, F 31, F 33, F 34, F 36, F 37, F 39, F 41, F 43, F 48, F 50, F 51, F 53, F 54, F 56, F 59, F 62-64, F 66, F 67, F 69, F 74-77, F 79, F 80, F 82-86 (also foot-top of F 86), F87, F89, F 90, F 91 (also inside), F 92, F 94-96, F 98, F 104, F 105, F 107, F 108, F 110, F 112, F 117, F 119, F 120, F 122, F 123, F 125, F 126, F 128, F 133-135, F 137, F 139, F 140, F 143-147, F 149-151, F 153, F 159-162, F 164, F 167, F 168, F 170, F 173, F 174, F 176, F 179, F 180, F 182, F 184, F 186-195, F 200, F 206 (also outside wall), F 208, F 210, F 213, F 215, F 221, F 222, F 226, F 227, F 229, F 230 (also inside), F 234F 236, F 237, F 242, F 245 (also inside), F 246-249, F 254-256, F 264, F 265, F 301, F 302, F 334. Outside wall: F 1-6, F 25, F 32, F 45, F 46, F 57, F 68, F 78, F 99-101, F 109, F 115, F 118, F 124, F 154, F 169, F 172, F 181, F 201, F 203-206 (F 206 also underneath), F 207, F 209, F 223, F 225, F 231 (also inside), F 232, F 330. Inside: F 70, F 91 (also underneath), F 116, F 138, F 141, F 156, F 220, F 230 (also underneath), F 231 (also outside), F 245 (also underneath). Stem or top of foot: F 24, F 86 (also underneath), F 158. Tip of rim: F 88, F 106, F 132. Handle: F 219.

[^12]:    ${ }^{13}$ There are 127 examples. Shoulder or side: F 7, F 9, F 12, F 13, F 16, F 19, F 29, F 52, F 55, F 60, F 61, F 65, F 97, F 127, F 130, F 131 (also handle), F 171, F 196, F 198, F 217, F 224, F 233, F 235, F 241, F 243, F 244, F 251-253, F 257, F 258, F 260-262, F 266279, F 282-285, F 287-289, F 291-296, F 298-300, F 303-309, F 311-313, F 315-319, F 321-323, F 325-327, F 331. Neck to mouth: F $28, \mathrm{~F} 35, \mathrm{~F} 38, \mathrm{~F} 142, \mathrm{~F} 218, \mathrm{~F} 228, \mathrm{~F} 239, \mathrm{~F} 250, \mathrm{~F} 263, \mathrm{~F} 280$, $\mathrm{F} 281, \mathrm{~F} 286, \mathrm{~F} 290, \mathrm{~F} 297, \mathrm{~F} 310, \mathrm{~F} 314, \mathrm{~F} 320, \mathrm{~F} 324, \mathrm{~F} 328, \mathrm{~F} 329$, F 332, F 333. Under base: F 40, F 44, F 47, F 71-73, F 81, F 136, F 155, F 175, F 202, F 259. Handle: F 20, F 102, F 111, F 114, F 131 (also side), F 148, F 199, F 238.
    ${ }^{14}$ Just as the somewhat different commercial notations of the Greek period were made by stamps impressed in the soft clay, as on amphora handles.
    ${ }^{15}$ For brevity's sake only the dipinti numbers are here listed: F 198, F 211, F 217, F 218, F 228, F 233, F 235, F 241, F 250, F 252, F 257, F 258, F 263, F 266, F 267, F 276, F 277, F 280-282, F 284-287, F 290, F 292-298, F 304, F 305, F 308, F 310-312, F 316, F 317, F 322, F 324, F 328, F 331, F 332.
    ${ }^{16}$ F 12, F 13, F 24, F 43, F 46, F 67, F 88, F 108, F 117, F 118, F 123, F 166, F 176, F 184, F 206, F 224, F 239, F 240, F 284, 285, F 297, F 306, F 310, F 326.

[^13]:    
    
    ${ }^{18}$ Certainly feminine : F 4, F 8, F 11, F 24, F 79, F 84, F 103, F 117, F 158, F 165, F 176, F 184, F 230, F 257, F 258, F 306, F 311, F 322, F 329. Either sex: F 46, F 113, F 182, F 183, F 188, F 224.

[^14]:    ${ }^{1}$ Compare Metrolog. Script., II, xxx.
    ${ }_{2}$ 'H $\mu \mathrm{iva}$, the alternate word for kotyle in this period, appears only once (Ha 54).
    ${ }^{3}$ Called Roman or Italic in Metrolog. Script., I, 208. Such a xestes of wine weighed 20 ounces ( 546 gm .).

[^15]:    ${ }^{4}$ Actually these two vessels could be interpreted as based on the 0.728 1. xestes since the measured capacity is in both cases less than $6 \%$ under the capacity calculated with the larger unit. But since it is difficult to explain the oil xestes except through the wine xestes, it seems reasonable to see the wine xestes exemplified where it fits more easily than does the oil xestes.

[^16]:    ${ }^{5} \mathrm{k} \alpha 9$ apoũ is written in full on $\mathbf{H d} 10$, which was included in the Notations of Contents category as a description of the contents, although it is obvious that the litrai which follow give the weight of those contents or net weight.
    ${ }^{6}$ Litra is the Greek form of libra or pound; the weight is 327 gm . or twelve Roman ounces.
    ${ }^{7}$ Compare Hd 6, which is included in the Contents category because its net weight indicates the nature of the contents.

[^17]:    ${ }^{8}$ But see pots from the Hellenistic period found in Corinth which have dipinti recording sakoma followed by a ligature of mu and nu (certainly the abbreviation of mna) and so giving tare weight (Hesperia, XVIII, 1949, p. 152, pl. 16).

[^18]:    ${ }^{9}$ It is understood that the weight-unit is the Roman litra since the only two mna-weights belong to the early part of the first century ( $\mathbf{H b} 5$; He 5 ).
    ${ }^{10}$ In the capacity notations of the Greek period the acrophonic number system allowed tallying of this sort (with delta for "ten'") for a different purpose. The whole shift in the use of tallying from measures to weights is interesting and suggests that commodities began to be sold more and more by weight.

[^19]:    ${ }^{11}$ All texts identifiable (even tentatively) as dates are included, even when the magistrate or era on which they are based is not clear. ${ }^{12}$ Or the fourteenth year from the visit of Hadrian to Athens. Cf. P. Graindor, Athènes sous Hadrien, Cairo, 1934, pp. 15ff.; Kubitschek, Real-Encyclopädie, Suppl. III.

[^20]:    ${ }^{13}$ Since the tax-notation pots all seem to serve the same purpose, the conclusion that some held a specific kind of wine makes it likely that all held wine but that only special kinds were noted "on the label." See Introduction to Tax Notations below.

[^21]:    14 The Attic drachms may still at this time have been equated with the denarius, or at least valued at three-quarters. Cf. H. Mattingly, Roman Coins, London, 1960, pp. 104, 196f.
    ${ }^{15}$ I.e., 105 coin-drachms of 4.36 gm. Cf. Agora, X, pp. 2-4.

[^22]:    ${ }^{1}$ For a general discussion of indictiones or annual levies in kind see A. H. M. Jones, The Later Roman Empire, Oxford, 1964, pp. 61 ff ., 448 ff .
    ${ }^{2} I 1$ is included in this group because it employs the estate abbreviation, but the different form of the vessel and its late 3rdcentury date set it apart from the rest of the series.
    ${ }^{3}$ O 18: I 17-19, I 23, I 24, I 28-34 P 18: I 35-37, I 41
    O 19: I 5, I 6, I 15

[^23]:    ${ }^{4}$ M 17: I $3 \quad$ N 18: I $1 \quad$ Q 17: I 27, I 39, I 40, I 44, I 45 M 18: I 4, I 16

    N 20: I 2, I 7 N 21: I 10-12
    ${ }^{5}$ Various forms: 'A $A$ ivvios (Ed. Diocl., 2,4); 'A ${ }^{\prime}$
    ${ }^{6}$ I 4, 1 5, I 7, I 25-40. See Robinson, Chronology, M 315 for a late example.
    ${ }^{7}$ I 20-24, I 41-43. For early variants (I 2, I 9) see Robinson, Chronology, pl. 40, P 16074; M 236.
    ${ }^{8}$ I 3, I 6, I 13, I 15-19. See Robinson, Chronology, M 233, M 302, M 324.
    ${ }^{9}$ I 11, I 12. See Robinson, Chronology, M 334.

[^24]:    ${ }^{1}$ For other prices see Ha 5; He 1, He 2, He 15-17, He 25, He 35, He 38; 20.

