THE ATHENIAN AGORA

RESULTS OF EXCAVATIONS
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GREEK LAMPS AND THEIR SURVIVALS

BY
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FRONTISPIECE

Selected specimens of Athenian lamps, presenting a synoptic illustration of some developments in local manufacturing from the early 7th century B.C. into the 1st century after Christ.

From left to right, and from the upper row to the bottom: Types 1, 2 B, 4, 16 B, 20, 24 A, 25 B, 25 C Prime, 29 A, 43 C, 48 B, 52 F, 53.

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PREFACE

In the following study an attempt is made to establish a series of types of Greek and early Roman terracotta lamps, and to publish representative examples of these types in a catalogue. The purpose of this work is not only to make known the definitive results of the excavations of the Athenian Agora as far as certain clay lamps are concerned, but also to furnish a reliable guide for archaeologists who may be able to use these types of lamps as criteria for dating deposits on other sites, wherever they may be in the Mediterranean area.

The corpus of lamps from the Athenian Agora was assigned to the author in 1938, for eventual publication, by the late Professor T. Leslie Shear, Director of the Agora Excavations until his death. The Greek lamps found during the first seven years of excavation formed the basis for a doctoral dissertation accepted by the Johns Hopkins University in 1946, entitled " Greek Lamps from the Athenian Agora." The present study is an outgrowth of this dissertation, utilizing all of the material from subsequent seasons of excavation through the spring of 1954; it has been in process of compilation since 1950.

The author would like to express his appreciation and very warm thanks to a number of people who have aided in the preparation of this book either by useful suggestions and valuable information or in other practical ways. These helpful friends include the senior scholars of the Athenian Agora, mentioned by name in the Introduction, and in addition Mr. Lucas Benachi, Professor Oscar Broneer, Mrs. Richard Erstein, Miss Sarah Elizabeth Freeman, Miss Anne Fuller, Miss Clairève Grandjouan, Mrs. Margaret Larson Lethen, Mrs. Foti Likiardopoulo, Miss Anne McCabe, Mrs. William MacLean, Miss Judith Perlzweig, Mrs. Symington Perin, the late Professor David M. Robinson, Professor Richard Rowe, and Mrs. Evelyn L. Smithson.

The profiles and the drawings of signatures, graffiti and dipinti are the work of Mrs. Aliki Bikakis, Mrs. Norman Herz, Mr. John Travlos and Professor John H. Young. The photographs are by Miss Alison Frantz. My special thanks go to Miss Lucy Talcott of the Agora Excavations whose work concerned with the deposit summaries and other lists appearing below should make this study more useful than it could otherwise be, and to Miss Lucy Shoe.

Richard Hubbard Howland

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Washington

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TABLE OF CONTENTS

PAGE

PREFACE v

LIST OF PLATES viii

ABBREVIATIONS AND SELECT BIBLIOGRAPHY ix

INTRODUCTION 1

TYPES OF LAMPS

TYPES 1–2 (HANDMADE) 7

TYPES 3–40 (WHEELMADE) 12

TYPE 41 SANCTUARY LAMPS 128

TYPES 42–58 (MOULDMADE) 129

MISCELLANEOUS MOULDED LAMPS 211

SIGNED BASES 214

CONCORDANCE OF AGORA INVENTORY NUMBERS, LAMP TYPES AND CATALOGUE NUMBERS 221

INDEX OF DEPOSITS 234

CONCORDANCE OF BRONEER AND AGORA TYPES 246

INDEX 247

GENERAL 247

INSCRIPTIONS 251

PLATES

CHART

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LIST OF PLATES

Plate	
1 – 21	Profiles of Lamps, Types 1-44
22 – 24	Graffiti and Dipinti
25 – 28	Signatures
29 – 55	Photographs of Lamps
56	Actual State Plan of the Athenian Agora
Chart	Chronological Distribution of Types

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ABBREVIATIONS AND SELECT BIBLIOGRAPHY

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INTRODUCTION

Scope of Study

This study is a survey of all terracotta lamps of Greek types and their successors of the early Roman period, inventoried in the excavations of the Athenian Agora through March, 1954; occasional reference will be made to pieces of unusual interest found too late for inclusion in this catalogue.

The year 86 B.C. is a convenient date for students of Athenian history to choose as a demarcation between the Hellenistic and Roman periods in Athens. In that year Sulla's invasion of the city marked the beginning of Roman hegemony. All lamps made before 86 B.C. may be classed as Greek or Hellenistic, but even after that critical year a few Hellenistic forms continued to be made, well on into the middle years of the 1st century after Christ. A number of new types also developed after 86 B.C., depending upon the old tradition of late Hellenistic forms even though they were manufactured much later. All these survivals are included here, together with the small groups of wheelmade lamps that persisted long after 86 B.C., continuing a much earlier tradition. The increasingly popular moulded lamps, of Italian inspiration, which drove all earlier varieties from the Athenian market in the late 1st century after Christ, will be the subject of a separate study by Miss Judith Perlzweig; with this will appear also a study of plastic lamps which are essentially Roman rather than late Hellenistic, by Miss Clairève Grandjouan.

It must be emphasized that this publication is selective; about one-third of the lamps inventoried from the Agora Excavations are catalogued here. Lamps have been chosen for presentation here either because they come from contexts that contribute to the dating of the type, or because they are well preserved and furnish good illustrative material, because they bear signatures, graffiti or dipinti, or because they offer some unique feature, in which case they are usually classed as variants of standard types.

This study is also selective in that it is concerned only with lamps that were made or used in Athens; it is not a comprehensive survey of all Greek lamps. When, however, lamps from other centers of production appear here as importations, the typological description or the catalogue will include some discussion of the probable places of origin. In a comparable manner, some attention is given to factors that indicate the export of Athenian lamps all over the Mediterranean area, since thousands of lamps, as well as decorated vases, were made in Attica for the export trade during a period of from five to six hundred years. Every available reference to a previous publication of an Attic lamp, whether found in Athens or elsewhere, will not, however, be cited here. Only those comparisons are utilized that contribute materially to a closer understanding of date or morphology or of the export trade. Lamps in other public or private collections are likewise noted only when they have a contribution to bring to this study. Most of the lamps in the museums of Europe and the United States are standard types, with little clue as to provenance and seldom any hint of having been found in closed or dated deposits.

Although there are several typologies of Greek lamps already in existence, the best known and most useful being that by Oscar Broneer based on the lamps found in the excavations at Corinth prior to 1930,[1] it has seemed desirable to devise yet another typology. The number and variety of Greek and Roman lamps found in the Agora Excavations have vastly exceeded those that

[1] *Corinth, Results of Excavations conducted by the American School of Classical Studies*, Vol. IV, Part II, *Terracotta Lamps*, Cambridge, Mass., 1930.

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were available in Corinth at the time of Professor Broneer's study. It has been possible to recognize new types that had not occurred in Corinth, and also to establish as independent types some that were grouped together in the Corinth publication. The corpus of Greek and early Roman lamps that is there classified under nineteen types has been expanded into fifty-eight types, with some subdivisions, for the lamps from the Athenian Agora. To facilitate cross reference between the two publications, the Corinth classification, where a corresponding one exists, appears here in the heading to the discussion of each Agora type, and a concordance (p. 246) equates the Agora to the Broneer types.

Methods of Dating and Arrangement of Material

It would be folly to codify any such large number of types if there were only morphological changes to record. Happily the Agora Excavations have offered a valuable contribution: a means of dating more or less precisely this increased number of types. Over 1200 closed deposits, consisting of wells, cisterns, shafts, graves, building fills and other strata have been discovered since the beginning of the excavations in 1931; the majority of these have now been analyzed and dated on the internal evidence of pottery, ostraka, coins, etc., or the external evidence given by their relation to buildings of known date such as the Stoa of Attalos. A large number of deposits contain lamps or lamp fragments which acquire the over-all dates assigned to the deposits. The dating suggested for the Agora types is thus in almost all cases based on two considerations: first, the circumstances of finding, where the piece comes from a closed or closely dateable deposit; and second, the stylistic relationships between the types and sub-types themselves.

Most deposits contain more than one type of lamp. It must be emphasized that during any given decade, except in the early years when lamps first appeared, i. e. in the 7th century, the fabricants were producing several distinct varieties. Older craftsmen and shops would continue to produce styles familiar to them and to the customers in their youth; at the same time younger lamp-makers would offer developments that would lead to new types or would be easily influenced by foreign imports coming into Athens. At certain times, particularly in the 3rd and 2nd centuries B.C., competition was keen and rival shops competed for trade with many varieties of lamps. Thus, for instance, the household debris of a single family, accumulated over a period of ten to twenty years and thrown gradually into an abandoned well used as a dump, may easily contain fragments of eight to ten separate types of lamps. Since there is this overlapping of types within the individual deposits, a fairly precise dating of any single type may be obtained by analyzing the several deposits in which it occurs, and then choosing the period of overlap of the deposits for the years of the type's floruit. By applying this method a fairly restricted chronological range has been assigned to many of the Agora's fifty-eight types and subdivisions.

A chart at the end of the volume shows graphically the duration as well as the overlap of the various types. This chart is designed to furnish a quick and accurate chronological table. Athenian lamps, widely exported in antiquity, are recognized as one of the most effective means of dating various deposits; it is hoped that this arrangement will increase their usefulness.

The dates assigned to the individual types are the maximum over-all dates. Although some types flourished for short periods and others for very long times, it has not always been possible to define the exact years for all types. In such instances the widest possible extent of the type's floruit is noted, rather than the minimum number of years during which it was certainly current.

The reader is cautioned against regarding the type numbers as a strict indication of chronology. This they could not in any case be, because of the overlap between types and the variation in length of life, as already noted. Moreover it has seemed advisable to follow a given line of development through to its end rather than to break a sequence by inserting lamps which although

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contemporary may be otherwise unrelated to the types under discussion. In particular it should be noted that the wheelmade lamps are carried on to their last appearance in the 1st century after Christ before the discussion of the moulded lamps, which first appear in the early 3rd century B.C., is undertaken. The chronological relationships between types may be best seen on the chart.

The inclusive catalogue numbers of the lamps discussed in this publication are listed at the beginning of the discussion of each type; there is also a statement as to the number of others of the type included in the Agora inventory. The total serves to give a general indication as to which types were particularly rare and which most common in the Agora area. In the headings of some types there is given, in Roman numerals, the classification to which the type belongs in the typology developed by Broneer for the lamps of Corinth (*Corinth*, Vol. IV, Part II, *Terracotta Lamps*); this is useful since Broneer's types have been widely followed by scholars for a quarter century. Where no reference to one of Broneer's types appears it may be assumed that there is no counterpart among the lamps from Corinth published in his volume.

In the catalogue which follows the discussion of each type the reader is referred by means of the deposit number [2] to the Index of Deposits, pp. 234-245, where all lamps included in this study and coming from dated deposits are listed under their finding places. In all cases the date given for a deposit is its lowest limit.

Where no context or deposit number is cited for a lamp, the reader may infer either that the deposit was not essential to the present purpose or else that it appeared in some way unreliable, as for instance in the case of contexts too late to be relevant or contexts the dating of which might have leaned heavily on the lamps themselves. For the Signed Bases the proportion of unlisted contexts is high, since the excavators have been at pains to preserve any fragment having a trace of an inscription, whether from a reliable deposit or not.

The pottery and other material by which these deposits may be dated has in many cases already been published, either in whole or in part. In other cases the dates quoted are based on pre-publication studies by various students who have been or are now at work on material of different categories and periods from the Athenian Agora. For information cited in such cases I am particularly indebted to the co-operation of the following: Eva Brann, Peter E. Corbett, Virginia Grace, G. Roger Edwards, Josephine Platner Harwood, Henry S. Robinson, Lucy Talcott, Dorothy Burr Thompson, Homer A. Thompson, Eugene Vanderpool and Rodney S. Young. No unpublished deposit is quoted here that has not been examined by one or more of these students; the dates will depend on pottery for the most part, but terracotta figurines, stamped handles from wine jars, ostraka and coins have also been taken into account.

With the exception of Professor Thompson's introductory article,[3] most of the Greek lamps from the Agora hitherto published have been presented in their contexts as parts of dated groups. Some of these lamps are republished here; for these, the prior references are given in the catalogue. Many others, however, have not been republished; for the types of these lamps, under the present classification, the reader is referred to the Concordance where are listed all the lamps which have provided the basis for this study.

Lamp-Makers

In studying the Greek lamps from the Agora one gains the impression that the lamp-maker was often so familiar with contemporary vases that he must have been producing them. Indeed

[2] By relating the deposit numbers to their grid-squares on the plan, the reader can orient himself and can note for instance that certain areas of the market square of classical times had been settled in earlier eras as residential neighborhoods, or that the lower north slopes of the Areopagus were favorite sections for dwellings throughout classical antiquity.

[3] *Hesperia*, II, 1933, pp. 195-215.

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one might say that the Athenian potter very frequently was the fabricant of lamps also. Both crafts used the same clays and glazes; variations in the quality of clay or glaze seen on lamps follow closely the standards of the vases of any given period. Methods of manufacture were also the same: wheelmade lamps are contemporary with wheelmade pottery; the introduction of moulded lamps in the 3rd century B.C. coincides with the first great use of moulds for vases and bowls.[4] The occasional bits of painted or moulded decoration on lamps also find ready parallels on vases. And the profiles of many wheelmade lamps, especially of their bases and lower parts, are remarkably similar to those of contemporary vases. The student will find these similarities noted on the following pages, as well as the occasional signatures that are known both on lamps and vases from the Hellenistic period when moulded signatures first appeared on both products.

Inscriptions

Inscriptions of several types appear on lamps; they may be divided into two categories, those made before the lamp was fired and those made after firing. In the former group are the monograms or full names of fabricants that begin to appear in the second half of the 2nd century B.C. There is no proven instance of a maker's name appearing on a lamp before this period. All of these lamps with recognizable makers' names are mouldmade. The artisan sometimes inscribed his letters in the mould or on its matrix, especially in the case of finer products, so that the letters stand out on the bottom of the lamp in bold relief. Many fabricants, however, waited until the lamp was completely formed and then scratched the letters in the leather-hard clay before glazing and firing. In these cases the letters read correctly, from left to right. The raised letters scratched in the mould before the lamp was cast are sometimes retrograde on the finished product, when the maker had written from left to right in the mould. None of these inscriptions made on lamps before firing is anything but the name or device of the manufacturer.

After a lamp was completed it may have received either a dipinto or a graffito. The painted inscriptions are rare: an early undecipherable and fragmentary one exists on **115** and another, late, example that refers to friendship appears on **464**. Incised inscriptions, scratched through the glaze or into the clay after firing, are however fairly numerous. Many of them establish ownership, either by the first few letters of the owner's name or, more rarely, by the full name, written in the genitive. It is not easy to cut neatly formed letters into the hard black glaze of Attic wares, but Diokles, for instance, worked very carefully to cut not only his name but his family's badge, a boukranion, on **267**. Other graffiti on lamps are plainly numbers, such as those on **280** and **300**. These probably do not represent the prices of the individual lamps since the sums shown are very large. The figures may rather refer to inventories or to the number of examples of a kind of lamp to be ordered, maintained in stock, or sent out from a factory. In addition to names and numbers there are also seen on lamps occasional examples of erotic inscriptions and of humor; **175** has incised on it the word for runaway, referring perhaps to the fact that this lamp had been lost and was returned. Occasionally in the 5th century B.C. lamp fragments were used as ostraka; others seem to have served as schoolboys' practice tablets, with remains of abecedaria on them.

Lamp Types

In surveying the development of Greek and early Roman lamps one notes the gradual growth from the open saucer of Type 1 to the elaborately decorated closed bodies of the latest types. The very earliest examples of Greek lamp-making are the handmade and unglazed Types 1 and 2;

[4] It should be noted however that both wheelmade and moulded lamps were sometimes made in the same shop; see the waster, **501**, below, where both sorts have fused together in a kiln accident.

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these flourished from the second quarter of the 7th century until well into the third quarter of the 6th century B.C. Their open pulled-out nozzles remained a standard characteristic of some later lamps, until the earliest years of the 5th century. The more usual closed-in bridged nozzle had, however, an early beginning with Type 9, which appeared in the third quarter of the 7th century. The first use of glaze on lamps coincided with the first use of the wheel for lamp-making, in Type 3, in the third quarter of the 7th century. This early use of glaze was confined to the interiors, to make the reservoirs somewhat less porous. The first use of glaze on the exteriors of lamps did not occur until Type 6 B appeared around the middle of the 6th century. Although both handmade and wheelmade lamps were produced concurrently from the third quarter of the 7th century until the third quarter of the 6th century, after that date only the wheel was used. It continued in lamp-making for a very long time, certainly until well within the 1st century after Christ, making its last appearance with Type 37 C.

At an early date the introduction of moulded lamps began to give some competition to the wheelmade varieties. The first moulded lamps were plain adaptations of the wheelmade forms; they began with Type 42 A in the first quarter of the 3rd century B.C. These undecorated forms continued for some time, through Type 44 D which is as late as the middle of the 1st century after Christ. A more original kind of moulded lamp however, with decorations in relief that recall those of contemporary Megarian bowls, made its first appearance in the middle years of the 3rd century, with Type 45 A. Descendants of this type became increasingly popular throughout the 2nd and the 1st centuries B.C.; they lasted well into the third quarter of the 1st century after Christ. After that they were seen no more, and the story of the Greek lamp and its survivals is ended.

NOTE

In the text that follows, the measurements of the individual lamps include the diameters of the wheelmade lamps, but for the moulded lamps the widths are given, since they were not thrown on the wheel and theoretically are not perfect circles. The width does not include projecting knobs.

Generally the subdivisions within a type, labelled A, B, C, correspond to morphological changes of the type that developed chronologically. But occasionally the subdivisions refer to differing varieties of the parent type; sometimes A, B, C are co-equal.

The use of " Prime " is a device to show that lamps in these sub-groups have unglazed exteriors, but otherwise are nearly identical with the parent type that is fully glazed. In the Concordance and in the deposit summaries the symbol (′) is used.

Plaster restorations are noted, when they occur, in the descriptions of the individual lamps.

The L numbers are inventory numbers.

The following abbreviations are used for measurements:

H. — Height
W. — Width
L. — Length
D. — Diameter
Pres. H. — Preserved height
Pres. W. — Preserved width
Pres. L. — Preserved length
Max. dim. — Maximum dimension preserved
Est. — Estimated
Rest. — Restored

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TYPES OF LAMPS

TYPE 1

Cocked Hat Lamps; Unglazed

Nos. 1-4 (and one other inventoried). Plates 1, 29.

First quarter of the 7th century B.C. and probably into the fourth quarter. Dating based partly on the fact that the next type does not begin before the last quarter of the century (perhaps towards its end) and partly on the finding places.

The earliest clay lamps found in Attica, after Mycenaean times, form a recognizable type that can be dated early in the 7th century. A vessel obviously designed for use as a lamp has yet to be recognized from the long succession of years stretching from the Submycenaean period down to 700 B.C.[1] The very rich collections of Geometric pottery from the Kerameikos Cemetery, Eleusis and the Athenian Agora have yielded no lamps. It seems evident that the use of oil for illumination was one more of the developments among the major changes in Athenian economy and culture that occurred between 750 and 650 B.C.[2] The style of pottery decoration changed markedly at this time, from Geometric to Protoattic, with an elaborate vocabulary of ornamentation derived from newly discovered eastern contacts. At this period Phoenician letters appeared in Greece,[3] another close link with the eastern shores of the Mediterranean. It is entirely conceivable that the use of lamps was taken over with other cultural developments from Syria and Palestine. The hypothesis appears stronger when one compares the type of lamp common through the east during the 11th, 10th, 9th, and 8th centuries[4] with these first examples used in Attica during the 7th century. The shape is the same, with minor variations: an open saucer with the rim pinched in to form a rudimentary open nozzle for the wick.

None of the Agora lamps seems to be an imported specimen; there is no exact parallel with an eastern lamp, largely because these local lamps have handles and are made of the local Attic clay that is also commonly used in coarse Protoattic cooking pots and water jugs.

These lamps of Type 1 have the cocked hat shape, but the nozzle tends to be wider than is usual in their eastern antecedents. There is no emphasis on the rim. There is a simple flattened base and a vertical band handle reaching from the base to the edge of the rim opposite the nozzle. They are handmade without glaze or any added decoration. The clay is Attic, sometimes coarse with tiny air bubbles and micaceous particles, sometimes more smoothly worked and refined. Fragments of two lamps of this type were found on Mt. Hymettos[5] along with the inscribed sherds which are now dated in the early 7th century.[6] A few others have occasionally come to light in other parts of Attica[7] but have passed unnoticed.

Type 1 began sometime in the first quarter of the 7th century, and continued for a long time.

[1] Athenaeus 700 e: *οὐ παλαιὸν εὕρημα λύχνος· φλογί δ' οἱ παλαιοὶ τῆς τε δαδὸς καὶ τῶν ἄλλων ξύλων ἐχρῶντο.*

[2] Cf. *Hesperia*, Suppl. II, p. 230.

[3] *Ibid.*, p. 229.

[4] J. C. Wampler, *Tell En-Nasbeh* II, The Pottery, Berkeley, 1947, p. 179, pl. 70. Also note Cypriote and North African examples in Walters, nos. 140-146, pl. XXXIX, fig. 11. Another example, found in South Russia, is in Waldhauer, no. 535, p. 67, pl. LI.

[5] Unpublished. Cf. *A.J.A.*, XXXVIII, 1934, pp. 110 ff.

[6] *Hesperia*, Suppl. II, p. 227, note 5.

[7] E. g. National Museum, Athens, no. 3278 (unpublished).

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The proportion of lamp fragments to pottery fragments in excavation deposits of this period is, however, very small indeed compared to the comparative frequency of lamp fragments found with household pottery in deposits of all subsequent eras. Oil illumination was a novelty and enjoyed by few, not to become usual until the end of the century.

1 (L 3022). Pls. 1, 29.

H. 0.028 m.; Max. dim. (of bowl) 0.085 m.

Nozzle and large piece of right side restored. Gritty micaceous clay, gray at core, red-brown at surface.

T 19: 3, well: dumped filling of first quarter of 7th century B.C.

2 (L 564). Pls. 1, 29.

H. 0.042 m.; L. 0.103 m.; W. 0.101 m.; W. of bottom *ca.* 0.036 m.

Mended from two fragments; handle and part of left side restored; rather deep bowl; coarse red clay, gray at core. The fabric of this lamp is thinner and purer than in others of Type 1.

Hesperia, II, 1933, p. 600, L 564.

H 17: 4, votive deposit: 7th century B.C., down to beginning of last quarter.

3 (L 3579).

Max. H. 0.036 m.; Pres. L. 0.075 m.

Most of right side and nozzle preserved, rear missing where a handle might have been; coarse red-brown clay. Profile like preceding.

Provenance as of 1.

4 (L 3094).

H. 0.027 m.; Pres. L. 0.079 m.

Right half with part of nozzle preserved; rear missing where a handle might have been; coarse micaceous red clay with grits; burning at nozzle. Profile like preceding.

B 14: 5, storage pit: filled up at end of first quarter of 6th century B.C. with a filling accumulated from 8th through 7th centuries.

TYPE 2 A

Lamps with Incurved Rims, Short Nozzles; Unglazed

Nos. 5-7. Plates 1, 29.

Late in 7th century B.C. into first quarter of 6th century.

Unglazed lamps were probably used sporadically all through the 7th century, but the next recognizable type of unglazed lamp does not appear until the end of the century, when the use of oil for lighting became popular and a distinct type emerged; this has notable variations in profile that correspond to early and later developments over a period of approximately one hundred years.

Type 2 A comprises a few examples that are the earliest and the least developed, covering approximately the last quarter of the 7th century down into the first quarter of the 6th. These lamps are handmade, roughly circular with flattened bases and shallow bodies. The simple incurving rim, a continuation of the sides, is narrow in comparison with that of later specimens in Type 2 B. The unbridged nozzle is very small, formed by pulling forward the wall of the lamp and adding a bit of clay to build it up; the edge of the nozzle is several millimeters higher than the edge of the rim. Slight traces of a simple vertical strap handle appear on 6; others of this group do not have the back portions preserved. These lamps are manufactured of coarse brownish red unglazed clay, similar to that of Type 1, but otherwise have no relationship morphologically to these predecessors, which were simple open saucers with a pinched nozzle. Type 2 A, with a definite incurving rim, marks the beginning of a new approach to lamp-making that set the general form for lamps during the next three hundred years, until the incurving rim developed into the completely covered top with only a small aperture left in the center as a filling-hole.

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5 (L 3494). Pls. 1, 29.

H. 0.021 m.; Pres. W. 0.088 m.

Nozzle and front part preserved, the rest restored, but without a handle. Coarse brown clay, much blackened by fire around nozzle.

Hesperia, Suppl. IV, p. 11, fig. 9, b.

H 8-9-10: Level I, a deposit of the early 6th century B.C., with much earlier material.

6 (L 3489).

H. 0.023 m.; W. 0.089 m.; L. 0.10 m.

Intact except for tip of nozzle, most of handle, and minor chips; coarse brown clay, blackened by fire around nozzle and elsewhere. Profile like preceding.

Provenance as of 5.

7 (L 4140).

H. 0.019 m.; Pres. L. 0.056 m.

Small fragment of floor and rim only; micaceous reddish brown clay. Like preceding.

M 11: 3, well: about 600 B.C.

TYPE 2 B

Lamps with Incurved Rims, Long Nozzles; Unglazed

Nos. 8-20 (and 27 others inventoried). Plates 1, 29.

Late 7th century B.C. into late 6th century.

Type 2 B is a large group that was popular in Athens [8] for three generations. In form it is a development of Type 2 A. The lamps themselves are inclined to be larger, their sides are higher and enclose more of the body; sometimes the profiles have a single curve, but more characteristically the outward curve of the lower part of the lamp and the curving upper part that forms the rim are treated as two separate elements, with a sharp angle at their junction, like that of a clamshell. The articulations between bottom, lower body, and upper body are exceptionally clear on some lamps, such as 19, with the clay pared to sharp and well defined angles while in a leather-hard state. Some of the later lamps, 14 and 20 for instance, have a well defined edge around the rim that gives a more finished appearance to the lamp and is analogous to the definition given to rims in contemporary glazed varieties.

The simple bases are the same as those in Type 2 A, but the nozzles are broader and longer. All the lamps of Type 2 B seem to have had handles; the majority are flat vertical loop handles made rather thickly, attached at the junction of the lower and upper curves of the body and at the flat base, with the result that in some cases the bottom of the handle is actually lower than the bottom of the lamp. This gives a certain unsteadiness, although it serves the purpose of tipping the lamp slightly forward so that the oil is thus concentrated in the forepart and nozzle. A few have small horizontal handles, circular in section, and attached at the angle between the upper and lower halves of the body.

Lamps of this type are usually undecorated but there are some exceptions; 8 and 9 have punched dots and scratched lines, made in the wet clay, with an attempt at pattern.[9] These decorated lamps are early within the type. The clay of Type 2 B lamps is usually a light dull red, coarse and thick, with many air bubbles, micaceous fragments, and foreign particles; in some

[8] These lamps are common in Athens, not seen elsewhere. Cf. nos. 5758 and 5769 from the Acropolis, formerly in the Acropolis Museum and now stored in the National Museum. There are scores of additional uninventoried specimens in the latter museum.

[9] Six similar lamps, unpublished, were found by Broneer in a 6th century well on the North Slope of the Acropolis in 1938. No. 5774 in the Acropolis Museum is similarly decorated and others exist, uncatalogued, from the Acropolis and now in the National Museum in Athens. Comparable incised decoration is seen on contemporary pottery (*Hesperia*, Suppl. II, pp. 189-190, C 157 - C 159, C 161 - C 164, fig. 139).

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examples it is smoother and purer.[10] The mixture often wears poorly, with a tendency to break and flake. A few specimens have a dull gray color, caused by misfiring. The source of the clay is probably Attica although Aegina has been tentatively suggested.[11]

These handmade lamps seem to have served adequately without benefit of glaze or paint, although their extreme porosity must have made them annoying at times. They were very popular, because of their cheapness, despite the fact that more suitable lamps with glaze were being made during these years; Types 4, 5, and 6 are their more sophisticated contemporaries. By the last quarter of the 6th century these sturdy unglazed lamps were driven from the market, yielding way entirely to glazed lamps except for a few small and sporadic later types that are unconnected with the tradition of Types 2 A and B.

8 (L 1942). Pls. 1, 29.

H. 0.071 m.; Pres. W. 0.099 m.

Front of lamp missing; high vertical strap handle pierced by a row of holes; micaceous pink clay with gray core.

Hesperia, Suppl. II, p. 128, no. B63, fig. 91.

F-G 12: 1, Layer II, road fill: second half of 7th and early 6th centuries B.C.

9 (L 1635). Pls. 1, 29.

H. 0.039 m.; W. 0.097 m.; Pres. L. 0.11 m.

Front of lamp restored; back part mended from several pieces; double zigzag line incised on rim; on handle and around inner edge of rim, pits made by a sharp pointed instrument; gritty micaceous russet clay.

Ibid., p. 121, no. B51, fig. 87.

10 (L 3386).

Pres. L. 0.090 m.; Est. W. 0.085 m.

About half preserved; the back part with traces of handle attachment; coarse micaceous clay, fired or burned gray. Profile like preceding.

P 8: 5, well: first half of 6th century B.C. Another inventoried example of Type 2 B found here.

11 (L 4340).

H. 0.023 m.; Pres. L. 0.104 m.; W. 0.091 m.

Most of the body preserved; the handle, end of nozzle, part of the floor, and a piece of the side missing. Coarse micaceous clay, fired or burned gray. Profile like 9.

A 17: 1, well: second quarter of 6th century B.C. Another inventoried example of Type 2 B found here.

12 (L 3497).

Pres. L. 0.062 m.

Fragment from the back with heavy flat handle. Coarse brown micaceous clay, much blackened.

H 10: 2, pit: second into third quarter of 6th century B.C.

13 (L 669).

H. 0.026 m.; Max. dim. 0.081 m.

Fragment of nozzle and left part of body preserved. Coarse micaceous clay, red to gray; nozzle blackened by burning.

G 15: 1, well: main dumped filling, late 6th century B.C. to *ca.* 500 B.C. or shortly after.

14 (L 671). Pls. 1, 22, 29.

H. 0.032 m.

Back preserved with stumps of handle and part of sides and bottom. Coarse micaceous clay, russet buff at surface, ash gray at core; blackened inside rim. On smoothed top surface near handle is a graffito: A.

G 15: 2, well: use filling, middle to third quarter of 6th century B.C.

15 (L 4146). Pls. 1, 29.

H. 0.035 m.; W. 0.083 m.; L. 0.16 m.

Mended from two fragments, complete except for chips. Coarse pitted brownish red clay.

J 18: 4, storage cellar: lower filling, mid 6th century B.C.

16 (L 415). Pls. 1, 29.

H. 0.034 m.; W. 0.085 m.; L. 0.15 m.

Mended from several fragments; small restorations at right and left sides of rim, otherwise all preserved. Deep buff micaceous coarse clay.

[10] This same clay was used for handmade 7th and 6th century B.C. water jugs. Cf. *Hesperia*, II, 1933, pp. 597-599 and *Hesperia*, Suppl. II, pp. 188-189.

[11] *Hesperia*, II, 1933, p. 597.

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F 15: 4, well: dumped filling of the 7th century down to about 600 B.C. Another inventoried example of Type 2 B found here.

17 (L 3916).

H. 0.03 m.; Pres. L. 0.105 m.

Part of back with handle. Light brown micaceous clay with gray core. Profile like preceding.

18 (L 3495). Pls. 1, 29.

H. 0.025 m.; W. 0.082 m.; L. 0.105 m.

Mended from several fragments; main part of horizontal loop handle restored. Gritty brown clay, nozzle blackened by fire.

19 (L 1866). Pls. 1, 29.

Max. dim. 0.0785 m.

Nozzle and front part only; back part restored. Body pared to sharp contours. Coarse red clay, nozzle blackened by fire.

20 (L 627). Pls. 1, 29.

H. 0.03 m.; Max. dim. 0.081 m.

Fragment of left side of body and nozzle; remainder restored. Well defined edge around rim. Coarse red clay, gray at core.

I 16: 4, well: mid 6th century B.C.

TYPE 2 VARIANTS

Incurved Rims; Unglazed; Variant Features

Nos. 21-22. Plates 1, 29.

Ca. middle of 6th century B.C. and well into its third quarter. Dating based on stylistic analogies with and developments from Type 2 B and also on the finding place of 21.

Related to Type 2 B is this pair of handmade unglazed lamps of the same clay, but with a marked development in the profile. The incurving rim encloses much more of the body than normally, and is finished with a very pronounced collar, grooved or flat on top. Each of these lamps had the conventional vertical strap handle, but since the front is preserved in neither case, it is difficult to tell much about the nozzles. One might suppose that the nozzle was bridged, because the lamps seem generally enclosed and it would be awkward to make the transition between the high collar and an open nozzle. In the second half of the century there must have been numerous transitional pieces like these, as lamps developed from the open saucer type to more enclosed forms.

21 (L 670). Pls. 1, 29.

Max. dim. 0.088 m.

Fragment of back with handle; none of bottom preserved; straight sides make an angle with the slightly rising top; raised rim, grooved on top around opening. Coarse micaceous clay, smooth russet surface but with gray core.

G 15: 2, well: use filling, middle to third quarter of 6th century B.C.

22 (L 3322). Pls. 1, 29.

H. 0.047 m.; W. 0.107 m.

Back half preserved with traces of vertical strap handle attachment; raised rim around opening. Coarse micaceous brown clay, blackened inside. The profile is most unusual and has no parallels that are known.

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TYPE 3

Cocked Hat Lamps; Glazed and Wheelmade

Nos. **23-24** (and 2 others inventoried). Plates 1, 29.

Late third quarter and last quarter of the 7th century B.C.

The lamps of this type are similar in shape to those of Type 1, but they are wheelmade and have glazed interiors. Here is the earliest use of the wheel and glaze in Greek lamp production. There is a flattened circular bottom from which the saucer-like flaring sides spread to form the body. The nozzle is pinched in like the nozzle of Type 1, and opposite there may be a flat vertical handle. None of the Agora examples preserves its handle; **23** certainly never had one, nor did **24**. The other inventoried lamps may have had handles like those of Type 1.[12]

The pinkish buff clay is Attic, but of a poor consistency, inclined to flake and wear badly. A dull reddish brown glaze is used on the interior and economically around the outer edge of the rim. It will be half a century before glaze will be added to the complete exterior of lamps to serve a decorative as well as a useful function.

23 (L 2731). Pls. 1, 29.

H. 0.032 m.; W. 0.094 m.; L. 0.098 m.

Back broken away; restored. Pinkish buff clay with some grits; red glaze inside only; burning around nozzle.

Hesperia, VII, 1938, p. 427, no. D28, fig. 8.

J 18: 8, well: third quarter of 7th century B.C. Another inventoried example of Type 3 found here.

24 (L 3377). Pls. 1, 29.

H. 0.028 m.; L. 0.081 m.

Rim and most of wall missing; nozzle has an unusual blunt spade-shaped form, but was made in the normal manner by folding in the sides. Soft pinkish buff clay; traces of red glaze inside.

P 7: 2, well: late 7th century B.C. Another inventoried example of Type 3 found here.

TYPE 4

Cocked Hat Lamps; Glazed and Wheelmade; Overhanging Rims

Nos. **25-29**. Plates 1, 29.

Late 7th century B.C. into the second quarter of the 6th century. Dating based partly on the finding places.

Lamps of this type continue the forms of Type 3, but with a marked emphasis on the rim. The base is flat and from it rise the curving walls of the body, more rounded than in the preceding type; the tops of the side walls are turned back, making a flat rim overhanging the outside of the lamp. In one early example, **26**, this flat rim does not overhang, but is merely the flattened top of the thick walls. In a later example, **29**, the overhanging rim has a pronounced flare, rather than the normal appearance. The nozzle is pinched in and drawn out, like that of Type 3; the handle, in all cases where enough remains to show the form, is horizontal and ribbon-like, some-

[12] An unpublished lamp of Type 3, with a handle comparable to that of Type 1, was found on Mt. Hymettos; cf. *A.J.A.*, XXXVIII, 1934, pp. 110 ff. This lamp fragment has the same clay and glaze as one of the inscribed sherds found with it, H 416, *loc. cit.*

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times with projecting tips like the kothon handle seen on contemporary pottery. This use of the kothon handle, as well as the more developed body shape, suggests that the lamp-makers were familiar with the wares of the potters; indeed it is very possible that lamps were turned out by potters, at least in these earlier periods, and that there were few or no separate manufacturers of lamps. Continually during the next six hundred years there will be seen many analogies between lamps and pots, in the use of clays and glazes as well as in decorative elements; the Hellenistic period will bring forth many moulded decorations in relief that are the same on both lamps and bowls.

All the lamps of Type 4 are wheelmade. They are of buff or pinkish buff clay that usually looks characteristically Attic; the fabric of 25 could possibly be Corinthian. Invariably the outside is unglazed, but a reddish brown glaze is used for the interiors and the upper surfaces of the overhanging rims, as well as for parts of the tops of the handles.

The type had a fairly long life, and it held the field alone with few other varieties of glazed competitors. The next groups of glazed lamps followed rather than paralleled, with pronounced changes in their shapes.

25 (L 3375).

H. 0.025 m.

Fragment from right side; flaring rim cut away at junction with drawn out nozzle. Coarse light buff clay (Corinthian?); traces of badly worn brown-gray glaze inside. Profile comparable to following.

P 7: 2, well: late 7th century B.C.

26 (L 3015). Pls. 1, 29.

L. 0.11 m.; W. 0.09 m.; H. 0.03 m.

Complete save for small chips from flattened bottom. Pinkish buff clay; dull reddish brown glaze inside, on top of handle, and on rim around nozzle.

B 14: 5, storage pit: filled at end of first quarter of 6th century B.C. with material accumulated from 8th through 7th centuries.

27 (L 450). Pls. 1, 29.

L. 0.139 m.; W. 0.089 m.; H. 0.036 m.

Mended from several fragments, part of bottom restored; rudimentary base left rough from wheel. Buff clay; glaze mottled red and black covering the overhanging rim, the tips of the handle but not the handle itself, and originally all the interior.

F 15: 4, well: dumped filling of 7th century, down to about 600 B.C.

28 (L 3499).

H. 0.03 m.

Fragment from right side and front; flat bottom, slightly offset. Pinkish buff clay; reddish brown glaze inside and on top of rim. Profile like preceding.

H 10: 2, pit: second into third quarter of 6th century B.C.

29 (L 4532). Pls. 1, 29.

H. 0.043 m.; Pres. L. 0.101 m.

Right side and nozzle preserved; restored. Thin pinkish buff clay; dull black glaze inside and on top of rim.

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TYPE 5

Lamps with Incurved Rims; Cut-out Nozzles

Nos. 30-37 (and 11 others inventoried). Plates 2, 30.

Second quarter and into fourth quarter of the 6th century B.C.

This very distinctive 6th century type shows the manufacturers progressing from simpler varieties to a developed and even sophisticated form that reflects, more than in the preceding type, the skill of the professional potters. There is a remarkable uniformity among several specimens of Type 5 (30, 31, 32), which suggests that these may all be the product of a single shop, the atelier of a craftsman who was cognizant of the thin fabrics and neat use of glaze that characterize much of the pottery of this period.[13]

The base may be slightly concave and raised just perceptibly as in 32 or, more usually, there is no base at all; the slightly flattened bottom then makes a continuous curve into the wall of the lamp and ends in a rim overhanging the interior. All of these lamps are wheelmade, but the nozzle in every case is made by cutting away a portion of the wall and adding a spoon-shaped projection. A horizontal loop handle appears frequently. Several of the earlier lamps have the kothon handle seen on Type 4, or a variant, as on 33, which marks the transition from the kothon handle to the standard horizontal U-shaped loop handle.

Two lamps, 34 and 37, have a circular collar or a raised rim around the central opening; these slight variations from the normal profile anticipate the rim developments of Type 20.

The fabric is a finely worked Attic clay, heavy and thick in some examples which are early within the type, but thinner in most of the specimens. A neat brownish black glaze is used judiciously on the interior, inside and around the edge of the nozzle, on top of the handle, and often as a decorative border around the edge of the rim. Sometimes the painted border around the edge of the rim is replaced by a decorative circle of glazed dots or dashes.[14]

30 (L 2678). Pls. 2, 30.

H. 0.031 m.; D. 0.085 m.

Two joining fragments preserve complete lamp except for handle which has been restored. Pinkish buff clay, black glaze; traces of thin slip on lower part of body's exterior.

N 18: 2, filling over bedrock: middle to third quarter of 6th century B.C. Another inventoried example of Type 5 found here.

31 (L 666). Pls. 2, 30.

H. 0.022 m.; D. 0.085 m.

Three joining fragments preserve about half of lamp including handle and part of nozzle, but none of base; restored. Pinkish buff clay, worn black glaze; traces of slip, as on preceding.

G 15: 1, well: late 6th century B.C. to *ca.* 500 B.C. or shortly after.

32 (L 668). Pls. 2, 30.

H. 0.030 m.; Est. D. 0.084 m.

Single fragment preserves bottom and about half of rim and sides including one handle attachment and start of nozzle; restored. Buff clay, much pitted; traces of reddish brown glaze in interior, none observable on exterior.

Same provenance as 31.

[13] I am aware of no examples of this type found outside of Athens. Several were found on the Acropolis but remain unpublished; several uninventoried fragments from the Acropolis are now in the storerooms of the National Museum in Athens.

[14] A lamp decorated in this manner was found at Eleusis: *J.H.S.*, XXXI, 1911, p. 93, fig. 18. This was called Corinthian but it is Attic, as Vanderpool rightly remarks in *Hesperia*, VII, 1938, p. 406.

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33 (L 672). Pls. 2, 30.

H. 0.035 m.; Rest. D. 0.081 m.

Most of left half restored. Pinkish buff Attic clay; thin flaked red to black glaze on nozzle both inside and out, on the inside of body, and on the top and outside of handle, as well as for short strokes on the rim.

Hesperia, VII, 1938, p. 405, no. 49, fig. 42.

G 6: 3, shaft: lower filling, *ca.* 575-535 B.C.

34 (L 3385). Pls. 2, 30.

H. 0.036 m.; Pres. L. 0.059 m.; Est. W. 0.091 m.

Fragment of left side and down-sloping nozzle. Thick buff clay; black glaze on insides of body and nozzle, in narrow lower groove, and for row of dots on rim.

P 8: 5, well: first half of 6th century B.C.

35 (L 3806). Pls. 2, 30.

H. 0.037 m.; Rest. D. 0.106 m.

Much of handle and right side restored. Thick pinkish buff clay; black glaze on interior, handle, nozzle, and edge of rim.

36 (L 4707).

Pres. H. 0.024 m.; Pres. W. 0.081 m.

Bottom only preserved, of a lamp much like preceding; slightly raised concave base. Pinkish buff clay; black glaze on interior and around exterior of nozzle.

R 11: 2, well: first half of 6th century B.C.

37 (L 3599). Pls. 2, 30.

H. 0.02 m.; Est. D. 0.085 m.

Single fragment preserves about half of lamp with one handle attachment and a portion of the nozzle. Attic clay; black glaze inside, on handle, and on ridge around rim.

TYPE 6 A

Lamps with Flat Rims; Open Nozzles; Partially Glazed

Nos. 38-42 (and 6 more inventoried). Plates 2, 30.

Ca. middle years of 6th century B.C. Dating based on the fact that Type 6 A is stylistically somewhat less developed than Type 6 B which flourished during the second half of the 6th century, and on the finding places of two lamps.

A large number of 6th century wheelmade lamps, with open nozzles and horizontal band handles, and with a certain emphasis on their flat rims, may be grouped together in two categories. The earlier and less developed group forms Type 6 A.

This group of lamps has a flat or slightly concave bottom, with the inner floor of the lamp correspondingly flat or rising to a low elevation in the center. Thick side walls rise nearly straight, although the profile is actually curved slightly. The tops of the thick walls are flattened and project a bit as a rim, normally horizontal and somewhat overhanging. The body is thus very open, and from it projects a large handmade nozzle attached at an opening cut in the wall. At the opposite side is a horizontal band handle with broad projections for attaching it to the body of the lamp.

The clay is Attic, and the walls are usually massive. The use of glaze especially distinguishes these lamps from those of Type 6 B; it is applied throughout the interior, but is sparingly used on the rim or body, confined to concentric bands that leave parts of these areas undecorated; the inside of the nozzle is of course glazed, as well as its outer edge; occasionally all of its exterior is painted.

38 (L 4700). Pls. 2, 30.

H. 0.024 m.; D. 0.090 m.

Single fragment preserves some of rim, floor, and parts of handle at ends; remainder restored. Smooth pinkish buff clay, thin black glaze inside, on top of rim, on handle, and in a broad band around lower half of body.

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39 (L 1636). Pls. 2, 30.

H. 0.032 m.; Pres. L. 0.068 m.

Fragment of right side with part of nozzle. Smooth pinkish buff clay, slipped outside; brownish black glaze inside, around outside of nozzle, in concentric bands around inner and outer edges of rim, and in a narrow band around bottom of wall outside.

40 (L 4224). Pls. 2, 30.

H. 0.031 m.; Pres. W. 0.069 m.

Forepart with nozzle preserved; restored. Thick pinkish buff clay, slipped outside; black glaze inside, around edge of nozzle, and in concentric bands around inner and outer edges of rim.

41 (L 3498). Pls. 2, 30.

H. 0.032 m.

Right half preserved with one attachment for handle and trace of the nozzle; restored. Very thick fine pinkish clay; thin red glaze, presumably intended to be black but misfired, applied to interior, rim, outside of handle, and upper part of outside walls except under handle.

H 10: 2, pit: second into third quarter of 6th century B.C.

42 (L 3240).

Pres. W. 0.08 m.

Single fragment preserving most of slightly concave bottom; interior rising to low cone at center, much like **38**. Well worked Attic clay; thick black glaze in interior; none on base.

Hesperia, VII, 1938, p. 406, no. 51, fig. 42.

G 6: 3, shaft: lower filling, *ca.* 575-535 B.C.

TYPE 6 B

Lamps with Flat Rims; Open Nozzles; Glazed Exteriors

Nos. **43-50** (and 6 others inventoried). Plates 2, 30.

Middle of 6th century B.C. to end of century.

This second subdivision is somewhat more advanced in shape and date. The form is a development of that seen in Type 6 A. The bottom is flat, or slightly concave, or slightly raised. The walls are pronouncedly curved and in some examples have a nearly angular profile, enclosing much of the body of the lamp. The flat rim is conspicuous, often sloping markedly inwards. The tendency is toward a closed oil reservoir. The open nozzle remains the same handmade feature as on Type 6 A, added to a cut-out section of the body of the lamp. The horizontal band handle is small and thick; it seems almost too small to be serviceable in carrying the lamp, but would have served adequately to hang the lamp on a peg, when not in use. There are no long projections or ears, as seen occasionally on handles of lamps of Type 6 A (**41** is a good example), which were vestiges of the kothon-type handle of Type 5.

The fabric is of fairly heavy well worked Attic clay. A few of the earlier lamps, around the middle of the 6th century, have unglazed exteriors but are decorated with glaze around the rims and the nozzles. Most of Type 6 B, however, shows a use of thick lustrous black glaze all over the exterior and interior. This is the earliest appearance of fully glazed lamps and marks a definitive step forward in utility, since a glazed exterior diminishes the porosity of the fabric and the seepage of oil. A few lamp-makers, however, allowed the bottoms of their products to remain unglazed, while covering the outer walls completely as well as the interiors. If a lamp were suspended on the wall from a peg, and hung with its interior toward the wall, the unglazed bottom would be rather decorative as a contrast to the glazed sides. A further interest in decoration is the occasional use of an added band of purple paint around the rim, as on **46**; this is the same kind of purple that is frequently added to contemporary black-glazed vases and shows

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another close link between pottery and lamps. The thick black glaze that covers most of the lamps of Types 6 A and 6 B is decidedly different from the thin reddish brown glaze of Type 5; this black glaze is typical of that used on black-figured pottery, as the reddish brown is characteristic of that used on Protoattic pottery.

43 (L 4191). Pls. 2, 30.

H. 0.03 m; W. 0.09 m.

Most of handle and part of nozzle, rim, and right side restored. Pinkish buff clay; streaked brownish black glaze on interior, rim, and outside of nozzle.

J 18: 4, storage cellar: lower filling, mid 6th century B.C.

44 (L 2261). Pls. 2, 30.

H. 0.021 m.; D. 0.08 m.

Fragment preserving profile, most of nozzle, and part of left side; right side, back, and most of bottom restored; presumably had horizontal band handle but handle area not preserved. Pinkish buff clay, good black glaze all over, inside and outside including base.

45 (L 3591). Pls. 2, 30.

H. 0.027 m.; D. 0.085 m.

Single fragment preserving profile and part of nozzle. Most of sides, rim, base, and nozzle restored; presumably had horizontal band handle; similar to preceding but with flat raised base. Pinkish buff clay; good black glaze inside and outside, the base reserved.

U 23: 2, well: dumped fillings of end of 6th century B.C. Another inventoried example of Type 6 B found here.

46 (L 1367).

Max. L. 0.073 m.

Fragment of side wall and nozzle only; like preceding except for two shallow concentric grooves around top. Clay and glaze like preceding except added narrow band of purple paint on the outer edge of rim.

47 (L 3493). Pls. 2, 30.

W. of nozzle 0.055 m.

Nozzle only of a very large lamp; rim flat and inclined slightly inward, overhanging the rim of nozzle. Thick pinkish buff clay; glossy black glaze inside and out.

H 8-9-10, Layer II, a deposit of early to middle 6th century B.C.

48 (L 1892). Pls. 2, 30.

H. 0.033 m.; W. 0.09 m.

Fragment preserving back part and handle. Forepart with nozzle restored. Thick pinkish buff clay; thin black glaze (streaked on outside) both within and without except on base and on wall behind handle.

I 9: 1, road deposit: level of second and third quarters of 6th century B.C.

49 (L 4729). Pls. 2, 30.

H. 0.027 m.; W. 0.079 m.

Fragment preserving left side and nozzle. Right side and rear, where handle might have been restored. Pinkish buff clay; thin black glaze with misfired red areas all over, inside and out, except base and lower third of walls.

R 12: 1, well: filled *ca.* 480/479 B.C. with debris accumulated over a generation or so earlier.

50 (L 3149). Pls. 2, 30.

H. 0.037 m.

Fragment of side preserving complete profile; handle (if any) and nozzle missing. Pinkish buff clay; thin black glaze inside and outside except on base.

M 17: 4, well: filled in second quarter of 5th century B.C. with material mostly of the late 6th and early 5th centuries.

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TYPE 6 VARIANTS

Lamps with Flat Rims; Open Nozzles; Glazed Exteriors; Variant Features

Nos. 51-52 (and 2 others inventoried). Plates 2, 30.

Second half of 6th century B.C. Dating based on obvious stylistic similarities to Type 6 B.

These lamps are similar in most respects to those of the normal Type 6 B; one, 51, however, has a rim that is decorated with ridges around its inner and outer peripheries, and another, 52, has a well-profiled ring foot which emphasizes its base. Both of these lamps are very much larger in scale than the usual specimens of Type 6 B. Both are made of Attic clay and have a good thick black glaze all over the interior and exterior.

51 (L 4530). Pls. 2, 30.

H. 0.036 m.; W. 0.101 m.

Fragment of nozzle and left side, preserving complete profile; remainder restored including area where handle might have been attached. Very thick pinkish buff clay; good black glaze, somewhat worn on sides, used inside and out including the flat base.

52 (L 3652). Pls. 2, 30.

H. 0.044 m.; W. 0.106 m.

Nozzle and small fragment of side of large lamp; remainder restored including area where handle might have been attached. Fine thick buff clay; good black glaze, somewhat worn, used everywhere inside and out, including concave bottom and ring foot.

TYPE 7

Lamps with Curving Side Walls, Incurving Rims; Open Nozzles

Nos. 53-55. Plates 3, 31.

Late 6th century B.C. and early years of 5th century. Dating based on stylistic similarities to Type 6 B and, to some extent, on the finding places.

Lamps of this category are related in general appearance to those of the preceding type; the characteristic feature, however, is a curved side wall rising from a flat base and ending with an incurving rim; this feature is closely allied to the curving side wall of lamps of Type 5. In the thickness of wall, however, and the all-over use of black glaze (except for the bottom) Type 7 is more akin to Type 6 B. Type 7 lamps are wheelmade like their immediate predecessors, have an open nozzle and a thick horizontal band handle. None of the Agora specimens preserves all of these features, but the appearance of a complete lamp may be obtained by combining fragmentary bits of evidence from several lamps.

This type flourished during the last quarter of the 6th century, and well into the 5th. Similar features reappeared after the Persian destruction of 480-479 B.C., in Type 20, which is marked by curving sides and a full use of black glaze, but has a short bridged nozzle below a continuous circular rim, rather than an open nozzle.

53 (L 3989). Pls. 3, 31.

H. 0.031 m.; W. 0.092 m.

Fragment of right side preserves complete profile and part of nozzle; remainder restored. Pinkish buff clay, thin black glaze everywhere except on base; short cross-strokes in red on top of rim.

54 (L 1947). Pls. 3, 31.

H. 0.029 m.; W. 0.088 m.

Two fragments preserve bottom and right side; remainder restored. Clay and glaze like preceding; no added decoration.

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E-F 12-13-14, construction fill: *ca.* 460-450 B.C., but the bulk of the material prior to 480, and including many ostraka of the 80's.

55 (L 3592).

Pres. H. 0.024 m.; Max. dim. 0.067 m.

Fragment from bottom and right wall with part of handle attachment; profile similar to preceding. Clay and glaze like preceding.

U 23: 2, well: dumped filling of end of 6th century B.C.

TYPE 8

Lamps with Open Nozzles: Variant Features

Nos. 56-59 (and 1 other inventoried). Plates 3, 31.

7th to late 6th centuries B.C. Dating based on the finding places. Individual lamps may be more closely dated by their own finding places or by stylistic similarities with lamps of preceding types, as noted below.

The lamps assembled in Type 8 have unique and distinctive features which prevent them from being classed with any of the foregoing types; they differ from one another so radically that they may be grouped together only in a miscellaneous classification of 7th and 6th century *varia*. Their only common element is the open nozzle. One, 58, is the result of caprice on the part of a workman who was surely a potter rather than a full-time lamp-maker.

57 is part of a large sanctuary lamp, and might be classed with Type 41 were it not for its distinctive open nozzle that places it very close to Type 2 B.

The profiles, fabrics, clays, glazes, and other distinctive features of this miscellany are described below.

56 (L 3608). Pls. 3, 31.

H. 0.016 m.; W. 0.047 m.

Intact except for chips from nozzle; no signs of burning; very small scale; rough bottom with evidence of adhesion to original stand or base which was presumably circular and held a large number of similar small lamps; wheelmade of smooth pinkish buff clay; unglazed. Similar in shape to lamps of Type 2 B, but the clay much finer.

T 24: 3, well: dumped filling of end of 6th or early 5th centuries B.C.

57 (L 1343). Pls. 3, 31.

H. 0.032 m.; Pres. L. 0.13 m.; W. 0.128 m.

Right half preserved, with part of nozzle; remainder restored; wheelmade; nozzle added at cut in wall; no handle attachment. Good pinkish buff clay, unglazed, made with the precision and skill characteristic of a fine potter.

I 14: 1, well: 7th century B.C. down to *ca.* 600 B.C.

58 (L 3488). Pls. 3, 31.

H. 0.031 m.; Pres. L. 0.055 m.

A triangular point preserved, with complete profile; broken away behind; a slight rise in the floor at one of the other angles indicates that the rear wall rose near this point and shows that most of the lamp is preserved; it was an equilateral triangle with perhaps additional nozzles at the other two angles. The one nozzle partially preserved projected little if any from the rounded angle and was presumably unbridged; handmade of buff clay, gray at the core; thin brown glaze inside; on the two outer walls that are preserved a broad band of same glaze at bottom, above which, on one wall preserved to full height, a frieze apparently of schematic water birds with a thin band of glaze at top. There are no known parallels for such an early lamp with decorations similar to those on contemporary pottery.

The frieze of birds has parallels on pottery earlier than the 6th century. Four skyphoi and a kantharos found in the Agora excavations have comparable decoration; two of these skyphoi and

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the kantharos are Protoattic of the period 700-650 B.C.;[15] another skyphos is middle Protocorinthian of the same period[16] and the fourth skyphos is early Protocorinthian of the second half of the 8th century.[17] Although the lamp was found in a context of the early 6th century, its decoration and its worn condition lead to the supposition that it should be dated earlier than its context. The clay is Attic, and the lamp appears as one of the earliest examples extant, sharing honors with lamps of Type 1 for being the first after the Mycenaean period and the subsequent dark Geometric epoch.

H 8-9-10, Layer I: deposit of early 6th century B.C., with much earlier material.

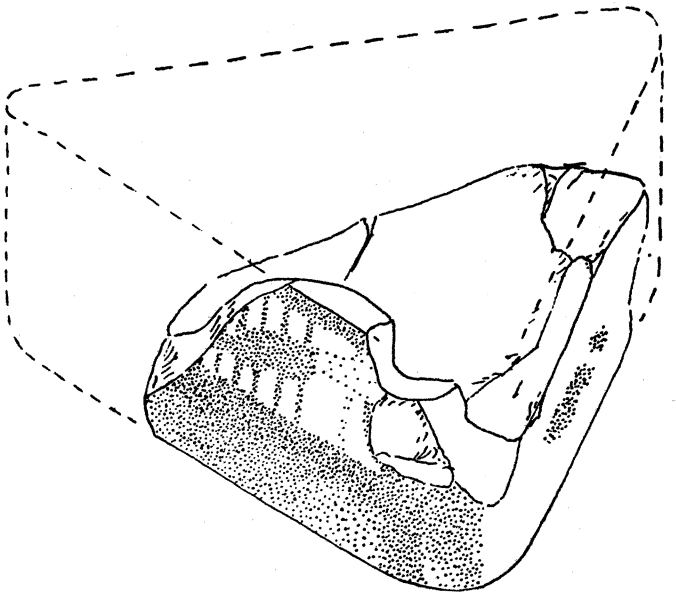
59 (L 3239). Pls. 3, 31.

H. 0.035 m.; Max. dim. 0.057 m.

Single fragment preserving part of the bottom, side, and nozzle; wheelmade, like a shallow bowl, with a high flaring open nozzle added at one point where the curved side wall is slightly pulled out. The clay is buff-colored and hard; black glaze much flaked on the inside, none on the outside.

Hesperia, VII, 1938, p. 406, no. 50, fig. 42.

G 6: 3, shaft: lower filling, *ca.* 575-535 B.C.



No. 58. Scale 1: 1.

TYPE 9

Smyrna Lamps; Bridged Nozzles

Nos. 60-62 (and 1 other inventoried). Plates 3, 31.

Third quarter of 7th century B.C., to *ca.* 600 B.C.

The first clay lamps with bridged nozzles appeared in Attica at a very early date, but some time after the introduction of the lamp itself as an item of household furniture. The bridged nozzle in Athens did not evolve slowly and develop ultimately out of the open-nozzle varieties, and we have seen in the previous sections that the open nozzle by itself is not a sign of an early date. Around the middle of the 7th century a separate development in lamp-making started that

[15] Skyphoi: P 7157 and P 7458; *Hesperia*, Suppl. II, p. 148, nos. C 28 and C 27, figs. 109, 103. Kantharos: P 1767; *Hesperia*, II, 1933, p. 591, no. 207, fig. 50.

[16] P 8347; *Hesperia*, Suppl. II, p. 146, no. C 18, fig. 100.

[17] P 1680; *Hesperia*, II, 1933, p. 569, no. 102, fig. 26.

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paralleled, for a while, the earlier concept of the lamp as an open saucer with pinched-in nozzle. This new development was perhaps the work of a potter who conceived of a lamp as a low pot or shallow rounded bowl, with the nozzle as a separate feature attached to the wall of the bowl and surrounding a hole pierced through the wall for the admission of a wick. This concept is quite distinct from the original form of the lamp as a flaring open saucer with the nozzle simply formed by manipulating part of the side wall into a trough for the wick.[18] Only in later forms of the open nozzle types is there a resemblance to the enclosed forms, with profiles more rounded and with definitive flat rims or copings crowning the walls. For over a hundred and fifty years, from *ca.* 650 B.C. to *ca.* 490 B.C., both types of lamp were used before the closed or bridged nozzle finally gained complete domination of the markets.

These 7th century lamps with bridged nozzles, the earliest to be seen in Attica, are wheelmade. The bottom is flat, without any raised base, the side walls are curved and crowned by a flat rim, overhanging the interior and sometimes grooved.

The distinctive feature is the hole pierced in the wall, well below the rim, and surrounded on the outside by a small handmade nozzle. The top of the walls of the nozzle are several millimeters below the level of the lamp's rim; this feature gives to the nozzle the appearance of an afterthought, added to the side of a low enclosed bowl. One lamp preserves a bit of one end of its horizontal handle. Other lamps may have been made without handles or may have had vertical loop handles.[19]

Type 9 is an importation from Asia Minor.[20] The clay is a pale pink, in texture and color very similar to Attic clay. Some examples of Type 9 were certainly made in the Smyrna area, others perhaps were manufactured locally in Athens, following closely the imported prototype. **62** has a crude circle scratched in the leather-hard clay of the nozzle where it joins the lamp. This circle or *omicron* is a characteristic graffito on local Smyrna fabrics,[21] and may be a potter's initial or some sort of trade mark. This same lamp had its lower walls pared with a blunt instrument while the clay was soft. It is certainly an imported item. The glaze on Type 9 is fugitive; two examples preserve none at all, while **61** has slight traces of glaze, partly red and partly black, on both its interior and exterior walls.

This imported type, with a developed form related to pottery shapes and introducing the bridged nozzle, was a marked contrast to the contemporary Athenian product, viz. Type 2 B; the local lamps were primitive by comparison and poorly adapted for containing oil and holding the wick apart from the reservoir. The limited number of Type 9 that is preserved shows that its use was confined to a few individuals, but it started a trend that was to become common in all later forms of both cheap and expensive lamp production.

60 (L 3376). Pls. 3, 31.

Pres. H. 0.032 m.

Fragment from right side with part of nozzle, the top of which is 0.007 m. below level of rim. Fine soft pink clay, fired buff at surfaces; unglazed.

P 7: 2, well: late 7th century B. C.

61 (L 4979).

H. 0.032 m.; Est. D. 0.060 m.

Two non-joining fragments include parts of rim and horizontal handle attachment. Light pink clay, traces of flaky black to red glaze all over.

O 12: 1, well: third quarter of 7th century B.C.

[18] Perhaps in Syria or North Africa the transition from open nozzle to bridged nozzle was made by pinching in the open flaring nozzle more and more until its curving sides united at the top.

[19] **60** and **62** have enough of their backs preserved to show that they did not have horizontal handles, but not enough preserved to show that they had vertical handles.

[20] A number have come to light recently in the British excavations of 1954 (as yet unpublished) in Smyrna.

[21] I owe this information to Mr. J. M. Cook, Director of the excavations at Smyrna in 1953 and 1954.

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62 (L 4139). Pls. 3, 22, 31.

H. 0.03 m.; Pres. L. 0.083 m.; W. 0.095 m.

Fragment from left side with complete profile and part of nozzle; restored. Hard pink clay; lower part of wall pared; unglazed. Circle scratched on wall of nozzle where it joins lamp.

M 11: 3, well: *ca.* 600 B.C.

TYPE 10

Early Argive-Corinthian Forms; Bridged Nozzles

Nos. **63-67**. Plates 3, 31.

Corinth: classified under Type I.

Late 7th century B.C. into second quarter of 6th century B.C.

A somewhat more advanced phase of lamp-making is seen in a group of examples that preserve many of the characteristics of Type 9 but have nozzles of a form that was to become normal; that is, the enclosure around the wick-hole and surrounding the aperture in the wall of the lamp is approximately level with the rim, instead of being considerably lower.

All of these lamps are wheelmade (with one handmade exception, **67**), unglazed, with flat bottoms and curving side walls topped by narrow flat rims. Two preserve intact their broad thin vertical strap handles, while all the other examples are fragmentary and lack their back portions; they also may have had similar handles. The nozzles are large and ovular with comparatively thin walls; they are made by hand and carefully joined to the body of the lamp and the edge of the rim, upon which they do not encroach; marks of a wooden tool are sometimes observable at the juncture of nozzle and body, and similar traces of paring the clay while in a leather-hard condition appear on the sides of at least one example (**67**).

The clay of Type 10 varies in different lamps. Its complexion is always light, but three varieties may be noted. Some of our lamps are of Attic clay, a very pale pinkish buff with a soft consistency and tendency to flake. One lamp (**65**) is certainly of Corinthian clay, buff with the familiar pale greenish cast; another (**66**) is perhaps of Corinthian clay, pale buff but without the greenish tint of the standard Corinthian products. Another, **67**, is handmade rather than turned on the wheel and has a slightly orange tone; its surface was pared with a blunt instrument while in a leather-hard state. This pale orange buff clay with pared surfaces is very similar to "Argive Monochrome Ware," a pottery fabric found in quantities at the Argive Heraion, and recognized as local.[22] A similar fabric has been found also in smaller quantities, in Corinth,[23] and the Phaleron Cemetery;[24] vases of this fabric are also not uncommonly found in Athens,[25] but few lamps. Type 10 lamps found in Corinth seem always to be of the local buff Corinthian clay.[26] **67** is an Argive

[22] A temple deposit, excavated in 1949 by J. L. Caskey and P. Amandry at the Heraion, contained scores of small hydriai and jugs of this fabric. For a full discussion of the fabric see J. L. Caskey, "Investigations at the Heraion at Argos, 1949," *Hesperia*, XXI, 1952, pp. 202 ff.

[23] In a well group dated in the last quarter of the 7th century B.C.: *A.J.A.*, XLI, 1937, pp. 217 ff., no. 50, fig. 34; in a grave not later than the beginning of the 6th century B.C.: *A.J.A.*, XXXIII, 1929, p. 541, fig. 21; in another well of the last quarter of the 7th century B.C.: *Corinth*, VII, i, p. 70, no. 301, pl. 37; in a deposit of the first quarter of the 6th century B.C.: *ibid.*, p. 79, nos. 356-357, pl. 43; in a well group dated 600-540 B.C.: *Hesperia*, XXV, 1956, p. 365, nos. 56-58, pl. 57. Also note an early example in a well of the third quarter and early fourth quarter of the 8th century B.C.: *Hesperia*, XVII, 1948, p. 213, no. C 23, pl. 76.

[24] In graves 27 and 70, both of the first quarter of the 7th century B.C.: *A.J.A.*, XLVI, 1942, pp. 29 ff., nos. 27.6 and 70.1, figs. 6, 8; the fabric is called "probably Corinthian."

[25] See for example *Hesperia*, XX, 1951, pl. 42, Grave 12, no. 4 from a grave group dated at the beginning of the last quarter of the 6th century B.C. (*op. cit.*, p. 93); there are also examples from a well-filling of the second quarter of the 6th century B.C. (*Hesperia*, XXV, 1956, p. 57).

[26] Broneer, p. 130, no. 12, fig. 55. Also an unpublished lamp (CL 3914) found in 1947 in a well dated in the

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imitation of a Corinthian model; it may have come along with an occasional export of pottery to Attica or may have been brought up by some Athenian citizen with Argive connections. Pending further knowledge concerning lamp-making activities near Argos it must be presumed that Corinth, very active in this field in the later 7th century, furnished the model for both Argos and Athens.

Throughout the 7th century many Attic imitations of Corinthian pottery were made in Athens;[27] no examples of Corinthian vases imitating Attic have come to light in this area. There is no reason to believe, then, that the lamps made in the northern Peloponnesos were sent to Athens to compete with a local style; rather the local version copies the imported examples, just as so many elements in Protoattic pottery were derived from Corinthian prototypes. The origin of Type 10 is Corinthian, with a reproduction of the type in or near Argos as well as in Athens.

63 (L 3767). Pls. 3, 31.

H. 0.026 m.; Pres. L. *ca.* 0.056 m.

Single fragment of right side preserving complete profile and part of nozzle. Soft pinkish buff Attic clay, unglazed.

S 22: 1, well: first half of 6th century B.C.

64 (L 4505).

Pres. H. 0.025 m.; Max. dim. 0.073 m.

Single fragment preserving part of left side and nozzle; profile incomplete, but similar to preceding. Clay similar to preceding; marks of tool at junction of body and nozzle.

B 18: 10, well: dumped filling of first quarter of 6th century B.C., including both Protocorinthian and Corinthian vase-fragments and some fragmentary Attic imitations of Corinthian.

65 (L 1454). Pls. 3, 31.

H. 0.024 m.; L. 0.04 m.

Single fragment of front preserving complete profile and part of nozzle. Pale greenish yellow Corinthian clay, unglazed.

66 (L 4504). Pls. 3, 31.

H. 0.026 m.; Max. dim. 0.065 m.

Single fragment from back of lamp preserving handle and complete profile; restored. Soft pale buff clay (Corinthian?).

Provenance as of **64**.

67 (L 4271). Pls. 3, 31.

H. 0.021 m.; W. 0.065 m.; Rest. L. 0.115 m.

Mended from several fragments; parts of rim and end of nozzle restored. Fine pink clay with smooth orange buff surface (Argive?), smoothed with tool. Handmade.

A 17: 1, well: second quarter of 6th century B.C.

TYPE 11

Early Corinthian-Attic Forms; Central Sockets

Nos. 68-70. Plates 3, 31.

Corinth: classified under Type I.

Late 7th century B.C. and well into the 6th. Dating based on stylistic similarities to Type 10 and on the finding places.

A variety of Type 10 with central sockets forms an interesting group that may be classified separately as Type 11. Central sockets, beginning in the 7th century B.C., occur in a great variety of forms down into the 2nd century B.C.

The earliest belong to Type 11, which shows a flattened base curving up into rounded sides

third quarter of the 6th century B.C. (*Hesperia*, XVI, 1947, p. 237), and a lamp from a well group dated 600-540 B.C. (*Hesperia*, XXV, 1956, p. 368, no. 70, fig. 2, pl. 59.)

[27] See Dorothy Burr Thompson's remarks in *Hesperia*, II, 1933, p. 634; R. S. Young's in *Hesperia*, Suppl. II, p. 146.

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that are topped by a narrow flat rim; this profile is not unlike that of Type 10. The center of the base, however, is pulled up into a hollow tube or socket that has its top at approximately the height of the outer walls of the lamp. These lamps are all preserved in fragmentary condition, but there is evidence [28] to show that the normal example had no handle and but one nozzle, comparable to the oval bridge nozzle used in the preceding type and placed just outside the rim. In lamps of Type 11 there is again evidence for Corinthian originals and Attic adaptations. The clay of 68 is pale buff Corinthian with a pared surface; the other lamps are of the typical pinkish buff Attic clay; all the lamps are wheelmade and completely unglazed.

The central tube or socket in the center of these specimens is not for the insertion of a pointed standard as is often surmised; there are no signs of wear within the tube, and a glance at the profile of 68 will show that the aperture is irregularly made and actually smaller at the bottom than its maximum width within. Nor was the tube designed to facilitate hanging the lamp by suspension, with a cord passing through the tube and knotted at its end or tied around an object larger than the diameter of the tube; if this were true, the lamp would tip precariously to one side since its single nozzle has no counterbalance,[29] and again there are no signs of wear around the bottom of the tube.[30]

The fact that these lamps have no handles leads to the belief that the central tube is simply a convenient finger hole to aid in grasping firmly and carrying safely a slippery lighted lamp. The central tube is equally useful for hanging the lamp on a peg by means of a cord passed through the tube. The central opening is a miniature variant of the open center seen in large sanctuary lamps of Type 8, as Thompson has pointed out in considering later lamps with similar features.[31] There are no earlier manifestations or predecessors of the central tube. It occurs in these small lamps synchronously with the first appearances of the large corona sanctuary lamps, and seems to have been spontaneously devised by Corinthian lamp-makers in the later years of the 7th century B.C.

68 (L 1658). Pls. 3, 31.

H. 0.023 m.; Est. D. *ca.* 0.09 m.

Single fragment preserving somewhat more than half of lower walls and bottom with part of rim. Hard light buff Corinthian clay worked with tool in leather-hard state; unglazed.

F 12: 5, well: dumped filling of early 6th century B.C., but with much material of the 7th century. Some of the pottery fragments in this well are Corinthian, some Attic imitations of Corinthian.

69 (L 1468). Pls. 3, 31.

Pres. H. 0.024 m.; D. *ca.* 0.085 m.

Three fragments preserve most of bottom and central tube; upper parts of walls and rim missing. Pinkish buff slightly micaceous Attic clay; unglazed.

I 14: 1, well: 7th century B.C. down to *ca.* 600 B.C.

70 (L 3388).

Max. dim. 0.051 m.

Small fragment from floor with part of cone; like preceding. Smooth pinkish buff Attic clay.

P 8: 5, well: first half of 6th century B.C.

[28] An unpublished lamp from Corinth, CL 3915, is exactly similar to the Agora lamp 68 and preserves its nozzle and all of its rim; it has no handle. 68 itself has enough of its body preserved to indicate that it could have had but one nozzle and no handle attachment. See also a lamp from a well in Corinth dated 600-540 B.C. (*Hesperia*, XXV, 1956, p. 368, no. 71, fig. 2, pl. 59).

[29] Later 6th century lamps with central tubes often have two nozzles opposite each other; perhaps in these cases suspension by a cord was feasible. Cf. Types 19 A, B, C.

[30] Types 22 A and B, designed for suspension, sometimes show signs of wear around the bottoms of the tubes.

[31] *Hesperia*, II, 1933, p. 198, note 1.

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TYPE 12 A

Lamps with Flat Rims and Central Cones: Flat Bases

Nos. 71-75 (and 2 others inventoried). Plates 3, 31.

Corinth: classified under Type II.

Second and third quarters of 6th century B.C. Dating based on the continuation of the rim design of Types 9, 10, 11 and on the finding places.

While the open nozzle lamps of coarse unglazed fabric were those most commonly used during the major part of the 6th century, more carefully made types continued to be introduced with bridged nozzles and a modified use of glaze. Lamps of Types 10 and 11 are succeeded, in the second quarter of the century, by a newer form that has several varieties. Type 12 A is the earliest of these and shows a development in profile and use of glaze. The bottom is flat but rises in the center into a conical concavity that is seen on the interior floor of the lamp as a central conical protuberance.[32] The side walls are thick and either angular or curved, topped by a very emphatic flat rim that overhangs the interior of the lamp and projects on the exterior over the side walls; the rim is normally embellished with a raised ridge around its outer edge.

None of our examples preserves its back portion entirely, so it is impossible to say definitely whether a handle was used. Very probably none existed, since it would be difficult to design a handle that would be suitable with the ridged rim and it is certain that no handle is used on Type 12 B which is morphologically related to Type 12 A.[33] The raised cone in the base is an adaptation of the central tube and used for the same purpose, to serve as a finger hole for a secure grasp on the lamp when carrying it. In this respect there is a strong relationship to vase design: the hollow raised boss of the mesomphalic phiale which also serves as a depression, on the under side, for the fingers.[34]

The nozzle of Type 12 A is broad and thick, with its base on a level with the bottom of the body of the lamp; the oval aperture extends close to the rim. The clay seems to be Attic; all the lamps are wheelmade. In the use of glaze there is a nice combination of the practical and the aesthetic, since a thin brownish red glaze is used throughout the interior to keep the porous clay from absorbing the oil, and for the same reason the entire exterior of the nozzle is dipped in glaze; paint is used elsewhere on the exterior only for a thin decorative line or lines around the top of the rim.[35] Such a line is usually around the inner edge of the rim and emphasizes the transition between the plain exterior and glazed interior.

[32] This central projection, or *mesomphalos*, is referred to in the *Batrachomyomachia* (line 129, *Homeri Opera*, T. W. Allen ed., Oxford, 1912), where the mice arm themselves and use the *mesomphaloi* of lamps as shields. No lamps with these central projections existed before the second quarter of the 6th century B.C., which gives a *terminus post quem* for the poem. Central features like these of Type 12 A continued, however, throughout the 6th century.

[33] Five inventoried lamps of Type 12 A preserve considerable stretches of their walls that are from parts of circumferences beyond the nozzles, and none has any trace of a handle. A similar lamp from Berezanj (an island in the Black Sea) is intact; it has no handle. See *Arch. Anz.*, 1910, col. 227, fig. 26, where it is dated in the second half of the 6th century. Two lamps of this type from a well in Corinth dated 600-540 B.C. have no handle (*Hesperia*, XXV, 1956, p. 372, nos. 89, 90, fig. 2, pl. 59).

[34] Although metal mesomphalic phialai are found in the 9th century and earlier, clay examples in Attica are not known until the second half of the 6th century. See Heinz Luschey, *Die Phiale*, Bleicherode am Harz, Carl Nieft, 1939.

[35] An exceptional example, 75, has glaze on the entire rim and upper part of the body's exterior.

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71 (L. 1490). Pls. 3, 31.

H. 0.022 m.; Rest. W. 0.086 m.; Rest. L. 0.112 m.

Single fragment preserving left side of lamp and nozzle; remainder restored. Fine buff clay; brownish glaze inside, around nozzle outside, and as a fine line around inner edge of rim.

72 (L 4343). Pls. 3, 31.

H. 0.023 m.; Max. dim. 0.061 m.

Single fragment preserving complete profile. Clay and glaze as preceding.

A 17: 1, well: second quarter of 6th century B.C.

73 (L 4342). Pls. 3, 31.

Max. dim. 0.091 m.

Two joining fragments preserve part of floor and start of the wall. Fine slightly micaceous buff clay, similar to preceding; brownish black glaze inside.

Provenance as of 72.

74 (L 3643).

H. 0.022 m.

Single fragment preserves part of rim and complete profile of side, as preceding. Clay and glaze as preceding; broad band of glaze around top of rim, in center.

T 18: 1, well: second half of 6th century B.C.

75 (L 648). Pls. 3, 31.

H. 0.023 m.; D. *ca.* 0.105 m.

Single fragment preserves bottom and small section of profile and rim. Attic clay fired gray; black glaze inside, on rim, and on upper parts of walls.

TYPE 12 B

Lamps with Flat Rims and Central Cones; Raised Bases

Nos. 76-78 (and 4 others inventoried). Plates 3, 31.

Corinth: classified under Type II.

Late third and fourth quarters of 6th century B.C., perhaps into early years of 5th century. Dating based partly on stylistic similarities to Type 12 A, partly on the dates of recently discovered examples of Type 12 B in Corinth,[36] and in part on the finding places of several specimens in the Agora.

This more advanced variety of Type 12 shows an early use of a well defined raised base instead of the usual flat bottom; it is actually a kind of broad base ring, since the concavity in the center is present, projecting into a cone in the interior of the lamp as in Type 12 A. The sides rise above the base in two clearly defined steps, the lower more spreading and nearly horizontal, the upper curved but approaching the vertical. The rim overhangs the interior only, and is flat without ridges. There is never a handle; the flat-topped nozzle is broad and set fairly high in the upper part of the wall without encroaching on the rim, with which its top is flush. Glaze is applied in the same manner as in Type 12 A, in the interior and around the exterior of the nozzle; there are very carefully drawn concentric glazed circles around the rim. A good deal more taste and skill is evidenced in these neatly made lamps than in their predecessors, showing that the manufacture of lamps was now in the hands of very competent craftsmen used to some of the refinements seen in contemporary glazed pottery; lamps no longer are pedestrian and merely utilitarian wares.

The Attic clay of Type 12 B is a smooth hard pinkish buff, remarkably free from impurities and ideally adapted to precise workmanship. The glaze is brown to black.

[36] A well excavated in 1947 in Corinth yielded an example, CL 3918 (unpublished); the well has been dated by its pottery in the third quarter of the 6th century B.C. (*Hesperia*, XVI, 1947, p. 237). Another lamp in Corinth is from a well with contents dated between 550 and 480 B.C. (*Hesperia*, VII, 1938, p. 610, no. 241, figs. 30, 31); two more came from a well dated 600-540 B.C. (*Hesperia*, XXV, 1956, p. 372, nos. 92, 93, pl. 59).

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76 (L 3445). Pls. 3, 31.

H. 0.021 m.; Pres. L. 0.09 m.; W. 0.087 m.

Nozzle and a bit of the rim missing; restored. Pinkish buff clay; brown to black glaze inside, around nozzle, and for thin concentric circles around inner and outer edges of rim.

U 25: 2, well: dumped filling of end of 6th century B.C.; another inventoried (uncatalogued) example of Type 12 B found here.

77 (L 1946). Pls. 3, 31.

H. 0.023 m.; W. 0.09 m.

Two fragments preserve half of lamp without nozzle; restored. Clay and glaze like preceding.

E-F 12-13-14, construction filling: *ca.* 460-450 B.C., but bulk of material prior to 480 and including many ostraka of the 80's; another inventoried example of Type 12 B found here.

78 (L 3606). Pls. 3, 31.

Pres. H. 0.019 m.; Pres. L. 0.045 m.

Small fragment of rim and part of side wall. Dark buff clay; black glaze inside and for broad and narrow concentric bands around center and inner edge of rim.

Provenance as of 76.

TYPE 12 VARIANTS

Lamps with Flat Rims and Central Cones; Raised Bases; Variant Features

Nos. 79-81. Plates 3, 32.

Corinth: compare Type II.

Late third and fourth quarters of 6th century B.C., into early years of 5th century. Dating based on stylistic similarities to Type 12 B and on the finding places.

These variants retain the main features of Type 12 B: the raised base, the central cone, the lack of handle and the restricted use of glaze. Two of them, however, have curved profiles that are very different from the conventional profile of Type 12 B with its two planes. Another variant, 81, is made of a non-Attic clay that betrays a foreign origin (Corinth or elsewhere in the Peloponnesus?) and has a very much wider rim than Types 12 A or B, one that approaches the character of the Corinthian lamps of Type 16 A.

79 (L 2449). Pls. 3, 32.

H. 0.023 m.; Pres. L. 0.08 m.; Est. W. 0.08 m.

Part of one wall, most of nozzle, and part of bottom missing; restored. Pinkish buff slightly micaceous clay; glaze black to red on inside, around outside of nozzle, and in two concentric bands on rim.

T-U 19: 1, filling of late 6th century B.C.

80 (L 4740). Pls. 3, 32.

Pres. H. 0.016 m.; Est. D. 0.077 m.

Two fragments preserve parts of base, nozzle, and curving walls. Smooth pinkish buff clay; brownish red glaze on interior, around outside of nozzle, and in at least one broad band around upper part of wall.

D 17: 10, well: late 6th or early 5th century B.C., with considerable earlier material.

81 (L 3634). Pls. 3, 32.

Pres. H. 0.025 m.; D. 0.075 m.

Single fragment preserves half of rim and upper part of walls. Enough is preserved to show it could not have had handle; none of nozzle area preserved. Micaceous light brown clay, non-Attic. Brownish red glaze on lower part of interior and in concentric bands around rim.

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TYPE 13

Lamps with Narrow Convex Rims

Nos. 82-83 (and 1 other inventoried). Plates 3, 32.

Ca. second to third quarters of 6th century B.C. Dating based on stylistic relationships with Types 11 and 16 B and on the finding place of 83.

Type 13 consists of a small number of lamps that seem to be transitional between Type 11, which was unglazed with narrow overhanging rims, and Type 16, partially glazed and with broader overhanging rims. These transitional lamps have flat bottoms without any central hole or cavity, rather high curving sides, and very narrow, slightly convex, rims that are set off from the walls and overhang the interior. There is evidence that they possessed horizontal bar handles, very much like the similar handles on contemporary unbridged lamps of Type 5. None of our examples possesses a nozzle intact.

The clay is uniformly Attic pinkish buff, used in a thin fabric; there are horizontal ridges around the body made by paring the leather-hard clay. A dark brown glaze is used throughout the interiors and on the rims as well as on the handles. Presumably the exteriors of the nozzles were decorated with glaze also, as on Types 5, 12 A, 12 B, 16 A, and 16 B. The exterior side walls are unglazed.

82 (L 2702). Pls. 3, 32.

H. 0.023 m.; Est. D. 0.09 m.

Single fragment preserves about one-third of lamp including one handle attachment but not nozzle. Fine pinkish buff clay, horizontally ridged walls. Dark brown glaze inside, on rim, and at handle attachment.

83 (L 3616).

H. 0.027 m.; Est. D. 0.09 m.

Two joining fragments preserve profile of body, like preceding. Clay and glaze like preceding.

Hesperia, VIII, 1939, p. 263, no. 25, fig. 18.

Q 18: 1, well: third quarter of 6th century B.C.

TYPE 14

Corinthian-Attic Lamps with Slim Vertical Handles

Nos. 84-85. Plates 3, 32.

Corinth: classified under Type II.

Last quarter of 6th century B.C. and into early years of 5th century. Dating based on the finding place of two examples in Corinth,[37] as well as on the finding places of 84 and 85.

This type of wheelmade late 6th century lamp with a vertical loop handle originated in Corinth and was probably copied in Athens. The extant examples are preserved in very fragmentary condition at both places, but enough evidence remains to show definite characteristics of a separate type. The base is presumably flat, without a central cone, and the low sides curve up and around to form a narrow rim; in one example, 85, the sides are slightly ribbed, and this lamp has a narrow flat rim overhanging both the exterior and interior, as on lamps of Type 10. A distinguishing feature of Type 14 is the broad vertical loop handle, again reminiscent of Type

[37] From a well with pottery dating between 550 and 500 B.C. (*Hesperia*, VII, 1938, p. 610, nos. 227, 228, figs. 30, 31).

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10 but narrower and thicker. No example preserves its nozzle, but by analogy with Type 10 it may be presumed to have been bridged. The clay of one example is Corinthian, that of the other is probably Attic; the examples found in Corinth are all of Corinthian clay. A brownish red or dull black glaze covers all parts of the interior and exterior of all the lamps. This complete use of glaze would indicate by itself a date fairly late in the 6th century or even later.

84 (L 1941). Pls. 3, 32.

Pres. H. incl. handle, 0.04 m.; Pres. L. 0.06 m.

Double loop handle and parts of walls and rim preserved. Corinthian clay; dull black glaze.

F-G 12: 1, road metal: Layer I, 6th century B.C.

85 (L 665). Pls. 3, 32.

Max. dim. 0.067 m.

Parts of handle, walls, and rim preserved. Hard red Attic clay; uneven brown metallic glaze.

G 15: 1, well: main dumped filling, late 6th century B.C. to *ca.* 500 or shortly after.

TYPE 15

Unglazed Lamps of Corinthian Clay; Pared Surfaces

Nos. 86-91 (and 4 others inventoried). Plates 4, 32.

Latest years of 6th century B.C. and first two decades of 5th century.

An unusual form of unglazed handmade lamp, combining both archaic and advanced elements, is introduced toward the end of the 6th century.[38] Its appearance is surprising because of its apparently primitive aspect after a series of more sophisticated developments in both the bridged and unbridged nozzle types, yet when one considers carefully certain features it seems much in advance of its period.

Like most earlier lamps, Type 15 has a flat circular bottom brought up into incurving side walls. There is no rim, although the bevelled edge around the top of the thin walls serves as an adequate finish. A very broad and thin vertical handle like that of Type 10 is used on every lamp of which the back is preserved. The nozzle form is most interesting, since on some it is a broad, long, boat-shaped open nozzle, and on others (the majority) it is closed. There is little difference in date between the two forms of nozzle, and this is the only type of Greek lamp in which both appear. The closed nozzle is very long and seems to swell out into an oval protuberance in which is placed the large wick-hole. This nozzle is simply an enclosed version of the open one; the sides are pulled somewhat together at the neck and extended up to join and form a closed tube; the end is left with its original breadth, so that it only seems to swell out of a narrower neck; actually it is the neck that is drawn in.

The clay of these lamps shows them to be non-Attic. The fabric is remarkably susceptible to changes of color under different firing conditions; it may be pink at the core and buff outside, or red at the core and gray outside; sometimes it is brown all through. It is frequently very hard, free of mica, but is apt to have occasional air bubbles; the surface is always finished in a distinctive way by paring, that is by trimming the surfaces with a blunt instrument while the clay is leather-hard.

This clay has analogies with that used in a series of wine jars and in other household wares from Corinth,[39] which show similar wide variations in color, due to firing conditions. The clay of

[38] In Corinth this type has been found only after 1930, since the publication of Broneer's *Terracotta Lamps*. One unpublished example found in Corinth in 1939, CL 3959, comes from a well dated by its excavator in the early 5th century B.C.

[39] For this fabric see most recently *Hesperia*, XXII, 1953, pp. 93-94, nos. 106-109, and pp. 108-109, no. 166;

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Type 15 may be Corinthian and the supposition that the lamps were imported from that city is strengthened by the similarity of their handles to those of Corinthian lamps of Type 10.

Type 15 is found at Corinth, although in small quantities;[40] it has also been found at the Kerameikos in Athens and on the Athenian Acropolis.[41]

86 (L 1188). Pls. 4, 32.

H. 0.021 m.; Rest. L. with handle 0.103 m.; W. 0.056 m.

Three fragments preserve most of lamp; most of handle, tip of nozzle, and parts of left side and bottom restored. Bright pink clay with yellow buff surface.

Hesperia, XV, 1946, p. 331, no. 328, pl. LXVIII.

G 6: 3, shaft: upper filling, *ca.* 500-480 B.C.

87 (L 3327).

H. 0.021 m.; W. 0.054 m.

Intact except for missing back portion. Profile like preceding. Clay pink to yellow, somewhat flaky.

Hesperia, Suppl. IV, 1940, p. 38, fig. 30, c.

H 12: 18, filling: *ca.* 490-480 B.C.

88 (L 2701).

H. 0.021 m.

Fragment of nozzle and side wall. Profile like preceding. Pink clay with brownish gray surface.

E 14: 5, well: early 5th century B.C. to *ca.* 480 B.C.

89 (L 4417). Pls. 4, 32.

H. of body 0.02 m.

Single fragment preserving handle and complete profile; restored in plaster, but nozzle should be like 86. Gray clay with pink core, surface pink to gray.

90 (L 3598). Pls. 4, 32.

H. 0.02 m.; Pres. L. 0.049 m.

Fragment with part of open nozzle and complete profile. Hard fine clay, pink to brown.

U 25: 2, well: dumped filling of end of 6th century B.C.

91 (L 3602).

H. 0.026 m.; Pres. L. 0.065 m.

Fragment with part of open nozzle and complete profile. Like preceding. Pink clay, gray at surface.

Provenance as of 90.

TYPE 16 A

Lamps with Broad Flat Overhanging Rims; Corinthian Versions

Nos. 92-93 (and 2 others inventoried). Plates 4, 32.

Corinth: classified under Type II.

As early as the early 6th century B.C. and well into third quarter of the century. Dating based partly on an example from Corinth assigned to 550-500 B.C.,[42] partly on the fact that this type develops in Athens as Type 16 B in the third quarter of 6th century, and also on the finding place of 93.

Type 16 consists of a very large number of wheelmade lamps that have one predominant characteristic in common, the flat or slightly convex rim that overhangs the exterior and a great

and the references there. In Athens, wine jars in this fabric appear at least as early as the first half of the 6th century B.C.

[40] Perhaps its apparent scarcity here is due to the fact that comparatively few early 5th century well deposits or masses of household débris have been excavated.

[41] Uninventoried examples exist from both places, one in the store rooms of the Kerameikos Excavations and one in the National Museum.

[42] *Hesperia*, VII, 1938, p. 610, no. 235, figs. 30, 31.

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deal of the interior. There are several subdivisions of this type according to place of manufacture and width of rim. The earliest, Type 16 A, is a group of lamps from Corinth, apparently exported from there in some quantity during the first half of the 6th century B.C. In this period the exportation of Attic pottery had not yet grown to the volume that would be normal later in the century; Corinthian wares still had wide markets, and numbers of lamps were included in shipments to Athens and other centers of trade. Some of these Corinthian lamps were to be copied soon by Athenian manufacturers (Type 16 B) and a little later there occurred an interesting phenomenon: the Attic copy of the Corinthian original was copied in Corinth, after trade conditions had been reversed and Athens had become the prime exporter; this was later in the 6th century.[43]

Type 16 A, the Corinthian prototype, is represented by fragmentary examples in the Agora. Their bottoms are not preserved, but examples found in Corinth show them to be flat or slightly concave; this is normal for the later Athenian lamps of Type 16 B that copy Corinthian originals. The comparatively low curving sides are topped by a broad flat rim.[44] There is no handle; the nozzle is made separately, by hand, with a large hole that encroaches slightly, if at all, on the wide rim. Both the profiles and the nozzle forms show a distinct relationship to Type 10. The clay is typically Corinthian, pale buff with yellow or green tones. Glaze is conspicuously absent from the interior, but is used decoratively in dark brown concentric bands around the rim. The end of the nozzle was dipped in glaze, so that color appears both on its exterior and interior; this was done for a practical reason, to avoid absorption and discoloration from the burning wick that would otherwise create an untidy appearance on the pale porous clay.

92 (L 3106). Pls. 4, 32.

Pres. H. 0.02 m.; D. 0.084 m.

Three joining fragments preserve nozzle, most of rim, and parts of walls. Pale yellow Corinthian clay; brownish black glaze on both interior and exterior of nozzle and in concentric circles on rim.

93 (L 3491).

Max. dim. 0.039 m.

Single fragment preserving parts of nozzle, rim, and side wall. Profile like preceding. Pale greenish buff Corinthian clay; flaky brown glaze.

H 12: 9, road metal: level of late 7th to early 6th centuries B.C.

TYPE 16 B

Lamps with Broad Flat Overhanging Rims; Athenian Version

Nos. **94-105** (and 59 others inventoried). Plates 4, 22, 32.

Corinth: classified under Type II.

Last quarter of 6th century B.C. and down to *ca.* 480.

A very common type of lamp during the late 6th century and the early 5th is an Athenian version of Type 16 A. This new group, Type 16 B, is also closely related in profile and use of glaze to Type 13, of which it seems to be a development.

The general characteristics of Type 16 B show a close adaptation of its Corinthian prototype. There is a slightly concave bottom that rises into low curving sides topped by a flat or nearly flat

[43] See 118 (Type 16 Variants).

[44] In some examples the rim seems to have been made separately, on the wheel, and joined to the top of the walls while both were leather-hard. This process anticipates that used in later 3rd century B.C. mouldmade lamps, in which the top and bottom were made separately and joined.

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overhanging rim. In the earlier examples the walls are low and the rim narrow; in the later, the walls are somewhat higher and the rim much broader, covering a large proportion of the interior of the lamp so that it appears more like a flat top with a central aperture than a rim. This is an important step in the ever-growing tendency to enclose the body of the lamp more and more, as lamp forms develop in the 6th and throughout the 5th centuries until the oil reservoir is completely enclosed except for a small central filling-hole.

Type 16 B has no handle,[45] following again the example set by Type 16 A. The nozzle is broad, coming to a narrow rounded termination, with a large oval wick-hole that may or may not intrude slightly onto the rim; there is no chronological significance in the presence or absence of such an intrusion.

The Attic clay of these lamps is partially covered with a good black glaze that sometimes, owing to conditions of firing, appears brown or red. The glaze is uniformly used throughout the interior, on the rim, and around the exterior of the nozzle in a neatly defined line. The remainder of the lamp, bottom and side walls, shows a diluted glaze wash, buff to orange or red in color. This was applied thickly or thinly to the entire exterior of the lamp before the black glaze was added on rim and nozzle. The two coatings became fused together; on some lamps the glaze is flaky and worn away due to unusual firing conditions, and the undercoating of glaze wash is missing too, although present on adjacent surfaces that were not also decorated with glaze; **101** shows an example of this. An occasional lamp, such as **102**, may show an irregular circle on the rim where the glaze has fired orange or red; this blemish was caused by stacking in the kiln, which kept some of the heat away from the area on which the upper lamp rested.

The earlier lamps in Type 16 B have low bodies and narrow rims; these may be safely limited to the first quarter of the 6th century. The later examples within this type tend to have somewhat higher bodies and slightly wider rims; these may have been gradually introduced in the very last years of the 6th century, but were no longer made after the Persian invasion. There is no sharp line of demarcation between the earlier and later examples. Some lamps fall in between, and it is only the extremes in the width of the rim that may assuredly be placed early or late within this very popular type.

94 (L 4190). Pls. 4, 32.

H. 0.016 m.; D. 0.089 m.

Mended from many fragments; parts of rim and nozzle restored. Dull black glaze; orange buff wash on lower body.

J 18: 4, storage cellar: upper filling, last quarter of 6th century B.C.

95 (L 2175).

H. 0.019 m.; Max. dim. 0.089 m.

Fragment from wall and rim. Profile like preceding. Black glaze fired red to black; buff wash on lower body.

T 18: 1, well: second half of 6th century B.C.

96 (L 675). Pls. 4, 32.

H. 0.025 m.; D. 0.087 m.

Mended from five fragments; part of rim restored. Black glaze; orange buff wash on lower body.

Hesperia, XV, 1946, p. 332, no. 330, pl. LXVIII.

G 6: 3, shaft: upper fill, *ca.* 500-480 B.C. Nineteen additional inventoried (but uncatalogued) examples of Type 16 B found here, besides twenty-five to thirty uninventoried fragments. Note that no examples of Type 16 B were found in this shaft's lower fill, *ca.* 575-535 B.C.

97 (L 1191). Pls. 4, 32.

H. 0.022 m.; D. 0.084 m.

Mended from three pieces, most of left side restored. Dull black glaze; dark brown wash on lower body.

Ibid., no. 332.

Provenance as of **96**.

[45] Lamps with handles have in addition an abnormal use of glaze and unusual profiles; they are distinctly variants, discussed later as such and not listed in the catalogue with Type 16 B.

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98 (L 3369). Pls. 4, 32.

H. 0.022 m.; D. 0.078 m.

Intact. Good black glaze; orange-red wash on lower body.

G 11: 3, well: accumulated filling from last years of 6th century to *ca.* 480 B.C. Another inventoried example of Type 16 B found here.

99 (L 3722).

H. 0.023 m.; D. 0.094 m.

Complete except for minor chips. Profile like preceding. Good black glaze; orange buff wash on lower body.

F 19: 5, well: early 5th century to *ca.* 480 B.C.

100 (L 3666). Pls. 4, 32.

H. 0.020 m.; D. 0.086 m.

Two joining fragments preserve over half of lamp; right side and nozzle restored. Good black glaze; orange-red wash on lower body.

101 (L 1185). Pl. 32.

H. 0.025 m.; D. 0.092 m.

Four pieces preserve most of lamp except rim and wall areas, which are restored. Profile similar to **98**; but clay fired a pale yellow buff. Dull black glaze, mostly peeled; orange wash on lower body.

Ibid., no. 331.

Provenance as of **96**.

102 (L 1201). Pl. 32.

H. 0.024 m.; D. 0.08 m.

Complete except for minor chips. Profile like **98**. Good black glaze; orange wash on lower body. On rim an irregular band where glaze has fired orange, probably caused by stacking in the kiln.

Ibid., no. 333.

Provenance as of **96**.

103 (L 1096). Pls. 22, 32.

H. 0.02 m.; D. 0.083 m.

Mended from many pieces; nozzle and parts of side and bottom missing; restored. Profile, glaze, and wash similar to **100**. Scratched through wash on under side: ΧΣΑ, initial letters of owner's name.

104 (L 2447). Pls. 22, 32.

H. 0.024 m.; D. 0.095 m.

Intact except for minor chips. Profile, glaze, and wash similar to **98**. Scratched through wash on under side: ΑΓ. This is an abbreviation for Agasikrates, the name of the lamp's owner. The lamp comes from a well with a fragmentary red-figured cup bearing this name in a painted kalos inscription (Inv. P 7901); perhaps by Euphronios; mentioned by Beazley in *A. R. V.*, p. 19, no. 7, and in "Some Attic Vases in the Cyprus Museum," *Proceedings of the British Academy*, XXIII, pp. 29-30, γ 15. Two fragmentary olpes from this same well also have the monogram ΑΓ.

E 14: 5, well: early 5th century to *ca.* 480 B.C.

105 (L 3573). Pls. 22, 32.

Max. dim. 0.056 m.

Fragment of rim and sides; profile, glaze, and wash like preceding. Grafitto on rim.

TYPE 16 VARIANTS

Lamps with Overhanging Rims; Variant Features

Nos. **106-119** (and 2 others inventoried). Plates 4, 32.

Corinth: classified under Type II.

Last quarter of 6th century down to *ca.* 480 B.C. Dating based partly on close stylistic analogies with Types 16 B and partly on the finding places.

A number of lamps with the characteristic rim of Type 16 B, flat or nearly flat and overhanging both the exterior and the interior, may have other features that set them apart from this large group. Type 16 Variants includes these, with their differences that show up in their profiles, their use of a handle, their clays, or their glazes; these are fully listed in the descriptions of the lamps below.

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The chronological range of these variants is the same as that of Type 16 B, with lamps having low bodies and narrow rims falling in the earlier years of this period and the rest assigned generally to the period 500-480 B.C.

Two lamps are of non-Attic clay; all the rest are Athenian products. **118** is Corinthian, an interesting Corinthian imitation of the Attic Type 16 B, which had been inspired in turn by the earlier Corinthian Type 16 A. **106** is of a coarse red micaceous clay that resembles the Corinthian fabric used so often in later years in Type 16 A.

106 (L 2181). Pls. 4, 32.

H. 0.025 m.; D. 0.08 m.

Half of lamp preserved, nozzle missing. Traces of burning on rim. Coarse micaceous clay, perhaps Corinthian; unglazed.

107 (L 2833). Pls. 4, 32.

H. 0.02 m.; D. 0.078 m.

Fragment of right side with trace of nozzle; remainder restored. Black glaze on interior, around nozzle, and in two bands on rim. There is a slight trace of diluted glaze-wash on the bottom, none on the reserved clay between the rim's concentric bands. The intentionally reserved light band may well have been inspired by the accidental bands, caused by stacking, seen occasionally on lamps of Type 16 B, cf. **102**. To be dated *ca.* 500-480, by stylistic analogy with Type 16 B.

Hesperia, Suppl. V, p. 144, no. 40, fig. 72.

C 9: 6, pit: filled *ca.* 450 B.C. but with considerable earlier material.

108 (L 4659). Pl. 22.

Pres. H. 0.016 m.

Two joining fragments and one non-joining, from the rim and upper wall of a lamp like preceding; start of nozzle preserved with black glaze around it; black glaze and wash as on preceding. Scratched on either side of rim's reserved band: [Θεμισ]θοκλ[ε̂]ς | [Νεο]κλέος. This use of the lamp fragment as an ostrakon for Themistokles indicates that it was made and broken before 471 B.C., when he was actually ostracized; it may well have been used, however, in the earlier ostrakophoria of 482 B.C.

Hesperia, XV, 1946, p. 274, under no. 11.

109 (L 1176).

H. 0.018 m.; D. 0.062 m.

Back half preserved with stubs of horizontal band handle; much smaller than usual lamps; profile, glaze, and wash like preceding, with reserved band on rim. Handle and space within it glazed.

Hesperia, XV, 1946, p. 332, no. 334, pl. LXVIII.

G 6: 3, shaft: upper filling, *ca.* 500-480 B.C. Another inventoried (uncatalogued) example of Type 16 Variants found here.

110 (L 2186). Pls. 4, 32.

H. 0.027 m.; H. with cone 0.03 m.; D. 0.097 m.

Complete except for most of one nozzle, restored. Black glaze inside, around nozzles, and on rim save for the reserved band; thin brown wash on bottom and sides, none on rim.

D 7: 2, destruction filling: *ca.* 480-479 B.C.

111 (L 1555). Pls. 4, 32.

H. 0.018 m.; D. *ca.* 0.076 m.

Right half preserved with part of nozzle. Black glaze on interior, rim, and around nozzle; diluted orange wash elsewhere. To be dated in last quarter of 6th century because of low sides and narrow rim, like those of earlier examples of Type 16 B.

G 11: 5, filling over bedrock: with pottery of the second half of 6th century B.C.

112 (L 3415). Pls. 4, 32.

Two joining fragments preserve most of lamp except nozzle and small horizontal bar handle (round in section). Good black glaze throughout exterior and interior, except for reserve space under handle, and base; no wash. The height of lamp and width of rim would indicate a date around the end of the 6th century; the full use of glaze is not unusual in the later 6th century.

Hesperia, Suppl. V, pp. 144-145, noted under no. 41.

G 11: 3, well: accumulated filling, from last years of 6th century to *ca.* 480 B.C.

113 (L 1200). Pls. 4, 32.

H. 0.019 m.; D. *ca.* 0.077 m.

Two joining fragments preserve parts of rim, side, bottom, and handle stubs; handle was narrow and circular in section. Good black glaze as in preceding.

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Hesperia, XV, 1946, pp. 334-335, no. 349, pls. LXVIII, LXIX.

Provenance as of **109**.

114 (L 2786).

Pres. H. 0.015 m.; D. 0.095 m.

Single fragment preserving half of rim and stubs of handle, like preceding; profile like **94** (Type 16 B). Black glaze throughout, including space under handle. To be dated in last quarter of 6th century by stylistic analogy with earlier lamps of Type 16 B.

M 17: 4, well: filled in second quarter of 5th century B.C. with material mostly of late 6th and early 5th centuries.

115 (L 2857). Pls. 4, 22, 32.

Max. dim. 0.05 m.

Single fragment preserving part of rim and body; no traces of nozzle or handle. Rim and interior unglazed; black glaze on lower part of body, white paint on upper part. Inscription, badly worn, painted in black glaze on rim. The use of white with black glaze is most unusual for a lamp, but is often seen on pottery of the second half of the 6th century.

116 (L 663). Pls. 4, 32.

H. 0.023 m.; Est. D. 0.10 m.

Single fragment preserving part of rim, side, and bottom; no traces of nozzle or handle. Flaky black glaze all over except for bottom which has traces of thin wash.

G 15: 1, well: main dumped filling, late 6th century B.C. to *ca.* 500 B.C. or shortly after.

117 (L 3411). Pls. 4, 32.

Pres. H. 0.022 m.; Est. D. 0.072 m.

Single fragment from right side preserving trace of nozzle. Black glaze on interior, rim, and around nozzle; dilute orange-red wash on side.

118 (L 4460). Pls. 4, 32.

H. 0.028 m.; Est. D. 0.072 m.

Mended from several pieces; parts of nozzle, rim, and side walls restored. Corinthian clay; very worn black glaze throughout exterior and interior. The profile suggests a date in the early 5th century.

119 (L 4624). Pls. 4, 32.

Pres. H. 0.017 m.; Pres. L. 0.046 m.

Single fragment with about one-fourth of rim, upper surface, and a part of the side preserved; traces of one attachment for horizontal handle. Good black glaze, fired red in spots, on side and top; wide reserved band on top just outside raised rim; no glaze in area between handle attachments. This lamp combines the overhanging rim of Type 16 with the inner raised band of Type 20; it may be safely dated in the latest 6th or early 5th century, before 479 B.C.

TYPE 17 A

Lamps with Glazed Ridges around Borders of Rims

Nos. 120-123 (and 2 others inventoried). **Plates 4, 33.**

Corinth: classified under Type II.

Latest years of 6th century and down to *ca.* 480 B.C. Dating based on stylistic similarities to Type 16 B and on the finding places.

A very sophisticated type of lamp, not unrelated to Type 16 B, shows the craft of the lampmaker at its highest peak, with exceptional skill evident in the handling of profiles and contrasts of color. A flat or slightly concave bottom supports the walls that rise in two planes, an upper and a lower; the former is always concave, the latter usually so. The flat top is banded by a raised ridge around the central opening and another, around the outer edge, which overhangs or prolongs the concave profile of the upper part of the walls. This overhang, together with the flat top, shows a close relationship to lamps of Type 16 B. The nozzle is also similar to the conventional nozzle of that type. It is possible that a horizontal band handle was occasionally used, but the

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complete rear portion of no lamp is preserved where traces of a handle might be found. One example, **123**, has a central tube and two nozzles recalling **110** of Type 16 Variants.

Smooth Attic clay is used consistently in these lamps, and a very good quality of black glaze that is applied to the floor of the interior, on the lower section of the exterior wall, around the exterior of the nozzle, and on the two ridges that encircle the rim. Elsewhere the clay is left exposed, although an occasional use is made of a thin diluted glaze-wash on the bottom and on the upper part of the walls; none ever appears on the rim. The consistency shown in these lamps suggests that they were made in one shop, possibly during a very short period of years.

120 (L 3968). Pls. 4, 33.

H. 0.024 m.; Est. D. 0.083 m.

Single fragment preserving about one-third of body with part of nozzle; remainder restored. Black glaze on interior floor, lower angle of body, around nozzle, and on ridges; traces of wash on base only.

F 19: 5, well: 5th century to *ca.* 480 B.C.

121 (L 2196).

H. 0.028 m.; Est. D. 0.10 m.

Single fragment preserving about one-third of body with part of nozzle. Profile like preceding. Glossy black glaze applied as on preceding; traces of wash on base and upper part of body.

122 (L 677). Pls. 4, 33.

Pres. H. 0.023 m.; Est. D. 0.095 m.

Single fragment preserving parts of rim, nozzle, and upper part of body. Good black glaze throughout interior, on ridges, around nozzle, and on lower portion of lower angle of body; no traces of wash on reserved clay.

Hesperia, XV, 1946, p. 332, no. 336, pl. LXVIII.

G 6: 3, shaft: upper filling, *ca.* 500-480 B.C.

123 (L 3326). Pls. 4, 33.

H. 0.032 m.; D. 0.118 m.

Mended from several fragments; most of nozzles and parts of rim and wall restored. Double-nozzled lamp with central tube. Fine black glaze applied as on preceding, with two concentric rings of glaze on bottom; no traces of wash.

Hesperia, XV, 1946, p. 332, noted under no. 336.

TYPE 17 B

Lamps with Dotted Ridges around Rim's Borders

Nos. **124-125** (and 1 other inventoried). Plates 4, 33.

Ca. second quarter of 6th century B.C. Dating based on stylistic similarities to Types 6 A and 12 A, and on the finding place of **125**.

This sturdy type is made of a much thicker Attic fabric and has a somewhat different profile than Type 17 A. Few exist, and these fragmentary, but they form a distinctive class that was surely the product of one shop, perhaps of one craftsman.

A very heavy raised base with a slightly concave bottom or high slanted base-ring supports the curving side walls; the rim profile with inner and outer concentric ridges is very similar to that of Type 17 A, but it also recalls the flat rims with ridges of Types 6 A and 12 A. No example preserves a trace of a handle. The nozzles on two of our examples are missing; they may have been closed or open, like that of **125**. This open nozzle recalls the similar formation seen on Type 6 A.

In the use of glaze these lamps are unusual, since black is confined to the interior and a series of dots on the two ridges; elsewhere the clay is unglazed, although there may be a diluted glaze-wash on the edges of the rim. The use of dots of glaze on the rim recalls the dots or dashes of glaze applied to a slightly later lamp of Type 7 (**53**). Type 17 B belongs earlier in the over-all classification than its position here indicates. The superficial resemblance of its ridged rim to that of Type 17 A is the reason for its position here.

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124 (L 1361). Pls. 4, 33.

H. 0.038 m.; Max. dim. 0.071 m.

Single fragment preserving complete profile; black glaze in interior and for dots on ridges; wash applied to ridges only, before the added dots.

125 (L 4835). Pls. 4, 33.

H. 0.037 m.; Est. D. 0.104 m.

Single fragment preserves complete profile and most of open nozzle. Black-glazed as preceding.

O 7: 9, pit: first half of 6th century B.C.

TYPE 18

Double-Decker Lamps

Nos. **126-130** (and 5 others inventoried). Plates 5, 33.

First two decades of 5th century B.C. Dating based on stylistic similarities to Types 16 B, 17 A, and on the finding places. Double-decker lamps with very different profiles will continue to be made sporadically, as rare versions of later types, for a long time; see **356** and **357** of Type 25 Variants, which may be as late as the early years of 3rd century B.C. An uninventoried example exists in Delos with late Hellenistic features.

The average Greek lamp with a single nozzle furnished a small light[46] suitable for most purposes in the average household. Sometimes more light was needed or desired, and a well equipped house might have not only a number of simple small lamps but occasionally a large lamp with two wick-holes; examples of these broad luxurious lamps appear in the early 5th century with the emergence of Types 16 and 17;[47] lamps such as **110** and **123** have rather wide central openings that would admit dust and dirt; their breadth and comparative shallowness might have made them precarious to carry when filled or lighted. To produce a more compact type of lamp that would eliminate these drawbacks and yet contain twice the normal amount of oil for the two nozzles, an inventive craftsman devised Type 18, stressing vertical expansion rather than horizontal.

This new type shows a pair of lamps, one above the other. The lower lamp is a simple container; the single example preserved from the Agora shows a broad slightly concave bottom with side walls rising, nearly straight, to the point of junction with the upper lamp. Presumably this lower member had a tube leading into it. An unpublished lamp in the Acropolis Museum, No. 5617, gives evidence for a separate nozzle for the lower lamp, at the level of its top rather than the level of the upper lamp's top. Several of the Agora's specimens, preserving parts of the upper lamps, but little of the lower, show a tube or spout, projecting like a nozzle but not formed like one, at the level of the upper lamp's rim; such a spout is the filling hole for the lower reservoir; it leads directly into it through a small hole in the side wall of the lower lamp. This hole is too small and too inconvenient to have served for the easy insertion of a wick.

The upper and lower bodies were made separately, then joined while the clay was in a leather-hard state; the upper lamp was placed firmly in the top of the open lower member, then the two united by added clay at the point of juncture, the whole exterior smoothed down while the double lamp was put on the wheel again.

The top of the upper lamp is not unusual; in some instances it is like the top of Type 16 B

[46] About the same intensity as a modern candle; the average lamp of Type 16 B holds enough oil to burn approximately four hours.

[47] The presumption that these were for domestic rather than sanctuary use is based on the fact that masses of household pottery were found with them in wells. None has been found in debris definitely assignable to a sanctuary, but of course the market area had few sanctuaries in the early 5th century.

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lamps, with a nearly flat overhanging rim. Other examples have tops like those of Type 17 A, with raised bands around outer and inner edges of the flat rims. The upper lamp always has a conventional nozzle, usually like the nozzles of Types 16 and 17. An entire lamp would presumably have three projecting members: a nozzle for each of the reservoirs and a tube for filling the lower one. No lamp is sufficiently preserved to show the relative positions of these projections, although there is evidence in **130** to show that the nozzle of the upper lamp was opposite the filling tube for the lower. The Acropolis lamp shows that its two nozzles were opposite each other.

Although the presence of a real nozzle for the lower lamp on the Acropolis example seems to show that the lower body served actually to hold oil and a wick, it must be noted that there are no lower nozzles preserved on the fragmentary Agora examples. Nor do the later double-bodied lamps (**356** and **357** of Type 25 Variants) preserve any indication of nozzles for the lower portions. Another factor to consider is the absence of glaze within any of the lower interiors, yet these interiors are remarkably clean, bearing no traces of accumulated grime or burning. It seems quite plausible that, although some double-decker lamps may have been used as two separate oil reservoirs, many of them, perhaps most, were constructed so that the lower chamber would contain something else. Hot water is the most obvious suggestion, introduced to warm the lamp and the oil in the upper reservoir, to make the oil burn better if it were turgid or semi-congealed on a cold night. This would explain the cleanliness of the interiors and the presence of a number of filling-spouts but so few nozzles for the lower chambers. The water would remain in the lamp for the duration of the evening, and then be poured out the next day. If any oil remained in the lamp from the previous night it would not spill out when the water reservoir was emptied, because the tube for the lower chamber is on the back of the lamp, opposite the nozzle of the upper reservoir.

The use of glaze on lamps of Type 18, which are made of Attic clay, is similar to the arrangements on the several preceding types. Good black glaze is used on the interior of the upper lamp. There is no glaze in the lower chamber; it would have been impossible to introduce a brush after the upper lamp was attached, and the makers evidently preferred not to pour in glaze through a nozzle or tube and then empty it out after the inside was coated, as later lamp manufacturers frequently did. On the outside, glaze is usually used on and around the nozzles and filling tubes and for bands around the outside and inside of the rim; **130** has no glaze whatsoever on its exterior. Diluted glaze-wash appears often on the bottoms and on the exterior walls; it may or may not be used on the reserved red clay areas of the rims between the bands of glaze. As on lamps of Type 16 B, this wash was applied before the black glaze was added.

The type is predominantly an Athenian one. Three were found in the excavations at the Kerameikos.[48] One found at Selinus seems to be Attic, but later than the floruit of Type 18.[49] An example from Cyprus is Attic, but of a later period; this lamp was a chandelier with three superimposed reservoirs, all with nozzles.[50]

126 (L 4062). Pls. 5, 33.

Pres. H. 0.031 m.; Est. D. 0.11 m.

Three joining fragments preserve half of bottom and parts of walls with trace of nozzle, of the lower member of a double-bodied lamp. Traces of junction with upper member at top of walls. Black glaze around nozzle; wash on all parts of exterior; interior unglazed.

Hesperia, XV, 1946, p. 333, noted under no. 337, pl. LXVIII.

[48] Uninventoried, in the storerooms of the excavation; their profiles suggest that they are late variants, closely allied to 4th century B.C. lamps of Type 25.

[49] *Mon. Ant.*, LVI, 1928, cols. 370-373, fig. 165.

[50] *Opuscula Atheniensia* I, Skrifter utgivna av Svenska Institutet i Athen, 4, II, pp. 120-121, fig. 1.

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G 6: 3, shaft: upper filling, *ca.* 500-480 B.C. Two additional inventoried (uncatalogued) examples of Type 18 found here.

127 (L 1193). Pls. 5, 33.

Pres. H. 0.022 m.; D. 0.09 m.

Three joining fragments from the upper member of a double-bodied lamp preserve half of rim and parts of walls, with traces of filling-tube for lower member. Black glaze in interior, around filling-tube on exterior, and in two concentric bands around inner and outer edges of rim; diluted glaze-wash on sides.

Mentioned *ibid.*, L 1193 a and b.

Provenance as of 126.

128 (L 484). Pls. 5, 33.

Pres. H. 0.02 m.; D. 0.071 m.

Two joining fragments preserve two-thirds of upper member, with much of filling-tube leading to missing lower member; slight traces of nozzle of upper member opposite filling-tube. Black glaze fired light red in some areas in interior, around nozzle and filling-tube, and on rim's ridges; glaze-wash on walls.

Mentioned *ibid.*, L 484.

129 (L 1204). Pls. 5, 33.

Pres. H. 0.025 m.; Est. D. 0.09 m.

Single fragment preserving almost half, with nozzle, of upper member; back missing where filling-tube for lower member might have been opposite nozzle. Black glaze in interior, around nozzle, and on rim's ridges; glaze-wash on walls and reserved space between ridges on rim.

Ibid., pp. 332-333, no. 337, pl. LXVIII.

Provenance as of 126.

130 (L 4005). Pls. 5, 33.

Pres. H. 0.026 m.; D. 0.075 m.

Two joining fragments preserve about two-thirds of upper lamp. Traces of two nozzles for upper lamp, near each other, with the space between occupied by another projection that presumably was the filling-tube leading to lower member. Rim depressed and suitable for receiving a lid. Good black glaze inside; outside unglazed but covered with glaze-wash, fired gray.

TYPE 19 A

Lamps with Sharp Angle between Body and Rim; Central Tubes; Imported Fabric

Nos. 131-135 (and 13 others inventoried). Plates 5, 33.

Corinth: classified under Type III.

Last quarter of 6th century B.C. to *ca.* 480. Dating based partly on the fact that such lamps found at Lindos [51] are assigned to the period after 525 B.C. and partly on the finding places.

Broad shallow lamps with two nozzles flourished concurrently with the more compact double-bodied lamps, and even though they may have been impractical, continued with a greater popularity, since they were cheaper and easier to construct.

One large group, Type 19 A, consists of shallow saucer-like specimens, each of which has a slightly convex bottom that curves up into low side walls; the rim is flat and slopes downward, overhanging the interior only. There is a wide central tube with a conical profile and a neatly defined angle at the point of junction with the bottom, as in lamps of Type 11; it seems probable that this central fixture is to facilitate holding the lamp while lighted, and is a development of the open corona type of lamp. No signs of wear appear within the tube wherever it is preserved. The two nozzles, diametrically opposite, are unusual in that they tip upward, continuing the slanting line of the rim so that their tips are several millimeters higher than the rim. The wick-holes intrude well into the rim. The nozzles are shallow, obviously handmade, and bear the marks

[51] Blinkenberg, *Lindos*, I, p. 615, pl. 122, no. 2557.

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of finger prints on the outside where they were patted onto the lamp itself. There is no handle in Type 19 A.

The clay is thin and brittle, probably not Attic; it is light brown to buff in color, sometimes with small air bubbles and occasionally micaceous. The undersides of most of these lamps are ridged, where they have been trimmed down with a wooden tool. A dull black glaze, sometimes fired red, appears on the interiors and the rims, never on the exteriors or interiors of the nozzles, save for a trace sometimes where the glaze of the rims is brought out onto part of the nozzle's rims.

These lamps have appeared in other areas where they have been called variously South Russian,[52] Rhodian,[53] and Attic.[54] The clay resembles that used for household pottery in the Lindos settlements, according to Blinkenberg;[55] it is a thin brittle clay rather unlike the normal Attic product. The omission of glaze around the outside of the nozzle is not typical of Attic lamps of this period or any related period, and the tipped angle of the nozzle is at variance with Athenian traditions of lamp-making. One must look for a source elsewhere, but whether it is Rhodes or another eastern center cannot as yet be determined.

131 (L 2700). Pls. 5, 33.

H. 0.018 m.; D. 0.097 m.

Four joining fragments preserve about half of lamp including tube and one nozzle; remainder restored. Brownish buff clay, thin black glaze.

E 14: 5, well: early 5th century B.C. to *ca.* 480 B.C.

132 (L 3694). Pls. 5, 33.

H. 0.035 m.; D. 0.138 m.

Several fragments preserve about one-third of large lamp including tube and part of one nozzle; remainder restored. Buff clay, thin black glaze.

Hesperia, Suppl. IV, p. 38, fig. 30, b.

H 12: 18, packing: *ca.* 490-480 B.C.

133 (L 3374).

H. 0.02 m.; D. 0.098 m.

Complete except for one nozzle and chips; profile like preceding. Buff clay, thin red to black glaze.

Hesperia, XV, 1946, p. 333, under no. 339, L 3374, pl. LXVIII.

G 11: 3, well: accumulated filling, last years of 6th century B.C. to *ca.* 480 B.C.

134 (L 688).

H. 0.019 m.; Max. dim. 0.065 m.

Fragment of rim and side wall; profile like preceding. Micaceous buff clay, dull mottled red glaze.

Ibid., no. 339 (L 688).

G 6: 3, shaft: upper filling, *ca.* 500-480 B.C. Three additional inventoried examples of Type 19 A found here.

135 (L 3999). Pls. 5, 33.

H. 0.022 m.; D. 0.098 m.

Several joining fragments preserve most of lamp except for one nozzle; remainder restored. Brownish clay, dull worn black glaze.

TYPE 19 B

Lamps with Sharp Angle between Body and Rim; Central Tubes; Attic Fabric

Nos. 136-141 (and 1 other inventoried). **Plates 5, 33.**

Corinth: classified under Type III.

Last quarter of 6th century B.C. to *ca.* 480. Dating based partly on stylistic similarities to Type 16 B and partly on the finding places.

[52] Waldhauer, no. 24, pl. II. This lamp in the Hermitage Museum, found in South Russia, is called a "local imitation" only because it is obviously non-Attic.

[53] *Lindos*, I, p. 615, no. 2557, pl. 122. [54] *Aegina*, p. 469, no. 10, pl. 130, no. 9. [55] *Op. cit.*, p. 615.

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Type 19 B, the Attic counterpart of Type 19 A, shows a translation of the latter into local clay with fine black glaze. There is also a close relationship with Type 16 B, which has a similar lower profile and rim, although its rim extends over both the outer and inner faces of the walls, rather than just over the inner area as in Types 19 A and B. The central tube is wide and very low; sometimes missing is the sharp profiling at the junction of tube and bottom which is characteristic of Type 19 A. The outside of the body frequently bears horizontal ribbing made by a tool while the lamp was leather-hard. The usual lamp has a pair of nozzles, like the prototype, but an occasional example bears only one. The nozzles intrude slightly onto the rim's surface; the tips of the nozzles frequently, but not always, copy the upward swing of Type 19 A. No lamp has a handle.

In the use of glaze as well as clay these lamps reflect the contemporary Athenian mode of Type 16 B; good black glaze is used throughout the interior, on the rim, and all around the exteriors of the nozzles. Elsewhere the exterior shows the conventional Attic diluted glaze-wash. The Athenians did not approve of the impractical custom, seen on Type 19 A, of leaving the outside of the nozzle uncoated, where dripping or burning oil might leave an unsightly stain on the unglazed clay.

It is interesting to note that only seven of these Athenian lamps exist in the Agora inventory, compared to eighteen examples of the imported Type 19 A. Both types are contemporary, and show that the local fabricants were not entirely successful in competing with a cheaper foreign product. After the Persian invasion Type 19 A ceased to be imported and the local craftsmen turned to other styles, both for home consumption and export.

136 (L 3554). Pls. 5, 33.

H. 0.017 m.; D. 0.097 m.

Intact except for chips from one nozzle and minor chips on rim. Pinkish buff Attic clay; black glaze; glaze-wash on outside.

T 24: 3, well: dumped filling of end of 6th or early 5th century B.C.

137 (L 1554).

H. 0.013 m.; Max. dim. 0.065 m.

Single fragment preserving one nozzle and complete profile, as preceding. Clay, glaze, and wash as preceding.

G 11: 5, layer on bedrock: second half of 5th century B.C.

138 (L 3416).

H. 0.019 m.; Est. D. 0.105 m.

Single fragment preserving most of floor with central tube and portion of complete profile, as **136**. Clay, glaze, and wash as preceding.

G 11: 3, well: accumulated filling, last years of 6th century to *ca.* 480 B.C.

139 (L 1190). Pls. 5, 33.

H. 0.018 m.; Est. D. 0.10 m.

Two non-joining fragments preserve most of floor with central cone, complete profile, and part of one nozzle; restored. Good black glaze; traces of thin wash on exterior.

Hesperia, XV, 1946, p. 333, no. 338.

G 6: 3, shaft: upper filling, *ca.* 500-480 B.C.

140 (L 3373). Pls. 5, 33.

H. 0.022 m.; D. 0.094 m.

Intact. Dull black glaze; wash on exterior.

Mentioned *ibid.*, and pl. LXVIII.

Provenance as of **138**.

141 (L 2446).

H. 0.02 m.; Est. D. 0.09 m.

Single fragment preserving most of floor and one-third of wall and rim, with one nozzle. Profile like preceding. Black glaze fired red in places; heavy wash.

E 14: 5, well: early 5th century B.C. to *ca.* 480 B.C.

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TYPE 19 VARIANTS

Lamps with Sharp Angle between Body and Rim; Variant Features

Nos. 142-148 (and 1 other inventoried). Plates 5, 33.

Corinth: classified under Type III.

Last quarter of 6th century B.C. to *ca.* 480. Dating based on the rim formations, like those of Types 19 A and B, and on the finding places.

A number of lamps may be assigned to Type 19 Variants because their rims are like those of lamps in the two preceding classifications, and it is generally according to the development of the rim and top that distinctions between types are made. This characteristic rim is flat or nearly flat and overhangs the interior of the lamp horizontally or sloping inwardly; there is no overhang on the exterior.

In other respects these variant lamps differ from Types 19 A and B. Most of them have handles, raised bases, and solid floors without the central tube; usually they carry single nozzles and a complete covering of black glaze. Chronologically, however, the variants are close to the standard varieties of Type 19. All of the variants are made of Attic clay (with one possible exception, 148, which may be an import). The idiosyncrasies in profile and decoration are discussed below in the descriptions of the individual lamps, together with occasional stylistic connections that these variants may have with other types in addition to Types 19 A or B.

142 (L 3961). Pls. 5, 33.

H. 0.022 m.; D. 0.087 m.

Intact except for fragment at back and most of horizontal bar handle; restored. Unusually small handmade nozzle. Conical projection in center, irregularly made and left as it came from wheel. Black glaze throughout interior, on rim, exterior of nozzle, and on handle. To be dated early in the last quarter of the 6th century by analogy with 30 of Type 5, which has a similar raised base, same handle, clay and glaze.

143 (L 1950). Pls. 5, 33.

Pres. H. 0.023 m.; Est. D. 0.10 m.

Single fragment preserving nozzle and one quarter of rim with part of side walls; restored. Nozzle slightly elevated and intrudes on rim, as on lamps of Type 19 A. Metallic black glaze throughout interior, on exterior of nozzle, and in three bands on edges and center of rim.

E-F 12-13-14, construction filling: *ca.* 460-450 B.C., but bulk of material prior to 480 B.C. and including many ostraka of the 80's.

144 (L 1202). Pls. 5, 33.

H. 0.029 m.; Est. D. 0.104 m.

Three joining fragments preserve base, parts of walls and rim, handle, and trace of nozzle. Glossy black glaze throughout except for inner face of handle, space between its points of attachment, resting surface of ring foot, and space within foot; space within foot decorated with three concentric circles.

Hesperia, XV, 1946, p. 334, no. 347, pl. LXIX.

G 6: 3, shaft: upper filling, *ca.* 500-480 B.C.

145 (L 1206). Pls. 5, 33.

H. 0.029 m.; Est. D. 0.104 m.

Three fragments preserve central tube, much of bottom and sides, and start of rim, handle, and nozzle. Glossy black glaze throughout except space between handle's points of attachment; false ring foot is covered with glaze or glaze-wash fired pink. A lamp having both handle and central tube is unusual; in this case the tube is redundant, obviously not designed for affording an easy grasp and useless for this purpose because of the handle. Perhaps the nozzle and handle were made to counterweight each other, in order to allow the tube to be used as a means of suspending the lamp upon occasion.

Ibid., no. 348, pls. LXVIII, LXIX.

Provenance as of 144.

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146 (L 1897). Pls. 5, 33.

H. 0.031 m.; D. 0.096 m.

Horizontal loop handle, nozzle, and bottom missing; all of these features carefully trimmed away in antiquity, perhaps to utilize resultant object for another purpose; restored. Worn black glaze throughout except for space between handle's points of attachment, a line around central opening, the groove at junction of foot and body, the resting surface of the foot, and the space within the ring foot. Because of the resemblance between this lamp's profile and that of **144**, as well as the circumstances of finding, this lamp may be placed in the 480's.

E 15: 6, well: late 6th century B.C. and early 5th, down to *ca.* 480 B.C.

147 (L 3361). Pls. 5, 33.

H. 0.021 m.; W. 0.083 m.

Mended from many pieces; most of nozzle and very narrow horizontal bar handle missing; restored. Good black glaze throughout including all of bottom and area between points of attachment of handle. The use of good black glaze all over is unusual, but not necessarily an indication of lateness. The convexity of the walls and the downward curve of the rim, however, combined with the lack of very sharp definition between walls and rim suggest a relationship with Type 20, which is a later type. **147** certainly belongs in the 480's rather than earlier.

148 (L 4000). Pls. 5, 33.

H. 0.02 m.; D. 0.075 m.

Five joining fragments preserve about half of rim and walls with part of floor, none of nozzle; there was no handle. Thin pink clay, perhaps Attic, but not unlike the clay of Type 19 A; brownish black glaze on rim and for a large dot and circle at center of floor only.

The profile of the lamp seems later than the early years of the 5th century, but such a restricted use of glaze is most unusual for a date as late as the second quarter of that century. It is quite possible that this odd specimen is of non-Attic origin and perhaps allied to Type 12 A, with a comparable date, in the second and third quarters of the 6th century.

TYPE 20

Early Lamps with Curved Sides; Ridge Around Filling-Hole

Nos. **149-155** (and 12 others inventoried). Plates 5, 34.

Corinth: classified under Type V.

First half of 5th century B.C. (both before and after the Persian wars), into the 460's.

A very common sort of lamp throughout the 5th century B.C. and well into the 4th is one with curving sides that extend inward to form the rim and enclose much of the body of the lamp. There are several variations on this theme, all of them beginning in the early years of the 5th century. One of these, that does not last after 450 B.C., is Type 20, a distinctive group of lamps. This type marks a further step in the growing tendency to enclose more and more of the body of the lamp so that the rim becomes more like a top with a small central filling hole.

Type 20 has a flat or slightly concave bottom, or sometimes a slightly raised base, that curves up into low sides extending inwardly and meeting a kind of rim. The rim is simply a raised band or a raised ring around the filling hole, but it is a relative of the narrow flat rim seen on lamps of earlier types, particularly Types 6 A, 12 A, and 13.

All examples have single nozzles with wick-holes that encroach a little onto the upper parts of the bodies, in a manner reminiscent of the wick-holes of Type 19 A. About half of the lamps are without handles; the others have flat horizontal band handles opposite the nozzles.

The clay is always Attic and the use of glaze is uniform; good black glaze is applied in a band around the shoulder of the lamp and on the raised ring or rim; with one exception (**150**) there is always a reserved area between these two concentric circles of glaze. The shoulder circle

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is broad if the raised rim is broad; it is correspondingly narrow if the rim is merely a raised ring, and in such cases the reserved area of natural clay is wider. Elsewhere glaze is used for the interiors, for the exteriors of the nozzles, the exteriors of the handles, and the areas of the lamps between the points of attachment for the handles. The lower parts of the bodies and bottoms uniformly carry a diluted glaze-wash, sometimes thin and inconspicuous, sometimes thick and reddish.

149 (L 1186). Pls. 5, 34.

H. 0.019 m.; D. 0.085 m.

Fragments of rim and body missing; restored. Black glaze fired red except on right side; pink wash.

Hesperia, XV, 1946, p. 334, no. 342, pl. LXVIII.

G 6: 3, shaft: upper filling, *ca.* 500-480 B.C. Three additional (uncatalogued) examples of Type 20 found here.

150 (L 3723).

H. 0.019 m.; D. 0.0845 m.

Intact except for minor chips. Profile like preceding. Black glaze on all of top without reserved line around rim; normal wash.

F 19: 5, well: early 5th century to *ca.* 480 B.C.

151 (L 3372). Pls. 5, 34.

H. 0.019 m.; D. 0.084 m.

Intact. Black glaze fired red on right side of rim; heavy pink wash.

Hesperia, VIII, 1939, p. 231, fig. 27.

G 11: 3, well: accumulated filling, from last years of 6th century to *ca.* 480 B.C. Another inventoried example of Type 20 found here.

152 (L 678). Pls. 5, 34.

H. 0.018 m.; Rest. D. 0.077 m.

Left side preserved including most of nozzle and start of handle; handle and right side restored. Badly flaked black glaze applied in standard manner; no traces of wash preserved on small remaining areas of sides and reverse.

Hesperia, XV, 1946, p. 334, no. 343, pl. LXVIII.

Provenance as of **149**.

153 (L 1187). Pls. 5, 34.

Pres. H. 0.021 m.; D. 0.076 m.

Two joining fragments preserve most of rim and upper part of body; also stubs of handle; restored. Black glaze applied in standard manner; wash visible on all exterior surfaces not glazed.

Ibid., no. 344, pl. LXVIII.

Provenance as of **149**.

154 (L 4415). Pls. 5, 34.

H. 0.021 m.; Est. D. 0.078 m.

Three joining fragments preserve most of left side with part of nozzle, and show that lamp did not have handle; restored. Narrow shoulder ridge in addition to rim ridge. Black glaze fired red inside; heavy pink wash.

C 18: 4, filling: first half of 5th century B.C.

155 (L 4678). Pls. 5, 34.

H. 0.018 m.; Est. D. 0.062 m.

Single fragment preserves rear half of lamp with handle attachments; restored. Normal use of glaze and wash.

D 17: 2, rubbish pit: end of first quarter of 5th century B.C. Another inventoried example of Type 20 found here.

TYPE 21 A

Curved Rims; Plain Bottoms

Nos. 156-163 (and 5 others inventoried). **Plates 6, 34.**

Corinth: classified under Type IV.

Later years of 6th century B.C. down to *ca.* 480 B.C. Dating based partly on the fact that two examples served as ostraka, in 483 B.C. and either in 482 or 471 B.C., and partly on the finding places.

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Lamps with simple curved sides form a very large group, classed as Types 21 A-D, lasting from the later years of the 6th century to the last years of the 5th. There is little change or development within this period, but the earlier examples have certain minor characteristics in common which group them together as members of Type 21 A.

These lamps, although varying in some other respects, uniformly have flat or slightly concave bottoms without raised bases, that curve up into the distinctive rounded sides characteristic of Type 20; the rims continue the curve of the sides and enclose, in some lamps, large parts of the bodies. The curving rims continue from Type 5. All lamps in Type 21 A are possessed of a single nozzle with an oval wick-hole that touches the area of the rim and usually encroaches upon it. Usually there is a handle opposite the nozzle, horizontal and either flat or circular in section; occasionally there is no handle.

There is considerable uniformity in clay and the use of glaze; the former is Attic. The black glaze is of varying quality, but applied always to the interior, the exterior of the nozzle, and the handle if one exists; some lamps have glaze on the area between the points of attachment for the handle, some do not. With the exception of the earliest of these lamps, **156**, the broad rim is also coated with glaze, and this sometimes extends down to cover the sides; the bottom is always unglazed and usually bears a thick coating of diluted glaze-wash.

After the events of 480-479 B.C. the type changed somewhat (into Type 21 B) with the addition of a flat raised base. The majority of the lamps of Type 21 A were made in the first two decades of the 5th century, although the type began somewhat earlier as a development from Type 5.

156 (L 3444). Pls. 6, 34.

H. 0.016 m.; D. 0.09 m.

Four joining fragments preserve all of lamp except for fragments of base and rim; no handle existed; restored. Dull black glaze on interior and around nozzle.

U 25: 2, well: dumped fillings of end of 6th century B.C.

157 (L 1183). Pls. 6, 34.

H. 0.017 m.; D. 0.081 m.

Nozzle and immediately adjacent parts of rim and body missing; restored. Black glaze on rim fired red toward inner edge and black toward outer as a result of stacking; red glaze on interior. Thin wash on exterior.

Hesperia, XV, 1946, p. 333, no. 340, pl. LXVIII.

G 6: 3, shaft: upper filling, *ca.* 500-480 B.C.

158 (L 3002). Pl. 22.

Max. dim. 0.067 m.

Fragment of bottom only, profile like preceding. Used as ostrakon against Themistokles either in 482 or 471 B.C. (*Hesperia*, XV, 1946, p. 274, no. 11); name scratched on outer surface. Black glaze fired red on interior, wash on exterior.

159 (L 1194). Pls. 6, 22, 34.

H. 0.022 m.; D. 0.108 m.

Three fragments make up to two. One preserves start of handle and some of rim and body; the other, parts of rim, body, and handle; restored. Handle is circular in section. Fine black glaze on interior, rim, and outside of handle; wash on body. Graffito.

Hesperia, XV, 1946, p. 334, no. 341, pl. LXVIII.

Provenance as of **157**.

160 (L 3299). Pls. 6, 34.

H. 0.018 m.; D. 0.075 m.

Intact; strap handle. Worn black glaze on inside, rim, around exterior of nozzle, both inside and outside of handle, and on body between points of attachment for handle; wash on rest of body.

161 (L 3371). Pls. 6, 34.

H. 0.024 m.; W. 0.082 m.

Intact except for horizontal band handle; restored. Good black glaze on interior, handle, rim and upper part of body, including nozzle area but excluding area between points of attachment for handle. Wash elsewhere on body.

Hesperia, VIII, 1939, p. 231, fig. 27.

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G 11: 3, well: accumulated filling from last years of 6th century to *ca.* 480 B.C.

162 (L 1877). Pl. 22.

Max. dim. 0.062 m.

Fragment of bottom only; profile like preceding. Used as ostrakon against Kallixenos Aristonymou, a candidate for ostracism in the 480's, probably in 483 B.C. (*Hesperia*, XV, 1946, pp. 272-273, no. 8); name scratched on outer surface. Glaze and wash as on preceding.

163 (L 494). Pls. 6, 34.

H. 0.027 m.; Rest. W. 0.084 m.

Single fragment preserves all of lamp except part of nozzle and one-third of rim and side; restored. Thin strap handle. Thin reddish black glaze on interior, rim, around outside of nozzle, and outside of handle; very thin wash elsewhere.

TYPE 21 B

Curved Rims; Raised Bases

Nos. **164-170** (and 41 others inventoried). Plates 6, 34.

Corinth: classified under Type IV.

Between 480 B.C. and *ca.* 415 B.C.

This long-lived variety of Type 21 has most of the usual characteristics associated with Type 21 A, with the addition of a well defined flat raised base; this base is the distinguishing feature of Type 21 B; it is very rarely found in the long series of Type 21 lamps before 480 B.C.[56]

The raised base may be either flat or very slightly concave; the floor inside the lamp is also flat or nearly so, with never any occurrence of the central raised cone or projection that frequently characterizes lamps made before 480 B.C. The sides curving into the rim are like those on lamps in Type 21 A. Every one of the inventoried lamps in the Agora collection, assigned to Type 21 B, has a trace or more of a horizontal band handle, whenever the rear portion of the lamp is preserved. The handles are usually flat in section, but that of **167** is by exception circular and has its points of attachment close together, giving to the handle a pronounced U-shape, comparable to U-shaped bar handles on contemporary skyphoi. This handle is horizontal, and is in the same plane as the top of the lamp; the usual handles of Type 21 B are set at a slight angle to the top and afford an easy grasp.

The nozzles of Type 21 B are small and flat, with the wick-hole occupying practically all of the nozzle. There is a tendency for the nozzle to be somewhat broader and longer, and the wick-hole further removed from the rim of the lamp, in later examples of the type. This is not consistent, however, and cannot be reliably employed as a means of close dating within the type. It will be seen, however, that when the nozzle becomes pronouncedly elongated in the late 5th and early 4th centuries B.C. it serves as a distinguishing characteristic for identifying lamps of Type 21 C, a much later variety of this curved-rim class.

All lamps of Type 21 B are of Attic clay and show great consistency in the use of black glaze. This is generally of good quality and applied all over the lamp, inside and outside, with the exception of the base. Only two lamps, **167** and **170**, have glazed bottoms, and these examples also differ, as may be seen in the description below, in the matter of handle or nozzle. The normal unglazed base is usually coated with a pink diluted glaze-wash. The extensive use of glaze on the outside includes the area between the handle attachments, often left unglazed on lamps made

[56] One early lamp with a raised base, **184**, is catalogued under Type 21 Variants.

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before 480 B.C. but rarely unglazed afterward; 164 is the one exception with a reserved space between the handle attachments.

Type 21 B was the commonest type of lamp during the second and third quarters of the 5th century. It was easy to make, convenient to use, and did not deviate from a standard form for two generations. It did not stop abruptly; the nozzles gradually became longer and wider. Examples with pronouncedly long and wide nozzles have been classified as Type 21 C, and belong to the last quarter of the 5th century B.C. and the early years of the 4th.

164 (L 4536). Pls. 6, 34.

H. 0.019 m.; D. 0.077 m.

Most of body preserved, with part of the rim, the stumps of the handle, and a trace only of the nozzle and wick-hole; restored. Good black glaze all over except between points of attachment for handle and on resting surface. No traces of wash.

A 18-19: 1, pit: dumped filling containing many ostraka of the 80's, but with some pottery as late as second quarter of 5th century B.C.

165 (L 3971). Pls. 6, 34.

H. 0.017 m.; D. 0.070 m.

Most of handle, two-thirds of nozzle, and small pieces of rim, wall, and base missing; restored. Black glaze mottled to red and greenish gray all over, except base which has thin brown wash.

F 19: 4, well: *ca.* 490-460 B.C.

166 (L 3972). Pls. 6, 34.

H. 0.020 m.; D. 0.077 m.

Complete except for small fragments of rim; restored. Good black glaze all over, except base which has thin red wash.

Provenance as of 165.

167 (L 2834). Pls. 6, 34.

H. 0.023 m.; D. 0.081 m.

Much of handle and all of nozzle, some of rim, missing; restored. Handle round in section, not flat like preceding. Good black glaze all over including base.

Hesperia, Suppl. V, p. 144, no. 41, fig. 72.

C 9: 6, pit: filled *ca.* 450 B.C., but with considerable earlier material. Another inventoried example of Type 21 B found here.

168 (L 1110). Pls. 6, 34.

H. 0.02 m.; D. 0.079 m.

Handle, a quarter of rim, and fragments of bottom missing; restored. Good black glaze all over except base; no traces of wash.

Hesperia, IV, 1935, p. 516, no. 89, fig. 1.

R 13: 4, well: *ca.* 430-420 B.C. Three additional inventoried examples of Type 21 B found here.

169 (L 2825). Pls. 6, 34.

H. 0.019 m.; D. 0.08 m.

Complete except for most of handle and piece of rim; restored. Good black glaze all over, except base where there is thin red wash.

M 18: 8, well: last quarter of 5th century B.C. Another inventoried example of Type 21 B found here.

170 (L 3973). Pls. 6, 34.

H. 0.029 m.; Rest. D. 0.130 m.

Most of base, one nozzle, start of handle, and fragments of rim preserved; remainder, including two nozzles, restored. Similar three-nozzled lamps of Type 21 B were found on the Acropolis (unpublished; in Acropolis Museum). In this lamp enough of walls are preserved to preclude more than three nozzles if they were symmetrically placed. Black to reddish brown mottled glaze carelessly applied over all parts including base, except for a reserved circle in its center; no wash.

Provenance as of 165.

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TYPE 21 C

Curved Rims; Long Wide Nozzles

Nos. **171-176** (and 31 others inventoried). Plates 6, 34.

Corinth: classified under Type IV.

Last quarter of 5th century B.C. and well into early years of 4th century. Dating based partly on stylistic development from Type 21 B and partly on the finding places. Examples have been found on the Pnyx in a context dated before 404-403 B.C. (*Hesperia*, I, 1932, p. 133, fig. 20).

In the last quarter of the 5th century some lamps with curved rims began to be made with much longer and flatter nozzles, broader than their predecessors, and with the wick-holes well removed from the rim area. These lamps, with nozzles characteristic of other late 5th and 4th century B.C. types, brought the main features of Type 21 well down into the 4th century. Occasionally Type 21 C lamps are found with multiple nozzles.

In all other essential respects Types 21 B and C are similar: the raised base, the curved sides and rim, and the flat ribbon handle set at a slight angle to the top of the lamp are common to both. The clay and glaze are alike, although in Type 21 C the glaze is apt to be of poor quality and carelessly applied; often it has a tendency to flake. Glaze always appears between the points of attachment for handles; the bases usually but not always carry a coating of dilute glaze-wash similar to that seen on Type 21 B.

Type 21 C gradually crept into the market some time in the last quarter of the 5th century. It must be reaffirmed that the type is not a new one, but rather a development, in the nozzle area only, from the preceding variety. It is difficult to draw the line between later Type 21 B's, with a tendency toward larger nozzles, and early Type 21 C's with nozzles less advanced than usual. By the middle of the first quarter of the 4th century Type 21 C was seldom seen, although a conservative older craftsman might continue to produce in subsequent years a few examples of this form that had been so exceedingly popular around the turn of the century.

171 (L 3160). Pls. 6, 34.

H. 0.021 m.; D. 0.074 m.

Two joining fragments preserve complete lamp. Dull red to brownish glaze, much peeled, over all except base, where slight traces of wash.

Hesperia, XVIII, 1949, p. 338, no. 109, fig. 8, pl. 99.

B 15: 1, well: last quarter of 5th century B.C. Two additional inventoried examples of Type 21 C found here.

172 (L 3133). Pls. 6, 34.

H. 0.023 m.; D. 0.084 m.

Handle and part of side missing; restored. Black to red glaze, much peeled, over all except base, where thin wash.

H 12: 6, rubbish dump: last quarter of 5th century B.C. Another inventoried (uncatalogued) example of Type 21 C found here.

173 (L 1212).

H. 0.021 m.; D. 0.064 m.

Nozzle, handle, and about half of wall missing; profile like preceding. Worn black glaze over all except base; no traces of wash.

H 12: 11, well: upper dumped filling, first quarter of 4th century B.C. Another inventoried example of Type 21 C found here, and an additional inventoried example from use filling of same well: *ca.* 410-390 B.C.

174 (L 3161). Pls. 6, 34.

H. 0.024 m.; Max. dim. 0.064 m.

Fragment, preserving profile of side wall, of lamp with multiple nozzles; one and traces of two other nozzles preserved. The original lamp could not have had more than five nozzles altogether if they were evenly spaced and an area left at the back for a horizontal band handle. Black glaze

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inside and out, except for lower sides of exterior and base; no traces of wash.

Ibid., no. 112.

Provenance as of 171.

175 (L 3088). Pls. 22, 34.

H. 0.025 m.; D. 0.08 m.

Two joining fragments preserve all of lamp except handle, nozzle, and walls and rim around nozzle. Profile like that of 172. Very worn black glaze inside and out; no trace of wash on base. Carefully scratched on base is inscription: ΔΡΑΠΕΤΗΣ, runaway; perhaps this was incised by the owner when the lamp was returned after having been lost.

Provenance as of 172.

176 (L 2450). Pls. 22, 34.

Pres. H. 0.023 m.; Max. dim. 0.058 m.

Single fragment preserves nozzle and parts of rim only. Black glaze inside and out. On top of nozzle crudely scratched drawing of phallus and carefully incised erotic inscription in two lines: ΚΟΚ | ΚΑΛ (for ΚΟΚΚΑΛΟΣ).

TYPE 21 C PRIME

Curved Rims; Long Wide Nozzles; Unglazed

Nos. 177-178. Plates 6, 34.

Last quarter of 5th century B.C. and well into early years of 4th century. Dating based on stylistic similarities to Type 21 C.

This group comprises lamps exactly like those of Type 21 C except that the exteriors are unglazed.[57] They are handsome specimens with an effective contrast between the rich dark glaze of the interior and the pinkish buff Attic clay of the exteriors, left without glaze or wash but polished. Caprice or a desire to make a lamp more aesthetically pleasing led these later craftsmen into the unglazed versions; they were actually returning to the 6th century modes, with partial glazing, after a century or so had elapsed during which glaze was applied more and more, and finally to all parts of the lamp. The glazed interiors keep the lamps reasonably practical, preventing much oil from seeping through the porous clay.

The two Agora specimens reflect the two varieties of handle seen in Types 21 A and B. One has the standard horizontal band handle, while the other's is narrower and circular in section, like that of 167 (Type 21 B) and 159 (Type 21 A). This latter version of the handle becomes increasingly popular in the late 5th century.

177 (L 2830). Pls. 6, 34.

H. 0.025 m.; D. 0.085 m.

Complete except for most of loop handle. Fine black glaze inside only, except for two accidental streaks on rim and lower wall of nozzle.

178 (L 2828). Pls. 6, 34.

H. 0.023 m.; D. 0.081 m.

Three joining fragments preserve all of lamp except nozzle and portions of rim and walls; restored. Horizontal band handle. Black glaze inside only, except for accidental streak on rim.

[57] In the later 5th and in the 4th century B.C. many lamp-makers produced various types of lamps in both glazed and unglazed lots. Since the profiles, nozzles and other morphological elements are the same in both glazed and unglazed versions of the same type, the unglazed examples are not classed as separate types but are given the designation "Prime" following the type classification. In the text and catalogue this word will be found written out; in the deposit summaries and in the Concordance, pp. 221-245, the symbol ′ is used.

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TYPE 21 D

Curved Rims; Restricted Use of Glaze

Nos. 179-183 (and 3 others inventoried). Plates 6, 35.

Corinth: classified under Type IV.

Late in first quarter of 5th century B.C. into early years of fourth quarter.

An apparently simple but actually complex group of lamps with curving sides shows an early 5th century tradition lasting into the fourth quarter of the century.

All of the lamps in this group have common major characteristics; every one has a slightly concave bottom, with no trace of a raised base, curving up into the sides and overhanging rim that are seen in all subdivisions of Type 21. Every lamp that has its back portion preserved bears a trace or more of the normal horizontal band handle. Every lamp is of Attic clay and has a restricted use of black glaze in an early 5th century manner: in the interior, on the handle, around the outside of the nozzle, and in two concentric bands around the rim that leave a reserved circle between. The unglazed portions are uniformly covered with a thin diluted glaze-wash.

Only in the nozzles is there a slight difference; two lamps have rather small nozzles with the wick-hole close to or intruding onto the shoulder. Others have proportionately larger and broader nozzles, like those of Type 21 B, with the wick-hole well removed from the shoulder area. If the development of the nozzle is a trustworthy criterion for the dates of lamps, one would say that the latter lamps are at least a generation later than the others. Yet their concave bottoms and restricted use of glaze might point to an earlier era in the first two or three decades of the 5th century. The circumstances of finding prove that the nozzle development is indeed reliable as a chronological index.

The two earlier lamps, **179** and **180**, both of which happen to have the bands of glaze around the rims applied in broader circles than on the later lamps, could have been made just after the Persian destruction of 480-479 B.C. Possibly a veteran lamp-maker decided to continue in his new work the modes of the preceding decades, and his shop continued along these lines for another generation or two. The Periclean period is not noted for archaizing tendencies nor old-fashioned survivals, rather the contrary; but here is the work of one person or group that challenged the progressive movements of the day and catered to tastes formed much earlier.[58]

179 (L 243). Pls. 6, 35.

H. 0.02 m.; D. 0.078 m.

Single fragment preserves most of front half of lamp except edge of rim and chips from nozzle; restored. Good black glaze partly fired red.

Hesperia, II, 1933, pp. 196, 197, figs. 1, 3 and 2, 3.

H 5-6: 1, burned layer: probably 480/479 B.C.

180 (L 4535). Pls. 6, 35.

H. 0.02 m.; Est. D. 0.073 m.

Several fragments, two non-joining, preserve half of floor, about two-thirds of walls and rim, and parts of nozzle and handle; restored. Clay fired brown to grayish; normal black glaze.

A 18-19: 1, pit: dumped filling containing many ostraka of the 480's, but with some pottery as late as second quarter of 5th century B.C.

181 (L 4695). Pls. 6, 35.

H. 0.018 m.; Est. D. 0.070 m.

Fragment mended from three pieces preserves about half of walls and rim with portions of floor, nozzle, and handle; restored. Good black glaze.

[58] Similar cultural lags are frequently observable to-day. In Athens of 1955 new silver vases, made in the Art Nouveau style of 1900 are shown in shops and frequently sold; they are considered neither quaint nor out of style.

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182 (L 4382). Pls. 6, 35.

H. 0.017 m.; D. 0.057 m.

Complete except for parts of handle and rim; restored. Black glaze; diluted glaze-wash much worn on lower body.

B 19: 7, filling: *ca.* 430-410 B.C.

183 (L 4474). Pls. 6, 35.

H. 0.012 m.; D. 0.053 m.

Complete except for most of handle; restored. A small lamp, nearly a miniature. Clay fired brown to gray; worn black glaze; many traces of wash on lower body.

See also *Hesperia*, XXII, 1953, p. 111, no. 179 (Type 21 D, not 21 B).

TYPE 21 VARIANTS

Curved Rims: Variant Features

Nos. 184-192 (and 3 others inventoried). Plates 6, 35.

First quarter of 5th century B.C. for most. Dating based on the finding places or the nozzle formations.

A few lamps with the characteristic curved wall and rim of Types 21 A-D but with individual variations in profile, nozzle, clay or use of glaze are grouped together as variants, since they are close to no one of the foregoing subdivisions. They are for the most part comparatively early and reflect the diversity in form that occurred in the early years of the emergence of Types 21 A and B, before the standards were formed. 191, however, may be as late as the early 4th century, because of the similarity of its nozzles to those of Type 21 C.

184 (L 3413). Pls. 6, 35.

H. 0.021 m.; D. 0.071 m.

Most of horizontal band handle, most of nozzle with wick-hole close to rim, and parts of body and rim missing; restored. Attic clay, black glaze fired red on inside, around exterior of nozzle, on handle, and in a broad band around rim; elsewhere thin red wash.

G 11: 3, well: accumulated filling, from last years of 6th century to *ca.* 480 B.C.

185 (L 1189). Pls. 6, 35.

Pres. L. 0.046 m.

Single fragment preserves nozzle and adjacent parts of body and bottom; none of rim extant. The nozzle is unusual, because of its length, in a lamp so early. Attic clay with flaky black glaze fired red all over interior and exterior.

Hesperia, XV, 1946, p. 335, no. 350.

G 6: 3, shaft: upper filling, *ca.* 500-480 B.C.

186 (L 1205). Pls. 6, 35.

H. 0.027 m.; D. 0.081 m.

Bottom, some of sides, and most of unusually long nozzle preserved; inner edge of rim nowhere preserved; restored. Small patch of reserved space preserved at back indicating that there was a handle. Attic clay, lustrous black glaze inside and generally outside; resting surface of low ring foot and narrow bands setting it off from body reserved; small reserved circle at center of base decorated with black dot and circle.

Ibid., p. 334, no. 346.

Provenance as of 185.

187 (L 2656). Pls. 6, 35.

H. 0.018 m.; D. 0.076 m.

Two joining fragments preserve half of base and body, with nozzle; restored. This lamp had no handle, unless it were an extremely narrow one. Thick Attic fabric, worn black glaze all over.

D 7: 2, filling: probably 480/479 B.C.

188 (L 4679). Pls. 6, 35.

H. 0.022 m.; D. 0.071 m.

Four joining fragments preserve most of lamp except parts of sides and rim; restored. No handle, unusual ridge at rim, and very small nozzle make this a unique lamp. Attic clay, black to brown glaze all over.

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D 17: 2, rubbish pit: end of first quarter of 5th century B.C.

189 (L 4728). Pls. 6, 35.

Pres. H. 0.018 m.; Pres. W. 0.10 m.

Three joining fragments give floor with low ring base, a little of the curving walls, and the beginning of the single nozzle; this is a large lamp to have but one nozzle. Fine Attic clay; good black glaze inside and outside, except within the ring base which is reserved.

R 12: 1, well: filling of *ca.* 480/479 with debris accumulated over a generation or so earlier.

190 (L 1580). Pls. 6, 35.

H. 0.022 m.; D. 0.060 m.

Four joining fragments preserve most of base, about a third of walls and rim, and nozzle except for its tip; restored. The lamp may have had a handle (all of area where attachments might have been is missing). For the cone in center, cf. Types 12 A and B. Light pink micaceous clay, probably not Attic. Red glaze around outside of nozzle only.

191 (L 537). Pls. 6, 35.

H. 0.026 m.; D. 0.091 m.

Intact except for one nozzle, the end of another, and minor chips; restored. Three nozzles set at equal intervals around circumference of rim; no handle. A small saucer set in interior of oil reservoir, possibly for incense to counteract the acrid smell of the burning oil, or to give to the lamp the added characteristic of a thymiaterion. (Cf. Walters, no. 1200, a Roman lamp, but with a similar shallow bowl. There is another lamp, Greek and similar to this Agora specimen, found in the North Cemetery at Corinth; unpublished). It seems more probable, however, that the saucer was to contain an offering of grain or seed while the lamp was burning in honor of Demeter or Kore; the saucer is like those of kernoi associated with the Eleusinian deities. Lighted lamps were combined with offerings to these personages, according to the Scholiast on Nikander, *Alexipharmaka*, 217 f. (reference quoted by H. Thompson, *Hesperia*, III, 1934, p. 449, note 2). Attic clay, black glaze all over except base.

192 (L 2742). Pls. 6, 35.

H. 0.024 m.; D. (of body) 0.065 m.

Complete except for minor chips. Multiple-nozzle lamp; Attic clay, worn black glaze all over except on flat bottom.

TYPE 22 A

Curved and Decorated Rims; Central Tubes; Concave Bottoms

Nos. **193-195** (and 4 others inventoried). Plates 7, 35.

Corinth: classified under Type IV.

Ca. 500-460 B.C. Dating based on stylistic analogies with Type 21 A and on the finding places.

Related to lamps of Types 21 A-C, both in general shape and in date, is a sizeable group of lamps that may be classed separately because of their distinctive features: central tubes and decorated rims.

The earliest and the simplest have been grouped together as Type 22 A. They are remarkably uniform; every one has a simple concave bottom like that of Type 21 A, but rising in the center into an open tube that projects up through the floor of the lamp, its top or collar as high or higher than the rim of the lamp; every one has low rounded sides curving over into an overhanging rim, as in Types 21. Every lamp has a single nozzle, with the wick-hole occupying all of its area and intruding somewhat onto the shoulder of the lamp. These lamps were made without handles, but they could not have been suspended because the single nozzles would have rendered them unbalanced; as in earlier types, the central tube seems to be a development of the central cavity or opening designed for a finger-hold. It is possible that one of the larger lamps, **195**, may have had two nozzles; its back portion is entirely missing and a second nozzle has been conjecturally

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restored.[59] In such a case the central tube could have been used for suspension, but this particular one, like all others, shows absolutely no signs of wear that might have been made either by a suspension arrangement or by impalement on a thin vertical support. There is still a survival here of the earlier finger-hole, although it will be seen that in the 4th century, central tubes with high collars, or central rods, definitely were used for suspending lamps.

The clay reveals the Attic origin and manufacture of these lamps. Good black glaze is used sparingly; it occurs in the interiors, around the outsides of the nozzles, and in two broad concentric bands around the rim with a reserved circle in between. Every lamp bears some trace of diluted glaze-wash on its base.

193 (L 4364). Pls. 7, 35.

H. 0.024 m.; D. 0.088 m.

Complete save for minor chips. Normal use of glaze and wash.

194 (L 4473). Pls. 7, 35.

H. 0.02 m.; D. 0.079 m.

Several joining fragments preserve all of lamp except right side and chips; restored. Normal use of glaze, traces of very thin wash.

B 18: 11, pit: late archaic, *ca.* 500-480 B.C.

195 (L 3138). Pls. 7, 35.

H. 0.025 m.; Rest. D. 0.105 m.

Two joining fragments preserve front half of lamp with one nozzle and central tube; restored. The second nozzle is added because of the large size of the lamp; there is no evidence for or against this restoration. Normal use of glaze and wash.

Hesperia, Suppl. IV, p. 127, fig. 94, g; *Hesperia*, XV, 1946, p. 332, no. 335 (noted).

H 12: 5, pit: filled in second quarter of 5th century B.C., *ca.* 460.

TYPE 22 B

Curved and Decorated Rims; Central Tubes; Raised Bases

Nos. **196-200** (and 7 others inventoried). Plates 7, 35.

Corinth: classified under Type IV.

Second quarter of 5th century to *ca.* 410 B.C. Dating based on stylistic similarities to Type 21 B and on the finding places.

This group of lamps differs little from the preceding, but every example of Type 22 B has a raised base, recalling that of Type 21 B, flat or concave, in place of the simpler bottom of Type 22 A. The central tube, the lack of handle, the curved sides and rim, appear the same in both Types 22 A and B. Normally this more developed type has a single nozzle, but one example at least, **199**, had two, opposite each other. The normal nozzle is small, with a large wick-hole sometimes intruding onto the shoulder of the lamp; late specimens are wider and longer with proportionately small wick-holes.

The clay is Attic throughout. Good black glaze is used, but in a distinctive manner, differing from the method of application seen in Type 22 A. Besides appearing on the interior of the lamp, glaze is used on all of the exterior as well, except for the base and one or two neat reserved circles around the rim. The bases often preserve traces of diluted glaze-wash, sometimes with an added red pigment; a few lamps seem never to have been given a wash on their unglazed surfaces. Type 22 B was popular during the Periclean period, and one can see reflected in the careful profiles of these lamps and their neatly applied glaze some of the craftsmanship and artistry that characterized major works of that epoch.

[59] Cf. 199 of Type 22 B, which certainly had two nozzles opposite each other, and 203 of Type 22 C.

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196 (L 4771). Pls. 7, 35.

H. 0.025 m.; Rest. D. 0.109 m.

Two joining fragments preserve complete profile with central tube and parts of left side of one nozzle and rim; restored. Normal use of glaze, with single wide reserved band around rim; interior of tube glazed in lower half, unglazed in upper; thin wash on base.

H 12: 5, refuse pit: second quarter of 5th century, *ca.* 460 B.C. Two additional inventoried examples of Type 22 B found here.

197 (L 4501). Pls. 7, 35.

H. 0.024 m.; Rest. D. 0.096 m.

Three joining fragments preserve most of base with tube, and about half of body with nozzle; restored. Dull black glaze; two narrow reserved bands around rim; interior of tube glazed. No traces of wash.

198 (L 3842). Pls. 7, 35.

H. 0.019 m.; D. 0.074 m.

Complete. Worn black glaze; two reserved bands around rim; upper half of interior of tube glazed, lower half unglazed; thin pink wash on base.

199 (L 4575). Pl. 22.

H. 0.022 m.; D. 0.10 m.

Two joining fragments preserve right half of lamp with central tube, part of one nozzle, and start of another opposite. Profile like preceding. Good black glaze; a wide and a narrow reserved band around rim; interior of tube glazed. Thin pink wash on base. A ligature scratched on bottom; the two letters, X and A, presumably of the owner's name.

200 (L 4387). Pls. 7, 35.

Pres. H. 0.025 m.; Est. D. 0.098 m.

Single fragment preserves nozzle and parts of rim and wall; base missing; restored. Good black glaze; traces of pink wash on two reserved bands around rim.

C 19: 9, well: dumped filling of late 5th century B.C.

TYPE 22 C

Curved Rims, Banded or Grooved; Central Tubes

Nos. 201-204 (and 3 others inventoried). **Plates 7, 35.**

Corinth: classified under Type V.

Second and third quarters of 5th century B.C.

Type 22 C is very much like Type 22 B and has approximately the same floruit. The major difference between the two types is the use in the former of decorative grooves or raised bands around the rim. Type 22 C has the raised base (flat on all preserved examples), the central tube, the curved side walls, the lack of handle, and the same nozzle formation seen on the companion type. Again Attic clay is used exclusively, and the good black glaze and thin diluted glaze-wash are used similarly in both types. The grooves or raised bands around the rim are usually left unglazed, although 204 has an added circle of glaze in this area. It is quite possible that the makers of Type 22 B also may have produced this slightly more elaborate design for some of their lamps.

201 (L 4227). Pls. 7, 35.

H. 0.027 m.; D. 0.088 m.

Complete except for minor chips; restored. Worn black glaze; interior of tube unglazed; wash reddened with miltos on base and grooved rim.

A 18-19: 1, pit: dumped filling containing many ostraka of the 480's, but with some pottery as late as second quarter of the 5th century B.C. Another inventoried example of Type 22 C found here.

202 (L 3139). Pls. 7, 35.

Pres. H. 0.023 m.; Est. D. 0.10 m.

Single fragment preserves parts of one nozzle,

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rim, and wall; base missing; restored. Black glaze fired red to brown; traces of thin wash on reserved border around rim.

H 12: 10, layer of second quarter of 5th century B.C.

203 (L 3974). Pls. 7, 35.

H. 0.023 m.; D. 0.107 m.

Several joining fragments preserve most of lamp, including start of second nozzle, but most of that nozzle and half of rim missing; restored. Neatly made with fine black glaze; pink wash with added miltos on base, lower half of interior of tube, top of tube, and band around rim; upper half of interior of tube untouched by glaze or wash.

F 19: 4, well: *ca.* 490-460 B.C.

204 (L 1676). Pls. 7, 35.

H. 0.02 m.; D. 0.072 m.

Two joining fragments preserve half of rim and walls with small portions of base and nozzle; restored without tube. Flaky black glaze, with additional circle of glaze between reserved bands on rim; slight traces of wash on base.

H 7: 1, pit: latter part of third quarter of 5th century B.C.

TYPE 22 VARIANTS

Curved Rims; Central Tubes; Variant Features

Nos. 205-208. Plates 7, 36.

5th century B.C., early through third quarter. Dating based on stylistic similarities with related members of Type 22 and on the finding place of 205.

A few lamps that have the curved profiles and central sockets of Types 22, yet differ in other respects, are classified here. The points of difference are chiefly in the fabric or in the nozzle formations, and are discussed in connection with the individual lamps below.

205 (L 1207). Pls. 7, 36.

Pres. H. 0.024 m.; Est. D. 0.09 m.

Two joining fragments preserve false ring foot with central tube, parts of lower portions of side walls, and start of nozzle. Attic clay, glossy black glaze inside and outside except for interior of the foot and cone, and a narrow line around top of foot; thin wash on interior of foot. A fine example of the careful use of glaze on lamps of distinction made before the Persian destruction. Cf. 159 of Type 21 A and 186 of Type 21 Variants.

G 6: 3, shaft: upper fill, *ca.* 500-480 B.C.

206 (L 3492). Pls. 7, 36.

H. 0.016 m.; D. 0.064 m.

Four joining fragments preserve most of raised base with central tube and about half of walls and rim; nozzle missing; restored. Lamp did not have handle. Pale buff clay, probably Corinthian; thin black glaze in interior and in two concentric bands around rim, elsewhere unglazed with no traces of wash. *Ca.* second quarter of 5th century (?).

207 (L 2342). Pls. 7, 36.

H. 0.026 m.; Est. D. at nozzles 0.14 m.

Single fragment preserves portion of raised base, sides, rim, and four nozzles of a multi-nozzled lamp. There is no tangible evidence for or against a central tube, but a lamp of this diameter would be likely to have one; cf. examples from the Acropolis: Ἐφ. Ἀρχ., 1905, pl. 6; also cf. *Olynthus*, II, fig. 298, no. 20. Attic clay; black glaze in interior, and on exterior except for base and broad and narrow reserved bands on rim; traces of thin wash on unglazed areas.

The use of reserved bands on the rim and the presence of a base are reminiscent of Type 22 B; the general shape of the nozzles and their position in relationship to the shoulder of the lamp are characteristic of these features on lamps of Type 22 B made during the second quarter of the 5th century. This lamp came to light in the upper southeast area of the Agora, not far below the slopes of the Acropolis; it may well have been part of the furnishings in one of the citadel's sanctuaries refurbished after the Persian invasion.

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208 (L 4136). Pls. 7, 36.

H. (to rim) 0.015 m.; D. 0.054 m.

Two non-joining fragments preserve all of lamp except small portion of rim and wall; restored. Collar of central tube rises 0.004 m. above rim's level. Attic clay, unglazed throughout. A link stylistically between Types 22 and 27, and therefore to be dated in the late 5th century.

TYPE 23 A

Flat Rims; Broad Open Bodies

Nos. 209-220 (and 21 others inventoried). Plates 7, 36.

Corinth: classified under Type VI.

Late in third quarter of 5th century B.C. into first quarter of 4th century.

Among the common types of the late 5th and early 4th centuries is a large group of lamps that have curved sides similar to those of Types 21 A-D, but with a clearly defined rim, sloping inward usually, and progressing from a narrow variety to a very wide one that encloses nearly the whole top. Within the type there is seen also a gradual development from low broad bodies to higher and narrower profiles.

Type 23 A includes a number of lamps with common characteristics besides the curved body and the narrow rim already mentioned. All these lamps are rather broad and shallow; they have long wide nozzles, flat on top, with good-sized wick-holes at the ends; some large lamps have two nozzles, opposite each other, but without the central tube seen in double-nozzled lamps of Types 22 A-C. Every lamp with a single nozzle has a handle opposite it, normally a flat band handle but occasionally, among the earlier ones, a narrow tubular handle as 209. Every lamp has a raised base or a ring foot; the former is slightly concave, and the latter may be simple or combined with a central raised disk, as 212.

All the lamps are of Attic clay and coated with a good black glaze. The glaze normally covers the entire lamp, both inside and out, except for the base; this is usually reserved and coated with a thin slip or wash as on 213. The bottom may, however, be partly glazed as 212, or by exception entirely glazed as 216. The uninterrupted use of black on the upper surfaces of the lamps is, by exception, relieved on one example, 218, with concentric reserved bands encircling the rim.

There are minor variations within the type, but the profiles and nozzles show that all these lamps are essentially members of one group. These lamps of Type 23 A cover a generation. They are found in Athens on the Pnyx before 404 B.C.[60]

209 (L 2826). Pls. 7, 36.

H. 0.029 m.; D. 0.077 m.

Two joining fragments preserve all of lamp except parts of handle and rim; restored. The U-shaped bar handle is unusual in this group. Black glaze fired red, inside and outside; two concentric circles scratched through glaze on center of base and glaze scratched away, not worn, from resting surface of base ring. No wash or slip.

210 (L 3749). Pls. 7, 36.

Pres. H. 0.022 m.; Max. dim. 0.06 m.

Single fragment preserves nozzle and a little of rim and body. Good black glaze inside and outside.

211 (L 3163). Pls. 7, 36.

H. 0.033 m.; D. 0.076 m.

Complete except for parts of base and handle;

[60] *Hesperia*, I, 1932, p. 133.

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restored. Black glaze all over, except base which has thin wash.

Hesperia, XVIII, 1949, p. 339, no. 118, fig. 8, pl. 99.

B 15: 1, well: last quarter of 5th century B.C. Another inventoried (uncatalogued) example of Type 23 A found here.

212 (L 3164). Pls. 7, 36.

H. 0.031 m.; D. 0.072 m.

Complete except for end of nozzle, handle, and parts of rim; restored. Black to brownish glaze all over except resting surface of base ring and groove between it and central disc. No wash or slip.

Ibid., p. 339, no. 119.

Provenance as of 211.

213 (L 32). Pls. 7, 22, 36.

H. 0.033 m.; D. 0.062 m.

Two joining fragments preserve complete lamp except for handle and small chip from side. Black glaze all over except on base, reserved without wash or slip. Letter scratched on rim: Π.

Hesperia, II, 1933, p. 196, figs. 1, 6 and 2, 6.

214 (L 1211).

Pres. H. 0.025 m.; D. 0.063 m.

Two joining fragments preserve nozzle, half of rim, and part of body and handle. Profile and glaze like preceding.

H 12: 11, well: upper dumped filling of first quarter of 4th century B.C. Three additional inventoried examples of Type 23 A found here.

215 (L 2653). Pl. 22.

Pres. H. 0.023 m.; D. 0.062 m.

Single fragment preserves nozzle, two-thirds of rim, parts of sides and one handle attachment. Profile and glaze like 213. Inscription scratched through glaze on rim and top of nozzle: ΚΑ[----] ΦΙΛΙΠΗΣ ΑΝ. This may represent the name of a person dedicating the lamp in a sanctuary, a son or daughter (whose name begins with ΚΑ) of Philippe; a well known Philippe, the daughter of Medeios of Piraeus, was a priestess of Athena and member of a prominent Attic family (Plutarch, *Vit. X Orat., Lyc.* 30). The ΑΝ are presumably the first two letters of ΑΝΕΘΕΚΕ; the wick-hole prevented more letters from being incised on the nozzle.

Lamp was found in an unstratified deposit very near the Temple of Hephaistos, which contained statues of both Hephaistos and Athena.

216 (L 1874). Pls. 7, 36.

H. 0.032 m.; D. 0.128 m.

Many joining fragments preserve all but scraps of base and two-thirds of rim and walls; restored. Black to red glaze all over.

Hesperia, VI, 1937, p. 154, fig. 89, c.

F-G 9-10, construction fillings: down to last quarter of 5th century B.C., with some earlier material.

217 (L 4585). Pls. 7, 36.

H. 0.042 m.; D. 0.095 m.

Many joining fragments preserve most of base, parts of walls and rim, part of one nozzle, and start of the other; restored. Black glaze over all except on base, which is reserved with traces of thin slip.

218 (L 4586).

Pres. H. 0.034 m.; Est. D. 0.097 m.

Two joining fragments preserve part of one nozzle and bits of rim and walls. Profile like preceding. Black glaze inside and out except for two reserved concentric bands on rim. No wash or slip.

219 (L 3496). Pl. 22.

Max. dim. 0.052 m.

Fragment of side wall and raised base, slightly concave. Black glaze inside and out except on base, reserved without slip or wash. Letters incised on base representing numerals (?): ΗΓΔΔΔ (*Hesperia*, XXV, 1956, p. 21, no. 94).

220 (L 3269). Pl. 22.

Pres. L. 0.034 m.

Nozzle only, black glaze inside and outside. Inscription on upper flat surface, incised in two lines through glaze, with wick-hole above: ΣΑΤΥ| ΡΑΣ

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TYPE 23 A PRIME

Flat Rims; Broad Open Bodies; Unglazed Exteriors

Nos. 221-222 (and 2 others inventoried). Plates 7, 36.

Late in third quarter of 5th century B.C. into first quarter of 4th century. Dating based on stylistic similarities to Type 23 A and on the finding places.

All the characteristics of the previous type are here in Type 23 A Prime, save for the use of glaze on the exteriors. The same variation is found in the bases; all are raised or are fashioned with base-rings; the majority have simply flat or slightly concave raised bases as in the preceding group. The unglazed exteriors are usually given a thin slip or glaze-wash.

221 (L 3196). Pls. 7, 36.

H. 0.027 m.; D. 0.08 m.

Three joining fragments preserve base, nozzle, one handle attachment, and about one-quarter of rim and walls; restored. Exterior carefully finished with thin slip.

F 5: 3, pit: third quarter of 5th century B.C. or early in its last quarter.

222 (L 2859). Pls. 7, 36.

H. 0.027 m.; D. 0.074 m.

Complete except for handle and minor chips; restored. Unusually small wick-hole, characteristic of other, uncatalogued, specimens of this type. Exterior finished as preceding.

M 20: 3, well: lower dumped fillings, last quarter of 5th century B.C.

TYPE 23 B

Flat Rims; Broad Open Bodies; Restricted Glaze

Nos. 223-227 (and 4 others inventoried). Plates 8, 36.

Last quarter of 5th century B.C.

Similar to Type 23 A in profile, but with certain idiosyncrasies of its own, is another group of lamps that was made for a rather short time, perhaps by one shop, in the later years of the 5th century. These lamps are made with a base-ring rather than the flat raised base usually seen on the preceding type; the walls and rim however are exactly like those of Type 23 A. Some examples have the broad horizontal band handle, but more frequently seen is the narrow U-shaped bar handle. The nozzles have the same shape and size as those occurring on other lamps of this period, whether they appear singly or are used opposite each other on large specimens. In the latter cases one finds the familiar central tube of Types 22, and as usual the tubes show no signs of internal wear.

The lamps were locally made of Attic clay but in the use of glaze appears one of the noticeable differences between these and other contemporary lamps. In an old-fashioned manner there is a partial use of black glaze on the exteriors. The tops of the nozzles are always reserved and also the space between the handle attachments. The bottoms also show reserved areas; these are on the resting surfaces of the base-rings and occasionally in the centers or in bands around the bottoms of the walls. Elsewhere a fine black glaze appears on the exterior and always throughout the interior.

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223 (L 2862). Pls. 8, 36.

H. 0.036 m.; D. 0.121 m.

Intact except for most of one nozzle and minor chips; restored. Black glaze throughout except tops of nozzles, resting surface of base-ring, circle around lower body at top of base-ring, and interior of tube.

M 18: 8, well: last quarter of 5th century B.C.

224 (L 4384).

H. 0.039 m.; Est. D. 0.116 m.

Several fragments, some non-joining, preserve half of bottom, central tube, and small parts of wall and rim. Profile and use of glaze similar to preceding.

B 19: 7, filling: *ca.* 430-410 B.C.

225 (L 2769).

H. 0.032 m.; Est. D. 0.095 m.

Single fragment preserves nozzle, half of right side, and bit of base-ring. Profile and use of glaze like **223**.

R 13: 1, well: lower filling, last quarter of 5th century B.C.

226 (L 1047). Pls. 8, 36.

H. 0.034 m.; D. 0.076 m.

Intact except for handle; restored. Black glaze throughout except for top of nozzle, space between handle attachments, and resting surface of base-ring.

H 12: 11, well: lower filling, *ca.* 410-390 B.C.

227 (L 4084). Pls. 8, 36.

H. 0.026 m.; D. 0.087 m.

Several fragments, one non-joining, preserve bottom, nozzle, half of walls and rim, and both handle attachments; restored. Black glaze throughout except on top of nozzle, space between handle attachments, resting surface of ring foot, border around lowest part of body adjoining foot, and circle in center of base.

TYPE 23 C

Flat Rims; Tall Closed Bodies

Nos. **228-233** (and 29 others inventoried). Plates 8, 36.

Corinth: classified under Type VI.

First and especially second quarters of 4th century B.C. Dating based in part on the fact that none are found in 5th century contexts of the Agora, and on the fact that many were exported to Olynthos and have been found lying in the debris of houses burned in 348 B.C., in part on the stylistic development from Type 23 A, and in part on the finding places in the Agora.

Lamps of this group are actually a continuation and development of lamps of Type 23 A. Gradually, during the last years of the 5th century and the early years of the 4th, the bodies became higher in proportion to their diameters and more of the interiors were enclosed by broader rims. Nozzles became longer and narrower, and the wick-holes on this newer type are small and at the extreme ends of the nozzles.

All of the lamps of Type 23 C have the simple raised base, flat or slightly concave, that was seen on the parent type. All have the horizontal band handle also. The Agora collection has no examples without handles nor any multiple-nozzled lamps in this group; the type is remarkably consistent, although it is easy to detect a difference between specimens of the early 4th century and those made a generation later; the latter are taller and have wider rims that enclose so much of the interiors that only small filling-holes are left in the centers.

The Attic clay is uniformly covered with fairly good black glaze nearly all over; the bottoms alone are unglazed, and here is found sometimes a thin slip.

Type 23 C emerged in its distinctive form sometime during the first quarter of the 4th century; for a few years previously it had been growing out of Type 23 A. All standard examples

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of Type 23 C date certainly after the civil disturbances in Athens of 404-403 B.C.; there is no certainty of their existence after the middle years of the 4th century. For a generation or so it was an extraordinarily popular type in Athens.

228 (L 4024). Pls. 8, 36.

H. 0.036 m.; D. 0.074 m.

Intact except for end of nozzle and handle; restored. Rather metallic glaze, black to yellowish brown; evidence of stacking in kiln on rim. Thin slip on base.

229 (L 3350). Pls. 8, 36.

H. 0.034 m.; D. 0.06 m.

Complete except for handle and back part of body; restored. Black glaze somewhat flaked; base plain.

Hesperia, Suppl. IV, p. 133, fig. 98 f.

G 12: 23, rubbish dump: second quarter of 4th century B.C.

230 (L 3662). Pls. 8, 36.

Pres. H. 0.029 m.; D. 0.062 m.

Single fragment preserves most of left side and nozzle; base, handle, and remainder of walls and rim missing; restored. Good black glaze mottled with red.

F 21: 1, foundry pit: second quarter of 4th century B.C.

231 (L 2451). Pl. 22.

Max. dim. 0.032 m.

Fragment of rim with graffito on upper surface. The relative proportions of filling-hole to rim suggest that the lamp is of the early 4th century rather than the second quarter of the century.

232 (L 2025). Pl. 22.

Max. dim. 0.052 m.

Single fragment preserves part of left wall and rim with handle attachment. Same date as preceding, for same reasons. Graffito on side wall: ΔΙ (for ΔΙΟΝΥΣΙΟΥ?).

233 (L 427). Pl. 23.

L. 0.051 m.

Nozzle only with fragment of rim. Graffito on top of nozzle: Σ or M.

TYPE 23 C PRIME

Flat Rims; Tall Closed Bodies; Unglazed Exteriors

Nos. **234-235** (and 1 other inventoried). Plates 8, 36.

Corinth: classified under Type VI.

First half of 4th century B.C. Dating based on stylistic similarities to Type 23 C. Perhaps an occasional example may have been produced later in the century.

An occasional lamp comes to light with many of the features of Type 23 C, but without any glaze on the exterior. These sporadic examples differ from one another in minor ways, and do not seem to be the product of a single shop or of a short period. The bottom may be concave or, as **234**, bear a raised disc on its concave surface. The curving walls are comparatively tall and the rims enclose much of the body. The nozzles also are like those of Type 23 C. The lamps were made without handles, however, and the Attic clay is rather thinner than in the preceding group; the interior glaze, when it exists, is of a very poor quality. These factors would indicate that the lamps are variants, rather than unglazed counterparts of the lamps in Type 23 C; the very close relationship existing between Types 23 A and 23 A Prime is not paralleled here. **235** might appear by its short nozzle to be very early, but actually it is one of the latest examples of Type 23 C Prime. The clay of the floor of the lamp is left as it came from the wheel, in a little spiral swirl; such swirls of clay are usually seen only on later lamps of the Hellenistic period.

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234 (L 877). Pls. 8, 36.

H. 0.035 m.; D. 0.066 m.

Intact except for end and right side of nozzle; restored. Traces of poor flaky black glaze in interior.

235 (L 3782). Pls. 8, 36.

H. 0.039 m.; D. 0.074 m.

Complete. Dull black glaze inside, splashed outside.

TYPE 23 D

Flat Rims; Tall Closed Bodies; "Inkwell" Type

Nos. **236-240** (and 17 others inventoried). Plates 8, 37.

Corinth: classified under Type VI.

Third quarter of 4th century B.C., down into latest years of the century. Dating based partly on the fact that none of these lamps is found at Olynthos (destroyed 348 B.C.) and partly on the finding places in the Athenian Agora.

The ultimate development in lamps with tall sides is reached in Type 23 D, which has easily recognized characteristics. This group emerges from Type 23 C in a transitional lamp, **236**, with slightly curved high sides and a plain rim sloping slightly inward. But soon the new type is crystallized, and the high sides become practically straight, the rim or top becomes flat, and two shallow concentric grooves are added around the perimeter of the rim.

In all of these lamps the nozzle is enormous, long and broad, flat on top, and level with the rim; the wick-hole is a large oval at the end of the nozzle. None of the lamps in this type has a handle. None has a proper base; the bottoms are usually flat or slightly concave. There is sometimes a circular groove around the center of the base, occasionally a thin raised central disc on it, and on one example, **237**, a slight indentation that is remininscent of the simple raised base of Type 23 C. The bottom of the lamps is thick and rises in every example into a central cone in the interior.

These lamps are made of Attic clay and coated throughout the interior and most of the exterior with a thin black glaze that is inclined to flake. A few have glazed bases, but usually the bottom is uncoated save for occasional traces of a thin slip.

The sturdy fabric of the lamps and the fact that the aperture on top is reduced to a small filling hole give them somewhat the look of 18th century inkwells. They were never used for this purpose,[61] of course, but the resemblance makes a handy appellation for this convenient and popular type that had a full generation's approbation.

236 (L 2243). Pls. 8, 37.

H. 0.038 m.; D. 0.067 m.

Intact, except for minor chips from rim and nozzle. Traces of stacking on rim. Bottom unglazed but with thin slip.

C 12: 2, well: filled in 3rd century B.C. with rubbish accumulated for the most part during second and third quarters of 4th century.

237 (L 3076). Pls. 8, 37.

H. 0.038 m.; D. 0.06 m.

Intact except for part of nozzle; restored. Bottom unglazed.

238 (L 1521). Pls. 8, 37.

H. 0.04 m.; D. 0.066 m.

Intact. Bottom glazed.

Hesperia, VI, 1937, p. 165, fig. 98, g.

[61] In the 4th century B.C. real inkwells were made with tubes extending down from the central openings, so that they were comparatively spill-proof.

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F 12: 3, well: use filling, third quarter of 4th century B.C.

239 (L 1427). Pls. 8, 37.

H. 0.047 m.; D. 0.068 m.

Intact except for end of nozzle; restored. Base carelessly glazed, with two irregular unglazed areas.

F 11: 2, well: dumped filling mostly of third quarter of 4th century B.C., but thrown in near end of century. Two additional inventoried examples of Type 23 D found here.

240 (L 2230). Pls. 8, 37.

H. 0.047 m.; D. 0.064 m.

Intact. Base unglazed.

E 3: 1, cistern: filled during years just before and after 300 B.C.

TYPE 23 E

Flat Rims; Triangular Nozzles

Nos. 241-242 (and 1 other inventoried). Plates 8, 37.

Late 5th into early 4th centuries B.C. Dating based on some stylistic similarities to Type 23 A and on the finding place of 242.

Three very incomplete lamps in the Agora, forming a separate subdivision, have the curving sides and nearly flat rim of Type 23 A, but their nozzles are distinctive. In each case the body projects at one place into an angular proturberance, broad and heavy, and this serves as a nozzle. The wick-hole is exceptionally small, at the apex of the triangular excrescence, and is connected with the interior of the lamp by a hole of small bore pierced through the thick solid clay of the nozzle. The insertion of a wick must have been difficult, and this impracticality may be the reason for their rarity. Besides these three inventoried examples, only one other is known, an unpublished nozzle fragment from the Kerameikos excavations.

The bottoms are not preserved, but they presumably were similar to those of other examples in Type 23 A. The lamps are made of good Attic clay, and have fine black glaze inside and out. The extant profiles suggest a similarity to Type 23 A rather than to groups later in the 4th century. The reason for the very small wick-hole remains a mystery; perhaps a very thin string-like wick, which could be fairly easily inserted, was occasionally used in some households to give a feeble or slow-burning vigil light for all-night use. These lamps might also have been valued for a certain practicality, since the nozzle is really an integral part of the lamp and would presumably be less liable to fractures. Yet the only examples known are portions with nozzles that have become separated from their bodies!

241 (L 470). Pls. 8, 37.

H. 0.023 m.; Max. dim. 0.054 m.

Nozzle with portion of rim preserved. Hard lustrous black glaze.

242 (L 4599).

Pres. H. 0.027 m.; Max. dim. 0.057 m.

Badly chipped nozzle preserved. Profile of body, so far as preserved, like preceding. Worn black glaze.

D 17: 9, well: first quarter of 4th century B.C.

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TYPE 24 A

Grooved or Ridged Rims; Broad Open Bodies

Nos. **243-249** (and 31 others inventoried). Plates 8, 37.

Corinth: classified under Type V.

Late in third quarter of 5th century B.C. and well through the last quarter of the century. Dating based partly on stylistic development from Type 22 C and on similarities to Type 23 A, and partly on the finding places.

Type 24 A is found on the Pnyx in contexts antedating 404 B.C. (*Hesperia*, I, 1932, pp. 133 ff., no. 2, fig. 20). It occurs in Corinth in a well with contents dated 460-420 B.C. (*Hesperia*, VI, 1937, pp. 257-316, C L 2337).

An interesting group of wheelmade lamps, with both practical and decorative features, emerges in the second half of the 5th century. These lamps are contemporaries, by and large, of Type 23 A, and have the same low curved walls and wide shallow bodies; they continue the decorative rim treatment seen in Type 22 C.

There is sometimes a raised base, flat or slightly concave, but more commonly the bottom has a base-ring. The curving side walls are topped by an inward sloping rim ornamented with one or more decorative grooves or raised bands. The usual handle is the narrow U-shaped bar variety, although the horizontal band handle is frequent. It is the normal but not constant practice to employ the narrow handle on lamps with base-rings (244 is one of the few exceptions, having a narrow handle and plain raised base). The narrow handle is placed at a slight angle to the body, well designed for hanging the lamp on a peg when not in use. When suspended on a peg the reverse of the lamp would have been turned toward the room, and the base-ring with concentric bands of glaze within it shows an interest in decorating this portion of the lamp, unseen when in use. No lamps with the wide band handles have base-rings and decorated bases, although they too may have hung on pegs when unused or on display in shops.

The nozzles are long and flat with rather small wick-holes at the ends. Occasionally a nozzle will have a groove around the wick-hole extending back to two holes punched through to the interior, on either side of the base of the nozzle. This practical feature (seen on 246) allows oil to drain back into the interior if it seeps out of the wick-hole or drips from a soggy wick. The clay is Attic; the black glaze is of a fine quality and used throughout the interior and most of the exterior. The raised bases are entirely reserved, but within the base-rings on other specimens decorative bands and circles of glaze are almost invariably used (248 is the sole exception, with glaze on and solidly within the base-ring).

243 (L 3804). Pls. 8, 37.

H. 0.027 m.; D. 0.076 m.

Intact except for end of nozzle; restored. Base reserved, coated with thin wash.

G 18: 1, well: filled in last quarter of 5th century B.C., with considerable earlier material. Another inventoried example of Type 24 A found here.

244 (L 2832).

H. 0.028 m.; D. 0.066 m.

Handle, pieces of side, and part of nozzle missing. Profile, handle, nozzle, and reserved base like preceding.

M 20: 3, well: lower dumped filling, last quarter of 5th century B.C. Three additional inventoried examples of Type 24 A found here.

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245 (L 1113). Pls. 8, 37.

H. 0.02 m.; Max dim. 0.067 m.

Single fragment preserves front part of lamp with nozzle and complete profile. Base like preceding.

Hesperia, IV, 1935, pp. 516-517, no. 92.

R 13: 4, well: *ca.* 430-420 B.C.

246 (L 4086). Pls. 8, 37.

Pres. H. 0.026 m.; Est. D. 0.09 m.

Nozzle and part of adjoining rim of a large lamp; it may have had another nozzle opposite. Groove around wick-hole ends in drain-holes communicating with interior. Black to brownish glaze.

247 (L 3086). Pls. 8, 37.

H. 0.031 m.; D. 0.07 m.

Intact except for end of nozzle and handle; restored. Resting surface of ring foot reserved, also circle in center of base, within which a black dot; otherwise good black glaze throughout.

Hesperia, XVIII, 1949, p. 338, no. 113, fig. 8, pl. 99.

B 15: 1, well: last quarter of 5th century B.C.

248 (L 3162). Pls. 8, 37.

H. 0.032 m.; D. 0.073 m.

Complete except for one-quarter of rim and side walls and narrow U-shaped handle, of which small trace remains; restored. Extra nozzle communicating by means of very narrow tube with interior. Good black glaze all over; scraped off central ridge of rim.

Ibid., p. 339, no. 114.

Provenance as of **247**.

249 (L 3135). Pls. 8, 37.

H. 0.032 m.; D. 0.08 m.

Most of nozzle and broad horizontal band handle, with one-quarter of rim and walls, missing; restored. Base reserved, with very thin slip.

H 12: 6, rubbish dump: last quarter of 5th century B.C.

TYPE 24 A PRIME

Grooved or Ridged Rims, Broad Open Bodies; Unglazed Exteriors

Nos. **250-253** (and 12 others inventoried). Plates 8, 37.

Corinth: classified under Type V.

Ca. last quarter of 5th century B.C. Dating based on stylistic similarities to Type 24 A and on the finding places.

Lamps in this category are exactly like those of Type 24 A except that the glaze is restricted to the interiors. The same use of solid raised bases and base-rings occurs, and again both horizontal band handles and the narrower U-shaped bar variety appear. An occasional lamp has the channel around the wick-hole with two drains as seen in the parent type.

253 differs from its fellows chiefly in that it is handleless. Its small size renders its proportions different from the others, and it could be considered transitional to Type 25 A Prime and hence a little later, early in the 4th century.

250 (L 4225). Pls. 8, 37.

H. 0.035 m.; D. 0.077 m.

Intact except for end of nozzle and band handle; restored. Unusually narrow ring foot.

B 19: 7, filling: *ca.* 430-410 B.C.

251 (L 3083). Pls. 8, 37.

H. 0.03 m.; D. 0.069 m.

Intact except for parts of nozzle and loop handle; restored. Traces of burning on exterior.

Hesperia, XVIII, 1949, p. 339, no. 115, fig. 8, pl. 99.

B 15: 1, well: last quarter of 5th century B.C.

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252 (L 3136). Pls. 8, 37.

Pres. H. 0.022 m.; Est. D. 0.09 m.

Nozzle and front upper part only preserved. Well made groove around wick-hole with two adequate drain-holes into reservoir.

H 12: 6, rubbish dump: last quarter of 5th century B.C. Another inventoried example of Type 24 A Prime found here.

253 (L 3506). Pls. 8, 37.

H. 0.018 m.; D. 0.031 m.

Miniature lamp intact save for minor chips.

TYPE 24 B

Rims Depressed for Covers; Broad Open Bodies

Nos. 254-256. Plates 9, 37.

Approximately last quarter of 5th century B.C. Dating based on stylistic analogies with Type 24 A.

Related to Type 24 A is a small group of lamps with slightly curving sides and deeply depressed rims. The grooves marking the transition between body and rim on Type 24 A are replaced here by a high ridge, actually the top of the side walls, that serves as an edge for the sunken rim. Such a device is admirably suited for the reception of a cover, for use when the lamp is not hung on the wall.[62] Only one of the examples assigned to Type 24 B preserves its base; 256 shows a flat bottom, but it has side walls more slanting than the walls of others of Types 24 A and B. The usual base was presumably more in accord with that of Type 24 A.

The handle, as it appears on 255, is of the narrow U-shaped variety seen often on Type 24 A. The nozzle as seen in 254 is long, flat on top, and level with the ridge around the top of the lamp. The lamps are made of fine Attic clay and covered uniformly with excellent black glaze throughout the interior and exterior. The bottoms, if they were equipped with base-rings, may have had concentric reserved bands as on Type 24 A.

256, with a rim rather differently designed from those of the others, has glaze omitted from its bottom and from the groove around the top. It is exceptional in several ways, and might almost be classed as a variant, although there is no reason to assign it to a different epoch.

254 (L 366). Pls. 9, 37.

Pres. H. 0.025 m.; L. of nozzle 0.034 m.

Nozzle with bit of rim and side wall preserved. Glossy black glaze.

255 (L 4612). Pls. 9, 37.

Pres. H. 0.025 m.; Est. D. 0.082 m.

Fragment from wall and rim, with parts of both attachments for a narrow U-shaped handle, circular in section. Glossy black glaze.

256 (L 4623). Pls. 9, 37.

H. 0.023 m.; Max. dim. 0.039 m.

Small fragment with complete profile preserved. No trace of handle or nozzle. Good black glaze inside, on outside side walls, and on inner edge of rim; elsewhere reserved.

[62] For an example of a clay lamp with cover see 351 of Type 25 D Prime. A bronze lamp of Type 22, in a private collection in Maryland, has a cover attached to the rim of the lamp by a hinge.

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TYPE 24 C

Grooved or Ridged Rims; Curved Closed Bodies

Nos. **257-258** (and 1 other inventoried). Plates 9, 37.

Corinth: classified under Type VII.

Late years of 5th century B.C. through first quarter of 4th century. Dating based on stylistic similarities to the more numerous examples of the succeeding Type 24 C Prime, and on the finding place of **257**.

A small group of lamps transitional between Type 24 A and Type 25 A combines some elements of both. In a typical lamp of Type 24 C the curving sides are topped by shallow concentric grooves and ridges at the junction of the sides and rim, reminiscent of Type 24 A. The bases are very small; the curved bottom of the walls is supported by a narrow base-ring or a narrow thick raised base, as in Type 25 A. All of these examples have broad horizontal band handles and long narrow flat-topped nozzles; such handles occur in both Type 24 A and Type 25 A, while the nozzles are like the usual examples seen in Type 25 A.

These lamps are made of fine Attic clay and are glazed all over, except sometimes on the small bases, with good black glaze. These transitional examples classified as Type 24 C commence at the turn of the 5th and 4th centuries, at the end of the parent type's period. It will be seen below that Type 25 A begins in the second quarter of the 4th century; the first quarter of the 4th century would be the floruit of Type 24 C.

257 (L 4440). Pls. 9, 37.

H. 0.035 m.; D. 0.071 m.

Complete except for the broad horizontal band handle, the tip of the nozzle, and minor chips; restored. Excellent black glaze inside and out except on base.

Hesperia, XX, 1951, p. 117, no. 3, pl. 50, c.

B 18: 4, pyre: first quarter of 4th century B.C.*

258 (L 4134). Pls. 9, 23, 37.

H. 0.042 m.; D. 0.071 m.

Base and back half including one handle attachment preserved. Good black glaze as on preceding. Grafitto on wall between handle attachments, presumably made after handle was broken off: a ligature.

TYPE 24 C PRIME

Grooved or Ridged Rims; Curved Closed Bodies; Unglazed Exteriors

Nos. **259-266** (and 13 others inventoried). Plates 9, 37.

Corinth: classified under Type VII.

Late years of 5th century B.C. into second quarter of 4th century.

These unglazed lamps form a somewhat larger class than the preceding. There is no appreciable difference in the form. Each has a small raised base or thick base-ring; often the heavy bottom rises convexly within the interior of the lamp. There are always high curving sides with a shallow groove or grooves at the junction with the downward curving rim; there is always a long flat nozzle. Most lamps have a horizontal flat band handle, although this feature is omitted on some of the specimens.

* February 1958. Recent restudy of the pottery dates the pyre to first instead of third quarter (as published) and confirms further the floruit of Type 24 C as given above (the Chart with the old date had already been printed).

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Attic clay is used, but glaze appears only in the interiors; **266** has an exceptional use of glaze on the rim and on the top of its nozzle. The exteriors are smoothly finished with a thin slip.

259 (L 3165). Pls. 9, 37.

H. 0.03 m.; D. 0.074 m.

Complete except for handle, nozzle, and parts of rim; restored.

Hesperia, XVIII, 1949, p. 388, no. 116, fig. 8, pl. 99.

B 15: 1, well: last quarter of 5th century B.C.

260 (L 4602).

Max. dim. 0.053 m.

Nozzle and part of wall only; profile exactly like preceding.

D 17: 9, well: first quarter of 4th century B.C. Three additional inventoried examples of Type 24 C Prime found here.

261 (L 2840). Pls. 9, 37.

H. 0.036 m.; D. 0.062 m.

Complete except for nozzle and chips from rim; restored. Handleless. Very thin glaze, fired pale pink, inside.

D 5: 1, pit: first half of 4th century B.C.

262 (L 621).

H. 0.038 m.; D. 0.066 m.

Base preserved with fragments of sides and nozzle; traces of handle. Profile like preceding.

H 17: 5, deposit: second and third quarters of 4th century B.C., but not far down into third quarter.

263 (L 3665). Pls. 9, 37.

H. 0.035 m.; Est. D. 0.064 m.

Right half preserved with complete profile; remainder with handle and nozzle restored.

F 2: 1, foundry pit: second quarter of 4th century B.C.

264 (L 2897). Pls. 9, 37.

H. 0.048 m.; D. 0.087 m.

Handle and nozzle missing; restored. Surface worn.

265 (L 4459). Pls. 9, 37.

H. 0.04 m.; D. 0.07 m.

Intact except for end of nozzle; restored.

266 (L 1740). Pls. 9, 37.

H. 0.042 m.; D. 0.079 m.

Intact except for handle and most of nozzle; restored. Good black glaze on rim and top of nozzle.

TYPE 25 A

Globular Bodies and Thick Bases

Nos. **267-284** (and 67 others inventoried). Plates 9, 23, 38.

Corinth: classified under Type VII.

From middle of second quarter of 4th century B.C. down into first quarter of 3rd century. This type is found frequently in the later deposits at Olynthos [63] so it is evident that it was established and exported well before 348 B.C. Our dating of the type is based partly on the stylistic development from Type 24 C, partly on the stylistic similarity with Type 25 A Prime which flourished in the second half of the 4th and 3rd centuries, and partly on the Agora finding places.

More lamps in the Agora collection belong to Types 25 A-D than to any of the others, yet there are few subdivisions into smaller groups because of the remarkable and continued uniformity of this class. The examples cover approximately a hundred years, but the essential shape remains about the same, a development of features found in Types 24 A and C.

[63] *Olynthus*, V, pp. 279-282, Group 8.

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Type 25 A is easily recognizable. There is always a raised base, never a base-ring; the base is slightly concave and usually plain, although occasionally, as in **270**, there is a slightly raised central disc within the concavity. The bottom is very thick and rises in the interior into a markedly convex hump; there are rare exceptions, as in the early, transitional, **267**; but generally the heaviness of the bottom is an important distinguishing feature of Type 25 A.[64]

The sides are high with a pronounced curve, separated from the rim by a deep groove. The rim encloses a comparatively small filling-hole. In the earlier lamps of Type 25 A the rim is down-sloping, even concave, as in **267**. In the later lamps, of the later 4th century, the rim is more horizontal or even convex, as in **273**. These later specimens are also generally smaller in all their dimensions as compared to the bulky lamps of the mid 4th century.

The nozzles are long, narrow, and flat on top with a small wick-hole at the end. The later lamps in the type, perhaps after *ca.* 330 B.C., tend to have somewhat narrower nozzles that are slightly more pointed in effect. Lamps of Type 25 A may or may not have a thick horizontal strap handle. There is some chronological difference between those with and without handles. It is significant that more examples with handles are found in the earlier years of the type's floruit and more without handles in the later years. The handles are broken in all the numerous Agora examples; they are not really adequate to support the heavy bulk of the lamps caused by the enormous weight of the bases; it would seem that accidents occurred frequently, so that gradually the handles were omitted. Although handleless examples occur in the early years of the type, no example with a handle need be later than *ca.* 310 B.C. and may be considerably earlier. It will be seen that in Type 25 B the handle was replaced with a pierced lug at one side.

The lamps are of Attic clay and have a fairly good black glaze inside and out, except for the bases. These are unglazed although an occasional late example, such as **272**, shows traces of glaze running over onto the base from the sides. **274**, a miniature, by exception has its bottom glazed. Many lamps have a decorative treatment on the groove around the filling-hole where the glaze is scraped away after firing, leaving the pink clay exposed, a pleasing contrast to the lustrous black glaze elsewhere. In a few lamps this groove may have been scraped after glazing but before firing, since the edges are so evenly executed; it is not always easy to discern which method was used. It does not seem likely that the groove was ever completely reserved.

267 (L 4212). Pls. 9, 23, 38.

H. 0.035 m.; D. 0.064 m.

Intact except for central part of handle; restored. Fine black glaze; scraped groove around rim. Incised on one side: ΔΙΟΚΛΕΟΥΣ; on the other side, upside down to lamp: a boukranion and ΕΙΜΙ; on top of the nozzle: ΕΜ; on base: scratched lines. The lamp of Diokles with his badge, the boukranion.

268 (L 1507).

H. 0.035 m.; D. 0.062 m.

Profile and glaze like preceding. Handle and fragments of sides and top missing.

Hesperia, VI, 1937, p. 88, e, fig. 46.

H 7: 3, foundation fillings: second quarter of 4th century B.C.

269 (L 388). Pls. 9, 38.

H. 0.037 m.; D. 0.06 m.

Handle and two-thirds of sides and top missing; restored. Fair black glaze, somewhat worn; glaze scraped from groove on top.

H 6: 9, cistern system: filling of end of 4th century B.C. Another inventoried (uncatalogued) example of Type 25 A found here.

270 (L 3221).

H. 0.034 m.; D. 0.051 m.

Profile and glaze similar to preceding. Nozzle and right side missing. No handle; slightly raised disc on concave base.

[64] A single example, **275**, was attached to a tall vertical standard and has only a moderate convexity in the interior of its base.

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271 (L 3742). Pls. 9, 38.

H. 0.051 m.; D. 0.076 m.

Intact except for end of nozzle; restored. Good dull black glaze, fired red on rim and in interior; glaze scraped from groove around rim and partly scraped from junction of foot and body.

272 (L 859). Pls. 9, 38.

H. 0.038 m.; D. 0.053 m.

Intact. Pale buff clay, very worn black glaze. Glaze scraped from groove on rim.

Hesperia, III, 1934, pp. 322-323, no. A 41, fig. 7.

G 13: 4, well: *ca.* 340-310 B.C.

273 (L 3532).

H. 0.027 m.; W. 0.042 m.

Intact. Like preceding; glaze fired reddish-brown, scraped from groove.

O 20: 3, well: lower filling, first quarter of 3rd century B.C.

274 (L 192). Pls. 9, 38.

H. 0.015 m.; W. 0.031 m.

Miniature, complete except for chip from end of nozzle. Worn glaze, fired red, over entire lamp including base and groove.

Hesperia, II, 1933, p. 198, no. L 192, figs. 1-2.

275 (L 429). Pls. 9, 38.

Pres. H. 0.028 m.; D. 0.039 m.

Intact except for lower part of standard and minor chips from rim. Worn black glaze all over including groove.

Hesperia, XXIII, 1954, p. 88, note 4, no. L 429.

F 16: 1, cistern: third quarter of 4th century B.C. into last quarter.

276 (L 3653). Pl. 23.

H. 0.041 m.; D. 0.075 m.

Profile and glaze like **269**. Handle and half of top missing. Incised on top of nozzle: ΣΑΖ; incised on left side of nozzle: ΣΑΖ; incised on right side of nozzle: the same, retrograde. Initial letters of owner's name (?).

277 (L 3773). Pl. 23.

Pres. H. 0.05 m.; Est. D. 0.083 m.

Profile and glaze like preceding. Handle, nozzle, top, and right side missing. Incised on left side a meaningless inscription of many crowded letters; in part, an abecedarium (?).

278 (L 1970). Pl. 23.

Est. D. 0.082 m.; Pres. H. 0.031 m.

This and the following three lamps may have belonged to Type 25 B, characterized by a pierced knob on upper left side of body and no handle. The significant parts of these four lamps are missing, but their extant profiles resemble those of Type 25 A.

Fragment preserving base only; profile and glaze like preceding. Incised on bottom: Λ.

279 (L 1488). Pl. 23.

Est. D. 0.075 m.

Like preceding; incised on bottom: Α.

280 (L 3068). Pl. 23.

Est. D. 0.074 m.

Like preceding; but raised disc on bottom, around which incised: ΔΠIII and other figures,ΔΗ, partly scratched out (*Hesperia*, XXV, 1956, p. 21, no. 93, pl. 5). The sum represented is too large to have indicated the retail price of the lamp.

281 (L 454). Pl. 23.

H. 0.045 m.; W. 0.068 m.

Profile similar to **271**. Most of left side and end of nozzle missing. Worn black glaze. Incised on top of nozzle: Δ.

Provenance as of **269**.

282 (L 188). Pl. 23.

Max. dim. 0.079 m.

Similar to preceding; top of nozzle and bit of rim preserved; incised on nozzle: Π.

Mentioned *Hesperia*, II, 1933, p. 199.

283 (L 535). Pl. 23.

H. 0.037 m.; D. 0.054 m.

Intact. Profile similar to **272**; dull black glaze, scraped from groove. Incised on left side of nozzle: ΔΙΦΙ; incised on right side of body, upside down to lamp: ΔΙΦΙΛΟΥ, the owner's name.

284 (L 264). Pl. 23.

Max. dim. 0.072 m.

Nozzle and small fragment of rim; profile like **271**; good black glaze scraped from groove. Incised on top of nozzle: a ligature composed of *mu* and *pi* (?).

Mentioned *Hesperia*, II, 1933, p. 199.

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TYPE 25 A PRIME

Globular Bodies and Thick Bases; Unglazed

Nos. 285-300 (and 25 others inventoried). Plates 10, 23, 38.

Corinth: classified under Type VII.

From late in second quarter of 4th century B.C. down into second quarter of 3rd century. Dating based partly on the fact that a very few have been found in Olynthos and so must be before 348 B.C.,[65] and largely on the Agora finding places.

This unglazed variety is very similar to the preceding type but in general lasts a little longer and shows in the late examples a simplification in shape that is more marked than in the later glazed specimens.

The dominant characteristics for most of the lamps include the globular body with heavy base rising to a convexity within, and the raised foot that is more or less concave on its under surface where it is sometimes adorned with a raised disc.

Handles occur rarely, usually in earlier specimens within the type,[66] and are not serviceable for such bulky lamps. As in Type 25 A, none of these horizontal strap handles survives in its entirety.

The rim designs show a variety of forms, involving concentric grooves and ridges. There is normally a definitive band around the filling-hole, slightly convex and downward-sloping. In early examples this band is narrow and appears with surrounding grooves and ridges. In late examples it is broad and often used alone, being set off from the rest of the lamp simply by one deep groove. The variations in this band furnish a reliable criterion for assigning an early or late date to lamps within the type. Later lamps also tend to have side walls less spherical; they are smaller in all their dimensions throughout, and have proportionally less weight in their bases.

Nozzles are like those of Type 25 A, and occasionally show traces of paring while leather-hard, as on 288. The clay is consistently Attic, of a particularly fine quality in the earlier lamps. Glaze is used on the interiors only, with the exception of an occasional specimen such as 285, where concentric bands of glaze are used to decorate alternate grooves and ridges around the filling-hole. By chance a bit of glaze has sometimes run out of a nozzle, as on 298. Most lamps are covered on the exterior with a thin slip and very carefully finished.

285 (L 618). Pls. 10, 38.

H. 0.045 m.; D. 0.071 m.

Intact except for minor chips and handle, restored. Three concentric bands of brownish black glaze ornament top; fine slip on outside.

H 17: 5, deposit: second and third quarters of 4th century B.C., but not far down into third quarter. This is the only Agora lamp of this type that may be confidently associated with the second quarter of the 4th century.

286 (L 860). Pls. 10, 38.

H. 0.046 m.; D. 0.072 m.

Intact, except for partial peeling of slip. Some traces of paring on nozzle.

Hesperia, III, 1934, pp. 322-323, no. A 42, fig. 7.

G 13: 4, well: *ca.* 340-310 B.C.

287 (L 862). Pls. 10, 38.

H. 0.046 m.; D. 0.069 m.

Intact. Exterior slipped.

[65] *Olynthus*, XIV, p. 391, Group IX.

[66] But note 297 with a handle, that is surely to be dated stylistically in the early 3rd century. Its base, however, is less massive than in the case of the earlier examples with handles.

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Ibid., no. A 43, fig. 7.

Provenance as of **286**.

288 (L 549).

H. 0.044 m.; D. 0.065 m.

Intact; profile like preceding. Traces of paring on nozzle; exterior slipped.

Ibid., p. 340, no. B 30, fig. 21.

H 16: 3, cistern system: dumped filling of *ca.* 290 B.C.

289 (L 4634). Pl. 23.

Max. dim. 0.056 m.

Nozzle and part of rim only; profile similar to preceding. Graffito on right side near nozzle: X.

290 (L 1928). Pls. 10, 38.

H. 0.048 m.; D. 0.067 m.

Complete except for back of body, restored in plaster. No handle. Very thin slip on exterior.

E 14: 1, cistern: abandonment fill, accumulated *ca.* 275-225 B.C. Another inventoried (uncatalogued) example of Type 25 A Prime found here.

291 (L 701). Pl. 23.

Max. dim. 0.058 m.

Nozzle and bit of rim only. Profile like preceding; exterior slipped. Graffito on top of nozzle.

292 (L 2232). Pls. 10, 38.

H. 0.045 m.; D. 0.067 m.

Intact except for chip from nozzle, restored.

E 3: 1, cistern: filled during years just before and after 300 B.C. Another inventoried (uncatalogued) example of Type 25 A Prime found here.

293 (L 4107). Pls. 10, 38.

H. 0.036 m.; D. 0.049 m.

Intact.

294 (L 2225).

H. 0.032 m.; D. 0.044 m.

Intact; profile similar to preceding.

Provenance as of **292**.

295 (L 506). Pls. 10, 38.

H. 0.039 m.; W. 0.067 m.

Intact except for minor chips. Thin slip on exterior; clay flaky.

296 (L 2229). Pls. 10, 23, 38.

H. 0.031 m.; D. 0.056 m.

Intact except for end of nozzle, restored. Paring on nozzle; thin slip on exterior. Graffito crudely scratched on top.

Provenance as of **292**.

297 (L 530). Pls. 10, 38.

H. 0.033 m.; D. 0.060 m.

Intact except for handle, restored. Fine slip on exterior.

298 (L 1927). Pls. 10, 38.

Pres. H. 0.025 m.; D. 0.058 m.

Complete except for bottom. No handle.

Provenance as of **290**.

299 (L 4509).

Pres. H. 0.02 m.; Est. D. 0.031 m.

Miniature lamp; end of nozzle, all of rim, and most of body missing. Remains of profile comparable to that of **287**. Badly burned, no traces of slip.

300 (L 4133). Pl. 23.

D. 0.066 m.

Base only, comparable to that of **287**. Thin slip. Graffito in very small letters on bottom representing the numerals for 695: ᴾHᴾΔΔΔΔΓ (*Hesperia*, XXV, 1956, p. 21, no. 95).

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TYPE 25 B

Globular Bodies and Thick Bases, Pierced Lugs Added

Nos. **301-317** (and 30 others inventoried). Plates 10, 23, 38.

Corinth: classified under Type VII.

Second half of 4th century B.C. into first quarter of 3rd century. Dating based partly on the fact that none is found at Olynthos (destroyed 348 B.C.), and largely on the Agora finding places.

This group of lamps is like Type 25 A in most ways except for the presence of a pierced lug on the left side. None of these lamps has a handle; the lug takes its place. This small, securely attached, protuberance is far less likely to break off than the average thin horizontal band handle that was so poorly designed for the heavy bulk of Type 25 A. A cord passed through the lug would have served to hang the lamp on a peg, both when on sale in a shop and during periods of inactivity in domestic use.

The position of the lug is carefully managed so that the pierced hole comes a little forward of a line drawn across the full width of the lamp and at right angles to the nozzle. This results in an equilibrium when the lamp is suspended; the nozzle is more or less horizontal and does not hang down at an angle, as it would were the hole opposite the center of the lamp's body. Thus any remaining drops of oil in the suspended lamp would not drain out. The lug is also carefully placed on the side of the lamp's body, so that the lamp may hang in nearly the same plane as the wall or post on which it is hung. Were the lug nearer the filling-hole, the heavy base would tip the lamp. The lugs on Type 25 B are uniformly on the left side of the lamps, so that a group hung together (in a shop) would have their nozzles pointing in the same direction.

All of these considerations seem to indicate that the lug was originally designed for the purpose of suspension,[67] rather than primarily for the insertion of a thin stick of bronze, bone or wood that could conveniently lodge there when not being used to poke up the wick. The holes are large enough for the easy insertion of a cord, but not suitable for a bone probe or a stick of wood unless it were toothpick size. It seems improbable that every modest lamp would be equipped with a comparatively expensive bronze probe. No doubt, however, the holes in the lugs soon proved convenient for the occasional insertion of a stick of some sort, as **312** shows. This example was originally mounted on a columnar standard, as its bottom indicates, and its pierced lug seems unnecessary for suspension. Another example, **313**, has a pierced lug on each side, one with a vertical hole and one with a nearly horizontal penetration. Perhaps symmetry was in the manufacturer's mind, rather than functionalism, although one hole may have been used for suspension, the other one for a probe.

In later years and in several succeeding types the lug will remain as a vestigial survivor without usefulness, unpierced, and placed on lamps that are equipped with usable handles. These later lamps have light bodies, thin walls, and no heavy mass of clay in the base, the weight of which caused the initial appearance of this protuberance to replace the thin handle.

The profiles of these lamps exhibit considerable uniformity, with only minor exceptions. The bases are always concave, but some have added discs in their centers and **310** has a base that is closer to a ring foot. The curving sides are separated from the narrow rims by a well defined groove; occasionally there is a pair of grooves. A few lamps, not necessarily late within the type,

[67] For discussions of the use of the pierced lug see *Hesperia*, II, 1933, pp. 199, 201. Also Broneer, pp. 6 ff.; *Olynthus*, V, p. 280; *Hesperia*, Suppl. VII, p. 43.

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show sides nearly vertical and considerable emphasis on the breadth and flatness of the rim, as **308** and **309**. The latter has a barely perceptible groove, and in general shows a close stylistic connection with lamps of Type 23 D, with which it is contemporary. The lamps that are comparatively early within the type have their greatest diameter low on the body. Later lamps tend to be more spherical in profile.

As in Types 25 A and 25 A Prime, the rims may be either slightly concave or, more usually, somewhat convex. The former are earlier. The latest lamps tend to be somewhat smaller in general, with broad convex rims such as that on **311**. The nozzles are long, narrow, and flat on top; that of **301**, an early lamp, is by exception broad and reminiscent of the nozzles on lamps of Types 23 B and D.

Type 25 B is uniformly of Athenian clay and covered with black glaze, inside and out, except for the bases. Occasionally, as on **303**, the base is also glazed. As in Type 25 A, the quality of the black glaze deteriorates in the later lamps, serving as another criterion for early or late dating within the type, along with the change in the width of the rim and the decrease in the lamp's size.

The base often shows traces of a thin slip; the groove around the filling-hole is usually scraped clear of glaze; occasionally it seems to have added red (miltos) applied to it.

301 (L 2242). Pls. 10, 38.

H. 0.044 m.; D. 0.072 m.

Complete except for chips from knob, rim, and nozzle; restored. Slip on base; groove scraped.

C 12: 2, well: filled in 3rd century B.C. with rubbish for the most part accumulated during second and third quarters of 4th century.

302 (L 4130). Pls. 10, 23, 38.

H. 0.044 m.; D. 0.067 m.

Intact except for end of nozzle (restored) and minor chips. Slip and scraped groove as preceding. Graffito on top of nozzle: X.

303 (L 1426).

H. 0.035 m.; D. 0.058 m.

Complete except for knob and chips from top. Profile similar to preceding. Glazed base; scraped groove.

Hesperia, VI, 1937, p. 165, fig. 98.

F 11: 2, well: dumped filling mostly of third quarter of 4th century B.C., but thrown in near end of century.

304 (L 4020). Pls. 10, 38.

H. 0.039 m.; D. 0.06 m.

Intact except for end of nozzle; restored. Worn reddish brown glaze. Grooves probably scraped.

305 (L 4641). Pls. 10, 38.

H. 0.042 m.; D. 0.061 m.

Intact except for lug and end of nozzle; restored. Groove reserved with added red.

O-R 7-9, construction filling: before *ca.* 300 B.C.

306 (L 3097). Pls. 10, 38.

Max. dim. 0.070 m.

Fragment preserving about one-third of walls and half of top. Scraped groove.

P 10: 1, cistern: second half of 4th century B.C.

307 (L 4023). Pls. 10, 38.

H. 0.04 m.; D. 0.063 m.

Intact except for nozzle and chips from rim; restored. Worn black glaze; slip on base; scraped groove.

308 (L 1532). Pls. 10, 38.

H. 0.04 m.; D. 0.062 m.

Intact except for chips and end of nozzle; restored. Reserved groove.

309 (L 4300). Pls. 10, 38.

H. 0.035 m.; D. 0.062 m.

Intact except for minor chips. Fairly good black glaze all over, except base; no glaze scraped from shallow groove.

310 (L 3540). Pls. 10, 38.

H. 0.038 m.; D. 0.061 m.

Intact. Glaze scratched from groove.

O 20: 3, well: lower filling, *ca.* 300-275 B.C. Two additional inventoried examples of Type 25 B found here.

311 (L 539). Pls. 10, 38.

H. 0.035 m.; D. 0.054 m.

Intact except for chips from rim and part of

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nozzle; restored. Worn black glaze, only partly scraped from groove.

Hesperia, III, 1934, p. 342, no. B 38, fig. 22.

312 (L 744). Pls. 10, 38.

Pres. H. 0.06 m.; D. 0.059 m.

Lamp intact; standard broken. Poor brownish black glaze, scraped from groove.

313 (L 702). Pls. 10, 38.

H. 0.025 m.; D. 0.042 m.

Intact except for minor chips and nozzle; restored. Two lugs, right one pierced nearly horizontally. Glaze scraped from groove. Base carelessly reserved.

314 (L 4703). Pl. 23.

H. 0.036 m.; D. 0.062 m.

Complete except for parts of lower body; profile like that of 310. Scraped groove. Graffito on top of nozzle.

315 (L 2019). Pl. 23.

Max. dim. 0.070 m.

[Note: this and the two succeeding lamps have no portions preserved where lug might have been. They may have belonged to Type 25 A, but their extant profiles seem a little closer to those of Type 25 B.]

Fragment of rim and nozzle; profile comparable to 310. Glaze scraped from groove. Graffiti on top of nozzle and on left side.

316 (L 4588). Pl. 23.

Max. dim. 0.05 m.

Fragment of rim and nozzle; profile comparable to that of 302. Excellent black glaze; scraped groove. Graffito on top of nozzle: ΦΙ.

317 (L 1241). Pl. 23.

Max. dim. 0.052 m.

Fragment of nozzle with bit of adjacent rim; profile perhaps comparable to preceding. Graffito on top of nozzle: ΔΕ.

TYPE 25 B PRIME

Globular Bodies and Thick Bases, Pierced Lugs Added; Unglazed

Nos. 318-340 (and 73 others inventoried). Plates 11, 38, 39.

Corinth: classified under Type VII.

Third quarter of 4th century B.C. into second quarter of 3rd century. Dating based partly on the fact that this type is not found at Olynthos (destroyed 348 B.C.) but is found in fillings dated before 325 B.C. on the Pnyx in Athens,[68] and also on the Agora finding places.

This is by far the largest group of lamps of the Greek period from the Agora excavations. Type 25 B Prime not only had a very long life, of nearly a century, but was extremely popular during most of that period as a handy, easily produced product. The basic shape is the same as that of the three preceding types, with a raised base or base-ring supporting a rounded body and with a heavy interior mass. The base more likely than not has a slightly raised disc in its center, on the exterior.

There are certain distinctions between the early and late members of this type, between those produced for the most part in the 4th century and those made in the first half of the 3rd. Those produced around the turn of the two centuries vary, however, so that there is no clear demarcation, and no sure way of dividing the group.

In general it is possible to say that the heavy bases are markedly massive in the early lamps, those certainly produced in the third and early fourth quarters of the 4th century. Here also the concentric grooves and ridges are pronounced and numerous, and the circular rim around the

[68] Fillings of the Third Period of the Assembly Place, *Hesperia*, Suppl. VII, pp. 10 (note 3), 41, 56-57, no. 82, fig. 24.

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filling-hole gives the effect of being depressed and concave. These lamps tend to be large, tall and made of a thick fabric. They frequently have a decorative use of glaze on the ridges around the filling-hole, contrasting pleasantly with the otherwise plain buff exteriors. This glaze is sometimes applied individually to the separate concentric ridges, sometimes applied to the whole area and then scraped away from the intervening concentric grooves. These early lamps also tend to have a finer, creamier slip than the late ones.

Lamps of the late first and second quarters of the 3rd century tend to be small, low, and broad rather than tall. The bases are lighter; there are few grooves or ridges around the filling-hole, but instead there is usually a pronounced raised ring, narrow or broad, that takes the place of the early depressed concave rim. This raised ring is normally convex in section. The late lamps have a fairly thin fabric, sometimes rather coarse, and seldom have the fine lustrous smooth slip of the early ones.

On all lamps of Type 25 B Prime the nozzles are long, flat on top, with small wick-holes that sometimes seem too tiny for easy and effective use. There is never a handle, but uniformly a pierced lug on the left side, added after the lamp was completed. **320** has an extra pierced lug, at the back, almost like a miniature handle rather than a lug. **340**, which is a fragment of a lug only, has two projections side by side, only one of which is pierced. Two lamps have lugs only partially pierced, with holes that do not go all the way through; these are late within the type and herald the advent of the solid lugs that will be common in some Hellenistic lamps, chiefly moulded types. The solid lugs will remain for a long while as vestigial and decorative survivals down into the early years of the 1st century after Christ.

The lamps are local productions, of course. Not only is the clay typical of the fine Attic pinkish buff, but two workshop pieces survive. **334** is a waster; two lamps with part of a third are stuck together and warped due to some accident of firing; these are late (3rd century) examples and show traces of glaze on their interiors, demonstrating conclusively that a single firing served both to bake the clay and harden the glaze. **339** emerged from the kiln successfully, with the lug and nozzle properly added to the wheelmade body, but a careless workman had forgotten to punch the hole through the wall to communicate with the nozzle, a step that necessarily should have been done before firing. The lug and nozzle are now broken off, perhaps in the workman's unsuccessful attempt to bore a hole through the solid baked clay. This lamp also had failed to receive its inner coating of black or brown glaze, which is present in all other examples.

The exteriors are unglazed, except for the concentric ridges on some of the early lamps mentioned above. A few specimens have dots of black glaze on their nozzles or lugs, producing an attempt at decoration. The smooth thin slip added to the outside of some earlier lamps is less frequently seen on the later ones.

318 (L 4021). Pls. 11, 39.

H. 0.064 m.; D. 0.089 m.

Complete. Black glaze applied to top of lamp but scraped from two concentric grooves. Thin slip.

Hesperia, XX, 1951, p. 115, Pyre 2, no. 2, pl. 50 b.

319 (L 4400). Pls. 11, 39.

H. 0.052 m.; D. 0.078 m.

Complete except for small chips; restored. Black glaze on top of lamp, scraped from two concentric rings; glazed dots on knob and nozzle's top. Well finished clay, grayed from burning; slip like preceding.

Ibid., p. 118, Pyre 4, no. 2, pl. 51 a.

320 (L 4632). Pl. 39.

H. 0.052 m.; D. 0.075 m.

Intact except for end of nozzle; restored. Profile like preceding. Cornuted lug on side like most on Type 25 A Prime; lug at back simpler, made like miniature horizontal band handle. Black glaze for three separate concentric rings on top

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and for dots on nozzle's top and both lugs. Thin slip.

321 (L 4354). Pls. 11, 39.

H. 0.053 m.; D. 0.075 m.

Complete except for small fragments of walls and most of lug; restored. Well finished clay, grayed from burning.

Ibid., p. 122, pl. 52 a.

322 (L 4321). Pls. 11, 39.

H. 0.049 m.; D. 0.076 m.

Intact. Exterior surface somewhat worn and rust-stained.

323 (L 863). Pls. 11, 38.

H. 0.043 m.; D. 0.066 m.

Left side missing; restored. Lug restored because details of profile closer to those of Type 25 B Prime than to those of Type 25 A Prime. Thin slip.

Hesperia, III, 1934, pp. 322-323, no. A 44, fig. 7.

G 13: 4, well: *ca.* 340-310 B.C.

324 (L 3096). Pls. 11, 38.

H. 0.04 m.; D. 0.063 m.

Complete except for fragments of body and most of lug; restored. Thin slip.

P 10: 1, cistern: second half of 4th century B.C.

325 (L 3043). Pls. 11, 38.

H. 0.035 m.; D. 0.059 m.

Intact except for end of nozzle and chips from rim and lug; restored. Thin slip.

B 13: 8, well: last quarter of 4th century B.C.

326 (L 703). Pls. 11, 39.

H. 0.042 m.; D. 0.070 m.

Intact except for end of nozzle; restored. Traces of thin slip.

327 (L 4759). Pls. 11, 38.

H. 0.028 m.; D. 0.047 m.

Intact except for minor chips and end of nozzle; restored. (Similar in profile to lamps of Type 24 C Prime). A carefully made small lamp, with very narrow interior passage in nozzle and lug only partially pierced. No evidence of burning at extant end of nozzle. Perhaps this lamp was never used, but made for a merchant's sample or lamp-maker's model or child's toy.

328 (L 2381). Pls. 11, 38.

H. 0.039 m.; D. 0.059 m

Tip of nozzle and much of side wall missing; restored. Thin slip.

329 (L 650).

Max. dim. 0.066 m.

Nozzle and part of rim only preserved. Profile like preceding. Thin slip.

Hesperia, III, 1934, p. 337, no. B 11, fig. 17.

H 16: 3, cistern system: dumped filling of *ca.* 290 B.C.

330 (L 1559). Pl. 24.

Max. dim. 0.07 m.

Nozzle and half of rim preserved. Profile like preceding. Thin slip. Graffito on top of nozzle: K.

331 (L 3056).

H. 0.041 m.; D. 0.061 m.

Intact. Profile like preceding. No perceptible slip.

B 13: 7, well: bottom filling, first to second quarters of 3rd century B.C. Two additional inventoried (uncatalogued) examples of Type 25 B Prime found here.

332 (L 2814). Pls. 11, 38.

H. 0.041 m.; D. 0.065 m.

Intact except for end of unusually long nozzle and most of lug. Traces of thin slip.

333 (L 3533). Pls. 11, 38.

Intact. No traces of slip.

334 (L 3630). Pl. 38.

L. over all 0.068 m.; D. of top lamp now 0.049 m. (it would have been a little less before lamp was warped).

Fehlbrand or waster composed of two lamps, stacked one on the other, warped while being fired. Traces of a third lamp that rested on the rim of the upper one. Profile of upper lamp would have been like preceding. Lower lamp similar, but presumably had no lug. Clay burned dark gray; traces of glaze in interior.

335 (L 1847). Pls. 11, 38.

H. 0.035 m.; D. 0.057 m.

Complete. Semi-pierced lug.

E 14: 1, cistern: abandonment fill, accumulated

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ca. 275-225 B.C. Three additional inventoried examples of Type 25 B Prime found here.

336 (L 936). Pls. 11, 38.

H. 0.035 m.; D. 0.060 m.

Intact except for minor chips.

337 (L 3057). Pls. 11, 38.

H. 0.029 m.; D. 0.045 m.

Intact except for minor chips and lug; restored. A small lamp; signs of burning around nozzle.

Provenance as of **331**.

338 (L 3052). Pls. 11, 38.

H. 0.02 m.; D. 0.03 m.

Intact except for part of short nozzle; restored. A miniature lamp; partially pierced lug. Drop of glaze on outer edge of nozzle, but no signs of burning. This lamp does not have conventional groove or ridge around filling-hole.

Provenance as of **331**.

339 (L 4233). Pls. 11, 39.

H. 0.037 m.; D. 0.077 m.

Intact except for lug and nozzle, traces of which exist; not restored. No hole pierced through wall at attachment of nozzle; the maker attached the nozzle and forgot to punch hole through wall while clay was still soft or leather-hard. Lack of glaze inside is another unusual feature that shows lamp was a mistake or was possibly, because of its unusual profile, an experimental new model for study by the lamp-maker and not designed for sale.

340 (L 3560).

W. of handle 0.031 m.

Lug and fragment of rim, with profile resembling that of **328**. Lug is flat and thick, terminating in two projections, one of which is pierced. Small chip missing from other projection. Thin slip.

See also L 189: *Hesperia*, II, 1933, pp. 196-197, figs. 1-2.

TYPE 25 C PRIME

(There is no Type 25 C with glazed exteriors)

Heavy Bases and Domed Tops; Unglazed

Nos. **341-349** (and 7 others inventoried). Plates 12, 39.

Third quarter of 4th century B.C. down into first quarter of 3rd century. Dating based on examples from the Pnyx in a filling dated before *ca.* 325 B.C.,[69] and on the finding places in the Agora.

This type is a close relation of Type 25 B Prime in both appearance and date, but has enough idiosyncrasies to warrant classification as a distinct type. No examples have come to light that show a use of glaze on the exterior, although it is conceivable that there may have been occasional glazed counterparts, which could be classed as Type 25 C.

The base is thick, as on the preceding types; it is raised and slightly concave beneath, sometimes with the thin raised disc seen before. The side walls are slightly curved, but not so curving or bulbous as on the predecessors. There is a notable separation between the walls and the thick domed top, usually marked by a thin groove. The domed top covers most of the lamp, less so on **343**, and forms the type's distinguishing characteristic. The filling-hole, usually small, is surrounded sometimes by grooves and ridges as on the preceding types, sometimes by a narrow concave or depressed rim. In general the silhouette of the lamp tends to be more rectangular and boxy than the spherical profiles seen previously, and forms a transition to the straight-sided, flat-topped lamps of Type 25 D Prime.

There is never a handle, always a pierced lug on the left side. These lamps were no longer

[69] *Hesperia*, Suppl. VII, pp. 55-56, no. 65, fig. 24; also pp. 10 (note 3) and 41.

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being made when the semi-pierced or solid lug appeared on other types in the second quarter of the 3rd century. One lamp, **346**, is still set in its lead lamp-holder which has a thin vertical band handle,[70] thus rendering the pierced lug useless for suspension purposes. The nozzles are exactly like those of the preceding type, long and flat with small wick-holes.

The lamps are made of Attic clay. They are covered inside with a black or brown glaze; occasionally the glaze is used on the outside also, in a decorative series of concentric bands on the domed top or to coat the narrow rim around the filling-hole. Otherwise the exteriors are left unglazed, but treated with a creamy slip, as on previous unglazed types. On a few lamps the slip has been omitted leaving the smooth clay fabric exposed.

341 (L 4665). Pls. 12, 39.

Pres. H. 0.05 m.; Est. D. 0.094 m.

Nozzle and part of rim preserved. Traces of concentric bands of glaze on narrow inner rim and broad flat band between grooves. Clay fired gray.

342 (L 1566). Pls. 12, 39

Pres. L. 0.058 m.

Fragment from top and side, with lug. Clay smoothly finished with thin slip. No exterior glaze.

Hesperia, III, 1934, p. 323, no. A 46, fig. 7.

G 13: 4, well: use filling of *ca.* 340-310 B.C.

343 (L 2382). Pls. 1z, 39.

H. 0.034 m.; D. 0.066 m.

Complete except for chips from rim and walls. Rim's edge nowhere preserved, presumably deeply concave around comparatively small filling-hole. No slip.

E 3: 1, cistern: filled during years just before and after 300 B.C.

344 (L 1585). Pls. 12, 39.

H. 0.046 m.; D. 0.070 m.

Complete except for minor chips and end of nozzle; restored. Thin slip.

F 12: 3, well: use filling, third quarter of 4th century B.C.

345 (L 4720). Pls. 12, 39.

H. 0.045 m.; D. 0.068 m.

Complete except for minor chips and end of nozzle; restored. Smoothed exterior surface (slip?).

346 (L 3529). Pls. 12, 39.

H. 0.054 m.; D. 0.082 m.

Lamp intact except for lug and minor chips from top; restored. Part of lead holder still clings to lower wall, and a non-joining piece from rim of holder, with a high vertical strap handle, probably belongs. Three concentric bands of black glaze, one broad and two narrow, around top. Traces of thin slip.

O 20: 3, well: lower filling, first quarter of 3rd century B.C.

347 (L 1686). Pls. 12, 24, 39.

H. 0.042 m.; D. 0.065 m.

Intact except for end of nozzle; restored. Graffito on top: Δ.

348 (L 3535). Pls. 12, 39.

H. 0.042 m.; D. 0.067 m.

Intact. Traces of glaze on narrow inner rim and two small splashes of glaze on broad sloping top.

Provenance as of **346**.

349 (L 3534). Pls. 12, 39.

H. 0.042 m.; D. 0.071 m.

Intact except for lug; restored. No glaze nor slip outside.

Provenance as of **346**.

[70] A complete lead lamp-holder exists in the Agora collections, IL 907, from a mixed filling of the 3rd and 2nd centuries B.C. It is very much like this but constructed for a lamp with long flaring nozzle. An earlier one was found at Olynthos in the 1938 campaign. Cf. the iron lamp-holders found with **542** of Type **43 A** and **596** of Type **46 B**.

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TYPE 25 D PRIME

(There is no Type 25 D with glazed exteriors)

Heavy Bases and Flat Tops; Unglazed

Nos. 350-355 (and 10 others inventoried). Plates 12, 39.

Corinth: classified under Type VII.

Late in third quarter of 4th century B.C. into first quarter of 3rd century. Dating based on the fact that one was found on the Pnyx in a filling before *ca.* 325 B.C.,[71] and on the findings places in the Agora.

This variety is assigned to Type 25 because of the heavy bottom rising to a large cone-like mass in the interior, as in the preceding five groups. The base is always raised and either concave, or concave with a thin raised disc, or practically flat.

The sides are nearly vertical with a slight outward bulge, and make a sharp angle at the junction of the broad top. Usually there are one or two thin grooves around the outer edge of the top to emphasize the distinction between the sides and the top, which may be either slightly convex or concave. The high dome of the previous type is replaced here by a more horizontal member. Another marked difference between Type 25 C Prime and this is the complete absence here of ridges, grooves, or little depressed rims around the filling-holes; in Type 25 D, moreover, the wall is much thinner in the top part of the lamp. Some of the filling-holes are so small, as on 350, that the potter would have had difficulty in closing the top of the lamp and leaving such a small hole for his finger.

There are no handles, but in every case the familiar pierced lug is added on the left side. The nozzles too are the same as those seen on other members of the 25-family. 351 is unusual in that it has handmade ridges of clay added along the top of the nozzle to keep a cover in place. Its handmade cover was found with the lamp in a grave. Although covers were sometimes used on lamps it is very rare to find a clay cover and its lamp together.[72] Here the lid does not fit into a depression and would slip off were it not for the useful ridges along the nozzle. Both the filling-hole and the wick-hole are protected by the covering, presumably against dirt falling in but also against predatory mice.[73] A boss on the under side that fits the filling-hole and a pierced knob for a cord on the top of the cover would serve to keep it firmly in place against unwanted marauders. Another lamp lid, 364, classed with Type 25 variants, is of approximately the same shape and date but is made with a mouse in relief on its top, showing the propensity of these animals to sip the oil when they had the opportunity.[74]

All the lamps of Type 25 D Prime are coated inside with black or reddish-brown glaze. None is glazed outside, not even with decorative bands or dots. It is conceivable that some may have existed with glazed exteriors, which would be classed as Type 25 D, but none is known at present. The finely worked Attic clay is sometimes left plain on the exteriors, sometimes treated with a slip, as on some of the preceding types.

[71] *Hesperia*, Suppl. VII, p. 57, no. 83, fig. 24.

[72] A 5th century black-glazed lamp with its circular cover fitting neatly into a depression exists in the Kerameikos Museum in Athens (no number).

[73] In the *Batrachomyomachia* (line 180, ed. T. W. Allen) Athena complains about mice who break lamps while looking for oil in them.

[74] Two late Greek lamps in the Benachi Collection in Alexandria have plastic mice on them, the heads of the mice pointing to the wick-hole. Note also Walters, p. 2, no. 6, for a mouse on a lamp lid.

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350 (L 861). Pls. 12, 39.

H. 0.033 m.; D.0.059 m.

Intact except for end of nozzle and most of lug; restored. Glaze spilled near filling-hole; thin slip on exterior.

Hesperia, III, 1934, p. 322, no. A 45, fig. 7.

G. 13: 4, well: use filling of *ca.* 340-310 B.C.

351 (L 2895). Pls. 12, 39.

Lamp: H. (of body without raised edge) 0.044 m.; D. 0.064 m. Cover: W. 0.043 m.; Pres. L. 0.070 m.

Lamp complete except for minor chips from top and from raised edges on either side of nozzle's top; restored. All terminations of raised edges preserved. Thin slip.

Cover is handmade; intact except for minor chips and its termination that would swell out slightly and fit over wick-hole; not restored. Rectangular knob on top pierced horizontally. Projecting boss below fits filling-hole securely.

Hesperia, VII, 1938, p. 354, fig. 42.

352 (L 4355). Pls. 12, 39.

H. 0.043 m.; D. 0.069 m.

Complete. Surface much burned; traces of slip.

Hesperia, XX, 1951, pp. 122-123, no. 7, 2, pl. 52 a.

353 (L 4335).

H. 0.037 m.; D. 0.062 m.

Complete except for minor chips. Profile like preceding.

Hesperia, XX, 1951, p. 129, no. 13, 1, pl. 52 a; mentioned *ibid.*, XVII, 1948, p. 166, pl. XLVI, 3.

C 17: 2, pyre: first quarter of 3rd century B.C.

354 (L 3537). Pls. 12, 39.

H. 0.037 m.; D. 0.060 m.

Intact except for chip from nozzle; restored. Thin slip.

O 20: 3, well: lower filling, *ca.* 300-275 B.C. Two additional inventoried (uncatalogued) examples of Type 25 D Prime found here.

355 (L 3536). Pls. 12, 39.

H. 0.035 m.; D. 0.054 m.

Intact. No slip.

Provenance as of **354**.

TYPE 25 VARIANTS

Thick Bases, Enclosed Bodies; Various Additional Features

Nos. **356-364** (and 1 other inventoried). Plates 12, 39.

Second half of 4th century B.C. down through first half of 3rd century, perhaps a little later for **363**. Dating based on stylistic similarities with the preceding types of the 25-group and on the finding places of **362** and **363**.

All the lamps in this type have one or more of the traits of the 25-group: the thick base, the enclosed body, the typical flat nozzle, or the use of grooves and ridges around the filling-hole. They are all wheelmade of local Attic clay. They can all be dated before 250 B.C., except perhaps **363** which shows by its nozzle that it is a transitional link with later Hellenistic lamps having tubular nozzles; this exceptional lamp is the latest in the long history of the Type 25's, and probably was made in the third quarter of the 3rd century B.C.

In the first quarter of the 3rd century the pierced lug appears on lamps with added handles, **358** and **359**. After half a century of use the pierced lug was shown to be impractical. It often broke off entirely (as on these two lamps and many more) since it was a small attached piece of clay and not always strong enough to maintain the weight of the lamp when suspended or moved about. If the pierced lug had been devised originally only to support a probe or poker it certainly would not have been broken so frequently. Perhaps it was felt that the pierced lugs were satisfactory for suspending groups of lamps in shops, but that individual customers felt the need for

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ordinary handles and did not like to be bothered with stringing a lamp for suspension when not in use. Lugs continued, generally solid, as vestigial appendages on some lamps with handles well into the 1st century after Christ. The two examples in this group mark a step between actual use and decorative survival.

Two lamps, **356** and **357**, are double, like lamps of Type 18, with both upper and lower reservoirs. The former lamp presumably used the lower reservoir for hot water, as the prototype. **357** could not have had anything in its hollow base as there are holes in it. This lamp is of mammoth proportions, so the void in the bottom was for the double purpose of lightening the weight of the object and ensuring proper firing; the holes were to allow the heat of the kiln to penetrate into the hollow base.

A glazed lamp-cover, **364**, need not necessarily belong to the 25-Groups, but its shape shows that it could have been used on a glazed lamp like those of Type 25 D Prime; it is catalogued here for convenience of association with the lamp-cover which belongs to Type 25 D Prime, **351**.

356 (L 4008). Pls. 12, 39.

Pres. L. 0.08 m.; Est. D. 0.067 m.

Nozzle and part of upper body of a double lamp; none of rim preserved. Slight traces of groove around top. Black glaze inside, slip outside; bottom (roof of lower reservoir) left plain. Stylistically like early lamps of Types 25 A Prime and B Prime and thus dated in second half of 4th century.

357 (L 4079). Pls. 12, 39.

Pres. H. 0.04 m.; D. 0.102 m.

Lower part of double lamp with trace of bottom of upper part. Two holes, slanting downward, pierced in unbaked clay of base; one of these once surrounded on exterior by added enclosure or sealed off by the thin slip. Opposite this, on other side of lamp, remnant of base of nozzle that serviced upper lamp. Scant remains of pierced lug to the left of nozzle, high up on wall. Lower chamber is unglazed and its use limited since any liquid would run out the unprotected hole unless plugged (no signs of wear here); this chamber presumably designed to lighten weight of huge base and to make firing more certain. Fine clay, black glaze in upper reservoir, thin slip on exterior. Dated in second half of 4th century for same reasons as preceding.

358 (L 2804). Pls. 12, 39.

H. to top of collar 0.058 m.; D. 0.070 m.

Thin vertical band handle, pierced lug, end of nozzle, and part of collar missing; all restored except handle. Glazed interior, thin slip on exterior. Except for collar and attached handle this lamp similar in profile and dimensions to **344** of Type 25 C Prime; thus to be dated at turn of 4th and 3rd centuries.

359 (L 330). Pls. 12, 39.

Pres. H. 0.051 m.; D. 0.068 m.

Most of collar, handle, pierced lug, and end of nozzle missing. Lug and nozzle restored. Glaze and slip like preceding. Stylistically similar to preceding and reminiscent of early lamps of Type 25 B Prime; late 4th century.

360 (L 2655). Pls. 12, 39.

Max. dim. 0.049 m.

Fragment of bottom of lamp with high circular foot broken all around. Deep ring around foot, perhaps to facilitate placing lamp on a stand. Glaze and slip like preceding. Start of profile, glaze, and slip recall similar characteristics in late 4th century lamps of Types 25.

361 (L 529). Pls. 12, 39.

H. 0.033 m.; D. 0.051 m.

Intact. Black glaze inside, scant remains of worn brown glaze outside. Like late lamps of Type 25 A, but nozzle lower on body and with straight sides. Like late lamps of Type 25 B Prime but glazed and without lug. Dated in first half of 3rd century because of stylistic analogies with Types 25 A and 25 B Prime.

362 (L 1848). Pls. 12, 39.

H. 0.033 m.; D. 0.057 m.

Nozzle and most of right side missing; handleless. Clay shows signs of burning; poor black glaze all over. Context dated 275-225 B.C. Comparable in some ways to Type 25 B, but of inferior workmanship and with small ridge around filling-hole more like those on late examples of Type 25 B Prime. Probably second quarter of 3rd century.

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E 14: 1, cistern: abandonment fill, accumulated *ca.* 275-225 B.C.

363 (L 405). Pls. 12, 39.

H. 0.038 m.; D. 0.055 m.

Intact except for pierced lug; restored. Black glaze all over. Comparable to late examples of Type 25 B in many ways except for tubular nozzle with flat rim. From a filling dating from latter part of the 3rd century.

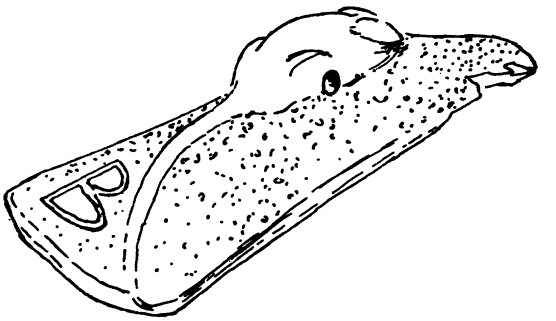
Hesperia, II, 1933, p. 453, fig. 2.

H 6: 4, well: latter part of 3rd century B.C.

364 (L 4635).

H. 0.018 m.; W. 0.026 m.; L. 0.067 m.

Intact save for minor chips. Wedge-shaped lamp lid, flat on bottom with mouse in high relief on top. A small hole through animal's body crosswise, for insertion of a cord to bind lid onto lamp (cf. lid **351** of Type 25 D Prime). By mouse's tail, incised in soft clay before glazing, a *beta*. Attic clay; black glaze, rather thin in places, all over. Similarity in general shape recalls **351** and clay and glaze could be 4th or, more likely, 3rd century.



No. 364. Scale 1: 1.

TYPE 26 A

High Central Tubes on Rods; Multiple Long Flat-Topped Nozzles

Nos. **365-371** (and 4 others inventoried). Plates 13, 40.

From late in second quarter of 4th century B.C. down into early years of 3rd century. Dating based in part on the existence of this type at Olynthos [75] and in part on the Agora finding places.

This type is related to the preceding members of Type 25 because of the groove around the filling-hole, the long straight-sided flat-topped nozzle, and the approximately same date. The chief individual characteristic, however, which is shared with other members of Types 26 and 27, is the vertical projection in the center that rises as a hollow tube or a solid rod. Lamps with central tubes have been seen earlier, of course, in Types 19 and 22, which are the forebears of these 4th century descendants.

The bases are always raised, carefully defined, and fairly thick. The central vertical members might be considered as the continuations of the great masses of clay seen in normal lamps of Types 25 A and B, the masses pulled up vertically and hollowed out. Perhaps lamp-makers in the second quarter of the 4th century occasionally experimented with their large bases, convex on the inside, and pulled them up into central projections, at the same time recalling the central holes of old Type 22.

Most of these central features in Type 26 A are open tubes, diminishing in their inner diameters toward the top, and rising approximately to the level of the rims. When the tube rises considerably higher than the rim it becomes a convenient handle for picking up the lamp; thus in **370** the terminal of the tube was given a knob, although the knob itself was open at the top, continuing the hollow cone below.

In general the tubes are late descendants of the open centers of corona lamps, via Types 19 and 22 with shrunken holes; the central opening in the base gives an easy and useful grip to the fingers. A careful examination of Type 26 A shows, however, that all these lamps are equally

[75] *Olynthus*, XIV, pp. 378-383.

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balanced with two nozzles opposite each other or with many nozzles equally spaced; there are also unmistakable signs of wear on the interiors of some of the tubes. These two facts lead to the hypothesis that the central hole of Type 26 A was often used for suspending the lamp, by means of a cord passed through the tube and heavily knotted or knotted around a stick or stone below, so that it would not slip up through the aperture. The even balance and the signs of wear on the interior of the tubes also suggest a possible impaling on a stick, to elevate the lamp or to create a kind of primitive portable floor-lamp, not a table-lamp. This may well have served as the prototype for the elaborate bronze standing lamps of the late Hellenistic and early Roman periods.

A few lamps, such as **369**, have solid rods rising higher than the rims. These of course served as handles, and may well have ended in loops, again for occasional suspension as so many Olynthos lamps show.[76] None of the Olynthos lamps, however, seem to have the low open tubes discussed above.

It will be noted that no lamps of Type 26 A have lugs on their sides. They were not needed nor were conventional handles, since the central projections served their purposes. Type 26 A is approximately contemporary with Type 25 A, the last of the major Greek types to be made without lugs.

The lamps tend to be very large, to hold a supply of oil sufficient for the two or more thirsty nozzles. They are neatly made of finely worked Attic clay and covered inside and largely outside with glossy black glaze that is inclined to flake on the later 4th century examples. The bases are normally unglazed; **366** is an exception. The groove around the rim is occasionally glazed along with the rest of the exterior, but more usual is a groove scraped of its glaze or carefully reserved and left untouched.

365 (L 635). Pls. 13, 40.

Est. D. 0.120 m.; W. of nozzle across wick-hole 0.058 m.

Two non-joining fragments; one preserves most of one side of body and rim with start of one nozzle and slight trace of other's attachment; other fragment, mended from many pieces, preserves most of a very large nozzle. Nozzle seems disproportionately large for body, but fabric and heavy black glaze, somewhat silvered on both pieces, indicates that they belong together; of course they were found together. Groove scraped. colored with miltos.

Hesperia, XXIII, 1954, p. 88, note 4.

F 16: 1, cistern: third quarter of 4th century B.C. into fourth quarter.

366 (L 3632). Pls. 13, 40.

H. 0.054 m.; D. 0.091 m.

Intact except for minor chips. Glazed all over, red to black, except resting surface of base and groove around top, both scraped. Noticeable wear on glaze within lower part of tube.

367 (L 1678). Pls. 13, 40.

H. of rim 0.046 m.; Pres. H. to top of collar 0.068 m.; D. 0.073 m.

Two joining fragments preserve base with one nozzle, start of the other, portion of sides and rim, and much of central rod; all restored except latter, broken off at top. Worn black glaze all over except scraped groove.

368 (L 4739).

Pres. H. 0.041 m.

Fragment of base and lower part of central tube; profile similar to preceding. Worn black glaze all over except bottom, which has a thin wash. Noticeable wear within lower part of tube.

D 17: 3, cistern: from *ca.* 300 B.C. into early years of 3rd century B.C.

369 (L 533). Pls. 13, 40.

H. of rim 0.039 m.; D. 0.069 m.

Intact except for top of central projection, which has neat small hole now *ca.* 0.002 m. deep.

[76] *Op. cit.*, pls. 156-157.

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Worn red to black glaze all over except for reserved groove and base.

G 14: 2, well: accumulated filling, level of 3rd century B.C.

370 (L 3919). Pls. 13, 40.

H. 0.068 m.; D. of base 0.081 m.

Single fragment preserves heavy raised base and pierced cone or tube, with traces of lower walls. Black glaze, considerably chipped, all over. Rounded projecting knob at top of tube.

371 (L 2163). Pls. 13, 40.

H. 0.045 m.; D. 0.086 m.

Intact except for one nozzle, parts of two others, and upper part of central tube; nozzles restored. Brownish-black worn glaze all over except scraped groove and reserved base. Signs of wear within tube.

D 11: 2, cistern-shaft: early (?) 3rd century B.C.

TYPE 26 B

Central Tubes with Covered Askoid Bodies

Nos. **372-374**. Plates 13, 24, 40.

Second half of 4th century B.C. Dating based on stylistic analogies with Types 25 A and 26 A, and on the finding places.

The outer profiles of this group as well as the flat-topped nozzles, fabric and glaze, and the use of grooves all recall corresponding features of Types 25 A and 26 A. What is unique is the completely covered body with a central tube, shaped like a doughnut and related to the kind of askos that appears in pottery categories in the 5th century and at least down into the early 4th century. The filling-hole is an added vertical member on top of the lamp, at the base of the nozzle.

Like the askoi these lamps have basket handles that curve from the filling-hole over the central tube to the back of the lamp, or to the opposite part of the top (on **374**) which has two nozzles opposite each other. There are no signs of wear inside the tubes, as on Type 26 A; this is to be expected, as of course the basket handle served for carrying or suspension and obviated the need for a cord or stick through the aperture as on the preceding type.

This type is practical, because the body is enclosed to lessen the dangers of spilling or of predatory mice; it is equipped with a very useful kind of handle. The hole in the center, however, seems to be a bit of whimsy on the part of the makers, who combined this feature, which was distinctly useful on Type 26 A and which they were making during the same period, with the covered body that pottery makers knew. It is likely that the same people were producing pottery and lamps during most of the classical period; this type is an illustration of the two categories in conjunction. Since these whimsical productions are very few, they could be the product of a very small group of craftsmen, perhaps one or two, and the finding places permit a supposition that they might all have been made in a single decade, in the middle of the second half of the 4th century.

The good Attic clay has black or brown glaze all over, inside and out, except for the scraped grooves around the top and the reserved base of **372**. This latter lamp belonged to a man named Menon who was so insistent on establishing his possession that he scratched not only his name, but also its abbreviation and its initial on various surfaces.

372 (L 3042). Pls. 13, 24, 40.

H. 0.042 m.; D. 0.07 m.

Intact except for filling spout and basket handle which extended between it and rear of lamp. Dull red glaze all over except scraped groove and reserved base. Inscribed on right side: ΜΕΝΩΝΟΣ; on top of nozzle: ΜΕΝΩ; on top of lamp: Μ.

B 13: 8, well: last quarter of 4th century B.C.

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373 (L 3568).

Pres. H. 0.04 m.; Pres. L. 0.051 m.

Nozzle and lower part of filling spout of a lamp exactly like preceding. Black glaze inside and out.

O 18: 2, well: *ca.* 350-320 B.C.

374 (L 1968). Pls. 13, 40.

H. (of rim) 0.045 m.; D. 0.102 m.

Single fragment preserves base, most of one nozzle and start of the opposite one, most of central tube, part of covered top, and stub of basket handle on side opposite the missing filling spout. Badly flaked black glaze all over except scraped groove around top.

TYPE 26 VARIANTS

Covered Body with Central Depression

No. 375. Plates 13, 40.

Second half of 4th century B.C. Dating based on some stylistic similarities to Type 26 B.

Although more may exist elsewhere, only a single curious lamp has been found in the Agora to be placed in this group. 375 has a solid flat base, on a ring foot, but the body is an enclosed ring with a funnel at the base of the nozzle to serve as filling-hole, very similar to lamps of Type 26 A. The flat-topped nozzle is also similar to those of that type. The central space within the ring is merely a depression, a kind of deep cup, which could have been merely a useless void or possibly a receptacle for burning incense or perfume. This lamp also demonstrates an ingenuity or imagination on the part of the lamp-maker that allies him with the potter. A somewhat similar central cup was made on 191 several decades earlier.

375 (L 4506). Pls. 13, 40.

H. (of top) 0.03 m.; D. 0.074 m.

About half of lamp preserved with bottom, base of flat-topped nozzle, parts of covered ring-shaped body, central cup-like depression (cf. 191 of Type 21 Variants), and start of funnel-like opening rising at base of nozzle for pouring in oil. Breaks show that a basket handle originally went from funnel across open cup to back of lamp. Attic clay, good black glaze over all, somewhat chipped.

TYPE 27 A

Small Lamps with Central Tubes; Small Blunt Nozzles, Flat Rims

Nos. 376-380 (and 12 others inventoried). Plates 13, 40.

Latter years of third quarter of 4th century B.C. through second quarter of 3rd century. Dating based on the fact that this type is found on the Pnyx before *ca.* 325 B.C.[77] and on the Agora finding places.

[77] *Hesperia*, Suppl. VII, pp. 44-45, nos. 85-86.

These little lamps, almost miniatures, seem to have had some popularity and a fairly long life although they are extremely impractical, being hard to fill, holding very little oil, and likely to tip over. The general profile recalls to some extent those of Types 25 A and 26 A. There is always a raised base, flat or slightly concave on its resting surface. The sides curve slightly; there is a noticeable separation between the sides and the narrow, nearly flat top which is often decorated with a groove around it. The high sides and distinct flat top are in marked distinction to those features of Types 27 B and C which are low and rounded.

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There is uniformly a central tube that often crowds the interior space, rising to the height of the exterior walls, occasionally higher. There are no signs of wear within the tubes. It would be impractical to suspend these lamps, which are too small and unbalanced (with but a single nozzle) for such a purpose. The central openings may be considered here as relics of the old finger-holes of Types 19 and 22, rather than useful adjuncts for suspension as in Type 26 A. Moreover, none of the lamps of Type 27 A has a handle or a pierced lug. The central tube provides a very convenient grasping place, especially when the tube rises higher than the rim, with a finger in the bottom of the socket or tube and the thumb on its top. It is possible of course that these lamps might have been occasionally set on a short rod or spike, perhaps affixed vertically to a shelf, so that they would remain stationary and not tip over.

There is always a single nozzle, not two as in Types 26 A or 27 D. The nozzle always offers a marked distinction to those of the preceding types and generation. No longer is there a long flat-topped protuberance, but here a broad shallow nozzle, usually semicircular in plan, with a little wick-hole taking up most of the top. The wick-hole does not encroach on the rim. These nozzles are most practical; they do not break off easily. All of the catalogued examples, and many others, still preserve intact their nozzles; this is far from being the case with lamps in the 25 and 26 types.

The Attic clay is covered all over with good black glaze in the earlier, 4th century, examples; in the 3rd century the glaze tends to be flaky and of poorer quality. The grooves on the rims are sometimes glazed, sometimes scraped clean. Most of the bases are glazed, but an occasional lamp had its base reserved.

376 (L 4642). Pls. 13, 40.

H. (of rim) 0.020 m.; D. 0.037 m.

Intact except for part of top of tube; restored. Worn black glaze all over, including groove.

O-R 7-9, construction fill: before 300 B.C.

377 (L 1484). Pls. 13, 40.

H. 0.026 m.; D. 0.043 m.

Intact except for top of central tube. Black glaze all over, somewhat flaked.

378 (L 4721). Pls. 13, 40.

H. 0.028 m.; D. 0.045 m.

Intact except for top of central tube and chips from rim. Black glaze all over except for scraped groove and reserved resting surface.

379 (L 4645). Pls. 13, 40.

H. 0.030 m.; D. 0.045 m.

Intact except for minor chips; restored. Collar same height as rim. Dull reddish black glaze all over except for resting surface(and this partly covered by dripped glaze from sides).

380 (L 3784). Pls. 13, 40.

H. (of rim) 0.031 m.; H. (to top of collar) 0.042 m.; D. 0.054 m.

Complete except for most of rim and upper side walls; restored. Black glaze all over.

N 21: 4, cistern: lower filling, *ca.* 250 B.C. or early in third quarter of 3rd century B.C.

TYPE 27 A PRIME

Small Lamps with Central Tubes; Small Blunt Nozzles, Flat Rims; Unglazed

Nos. 381-382 (and 2 others inventoried). **Plates 13, 40.**

Third quarter of 4th century B.C. into second quarter of 3rd century, by stylistic analogy with Type 27 A.

This type, a small group, is like the preceding except for the use of glaze. Here the interiors are glazed but the exteriors are left plain, except on an occasional lamp where the paint has

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accidentally spilled on to the outside. There is usually an application of a thin clay slip over the unglazed surfaces that results in a smooth even finish; this is comparable to that seen on Types 25 A Prime and 25 B Prime.

One of the lamps, 382, has a variation on the central tube motif. Here a solid central cone was made on the wheel and pierced afterwards when the clay was leather-hard. The hole was punched from the top downwards and is on a slant; this effectively disposes of any notion that the narrow tube was used for suspending the lamp while lighted, because it would have tipped considerably.

381 (L 1785). Pls. 13, 40.

H. (of rim) 0.027 m.; H. (to top of collar) 0.031 m.; D. 0.044 m.

Intact except for back parts of rim and walls; restored. Thin red glaze inside; thin slip outside.

382 (L 164). Pls. 13, 40.

D. of base 0.03 m.

Single fragment preserves base and lower part of tube. Hole pierced through tube when lamp was leather-hard (as if a lamp of Type 27 A Prime were intended, and central mass pulled up into tall projection and then pierced). Flaky black glaze inside; slight traces of thin slip outside.

Hesperia, II, 1933, p. 198, no. L 164 and note 1 (mentioned).

TYPE 27 B

Small Lamps with Central Tubes; Curved Rims, Solid Lugs; Imported

Nos. 383-384 (and 1 other inventoried). Plates 13, 40.

About second half of 3rd century B.C., perhaps into early 2nd century. Dating based on the fact that this type is numerous at Priene, where it is dated in the 3rd century,[78] and very common in Delos, where it is considered not earlier than the 3rd century B.C., running down into the 2nd century.[79] Only a single example from the Agora comes from a trustworthy context, 384.

These lamps form a very small group locally; none are known from the neighboring excavations on the Pnyx or in the Kerameikos, so that it seems likely that only a few were imported from their Aegean center of origin. Athens had its own very flourishing lamp industry which exported widely, but copied foreign models very little until the introduction of exotic moulded designs (Type 45 A), which began to come in, incidentally, about the time of these scattered imports of Type 27 B.

As a matter of fact this type, made abroad, was influenced by Athenian models of Types 27 A and 27 C. The small size, the comparatively large central tube, and the modest nozzle all reflect the slightly earlier Athenian lamps of Type 27 A. The curved sides merging with the rounded rim have their counterparts on Type 27 C.

There is no proper raised base, as on most of the preceding types, but rather a flat bottom. There is no handle, but instead a small solid lug. In the first and second quarters of the 3rd century B.C. lugs were seen (on Type 25 B Prime) that were only partially pierced. Soon after that, about the middle of the century, solid lugs made their first appearance in a long sequence of such vestigial remainders. These lamps of Type 27 B can hardly be much earlier, then, than the late second quarter or middle of the 3rd century. The solid lug here has almost no function,

[78] *Priene*, pp. 449 ff., nos. 165-170, figs. 555 and 556; cf. also p. 457 with references.
[79] *B.C.H.*, XXXII, 1908, p. 141, fig. 3.

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although it could be somewhat useful in gripping the lamp firmly if the outside were slippery with oil. In any case, the central tube could be used for a firm grip also, as in Type 27 A. Although there are no signs of wear within the tubes of either Types 27 A or 27 B they could sometimes have served for insertion over a spike on a shelf, to keep the lamp steady.

The one extant nozzle is spoon-shaped rather than like the semicircular projections of the preceding two groups. This is totally unlike most Athenian nozzles of the period. Different, too, is the wick-hole which utilizes all of the nozzle's area rather than a small orifice in a proportionately large nozzle-top.

The fabric is a rather thin clay, more buff than pink. The glaze used all over the lamps is flaky and fired red. These elements point to a foreign origin, since they are consistent on both lamps. Athenian clay and glaze, especially in the later Hellenistic and early Roman periods, may occasionally have looked like this in some of the variant manifestations, but at this time and with this consistency a foreign origin is indicated, perhaps Samos or the Asia Minor coast, from which Type 27 B was exported to Delos and occasionally to Athens.

383 (L 1296). Pls. 13, 40.

H. 0.024 m.; D. 0.046 m.

Intact. Flaked red glaze all over.

384 (L 459).

Pres. H. (of rim) 0.024 m.; Est. D. 0.05 m.

Single fragment preserves bottom, parts of sides and central tube, and solid lug. Profile and glaze like preceding.

Hesperia, III, 1934, p. 366, no. C 58, fig. 50.

G 6: 2, cistern: *ca.* 200 B.C.

TYPE 27 C

Small Lamps with Central Tubes; Small Blunt Nozzles, Curved Rims

Nos. 385-386 (and 2 others inventoried). Plates 13, 40.

Second half of 3rd century and probably into 2nd century B.C. Dating based on the fact that this type is a stylistic development of Type 27 A and related stylistically to Type 27 B. These lamps are not found in 4th century B.C. contexts of the Pnyx with Type 27 A.

It is impossible to ascertain the floruit of this small group of lamps very closely without further evidence, but the likelihood is that they were all made in a few shops during a rather short period, since they are so uniform. It may be suggested that they flourished during the later rather than the earlier years of their span, since they have more similarities to Type 27 B than to Type 27 A. Whether they served as models for imported Type 27 B or vice-versa is hard to say, but the nozzles indicate that at least they were not slavishly copied from these imports. Lamps of Type 27 C are found in Alexandria, which further confirms a date in the later years of the 3rd or in the 2nd century B.C.

There is always a pronounced raised base with a concave surface beneath, curving walls that merge with the plain overhanging rim, and a very large central tube, the top of which is higher than the lamp's rim. No handles occur, nor lugs, a situation like that in Type 27 A. The nozzles are small handmade projections similar in their curved plan to those of Type 27 A, but not so clearly set off; in fact the wick-holes do not limit themselves to the nozzles but invariably intrude into the curved rims of the lamps.

The clay seems to be an Attic fabric, but not the usual pinkish buff; it is thin, rather coarse,

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and buff in color. The lamps are glazed all over with a poor flaky compound, brownish or reddish rather than black. The general aspect of the lamps reflects the usual appearance of much 3rd and 2nd century B.C. Athenian pottery that has fallen far below the older standards of excellence.

385 (L 3872). Pls. 13, 40.

H. (of rim) 0.029 m.; H. (to top of collar) 0.033 m.; D. 0.048 m.

Intact except for chips from collar and rim; restored. Brownish black glaze all over, badly worn.

386 (L 1530). Pls. 13, 40.

H. 0.036 m.; D. 0.052 m.

Complete except for top of collar. Reddish brown glaze all over, but sparsely applied in interior and within tube.

See also L 123: *Hesperia*, II, 1933, pp. 196-197, figs. 1-2.

TYPE 27 D

Small Lamps with Central Rods; Double Tubular Nozzles

Nos. 387-391 (and 5 others inventoried). Plates 14, 40.

Later years of 3rd century B.C. down to *ca.* 150 B.C. Dating based on stylistic similarities with Type 27 C and on the finding places.

These lamps may be considered as late descendants of Type 26 A, which oftentimes had nozzles opposite each other with a central rod for suspension; but they are more closely related to Type 27 C because of the generally rounded profile, the smaller size, and the absence of straight sides and completely flat tops on the nozzles.

Some lamps of Type 27 D have neat raised bases; others have plain flat bottoms. In all cases the sides curve over into the rim, which usually continues the arc but sometimes is flattened. A reminiscence of Type 26 A is the occasional vestige of a thin groove around the rim. All lamps have central projections that crowd the interiors; these are pulled up into tall solid rods whether the lower part of the projection is hollow or solid. The tops of the rods have added loops or pierced holes for suspension, similar in every way to the 4th century rods seen on Type 26 A and particularly on some of the Olynthian lamps.[80] There is no morphological change whatsoever in the design of these rods, between the 4th century B.C. examples and these that continue in the later years of the 3rd century and down into the 2nd. Lamps with such central rods were never frequent; they were produced over a long period of time but in small numbers because they were never really practical. The rods broke easily; none of our ten examples is preserved with the complete rod attached to a more or less complete lamp. These projections in this type are the ultimate step in the long tradition of lamps with heavy central masses that began with Type 25 A in the second quarter of the 4th century.

The rods served as handles, eliminating the need for more conventional appendages. There are solid lugs on some lamps, always used in pairs, one at the left of each nozzle. The lugs are useless of course but survive as reminders of the 4th century Type 26 A; they appear in pairs in order to balance the lamp when it is suspended. It so happens that all lamps with lugs also have raised bases (although not all raised bases support lamps with lugs); there is no chronological significance in this, merely the reminder of an older prototype when a lamp was given a definite base and a useful pierced lug.

The nozzles are fairly long, tubular in section, with rounded tops, except for an occasional

[80] *Olynthus*, XIV, pl. 157.

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example such as **389** that has a practically flat top recalling those of Types 26 A and B. The wick-hole area tends to be swollen and may end in blunted flukes, as **388**. Such flukes, in a more extreme form, were introduced into Athenian lamp production via the imported Knidos lamps, Type 40 A, in the 2nd century B.C.

Type 27 D is made of fairly good pinkish buff Attic clay; it is wheelmade, but a single moulded example exists, **819**, classified under Miscellaneous Moulded Lamps. The glaze varies from a thick metallic black to a poor brown or brownish red; it is frequently thin and flaky. Sometimes the interiors of the hollow tubes, below the solid rods, are unglazed; one uncatalogued lamp has its base left unglazed, but this is an exception.

387 (L 556). Pls. 14, 40.

H. (of rim) 0.031 m.; D. 0.058 m.

Intact except for top of central projection and chips from one nozzle; latter restored. Nozzles slightly rounded on top. Glazed all over, black to brownish red.

Hesperia, III, 1934, p. 387, no. D 53, fig. 75.

H 16: 4, pithos: filling of *ca.* 150 B.C.

388 (L 557). Pls. 14, 40.

H. (of rim) 0.038 m.; D. 0.063 m.

Several joining fragments preserve base, one nozzle and both solid lugs, as well as parts of other nozzle, side walls, rim, and central projection; all except latter restored. Slight suggestion of groove around inner edge of rim. Nozzles rounded on top. Thick metallic black glaze everywhere.

Ibid., no. D 54.

Provenance as of **387**.

389 (L 3774). Pls. 14, 40.

H. (of rim) 0.034 m.; D. 0.056 m.

Intact except for top of vertical rod. Slight suggestion of groove around outer edge of rim. Nozzles flat on top. Worn black glaze all over.

390 (L 4702). Pls. 14, 40.

Pres. H. 0.085 m.; D. of base 0.040 m.

Single fragment preserves base, part of body, and most of central projection; latter chipped at top but preserves most of hole for suspension. Wheelmade, but loop of clay at top added by hand. Worn black glaze throughout except on interior of projection.

P-R 6-12, construction filling: before *ca.* 150 B.C.

391 (L 4658). Pls. 14, 40.

H. 0.076 m.; D. of base 0.041 m.

Single fragment preserves most of base, part of body with start of one nozzle, and central projection. Latter pierced laterally, at right angle to direction of nozzles. Worn black glaze all over.

TYPE 27 VARIANTS

Lamps with Central Tubes or Rods; Curved Sides and Various Individual Features

Nos. **392-396** (and 1 other inventoried). Plates 14, 40.

Dated variously in 3rd and 2nd centuries B.C. according to stylistic similarities with other types and, for **393** and **395**, by their finding places.

All of these lamps are wheelmade, have or had central projections in the form of tubes or rods, and have curving sides; their odd characteristics, which prevent them from being assigned to divisions of Type 27, are mentioned below.

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392 (L 4297). Pls. 14, 40.

H. (of rim) 0.022 m.; D. 0.049 m.

Intact except for top of central tube. Attic clay; thin worn black glaze all over. Close to Type 27 A, especially in nozzle formation, but lower, broader, and without raised base. Profile close to those of Type 21 C. Dated by analogy with Type 27 A in late 4th or first half of 3rd century B.C.

393 (L 1307). Pls. 14, 40.

H. 0.024 m.; D. 0.051 m.

Intact except for top of central tube. Thin hard buff clay; worn black glaze all over. Unusually small nozzle, carefully made; this and the clay suggest a possible non-Attic origin. The lamp seems stylistically earlier than its context.

Hesperia, III, 1934, p. 411, no. E 87, fig. 98.

F 15: 2, cistern: last quarter of 2nd century B.C.

394 (L 4592). Pls. 14, 40.

H. 0.038 m.; D. 0.055 m.

Complete except for one nozzle, parts of rim, and central projection; all except latter restored. Flaky Attic clay; slight traces of red glaze in interior. Exterior unglazed except for drip on nozzle; thin slip on exterior. Like **369** of Type 26 A in general profile, flat-topped long nozzles, and solid base with small hole in projection above it. Also similar to **389** of Type 27 D in size, proportions, flattened rim, and solid base. For these stylistic connections, dated between them: *ca.* middle of 3rd century.

395 (L 1814). Pls. 14, 40.

H. 0.095 m.; D. of base 0.045 m.

Single fragment preserves raised base and pierced projection; most of lamp broken away around the bottom; trace of start of one nozzle. Gray clay, very worn black glaze all over. Fabric similar to the Asia Minor "Gray Ware" of the late Hellenistic period.

Hesperia, III, 1934, p. 471, also discussions on pp. 423-427.

Shape recalls Type 27 D. Dated 275-225 B.C.; probably from later years of this period.

E 14: 1, cistern: filling accumulated *ca.* 275-225 B.C.

396 (L 500). Pls. 14, 40.

Pres. H. 0.028 m.; Est. D. *ca.* 0.075 m.

Fragment from base with start of side walls and lower part of central tube. Gray clay and black glaze (all over) like preceding. For stylistic reasons roughly contemporary with preceding.

TYPE 28 A

Blister Ware Lamps; Curved Profiles

Nos. **397-400** (and 1 other inventoried). Plates **14, 41.**

Corinth: classified under Type XIII.

Last quarter of 4th century B.C. into second quarter of 3rd century. Dating based in part on examples found in Corinth from contexts of this period,[81] in part on the same fabric in dated vases,[82] and in part on the finding places in the Agora.

This very easily recognizable group has a curiously distinctive clay which is reminiscent of the unusual clay of Type 15, an earlier fabric. The clay of Type 28 A is thin, gritty, hard, but sometimes brittle. Its surface is irregular with occasional bubbles or tiny blisters. It varies in color under differing firing conditions as does the clay of Type 15. Ordinary glaze was not used, but instead there is usually a thin wash or slip of gray or orange pink that is used inside and outside, but not consistently. The fabric is wheelmade with frequent traces of tooling when the clay was leather-hard, especially on and around the nozzles. The tooling as well as the somewhat irregular

[81] *Hesperia*, XVII, 1948, p. 239, F 11: from a deposit dated just before 300 B.C.

[82] *Hesperia*, III, 1934, p. 327, A 68: an amphoriskos dated at the turn of the 4th and 3rd centuries B.C.; and cf. pp. 470-471. On the fabric see also *Hesperia*, XVII, 1948, p. 233, E 10 and E 11, and the references there.

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turned surfaces and profiles suggest that these lamps were made by rather inept craftsmen. It is debatable whether these were Athenians or not, working with a local clay. Yet the vagaries of Attic clay are well known in the late Hellenistic and early Roman periods, when it took many kinds of textures and colors at the hands of various workers under assorted firing conditions; it must be remembered too that several banks of clay exist in the neighborhoods of Athens, not all alike by any means.

In the 4th century, however, it is most unusual to see any radical departure from the various grades of recognizable pinkish buff in the Attic repertory of vase making; nor do the local coarse unglazed household pots of the 4th century betray many aberrations as different as the clay of Type 28 A. It is very possible that the fabric of Type 28 A may be a variety of Corinthian clay, since numerous lamps of this sort are found in Corinth and the related clay of Type 15 has been seen to be Corinthian.

The shapes of the lamps recall some of the aspects of Type 25 D Prime, of approximately the same period, and indicate a strong influence from this type. Either there is a narrow ring foot or else the concave base is set off from the body by a groove. The curved side walls rise to the top where there is always a well defined circular groove at the point of junction. The top or broad rim is nearly flat, actually slightly convex. There is always a small round filling-hole without any groove or surrounding ridge. All the lamps have bold pierced lugs, appropriate for the last quarter of the 4th and first quarter of the 3rd centuries. A few lamps have thin vertical band handles in addition to the lugs, so that they could be carried about easily while lighted as well as strung up conveniently when not in use. The handmade nozzles are long, narrow, nearly flat on top with rounded terminations and small oval wick-holes at their extremities.

397 (L 3525). Pls. 14, 41.

H. 0.035 m.; D. 0.064 m.

Intact. Orange buff clay; thin gray wash all over.

O 20: 3, well: lower filling, 300-275 B.C.

398 (L 3523). Pls. 14, 41.

H. 0.026 m.; D. 0.057 m.

Intact except for tip of nozzle and most of lug and vertical strap handle; restored. Dark gray clay apparently with orange surface; covered on outside with thin light gray wash or glaze. Interior apparently has same coating.

Provenance as of **397**.

399 (L 1933).

Pres. L. 0.049 m.

Nozzle and bit of profile (like preceding) preserving groove at top of wall. Light red clay; thin gray glaze or wash outside through which is revealed the clay's redness; thin dark gray glaze inside.

E 14: 1, cistern: abandonment fill, accumulated *ca.* 275-225 B.C.

400 (L 2715). Pls. 14, 41.

H. 0.022 m.; D. 0.048 m.

End of nozzle and part of lug broken away; part of back missing but enough preserved to show there was no handle attachment; restored. Gritty gray clay, unglazed inside. Exterior has thin orange-pink wash.

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TYPE 28 B

Blister Ware Lamps; Angular Profiles

Nos. **401-405** (and 12 others inventoried). Plates 14, 41.

Corinth: classified under Type IX.

Early to late years of 3rd century B.C., but primarily in first half of century. Dating based on stylistic similarities with Type 28 A and on the finding places.

Type 28 B has the same fabric and use of washes or slips that characterize the preceding type. There is the same variety of colors in the clay and exterior coating; the same remarks on origin apply to both types.

This group differs in that it is later in date and has a very different profile, usually angular. The base may be raised and noticeably concave, in the earlier specimens of approximately the first quarter of the 3rd century; the base may be flat or only slightly concave in the later specimens, in the second half of the 3rd century. The sides curve and merge with the rounded top, in the earlier lamps, but the sides have a watch-shaped angular profile in the later examples. There is always a little groove and ridge concentrically arranged around the filling-hole. These were conspicuously absent on the preceding type. On Type 28 B there is never a ridge around the lamp at the junction of sides and top.

There is normally no handle, although one uncatalogued example has a vertical band handle like that of **398** of Type 28 A. There is always a lug; this is pierced in the earlier examples, solid in the later examples, but these can only be dated stylistically around the end of the first quarter of the 3rd century or slightly later, by analogy with Type 25 B Prime's semi-pierced lugs; the use of a groove and a ridge around the filling-hole also recalls features of Type 25 B Prime, as well as of contemporary Type 29 A. The lugs on Type 28 B show clearly the progression from usefulness to partial obsolescence to vestigial remainders. The nozzles are like those of the preceding type in every way, with considerable traces of paring on their rounded or flattened tops.

401 (L 3524). Pls. 14, 41.

H. 0.030 m.; D. 0.065 m.

Intact. Pierced lug; flat-topped nozzle. Orange buff clay with thin light gray wash all over, on exterior and interior.

O 20: 3, cistern: lower fill, *ca.* 300-275 B.C. Another inventoried (uncatalogued) example of Type 28 B found here.

402 (L 2380). Pls. 14, 41.

H. 0.031 m.; D. 0.065 m.

Complete except for back portion; restored. Semi-pierced lug. Thin orange wash or slip outside only. Interior unglazed.

E 3: 1, cistern, filled during years just before and after 300 B.C.

403 (L 3627). Pls. 14, 41.

H. 0.033 m.; D. 0.072 m.

Complete except for right side and minor chips; restored. Solid lug. Clay and glaze like preceding.

Provenance as of **401**.

404 (L 4095). Pls. 14, 41.

H. 0.029 m.; D. 0.059 m.

Intact except for chip from right side; restored. Solid lug. Thick gritty clay, orange-pink to gray; traces of thin gray wash on exterior. Interior apparently unglazed.

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405 (L 4195). Pls. 14, 41.

H. 0.025 m.; D. 0.060 m.

Intact except for minor chips. Solid lug. Roughly made, with crudely shaped nozzle. Thick fabric, red-orange at core, dark gray at surface. Traces of gray wash on exterior (?).

Hesperia, XVII, 1948, p. 161, pl. XLIII, 1.

M 21: 1, cistern: dumped filling of late 3rd and possibly into early 2nd century B.C. Another inventoried example of Type 28 B found here.

TYPE 29 A

Lamps with Watch-Shaped Lagynos Profiles; Narrow Ridges Around Filling-Holes

Nos. 406-414 (and 20 others inventoried). Plates 14, 24, 41.

Corinth: classified under Type IX.

Last quarter of 4th century B.C. and well into second quarter of 3rd century. Dating based partly on the fact that none are found in deposits on the Pnyx antedating *ca.* 325 B.C., partly on the similarity in painted decoration between some lamps and pottery dated after 275 B.C., and partly on the Agora finding places.

These crisp neatly made lamps are related to those of Type 25 in the continued use of an emphatic circular groove around the filling-hole; they also offer an origin for the angular profile seen in Type 28 B.

The profile is very carefully drawn, with a raised base concave on its under surface, and usually with the shallow disc which was seen so often in the Type 25 lamps. The bodies are broad and flat with a distinct angle between the upper and lower halves, as in contemporary lagynoi; the upper part of the walls of the body serves as the top of the lamp. The filling-hole has a groove around it and usually a thick ridge or rim; on a few lamps this rim may be drawn up into a neat vertical collar. Some of the later (3rd century) examples have multiple grooves around the collar rather than a single one, and an added groove at the angle marking the junction of the two parts of the body. The interiors of the early (4th century) lamps often show a large hump of clay in the bottom, recalling the convex masses of the related 25 Types. The later lamps do not have such conspicuously thick bases as a rule.

The use of a lug is almost universal; it is missing on only a couple of lamps that have serviceable handles. Normally the lug is fully pierced and is used on lamps without handles. A few of the latest lamps, those of the late first quarter or second quarter of the 3rd century, have the lug pierced with a very small hole indeed, or have solid lugs. This type thus exhibits again the change in the function of the lug during the first quarter of the 3rd century. When the handles occur they are broad vertical band handles and accompany lamps with solid lugs, although rarely one is found with a pierced lug. Handles are used only on the later lamps of this series.

The nozzles are normally long and flat with rounded ends, like those of Types 25. One exceptional nozzle is on 414; this is rounded on top, blunted on the end, with a slight indication of flukes. It is decorated with an incised herringbone pattern; the shape is late, typical of nozzles that are usually classed in the 2nd century B.C., since flukes seem to arrive in Athens with lamps of the Knidos type (40 A). It would seem that 414 is a late survival of its type and might indeed be classed as a distinct and unique variant.

The lamps are made of good pinkish buff Attic clay. The black glaze is smooth and hard on the earlier examples, flaky and thin on the later ones. The interiors are glazed, of course, as are most of the surfaces of the exteriors. The bases are generally left unglazed in the early

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lamps but covered in the later specimens. The grooves are sometimes reserved but usually scraped of glaze after it was applied, but before firing. The groove and scraping were occasionally done in one operation as 413 shows; here the scraped groove surrounds most of the lamp but no groove extends into the little area under the handle, as it would if the groove were made around the lamp before the handle was added, and then scraped clear of glaze in all but the handle area.

One lamp, 412, has a wreath painted in thinned clay on its upper side. This is actually West Slope decoration [83] and shows a close bond again between the potter and lamp fabricant.[84] It is interesting to see decoration on a West Slope lagynos [85] very similar to the decoration on this lamp with its lagynos type of profile. The two objects could have been the product of the same shop and might even be by the same hand. Other lagynoi of the same period have similar profiles and decoration.[86]

In recapitulation one may roughly divide lamps of Type 29 A into earlier and later groups, although there can be no clear demarcation between them either stylistically or chronologically. Generally speaking those that are early within the type have more acute angles in the profiles, well pierced lugs, reserved bases, better glaze, and reserved grooves. Those that are late within the type tend to be less carefully executed, but show added decorative features.

406 (L 3041). Pls. 14, 41.

H. 0.032 m.; D. 0.083 m.

Intact except for small chip from side. Pierced lug. Good black glaze, somewhat peeled; reserved base, reserved groove.

B 13: 8, well: last quarter of 4th century B.C. Another inventoried example of Type 29 A found here.

407 (L 1216).

Est. D. 0.10 m.

Fragment of upper part of body preserving bit of filling-hole and top of nozzle. Profile like preceding. Good black glaze; reserved groove.

Hesperia, III, 1934, p. 323, no. A 47, fig. 7.

G 13: 4, well: use filling of *ca.* 340-310 B.C.

408 (L 2187). Pl. 24.

H. 0.038 m.; D. 0.078 m.

Intact. Profile like 406. Pierced lug. Thin black glaze; reserved base, reserved groove. On top of nozzle is scratched in the glaze: Π.

E 3: 1, cistern: filled during years just before and after 300 B.C. Another inventoried example of Type 29 A found here.

409 (L 2360). Pls. 14, 24, 41.

H. 0.035 m.; D. 0.073 m.

Intact except for minor chip from rim. Small piercing through lug. Worn black glaze; reserved base, scraped groove. Graffiti on top of nozzle and on upper part of side: ΕΥ and ΥΑ.

410 (L 3539). Pls. 14, 41.

H. 0.032 m.; D. 0.067 m.

Intact. Pierced lug. Worn red to black glaze all over except on scraped groove.

O 20: 3, well: lower filling, first quarter of 3rd century B.C.

411 (L 4299). Pls. 14, 41.

Pres. H. 0.048 m.; D. 0.073 m.

Complete except for handle, top of collar, and minor chips; restored except for handle and collar. No lug. Two concentric grooves at base of collar, not scraped. Good black glaze all over except for reserved base.

412 (L 1003). Pls. 14, 41.

Pres. H. 0.033 m.; D. 0.081 m.

Intact except for handle, collar, and end of nozzle; nozzle restored. Very narrow piercing through

[83] *Hesperia*, III, 1934, pp. 438-447.

[84] Another Attic lamp with a later variety of West Slope decoration was found in Cyprus; *Opuscula Atheniensia* I, Skrifter utgivna av Svenska Institutet i Athen, 4, II, pp. 119-120, pl. I, 20.

[85] P 5654, from a context (E 14: 1) dated 275-225 B.C. This places the lagynos shape as somewhat earlier than suggested in *Hesperia*, III, 1934, pp. 450-451.

[86] A good example is P 7774, from a cistern deposit (E 3: 1) dated just before and after 300 B.C.

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lug. Two concentric grooves around base of collar as in preceding, but outer one scraped, inner one not. Although none of collar is preserved it surely existed because there is no second handle-attachment on top of lamp and, although the body of the lamp has never been broken, the central area is fractured all around in a way that would be possible only if an adjoining part of the lamp, the collar, were knocked off, leaving a broken edge. Good black glaze, somewhat worn, all over except on one groove and base. Wreath of leaves in thinned clay added to top of lamp, covering the circumference including top of nozzle, but excluding the area beneath handle.

413 (L 2936). Pls. 14, 41.

H. 0.026 m.; D. 0.073 m.

Intact except for handle and end of nozzle; restored. Solid lug. Good black glaze, somewhat worn, all over except for two scraped grooves.

414 (L 492). Pls. 14, 41.

H. 0.031 m.; D. 0.070 m.

Intact except for handle, left side, and most of rim; restored (without lug, although there is no certain evidence that there was none). Worn black glaze all over, except for two reserved grooves as in preceding, around inner and outer edges of upper part of body. Incisions on top of nozzle, in clay but beneath glaze, in form of rough branch or herringbone. Cf. 465 of Type 34 Variants.

See also L 420: *Hesperia*, II, 1933, p. 453, fig. 2, lower right; and L 4399: *Hesperia*, XX, 1951, p. 125, pl. 52 c.

TYPE 29 B

Lamps with Watch-Shaped Lagynos Profiles; Flat Rims around Filling-Holes

Nos. 415-416 (and 1 other inventoried). Plates 15, 41.

First quarter and into second quarter of 3rd century B.C. Dating based on stylistic similarities to late examples of Type 29 A and on the finding place of 416.

These lamps are comparable in most respects to the later examples of Type 29 A. There is seen a similar raised base, concave on its under surface, with or without the little raised disc. The sides are double-convex, with a noticeable if not sharp angle between the upper and lower halves. There is a groove around the filling-hole but a broad band replaces the ridge or collar of Type 29 A and serves as a rim; this rim may be either flat or slightly concave, and is the type's distinguishing feature.

None of the lamps has a handle, although the rear portions where handles might have existed are broken off on two examples. All the examples have lugs which in this particular type are characterized by very thin holes, pierced apparently by an instrument as thin as a needle, and wider at the top than at the bottom. These holes are practically useless although a thin string could have been drawn through some of them; they could have served to hold thin wick-pokers. Such narrow holes mark again a transitional step from the fully pierced to the solid lug. The nozzles are long, nearly flat on top, with rounded ends, recalling the usual nozzle form of Type 29 A.

The pinkish buff Attic clay is covered with fairly good black glaze, including the bases of the lamps. Sometimes the grooves are scraped, with an occasional use of added miltos here; sometimes they are uniformly covered with the black glaze used elsewhere on the lamp.

These lamps form the transitional link between the enclosed bodies of Type 29 A and the later, more developed forms, of Types 31, 32, 33, etc. that have depressed rims around the filling-holes.

415 (L 1727). Pls. 15, 41.

H. 0.036 m.; D. 0.069 m.

Intact except for end of nozzle; restored. Very thin piercing through lug, apparently shrunken to solidity (internally) during firing. Worn black to red glaze all over.

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416 (L 2694). Pls. 15, 41.

H. 0.037 m.; D. 0.069 m.

Intact except for end of nozzle and back parts of side and rim; restored. A handle could have existed on the missing portion. Very thin piercing through lug. Rather metallic black glaze all over except in scraped groove that has added miltos.

D 11: 2, cistern-shaft: early 3rd century B.C. Another inventoried example of Type 29 B found here.

TYPE 30 A

Lamps with Open Bodies; Angular Profiles

Nos. **417-418**. Plates 15, 41.

Late 5th century B.C. and well into first half of 4th century. Dating based on stylistic similarities to Types 23 A and 25 A, and on the finding places.

All members of Types 30 are isolated morphologically from Types 29 and the members of the 31 Types. They are introduced at this point, however, because Types 30 B and 30 C belong here in the early Hellenistic development of wheelmade lamps; Type 30 A is their predecessor.

Type 30 A is a link with Type 23 A, and dates back toward the end of the 5th century. It includes a very small group of carefully made lamps, rather a contrast to their more carelessly constructed progeny. The base is flat, the sides are in two planes of which the lower is short and straight, the upper taller and curved. A narrow flat rim crowns the wall. There are no handles; of course there are no lugs since these features were not used before the middle of the 4th century. The well made flat-topped nozzles are related to the neat nozzles that were beginning to come in Type 25 A just as Type 30 A was fading.

The fine Attic clay is uniformly covered inside and out, except for the reserved bottoms, with a respectable black or brown glaze.

417 (L 611). Pls. 15, 41.

H. 0.030 m.; D. 0.069 m.

Intact except for end of nozzle; restored. Brownish black glaze all over except base and lower plane of sides.

G 16: 1, well: late 5th and early 4th centuries.

418 (L 1873). Pls. 15, 41.

H. 0.026 m.; D. 0.059 m.

Intact except for part of side wall and end of nozzle; restored. Thin brownish black glaze all over except reserved base, where some glaze has spilled.

F-G 9-10, construction filling: to last quarter of 5th century B.C.

TYPE 30 B

Lamps with Open Bodies; Curved Profiles; Roughly Made

Nos. **419-422** (and 2 others inventoried). Plates 15, 41.

Ca. middle of 4th century B.C. into first quarter of 3rd century.

These lamps show the diluted but persistent tradition of the open body continuing down into early Hellenistic times. All of the new developments were omitted in these *rétardataire* specimens that were carelessly and quickly made by inept craftsmen. They do not reflect the popular interest in lugs; they show no signs of the gradual enclosing of the body. They do not form a proper group because of minor variations from each other, but they are placed here as an indication that some

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customers existed for the cheap little traditional types during the periods of continued experimentation and change.

Type 30 B is reminiscent of Types 23 A and 30 A. There is a flat bottom or simple raised base; 421 has a simulated raised base because of the groove around the lowest part of its side walls. The walls are curved and either merge into a curved rim or meet a narrow flat rim that slopes inwardly. There is no sharp profiling on these lamps. Only one lamp has a handle, which is of the early horizontal band variety seen so often on Type 25 A and earlier lamps. The nozzles are usually crude handmade addenda, flat on top and stubby at the ends.

The clay is always Attic, but the glaze varies with the period of production; it is noticeably flaky in the later, 3rd century, lamps. The entire exterior and interior of every lamp is coated except for the base of 422, which thus must be fairly early within the group. This little lamp is a miniature, a child's toy, but signs of burning indicate that it was once used.

419 (L 2890). Pls. 15, 41.

H. 0.037 m.; D. 0.066 m.

Intact except for small chip from side. Base and lower part of body smoothly finished; remainder of lamp somewhat rougher, not carefully smoothed. Brownish black glaze all over.

N 19: 1, cistern: use filling, early 3rd century B.C.

420 (L 3530). Pls. 15, 41.

H. (of rim) 0.026 m.; D. 0.049 m.

Intact. Worn black glaze all over.

O 20: 3, well: use filling, first quarter of 3rd century B.C.

421 (L 1899). Pls. 15, 41.

H. 0.025 m.; D. 0.060 m.

Intact. Pitted black glaze all over.

D 15: 3, cistern: middle of 4th century B.C.

422 (L 482). Pls. 15, 41.

H. 0.016 m.; D. 0.023 m.

Intact. A miniature lamp. Worn black glaze all over, except base.

TYPE 30 C

Lamps with Open Bodies; Curved Profiles; Wick-Holes Encroaching on Rims

No. 423. Plates 15, 41.

Second half of 3rd century B.C. and perhaps into early 2nd century. Dating based on close stylistic similarities with Type 27 C and on the finding place of 423.

Type 30 C is seldom found in Athens but occurs at Delos [87] and other Aegean sites. It is very similar indeed to Type 27 C, but lacks its central tube. The lamps are simply, almost crudely, constructed. There is a flat base with the swirled wheel-marks clearly visible rather than smoothed off. The curving sides go up to and merge with the overhanging rim. There is no handle nor lug. The rounded broad nozzle projects very little, so that the wick-hole encroaches noticeably onto the rim.

The clay of the Agora example is buff, rather coarse, and with occasional air bubbles; it is not micaceous. It is possible that this fabric represents a foreign ware, and the fact that so few of these lamps are found in Athens compared to those elsewhere supports this theory. There is no glaze in the interior, a most unusual feature for an Attic lamp of this period; on the exterior there is a dull red wash on the upper portions only. This is a " kitchen lamp," an example of the unglazed

[87] Several in the storeroom of the Delos Museum, unnumbered.

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common everyday lamps that are rarely found in Athens but common in general at their local provincial sites,[88] from many periods.

423 (L 4373). Pls. 15, 41.

H. 0.023 m.; D. 0.056 m.

Intact except for minor chip. Buff clay, dull red wash on upper part of body's exterior; otherwise unglazed.

M 21: 1, cistern: dumped filling of late 3rd century B.C. and possibly into early 2nd century B.C.

TYPE 31

Closed Body, Rounded Profile; Wheelmade Counterpart of Type 43 A

No. 424. Plates 15, 41.

Ca. second and third quarters of 3rd century B.C. Dating based on stylistic similarities with Types 28 B and 29 A, and on the finding place of 424.

This single lamp is classed as a separate type because it represents the wheelmade counterpart of the nearly contemporary moulded lamps of Type 43 A; others like it presumably exist although unexcavated. It also represents the next logical step in the 3rd century development of Hellenistic lamps from Types 28 B and 29 A. It is in fact an amalgam of these two types which, in a moulded form, became extremely popular around the third quarter of the 3rd century.

The profile shows a concave raised base, sides curving into the top, and a small filling-hole surrounded by a groove and a ridge. The Agora specimen has no handle, but possesses a solid lug, appropriate for a mid-3rd century date. The nozzle is long and flat like those of Type 29 A. Attic clay forms the fabric, which is glazed all over with a typically 3rd century reddish black glaze.

It might be debatable whether this type influenced the moulded Type 43 A or vice-versa. Since Type 31 comes so evidently out of two wheelmade prototypes that were not frequently nor accurately copied in moulded forms, it seems certain that Type 31 served as model for the moulded counterparts.

424 (L 1929). Pls. 15, 41.

H. (of top) 0.032 m.; D. 0.064 m.

Complete except for chips from lower sides. Solid lug. Reddish black glaze all over, including narrow groove around filling-hole.

E 14: 1, cistern: abandonment fill, accumulated *ca.* 275-225 B.C.

TYPE 32

Closed Bodies with Concave Tops; Double Convex Profile; Flat-Topped Nozzles

Nos. 425-432 (and 4 others inventoried). Plates 15, 41.

Corinth: classified under Type XII.

Late second quarter of 3rd century B.C. and at least to end of century, perhaps a little later. Dating based on the stylistic development from Type 29 B and on the finding places.

This type continues the traditions of Type 29 B. The principal progressive feature is the

[88] Cf. the lamps of Type XVI at Corinth, which form a comparable but larger group.

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enlargement of that type's rim into a sunken concave top; this change is gradual, however, and Type 32 shows various stages from the narrow flat sloping band around the filling-hole to the fully developed and pronouncedly concave top surrounding the filling-hole. This progression serves as a criterion for dating the lamps early or late within the type; 432 might be the oldest and 430 among the latest.

The profiles show bases that are occasionally flat, but usually decidedly raised and concave beneath, sometimes with the thin raised disc seen on Type 25; these would be early within the type. The sides have a noticeably double-convex profile, as in the parent Types 29 A and B. The tops range from narrow rims to deep concavities as mentioned above. The sunken tops mark the earliest appearance of this feature which will be so important a characteristic of later Greek and especially Roman lamps, when it will be known as a discus. The tops that are noticeably concave are set off from the sloping sides by grooves.

There is normally a pierced lug, especially on those lamps without handles; a few lamps have solid lugs; one, 431, has no lug at all but is furnished with a handle. Although most lamps are handleless and rely on the pierced lug for suspension when not in use, a few tall vertical band handles exist. These are used in conjunction with pierced lugs with the exception of 431. There is no regular rule for the use of handles and lugs, but the frequent custom is for a pierced lug to occur on a handleless lamp and the solid lug, late within the type, on lamps with handles.

The nozzles are long, flat on top or nearly so, and rounded or blunted at the end. The blunted ends are typical of the 3rd century, a transition between the rounded nozzles of all earlier lamps and the suggestion of flukes that are used on some lamps during the 2nd century B.C. and later.

The lamps are carefully made of conventional Attic pinkish buff clay; they are glazed inside and out, including the bases and grooves, with a rather thin black glaze that is inclined to flake. The use of glaze on the bases marks them off from most 4th century and early 3rd century lamps.

This group is important not only as the inheritor of the tradition of Types 29 A and B, but because it is a transitional link in passing on the sequence to Types 33, 34, and 35.

425 (L 4372). Pls. 15, 41.

H. 0.034 m.; D. 0.070 m.

Intact except for parts of back and left side of body and rim; restored. Pierced lug. Nozzle slightly rounded on top. Worn red to black glaze all over.

M 21: 1, cistern: dumped filling of late 3rd and possibly into early 2nd century B.C.

426 (L 3990). Pls. 15, 41.

H. 0.036 m.; D. 0.074 m.

Intact. Nozzle nearly flat. Pierced lug. Poor black glaze all over.

427 (L 3292).

H. 0.036 m.; D. 0.074 m.

Intact except for end of nozzle and fragment of rim. Profile similar to preceding. Nozzle nearly flat. Pierced lug. Vertical band handle like succeeding lamp. Poor black glaze all over.

428 (L 369). Pls. 15, 41.

Est. D. 0.075 m.

Fragment from upper part of rear and left side. Vertical band handle. Clay and poor black glaze show signs of burning.

H 6: 4, well: latter part of 3rd century B.C.

429 (L 741). Pls. 15, 41.

H. 0.029 m.; D. 0.062 m.

Intact except for part of pierced lug and most of nozzle (nearly flat on top); restored. Brownish red glaze all over.

H-I-J 12-13, construction filling: before *ca.* 150 B.C.

430 (L 4194). Pls. 15, 24, 41.

H. 0.031 m.; D. 0.065 m.

Intact except for end of flat-topped nozzle; restored. Solid lug. Dull black glaze, somewhat

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chipped, all over. Owner's name incised on rim: ΚΩΜΟΥ.

Mentioned *Hesperia*, XVII, 1948, pl. XLIII, 1.

Provenance as of **425**.

431 (L 4193). Pls. 15, 41.

H. 0.035 m.; D. 0.065 m.

Intact except for handle; restored. Nozzle flat on top. Dull black glaze, lime-encrusted but not badly worn, all over.

Provenance as of **425**.

432 (L 1123). Pls. 15, 41.

H. 0.029 m.; D. 0.057 m.

Intact. Pierced lug; nozzle slightly rounded on top. Worn black glaze all over.

Provenance as of **429**.

TYPE 33 A

"Poor Relations"; Generally Curved Profiles; Tops Rounded or Concave

Nos. **433-442** (and 18 others inventoried). Plates 15, 42.

Corinth: classified under Type XII.

Last quarter of 3rd century B.C. into third quarter of 2nd century. Dating based on the stylistic development from Type 32 and on the finding places.

Type 33 A is a rather amorphous group of lamps that reflects the general decline in the craft that characterizes wheelmade examples of this era. In the early years of the 3rd century moulded lamps had been introduced (Type 42 A and succeeding types); the more competent and imaginative craftsmen seem to have been occupied with these, leaving the production of the older forms to less progressive fabricants. From now on the wheelmade lamps degenerate, although they persist feebly in Athens into the 1st century after Christ.

Type 33 A is a pathetic development from Type 32 and its predecessors. Its forms are irregular, not following a definite set pattern; they last for a fairly long time. The bottoms are sometimes flat, but more usually constructed with a raised base that is concave beneath, with or without a concave disc; an occasional specimen may have a simple concave bottom. The curved sides show the chief characteristic of the type; they maintain only a suggestion of the double convexity of the preceding types. The tops are sometimes covered by a continuation of the sides, but normally the tops are enclosed by a sunken depression that continues the tradition of the central concavity of Type 32. The central depressions are seldom as well formed as those of Type 32. They vary greatly, from a well defined concave top or discus to a sunken circular rim around the filling-hole. There is often a thin circular groove with or without a blurred ridge at the junction of walls and top. These profiles are seldom crisp like those of Types 32 and 35, and prevent the formulation of any accurate criteria for dating these lamps more closely or for dividing them into sub-groups.

With very few exceptions the lamps of Type 33 A have lugs, solid or pierced. The two examples, **436** and **442**, that assuredly did not have lugs are equipped with high vertical band handles. In the late years of the 3rd century B.C. and early years of the 2nd there seems to be a renaissance of the pierced lug. It has been seen that they went out of use by the second quarter of the 3rd century; but later on, after a generation or two, they became prevalent again on both wheelmade and moulded lamps. This revival of the hole in the lug lasted during much of the 2nd century B.C., although it did not entirely supplant the solid lug during these years.

Handles of the vertical band variety appear on about half the lamps of Type 33 A, but they are used indiscriminately on lamps with no lug, a pierced lug, or a solid lug; there is no standard

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pattern. The nozzles are long, flat or only slightly rounded on top, with oval wick-holes well removed toward the ends which may be rounded or blunt. The flat-topped rounded nozzles are earlier, characteristic of 4th and 3rd century B.C. lamps in general. The blunted ends tend to be later.

441 has an added handmade collar around the entire lamp to collect oil that might be spilled in filling. Usually the concave top served admirably as a sort of funnel for directing the oil into the filling-hole, but as the central openings became smaller on these enclosed lamps of the 3rd and 2nd centuries more and more oil perhaps was spilled, more than a concave top would hold. The protective collar was invented to catch the extra oil and to drain it back into the reservoir through several holes conveniently punched in the cavity between the collar and the convex walls of the upper part of the lamp. Earlier lamps with wide, open tops did not need this collar. If any oil spilled, or if any oil seeped through the porous clay of the lamp despite the inner and sometimes outer glazing of the base,[89] the careful housewife could place a saucer or small plate under the lamp.[90] Protective collars of the same type are used on mouldmade lamps, but the earliest one known, 541, is earlier than the example discussed here and dates probably from the late 3rd century B.C.

All the lamps of Type 33 A may be of Attic clay, although it may be questioned whether the gray clay of 441 is a burned local fabric or an imported example of Asia Minor Gray Ware. A feature which appears here for the first time is the interior finish, or actually lack of finish, of the bottoms. Many of the lamps of Type 33 A, but not the earliest, have pronounced whirls or spirals of clay betraying the finger of the lamp maker as the clay swirled around on the wheel while he was drawing up the body of the lamp from its base. All earlier lamps have their floors carefully smoothed. These unlevelled swirls of clay show less careful or less competent workmen and add another item to the list of comparatively inept characteristics of this class of "poor relations." Since the filling-holes are now very small, a craftsman's fingers have little room to enter the cavity for careful interior finishing which could, indeed, be scarcely noticed. It is not always easy to detect the spiral in a well preserved lamp; broken fragments that expose the interiors are more revealing. This whirl of clay in the bottom is not confined to Type 33 A, but will appear in subsequent wheelmade lamps of the 2nd and 1st centuries B.C.

The black glaze is usually thin and flaky, varying in hue through various gradations of red to brown. It is applied all over the entire lamp. There are no reserved bases; these seldom appear in lamps after the mid 3rd century B.C. There is also no decorative scraping or reserving of the grooves on these cheaply made products.

Some examples of Type 33 A are similar to some of the lamps of the Esquiline Cemetery in Rome.[91] There is no actual Esquiline Type,[92] since the lamps from this cemetery are for the most part Greek exports of a variety of types, including our Types 29 A, 33 A, 34 A, and 35 A.[93] The Esquiline lamps all have closed bodies, however, and can be dated (by analogy with the Agora lamps) as a group covering the entire 3rd and 2nd centuries B.C. It is more accurate to say that

[89] Experiments have shown that lamps thinly glazed on both interiors and exteriors nevertheless exude oil and leave stains on wooden tables.

[90] No saucers have been found in undisputed conjunction with or under lamps, in deposits or tombs of the classical era in Greece. In Punic burials at Carthage the saucer almost invariably accompanies the unglazed lamp. There are scores of examples of the lamp and saucer combination (unpublished) in the Musée Alaoui in Tunis.

[91] *Annali dell' Instituto*, LII, 1880, pp. 265-342, pls. O, P.

[92] But cf. Broneer, p. 46.

[93] These types are represented in the Esquiline group by the following examples, all made of Attic clay with characteristic Attic black glaze: *Annali dell' Instituto*, LII, 1880, pl. O, nos. 4, 2, 5, 10; for our Types 29 A, 33 A, 34 A, 35 A, respectively.

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some of the Esquiline lamps have connections with or are examples of Type 33 A than to state that this type has Esquiline connections.

433 (L 2101). Pls. 15, 42.

H. 0.037 m.; D. 0.069 m.

Intact. Pierced lug; nozzle flat on top. Worn black glaze all over.

434 (L 345). Pls. 15, 42.

H. 0.033 m.; D. 0.069 m.

Intact except for part of left side, the area where a lug may have been; restored. Very shallow groove around top. Flat-topped nozzle. Mottled black and red glaze all over, badly worn.

H 6: 4, well: latter part of 3rd century B.C.

435 (L 2755). Pls. 15, 42.

H. 0.031 m.; D. 0.064 m.

Base and front part of lamp with solid lug preserved. Remainder restored without handle, although one may have existed as in succeeding lamp. Nozzle nearly flat on top. Very worn black glaze all over.

436 (L 4368). Pls. 15, 42.

H. (of body) 0.03 m.; D. 0.056 m.

Complete. Nozzle flat on top. Thick black glaze all over.

M 21: 1, cistern: dumped filling of late 3rd and possibly into early 2nd century B.C.

437 (L 4613). Pls. 15, 42.

H. 0.036 m.; D. 0.066 m.

Intact except for handle and end of nozzle; restored. Pierced lug; nozzle nearly flat on top. Worn black glaze all over, including groove around discus.

P-R 6-12, construction filling: before *ca.* 150 B.C.

438 (L 460). Pls. 15, 42.

H. 0.031 m.; D. 0.063 m.

Complete except for handle and parts of side and discus; restored. Solid lug; nozzle nearly flat on top. Very worn black glaze all over.

Hesperia, III, 1934, p. 365, no. C 54, fig. 50.

G 6: 2, cistern: *ca.* 200 B.C. Another inventoried example of Type 33 A found here.

439 (L 4549). Pls. 15, 42.

H. 0.035 m.; D. 0.068 m.

Complete except for handle, nozzle, and front part of lamp; restored. Pierced lug. Reddish black glaze all over.

Provenance as of **437**.

440 (L 3580). Pls. 15, 42.

H. 0.032 m.; D. 0.068 m.

Intact except for small chip from nozzle. Pierced lug. Nozzle nearly flat on top. Badly peeled dull black glaze all over.

441 (L 558). Pls. 15, 42.

H. 0.042 m.; D. (including edge) 0.09 m.

Complete except for end of nozzle and chips from raised edge and center; restored. Thin raised edge forms a gutter to collect spilled oil, which may drain back through five small holes (one is underneath handle). Edge extends out to amplify nozzle, nearly flat on top. Very shallow groove around top of center. Gray clay, good brownish black metallic glaze all over.

Hesperia, III, 1934, p. 388, no. D 60, fig. 75.

H 16: 4, pithos: filling of *ca.* 150 B.C.

442 (L 3155). Pls. 15, 42.

H. 0.033 m.; D. 0.06 m.

Intact except for handle and end of nozzle; restored. The nozzle copied from nozzle of **436**. Worn black glaze all over.

See also L 147: *Hesperia*, II, 1933, p. 201, fig. 3.

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TYPE 33 B

"Poor Relations"; Lamps Mounted on Columnar Stands

Nos. 443-444 (and 1 other inventoried). Plate 42.

Last quarter of 3rd century B.C. into first quarter of 2nd century. Dating based on stylistic similarity to early lamps of Type 33 A.

These lamps are nearly the same as those of the preceding type, and have close connections in particular with some of Type 33 A that come from fillings dated in the earlier years of that type's floruit. There is a curved profile, plain concave top, no handle, and a solid lug on the one well preserved specimen of Type 33 B.

The characteristic element is the tall wheelmade column on which the lamp is affixed. None is preserved in its entirety with a base, but enough remains to show a tall shaft diminishing toward the top where there is a flaring support for the lamp, not unlike a Doric echinus.[94] The lamps and shafts are of good Attic clay that is covered all over with flaky thin black glaze. A noteworthy feature is the use of decorative horizontal bands of added white paint, a narrow one at the junction of lamp and shaft with broader bands at intervals around the shaft. This use of white paint on top of the glaze is characteristic of West Slope pottery[95] and illustrates again the close connections between potter and lamp-maker in Athenian shops.

443 (L 4033). Pl. 42.

Pres. H. 0.032 m.; D. 0.039 m.

Lamp intact except for chips from nozzle. Profile like 435 of Type 33 A. Mounted on columnar stand with flaring top; most of column broken away, its profile like that on following lamp. Badly chipped black glaze all over; added white bands at junction of lamp and shaft, and somewhat lower down around shaft.

444 (L 1572). Pl. 42.

Pres. H. 0.060 m.; D. of shaft 0.022 m.

Lower part of lamp, comparable to preceding, mounted on a high columnar stand, broken off below. Worn black glaze all over; three added white bands, at junction of lamp and shaft and at intervals around shaft.

TYPE 34 A

"Poor Relations"; Generally Angular Profiles; Depressed Tops

Nos. 445-456 (and 41 others inventoried). Plates 16, 24, 42.

Corinth: classified under Type XII.

Last quarter of 3rd century B.C. into third quarter of 2nd century B.C. Dating based on the stylistic development from Type 32 and on the finding places.

Type 34 A is another group of lamps that reflects, like Type 33 A, the decline in craftsmanship in wheelmade lamps during the later 3rd and much of the 2nd centuries B.C. Type 34 A also is a continuation, but a debased one, of Type 32. Many features are like those of the preceding type but the distinctive characteristic here is the angular profile of the sides, with the upper half about the same in height and angle as the lower half; not until the more crisply shaped Type 35 A did the upper slope become predominant over the lower.

[94] Cf. the Corinthian columns of Type 47 A, mouldmade and carrying moulded lamps. Their shafts have horizontal bands of reserved clay, rather than added painted bands.

[95] Cf. *Hesperia*, III, 1934, pp. 438-440.

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Type 34 A is a popular type, more so than its curved-walled counterpart, Type 33 A, with which it is contemporary. It is found in vast numbers in Athens and was exported to other Greek cities and to Rome.[96] It was the most frequently used type of wheelmade lamp during the later Hellenistic period, replacing in popularity the lamps of Type 25 B Prime.

As in the related lamps of Type 33 A, the bases vary. They may be raised and concave in profile, or completely flat, or slightly concave with or without a central disc; the central disc effect is often achieved by making a deep groove around the perimeter of the base, which gives the appearance of a cheaply made base ring with a central disc within it. The raised bases would seem to be earlier than the flat bases. The walls have roughly angular profiles, but not crisp neat ones as in the ancestral Types 29 B and 32; sometimes there appears only a slight trace of this double convexity. The tops of the lamps are always depressed below the level of the walls, with a concave top or discus. There is not usually any clear demarcation between the top of the walls and the central concavity, although occasionally there may be a shallow groove here, and a very few lamps that are late within the type have a scraped circle at this junction. The central concavities are uniformly more definite and noticeable than many of the treatments of the tops on the contemporary Type 33 A. A few lamps have an added raised band of clay around the filling-hole, as **450**.

The lug is seen on almost every example; it may be pierced or solid, or with a very narrow needle-thin hole, following the vagaries of related 2nd century B.C. lamps. Broad vertical band handles occur on about half the lamps. Those lamps without handles normally have well-pierced lugs as one would expect; lamps with handles utilize all the varieties of lug. The nozzles are medium to long, although apparently the length of the nozzle does not offer a criterion for dating within the type. The ends of the nozzles may be rounded or blunted, following usual late Hellenistic forms. **454** has pronounced flukes at the angles and reflects the influence of imported 2nd century models. The tops of the nozzles are inclined to be flat in the earlier lamps, with straight sides; the later ones have rounded contours. As on Type 33 A, the interior floors of some examples have the unfinished swirl of clay that betrays a 2nd century B.C. date.

All are of easily recognizable Attic clay, used in a fairly thick fabric. A thin worn black glaze is used all over the lamps, inside and out. A few late lamps, which perhaps come from a single workshop, have a very heavy scraping not only of the glaze but of a sliver of clay also, around the line that marks the junction of the walls with the central concavity. It is apparent that this scraping occurred just before the lamp was fired, while leather-hard but with the glaze already applied. This is an easier process than creating a reserved band in the application of a glazed coating, and illustrates another aspect of the cheap and rapid production of Type 34 A.

445 (L 3077). Pls. 16, 24, 42.

H. 0.032 m.; D. 0.059 m.

Base and front half preserved; restored, including handle (not on Pl. 42) which may or may not have existed. Pierced lug; nozzle nearly flat on top. Fairly good dull black glaze. Graffito on bottom: a monogram; for ΚΑΛΛΙΑΣ (?).

446 (L 4567). Pls. 16, 42.

H. 0.040 m.; D. 0.076 m.

Complete except for end of nozzle and minor chips; restored. Pierced lug; nozzle rounded on top. Dull black glaze.

D 17: 5, cistern: lower filling, last quarter of 3rd century B.C.

447 (L 3640). Pls. 16, 42.

H. 0.036 m.; D. 0.068 m.

Complete except for handle and chips from rim; restored. Pierced lug; nozzle rounded on top. Dull black glaze.

[96] Among the lamps from the Esquiline Cemetery is an example of Type 34 A: *Annali dell' Instituto*, LII, 1880, pl. O, no. 5.

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448 (L 4615). Pls. 16, 42.

H. 0.035 m.; D. 0.061 m.

Intact except for end of nozzle; restored. Pierced lug; nozzle rounded on top. Thin black glaze all over, including groove around discus.

P-R 6-12, construction filling; before *ca.* 150 B.C. Another inventoried (uncatalogued) example of Type 34 A found here.

449 (L 461). Pls. 16, 42.

H. 0.032 m.; D. 0.069 m.

Complete except for minor chips from side and top; restored. Pierced lug; nozzle rounded on top. Thin worn black glaze.

Hesperia, III, 1934, p. 365, no. C 56, fig. 50.

G 6: 2, cistern: *ca.* 200 B.C.

450 (L 1322). Pls. 16, 42.

H. 0.031 m.; D. 0.062 m.

Intact except for handle; restored. Lug pierced with very slim hole; nozzle nearly flat on top. Very worn black glaze all over.

451 (L 4756). Pls. 16, 42.

H. 0.034 m.; D. 0.070 m.

Intact except for end of nozzle; restored. Solid lug; nozzle rounded on top; groove around discus. Dull black glaze over all.

Provenance as of **448**.

452 (L 1808). Pls. 16, 42.

H. 0.032 m.; D. 0.061 m.

Complete except for handle; restored. Solid lug; nozzle rounded on top. Thick slightly micaceous clay, dull black glaze very badly peeled.

453 (L 3107). Pls. 16, 24, 42.

H. 0.035 m.; D. 0.069 m.

Intact except for handle; restored. Solid lug, nozzle rounded on top. Worn black glaze. On top of nozzle incised: Λ.

454 (L 4051). Pls. 16, 42.

H. 0.043 m.; D. 0.069 m.

Intact except for minor chip from side. Solid lug. Fairly good black glaze all over except scraped ridge.

455 (L 322). Pls. 16, 42.

H. 0.037 m.; D. 0.069 m.

Complete except for part of handle and end of nozzle; restored. Pierced lug. Worn black glaze all over except scraped ridge.

456 (L 2544).

H. 0.037 m.; D. 0.070 m.

Complete except for parts of handle and end of nozzle. Base like **454**. Rest of profile and all other features exactly like **455**.

E 6: 1, cistern system: abandonment filling, third quarter of 2nd century B.C.

See also L 157: *Hesperia*, II, 1933, p. 201, fig. 3.

TYPE 34 B

"Poor Relation" Lamps with Multiple Nozzles; Generally Angular Profiles; Depressed Tops

Nos. **457-463** (and 8 others inventoried). Plates **16, 42, 43.**

Last quarter of 3rd century B.C. into third quarter of 2nd century B.C. Dating based on stylistic similarities to Type 34 A and on the finding places of **458** and **460**.

These lamps are the same as those of the preceding type except for the additional nozzles, ranging in number from three to fifteen. It will be noted that no lamps have two nozzles, opposite each other; normally there is an odd number, in order to have a central nozzle opposite the handle with the rest evenly distributed around the sides. On very large lamps, however, the aggregate of nozzles is so great that it does not seem to matter whether one is on the central axis

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or not. The nozzles are similar to those of the preceding type; some are short, some are long; they may be flat on top or rounded, and may have curved ends or blunted ends or incipient flukes (on the later examples). In general those that are long, flat, and have rounded ends are early within the type; the short rounded shafts with blunted ends or flukes are comparatively late. Yet **463** has among its ten nozzles some that are rounded, others perceptibly blunt. When the nozzles are only three in number their tops are nearly level with the tops of the angular walls. When the lamps are very large the numerous nozzles are set further down on the lamp, at the angle between the two halves where the lamp's circumference is greatest and will accommodate more outlets. It is interesting to note that the nozzles are always about the same size, whether the lamp itself is average in dimensions or huge. There can be only a single wick to a nozzle, so there is no point in having very large nozzles proportionate in size to the lamp. To gain more light the size of the oil reservoir was increased, and more nozzles of normal size were added around the increased circumference.

Many of these lamps were for domestic use in affluent households. About half of the inventoried lamps of this type were found in the area of private houses along the lower northwestern slopes of the Areopagus, where many Athenians had their residences in the 3rd and 2nd centuries B.C. Some of the very large lamps may have been used in sanctuaries, although none was found incontrovertibly allied to a temple deposit. Such very large lamps would seem to be the Hellenistic descendants of the multi-nozzled corona lamps devoted to sanctuary use during the archaic and classical periods.

The profiles of the lamps show a variety of bases ranging from a flat raised base to a ring foot. The bodies are double-convex with a perceptible, if somewhat rounded, angle between the halves except in very large lamps where the numerous nozzles fill nearly the entire circumference. The tops are noticeably concave but usually without marked angles between them and the side walls; only a few lamps retain a thin groove or grooves here, which may be emphasized by scraping away the glaze. All lamps have broad vertical band handles, proportionate to the size of the lamps and equal to the heavy loads that some have to support. In the very large lamps the handles spread out onto the rims for additional grips. **463** has vestigial remains of a wide lateral spread that appear as two small lugs on the edge of its rim. One lamp, **458**, with only three nozzles, retains a remnant of the once-useful lug, appearing here as a solid lug at the left of the handle; usually there is no room on the lamp's periphery for such a feature.

Type **34 B** is made of Attic clay in a well worked fairly thick fabric. In the later lamps the swirl of clay usually remains on the floor, as on the preceding type. The thin black glaze, often flaked, is used all over, both on interiors and exteriors except for an occasional scraped groove around the central depression. A few late lamps have the glaze and a bit of clay scraped from the angle between walls and concave top, a mannerism seen on some late lamps of Type **34 A** and perhaps emanating from the same shop that produced those specimens.

457 (L 3828). Pls. 16, 42.

H. 0.026 m.; D. 0.076 m.

Intact except for most of handle, part of one nozzle, and tip of another; restored. Nozzles rounded on top. Chipped black glaze all over.

458 (L 4722). Pls. 16, 42.

H. 0.037 m.; D. 0.068 m.

Intact except for most of handle and part of one nozzle; restored. Solid lug; nozzles nearly flat on top. Very worn black glaze all over.

P-R 6-12, construction filling: antedating *ca.* 150 B.C.

459 (L 3790). Pls. 16, 43.

H. 0.040 m.; D. 0.088 m.

Intact except for minor chips; restored. Nozzles rounded on top. Dull and somewhat worn black

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glaze all over, including shallow groove around top of walls, but glaze scraped from ridge around inner border of this groove and from edge around filling-hole.

460 (L 559). Pls. 16, 43.

H. (restored) 0.040 m.; D. 0.092 m.

Upper part preserved with one nozzle, certain indications for presence of the other six, and handle attachments; restored with base copied from preceding. Nozzles rounded on top. Thin worn black glaze all over except scraped ridge around top.

Hesperia, III, 1934, p. 387, no. D 55, fig. 75.

H 16: 4, pithos: *ca.* 150 B.C.

461 (L 2672). Pls. 16, 43.

H. 0.067 m.; D. (of body) 0.143 m.

Intact except for part of one nozzle; restored. Shallow grooves around top; nozzles curved on top. Worn black glaze all over.

462 (L 4609). Pl. 42.

H. (restored) 0.092 m.; D. (of body) 0.190 m.

Upper part of body largely preserved with handle, five complete nozzles, and parts of two others; profile like preceding, so base and lower body restored accordingly. Existing nozzles so spaced that lamp must have had originally a complement of fifteen, and so restored. Nozzles nearly flat on top. Handle spreads out on upper part of body with two projections ending in lugs. Worn black glaze all over except for scraped ridge around central depression.

463 (L 3858). Pls. 16, 43.

H. 0.057 m.; D. (of body) 0.138 m.

Complete except for part of handle, fragments of three of the ten nozzles, and large portions of rim and body; restored. Nozzles nearly flat on top. Lugs representing vestigial ends of spreading handle on upper part of top. Worn black glaze all over except for broad scraped line around ridge between lugs.

TYPE 34 VARIANTS

Roughly Angular Profiles; Depressed Tops; Varia

Nos. 464-466. Plates 16, 17, 24, 42.

Last quarter of 3rd century B.C. into third quarter of 2nd century B.C. Dating based on stylistic similarities to Types 34 A and B.

This miscellany includes one unglazed lamp, 464, which is otherwise like Type 34 A. No separate type exists for an unglazed variety since only this one example has been found, as compared to fifty-three inventoried lamps and hundreds of uninventoried fragments of the glazed type. This one unglazed lamp would seem to be a sport rather than a representative of a very small group. It is not an unfinished lamp because it has signs of use as well as a dipinto.

Another member of this variant class is a lamp, 465, distinguished by its abnormally large size, which has many characteristics of Type 34 B but apparently only a single nozzle, like Type 34 A. A third unusual lamp, 466, very fragmentary, has an odd gritty clay which is unlike Attic; it presumably is an importation, but its source is unknown and not enough of it is preserved to classify it more definitely than as a variant. Its interior has the characteristic swirl of clay that is seen often in Types 34 A and B, and the lower part of its profile, as well as its nozzle, allies it further to these types.

464 (L 2122). Pls. 16, 24, 42.

H. 0.033 m.; D. 0.063 m.

Intact except for end of nozzle (restored) and many chips from raised base. Solid lug. Attic clay, unglazed. On right side a dipinto: ΦΙΛΙ.

465 (L 4089). Pls. 17, 42.

H. 0.097 m.; D. 0.210 m.

Many fragments preserve complete profile, including parts of base and sides, all the top, handle, and nozzle. Remainder restored including area

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where a lug may have existed on the left side. Missing areas of walls sufficiently wide to have accommodated two additional nozzles, but not stylistically probable; this lamp simply a gigantic version of Type 34 A. Broad handle terminations spreading out around discus. Decorated with two parallel incised herringbone designs on nearly flat top of nozzle. Attic clay; good black glaze all over except for scraped areas: the median lines of the herringbone patterns (the short diagonal lines remaining glazed), two curved lines outlining the sides of the nozzle, a circle around the filling-hole, and a circle around shoulder from one handle-termination to the other. Compare similar incised and scraped decorations on 414 of Type 29 A.

466 (L 2613). Pls. 17, 42.

H. 0.033 m.; D. 0.062 m.

Base, nozzle, and upper part of body preserved. Thick purplish pink clay with white grits. Creamy gray slip, burned around nozzle. Swirl of clay left on floor of interior.

TYPE 35 A

Late Hellenistic; Deeply Sloping Side Walls; Deeply Depressed Tops

Nos. 467-471 (and 26 others inventoried). Plates 17, 43.

Corinth: classified under Type XII.

Last quarter of 2nd century B.C. and at least into first quarter of 1st century B.C., perhaps a little later. Dating based on the stylistic similarities to and development from 34 A, as well as on the finding places.

After the careless banalities of Types 33 A and 34 A it is refreshing to see a large group of wheelmade lamps that were carefully and crisply made during the generation before Sulla's invasion. In this period the moulded lamps were offering very lively competition; Type 35 A was the effective answer to this.

The forms developed out of those of Type 34 A, but with sharper articulations and with more emphasis on height than on breadth. The bases of about half the lamps are flat; the others are raised with a flat or slightly concave surface. The sides are in two well marked planes, with a pronounced angle between them placed very low on the body, so that there is much more emphasis on the tall inward sloping sides above the angle than on the broad low outward sloping sides below it. The lower sides may indeed be so minimized that they are practically identical with the raised base, as on 469. There is always a pronounced ridge or rim between the top of the walls and the deeply sunken top or discus; the top is slightly concave, as on the preceding types, but often approaches a completely flat plane, with a simple filling-hole in the center. A few of the earlier lamps have a circular groove marking the junction between sides and top; such lamps tend to have rather broad proportions and thus mark the actual transition between Types 34 A and 35 A.

All of these lamps have lugs which are uniformly solid except on the few examples without handles, where they appear with adequate pierced holes. The majority of the lamps are equipped with broad vertical band handles. It seems possible to date the lamps with pierced lugs and no handles early within the type, because the solid lugs used with handles are typical of later lamps, of the 1st century B.C. and early 1st century after Christ (in both wheelmade and moulded categories). The nozzles are uniformly rounded on top, roughly tubular in cross-section; they are emphasized more than they were on preceding types, since they are apt to be wide and long, often longer than the diameter of the body. The usual termination around the wick-hole is blunted or fluked, reflecting late 2nd century B.C. influences from abroad (cf. Type 40 A). A few nozzles that belong to lamps late within the type have swollen oval ends with a flattened band around the

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wick-hole. These may reflect similar terminations seen on contemporary imported lamps of Type 49 A, or they may be crude imitations of the thin flat rims seen sometimes around the wick-holes of contemporary bronze lamps. The sharp articulations of Type 35 A recall in general the precision of metal prototypes, although no particularly appropriate example of a metal original can be cited.

Attic clay is used, with an occasional appearance of the whirl of clay on the floor as on the preceding types. Since such an unfinished bottom is rare on these well made lamps and since such a characteristic is seen so often on the carelessly made types of the 2nd century B.C., it may be assumed that its use died out sometime before the beginning of the 1st century B.C. A thin black glaze, often flaky but sometimes hard and metallic, is used all over the exteriors and interiors, except for an occasional decorative scraping of the glaze around the bold ridge at the top of the walls.

467 (L 1886). Pls. 17, 43.

H. 0.035 m.; D. 0.057 m.

Intact except for end of nozzle. Pierced lug; blackened broken edges around nozzle indicating that it was used after it was broken. Badly peeled black glaze all over.

468 (L 1306). Pls. 17, 43.

H. 0.034 m.; D. 0.062 m.

Intact except for handle; restored. Solid lug; groove around discus. Worn black glaze all over.

Hesperia, III, 1934, p. 412, no. E 91.

See also *ibid.*, p. 412, E 89, E 90, E 92-95, fig. 98.

F 15: 2, cistern: last quarter of 2nd century B.C. Six additional inventoried examples of Type 35 A found here.

469 (L 1784). Pls. 17, 43.

H. 0.034 m.; D. 0.054 m.

Intact except for end of nozzle and part of handle; restored. Solid lug. Black glaze all over except for scraped ridge around top.

E 14: 3, cistern-shaft: middle filling, beginning of 1st century B.C. to its third quarter.

470 (L 3321).

H. 0.031 m.; D. 0.055 m.

Intact except for parts of handle and nozzle. Profile like preceding. Solid lug. Worn black glaze all over except for scraped ridge around discus.

N 20: 4, cistern: use filling, late 2nd to early 1st centuries B.C.

471 (L 3309). Pls. 17, 43.

H. 0.031 m.; D. 0.056 m.

Intact except for handle, most of top, and chip from nozzle; restored, with top copied from **469**. Solid lug. Worn brownish black glaze all over.

N 20: 4, cistern: dumped fillings, thrown in during second quarter of 1st century B.C., containing mostly debris resulting from Sulla's sack in 86 B.C.

TYPE 35 A PRIME

LATE HELLENISTIC; DEEPLY SLOPING SIDE WALLS; DEEPLY DEPRESSED TOPS; UNGLAZED EXTERIORS

Nos. **472-473**. Plates 17, 43.

Last quarter of 2nd century B.C. and at least into first quarter of 1st century B.C., perhaps a little later. Dating based on stylistic similarities to Type 35 A and on the finding place of **473**.

These lamps are like those of the preceding type except that the exteriors are unglazed. One example, however, shows a solid lug on a lamp without a handle, a usage not seen in Type 35 A. **472** has the swirl of clay on its floor that appears on many 2nd century B.C. types.

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472 (L 1326). Pls. 17, 43.

H. 0.039 m.; D. 0.069 m.

Intact except for chip from top and end of nozzle; restored with nozzle's termination copied from following. Carefully made; glazed inside only with good reddish black glaze. Lime incrustation on exterior.

473 (L 4667). Pl. 43.

Pres. H. 0.040 m.; Est. D. 0.084 m.

Nozzle with upper parts of left side, solid lug, and edge of top. Profile like preceding. Red glaze, inside and spilled over in areas on lug and on top of nozzle.

E 14: 3, cistern-shaft: middle filling, beginning of 1st century B.C. to its third quarter.

TYPE 35 B

LATE HELLENISTIC; DEEPLY SLOPING SIDE WALLS; DEEPLY DEPRESSED TOPS; MULTIPLE NOZZLES

Nos. 474-480 (and 6 others inventoried). Plates 17, 43.

Corinth: classified under Type XII.

Late 2nd century B.C. to late 1st century B.C. Dating based on stylistic relationships to Type 35 A and on the finding places.

This group is very much like Type 35 A except that the lamps are equipped with two to five nozzles. It may be noted that the bodies are not noticeably larger than those of the parent type, as are some of the huge multi-nozzled lamps of Type 34 B. These are small lamps for domestic use but constructed to give more light than the normal varieties. The nozzles are usually long and tubular with blunted or angular terminations; the latter are the latest, and will be seen frequently on other lamps of the 1st century B.C., both wheelmade and moulded. The angular pointed nozzle is a significant feature on many Ephesos lamps (Type 49 A) which were imported in great numbers during the floruit of Type 35. A few lamps early in the type have small nozzles with nearly flat tops, as on 478; these are more closely allied to Type 34 B than are the others. Two nozzles may be set opposite each other, or two may be placed close together opposite the handle; such distributions of the nozzles do not occur among the lamps of Type 34 B; there, as well as on the others here, the nozzles are more or less evenly spaced around the circumferences of the bodies.

The profiles show a variety of bases, like those of Type 35 A; there is often a base-ring or a simulated base-ring. The sides show greater concentration and height on their upper slopes than on their lower parts. The proportions are high and narrow compared to the low spreading profiles of the earlier multiple-nozzled lamps. There is always a deeply depressed top or discus, concave or nearly flat; sometimes this is surrounded by a narrow groove. All the lamps have handles, usually the normal vertical band. A sporadic use is made of a basket handle, bridging the top of the lamp, used when there are two nozzles opposite each other; these are useful for suspension since the lamps are evenly balanced. Filling such lamps is not seriously impeded by the handles since oil poured anywhere into the concave tops drains into the filling-holes. A few of the lamps with only two or three nozzles have solid lugs, placed at the left of a vertical handle when used singly or used in pairs with a basket handle. The lamps with more than three nozzles do not have space for these vestigial excrescences.

Attic clay furnishes the fabric; a few of the earlier lamps, e. g. 475 and 477, have the spiral of clay on the floor that appeared so frequently in the 2nd century B.C. A thin flaky black glaze, sometimes fired red or reddish brown, covers the lamps within and without except for a few instances of scraping around the ridge that borders the sunken top.

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474 (L 4038). Pls. 17, 43.

H. (to rim) 0.049 m.; D. 0.084 m.

Complete, including high-swung basket handle, except for one nozzle and parts of base and sides adjoining it; restored. There may or may not have been another solid knob diametrically opposite the extant lug. Groove around discus. Very flaky black glaze all over.

475 (L 1379). Pls. 17, 43.

H. (to rim) 0.045 m.; D. 0.077 m.

Intact except for basket handle; restored. Worn red glaze all over.

476 (L 1788). Pls. 17, 43.

H. 0.035 m.; D. 0.056 m.

Intact except for handle and tip of one nozzle; restored. Solid lug. Worn black glaze all over except for scraped ridge around discus.

E 14: 3, cistern-shaft: middle filling, beginning of 1st century B.C. to its third quarter.

477 (L 1505). Pl. 43.

H. 0.046 m.; D. 0.077 m.

Intact except for handle, all of one nozzle, and most of two others; restored, like preceding. Profile, lug, and use of glaze like preceding.

478 (L 2094). Pls. 17, 43.

H. 0.040 m.; D. (of body) 0.077 m.

Intact. Single groove on handle, groove around base to simulate ring foot. Nozzles rather flat on top. Worn black glaze all over except for scraped ridge around discus.

D 11: 4, cistern: bottom filling, late 2nd and early 1st centuries B.C. Another inventoried (uncatalogued) example of Type 35 B found here.

479 (L 3153). Pls. 17, 43.

H. 0.054 m.; Est. D. 0.078 m.

Fragment preserving section of complete profile and two nozzles, one of them badly chipped. Diameter would permit full complement of five such nozzles and handle, like preceding. Badly worn black glaze all over.

Provenance as of 478.

480 (L 4857). Pls. 17, 43.

H. 0.041 m.; D. 0.071 m.

Fragments preserving base, more than half of walls, and two nozzles. The handle attachment is not preserved, but must have occurred on a portion of the walls that is missing; therefore the lamp originally had but the two nozzles, as 476. No lug; fluked nozzles. Orange buff clay, worn red glaze all over.

R 10: 1, well: dumped filling of 1st century after Christ. Another inventoried example of Type 35 B found here.

TYPE 35 C

EARLY ROMAN; DEEPLY DEPRESSED TOPS; STRAIGHT SIDE WALLS BEVELLED AT BOTTOM

No. 481 (and 1 other inventoried). Plates 17, 43.

Corinth: close to Type XVI, second group.

Late 1st century B.C. into 1st century after Christ. Dating based on the similarity with Type 35 C Prime; the character of the glaze and its careless use are reminiscent of that seen on some moulded lamps of the 1st century after Christ.

Here the profile shows a pronouncedly straight side, a bevel at the lower part of the body, and a flat bottom. These features are at variance with the corresponding characteristics of Type 35 A, but the depressed tops of both are similar. In Type 35 C there are one or two little drain-holes punched in the top, in addition to the small central filling-hole. The nozzles are short and stubby, with the ends wider than the necks; the large wick-holes occupy most of the nozzle area. There is uniformly a thick vertical band handle with a groove down its center. The lug is never seen.

The fabric is very thick and presumably Attic, of the normal pinkish buff color. Poor black

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to brown glaze is used both within and without, but carelessly applied and not covering the entire surface; it is spotty, showing that the lamps were hastily painted, rather than completely dipped in glaze.

These lamps are the successors of Type 35 A, but made only occasionally during the years when moulded lamps were far more popular. These are among the latest wheelmade lamps in the whole development of classical lamp manufacture. The type was never common in Athens; its prototype may have been the contemporary Corinthian unglazed lamps (Corinth Type XVI, third group) as well as Athenian Type 35 A. The clay, however, shows Type 35 C undoubtedly to be local, and the absence of the lug at the side,[97] as well as the glaze, suggest that it is a product of the turn of the era and of the 1st century after Christ.

481 (L 3827). Pls. 17, 43.

H. 0.043 m.; D. 0.065 m.

Intact except for minor chips from nozzle; restored. Poor reddish brown glaze all over except parts of sides and base where glaze is only in drips.

TYPE 35 C PRIME

EARLY ROMAN; DEEPLY DEPRESSED TOPS; STRAIGHT SIDE WALLS; UNGLAZED

No. 482. Plates 17, 43.

Corinth: close to Type XVI, third group.

Late 1st century B.C. into 1st century after Christ. Dating based on stylistic similarities to Corinthian examples (Corinth Type XVI, third group) and on the finding place of 482.

This is the unglazed version of the preceding type, otherwise like it in profile and nozzle formation. Our single example does not, however, have the additional drain-holes on top that seem to be characteristic of Type 35 C. There is no lug, and the handle, missing on 482, may or may not have had a groove down its center like those of Type 35 C.

The clay is a thick creamy pink Attic fabric. The Agora lamp shows that it was originally attached to the overhanging rim of a shallow bowl or lamp-stand.[98] No glaze, slip, or paint seems to have been used anywhere on Type 35 C Prime.

482 (L 2385). Pls. 17, 43.

H. 0.044 m.; D. 0.058 m.

Intact except for handle and chips from right side of nozzle; restored; the handle presumably may have been wider and thicker than as restored, with a groove down its center. Bottom attached to fragment of overhanging rim of bowl or lamp-stand, approximately 0.240 m. in diameter, made of same unglazed thick clay as the lamp.

B 12: 1, well: lower use filling, accumulated from 1st to 3rd centuries after Christ.

[97] It will be observed later that although the lug may sometimes be omitted in late Hellenistic and early Roman lamps before the second quarter of the 1st century after Christ, it is never seen after that date.

[98] Comparable to the specimen illustrated in Broneer, p. 60, fig. 26, no. 288.

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TYPE 35 D

Early Roman; Deeply Depressed Tops; Slightly Curved Side Walls

Nos. 483-484 (and 2 others inventoried). Plates 17, 43.

Corinth: classified as Type XVI, third group.

Late 1st century B.C. and 1st century after Christ. Dating based on close similarities to the popular Corinthian Type XVI (third group) and some stylistic similarity to Type 35 C Prime.

These very simple, cheaply made, lamps are rarely seen in Athens. One of them must certainly be an importation from Corinth, perhaps brought up by an individual rather than imported commercially. The others, of a slightly different color, may also be importations. The profiles show the conventional curved sides of the Corinthian Type XVI (third group), rising from rough round bottoms; 484 is more carefully finished than the normal, irregular, 483. The tops are flat rather than concave (as seen on Type 35 C); they are sunk below the tops of the walls, as if depressed to receive covers. No covers have ever been found, however, that may be associated with lamps such as these. The filling-hole is large in proportion to the diameter of the top, and without subsidiary drain-holes. No lugs appear on these lamps.

The nozzles are blunt; that of 484 is perfectly rectangular, while that of 483 has flaring projections at the end, where it is wider than it is at the point of junction with the body of the lamp. The oval wick-holes are large and, as in Type 35 C, occupy most of the nozzle area. There is always a vertical ribbon handle, thinner than that seen on Type 35 C. The fabric is comparatively thin and brittle; one lamp is unglazed, and of the typical red clay seen in Corinthian-made examples. 483 and another inventoried example have red clay of a slightly heavier texture, although still brittle, covered with a thin buff slip. These two lamps are carelessly made, with the nozzles and handles set awry.

It is difficult to date lamps of Type 35 D precisely. Their Corinthian counterparts offer little help, and our examples come from contexts that give no more assistance. If these are to be considered the Corinthian models from which the few Athenian lamps of Type 35 C were adapted, then they must have been made around the turn of the era. If, however, Type 35 C should be considered a development of Type 35 A, an Attic type, these lamps of Type 35 D, of Corinthian origin, could fall anywhere in the late 1st century B.C. and throughout most of the 1st century after Christ.

483 (L 856). Pls. 17, 43.

H. 0.030 m.; D. 0.055 m.

Intact. Red clay, thin slip all over interior and exterior.

484 (L 4183). Pls. 17, 43.

H. 0.027 m.; D. 0.046 m.

Intact except for handle; restored; it may have been slightly ribbed, like preceding. Fine thin red clay, unglazed.

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TYPE 35 VARIANTS

Early Roman; Deeply Depressed Tops; Various Idiosyncrasies

No. 485. Plates 17, 43.

Late 1st century B.C. into 1st century after Christ. Dating based on stylistic similarities to Types 35 C and 35 D.

A single example has elements that prevent its classification in any of the preceding groups although it is related to them.

485 (L 3302). Pls. 17, 43.

H. 0.033 m.; D. 0.054 m.

Intact except for handle and angles of nozzle; restored. An interesting lamp with the nearly straight sides and Attic clay of Type 35 C, together with the nozzle formation of Type 35 D. Carefully smoothed flat bottom, convex dome rising in center of concave top, three small drain holes. Nozzle broad and flattened on top. Good pinkish buff Attic clay, light red glaze all over. To be dated on stylistic evidence in the first century after Christ, probably well before the end of the century.

TYPE 36 A

Curved Bodies Pulled into Collars Around Filling-Holes; Early Versions

Nos. 486-487. Plates 17, 44.

Ca. second half of 4th century B.C. Dating based on the nozzle formations, similar to those of Types 25 A and 30 B, and on the finding places.

All lamps of Types 36 and 37 have collars around their filling-holes which facilitate the pouring of oil into the reservoirs. Types 36 A and B are early versions related to, but not closely enough to assign to, various 4th and 3rd century types. Types 37 A-C are later manifestations, which were to be influenced not only by these lamps of the earliest Hellenistic epochs but more directly by their near contemporaries, lamps of Types 35.

These lamps of Type 36 A have no connections with Types 35, but are inserted here as a prelude to their offspring, lamps of Types 37. Type 36 A forms a very small group with only two inventoried specimens. They are reminiscent of other 4th century lamps with their rather globular bodies resting on flat or slightly raised bases. Their distinguishing feature, however, is the upper curve of the side walls that flares out to form a high convex-concave profile. The flaring top of the sides becomes the collar and rim; this feature is not added separately. There are no lugs on the bodies. The handles are flat vertical bands and among the earliest vertical handles to re-appear after the 6th century; 5th century and most 4th century lamps have horizontal band handles when there is any appendage at all.

The nozzles are either long, flat on top, and rounded on their ends, like the normal nozzles of Type 25 A, or are broad at their base and tapering, blunt and roughly triangular in shape with small wick-holes, like those of Type 30 B.

The dull gray clay and dull black glaze, sparingly used, seen on 486 show that this is an imported Eastern lamp. This is an ancestor of the very popular and much later Egyptian "pitcher" lamps of the late Hellenistic period, and a prototype of the Arabic and Byzantine

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globular lamps.[99] It is interesting to see such an early example entering Greece in the second half of the 4th century B.C., but leaving so little direct influence. 487 is one of the few local lamps produced as an adaptation. Its clay and all over black glaze show it to be Attic. The later adaptations are sporadic, and listed under Type 36 B; a weakened influence of Type 36 A persists, however, in the late Hellenistic lamps of Types 37 A and B.

486 (L 2900). Pls. 17, 44.

H. 0.059 m.; D. 0.068 m.

Complete except for handle and minor chips; restored. Nozzle flat on top. Dull gray clay; dull black glaze inside and on nozzle and upper part of outside.

F 5: 2, pyre: 4th century B.C.

487 (L 4638). Pls. 17, 44.

H. 0.040 m.; D. 0.053 m.

Complete except for handle and chips from rim; restored. Nozzle nearly flat on top. Worn black glaze all over.

O-R 7-9, construction filling: before *ca.* 300 B.C.

TYPE 36 B

Curved Bodies Pulled into Collars Around Filling-Holes; Later Versions

Nos. 488-490. Plates 18, 44.

First half of 3rd century B.C. Dating based on some stylistic similarities with late examples of Types 25 A and B, and with Type 29 B. The finding place of 490 is helpful.

Type 36 B also has collars which are the flaring upper parts of the side walls, but these rims are broader or lower than those of the preceding type. There are uniformly raised bases, slightly concave beneath, and curving side walls, but the general profiles are more squat and less jug-like than those of Type 36 A. The bases are somewhat thickened in their centers, like those of the 3rd century lamps of Types 25 A and B. There is always a vertical band handle. Two examples preserve pierced lugs on their left sides, like those of Type 25 B.

The nozzles are long, flat on top, with small wick-holes at their ends. These are reminiscent of those on late examples of Types 25 A and B. Two lamps have a groove around the upper parts of their bodies, interrupted by the nozzle in front and the handle behind. The groove may be taken as one of the distinguishing characteristics of the type.

There is some similarity between these lamps and those of Type 29 B in the nozzle formations, broad proportions, and little collars. It will be noted that the former have curved profiles rather than the sharply angular profiles of the latter.

The use of Attic clay and the fairly good Attic black glaze, applied both inside and outside, show that Type 36 B was a local product, made occasionally during the earlier years of the 3rd century after the introduction of Type 36 A in the later years of the 4th century B.C.

488 (L 1359). Pls. 18, 44.

H. 0.046 m.; D. 0.061 m.

Intact except for back and most of sides of body and collar. Slight traces remain of lower handle attachment, groove around upper part of body; restored. Worn black glaze all over.

489 (L 1607).

H. 0.046 m.; D. 0.062 m.

Intact except for most of collar, parts of handle, and right side of nozzle. Profile similar to preceding. Pierced lug, groove around upper part of

[99] Cf. Petrie, *Roman Ehnasya*, p. 13, pl. LXIX; Delattré, *Les Lampes antiques du Musée de St. Louis*, p. 22; Blanchère and Gauckler, *Catalogue du Musée Alaoui*, pl. XXXVI, nos. 51, 52.

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body interrupted by nozzle and handle. Worn black glaze all over.

490 (L 1932). Pls. 18, 44.

Pres. H. 0.03 m.; D. 0.076 m.

Two joining fragments preserve left side of upper part of lamp with handle, pierced lug, and start of flat-topped nozzle. Top restored. Dull black glaze all over.

E 14: 1, cistern: abandonment fill, *ca.* 275-225 B.C.

TYPE 36 VARIANTS

Curved Bodies Pulled into Collar Around Filling-Hole; Variant Features

No. **491**. Plates 18, 44.

4th century B.C. Dating based on stylistic similarities to Types 21 D and 36 A.

This rather individual lamp has a profile similar to, but not exactly like, those of Type 36 B. Its nozzle, however, is like that of 487 of Type 36 A. Its collar is unlike those of either of these types, but resembles a high bevelled rim. The profile and lack of raised base suggest an affinity with Type 21 D, but that type invariably has a horizontal rather than a vertical handle. It is barely possible, however, that **491** is a transitional step between the 5th century Type 21 D and the 4th century Type 36 A. The area of body where a knob might have existed is missing; if one were present it would surely date the lamp later rather than earlier in the 4th century.

The Attic clay and flaky black to red glaze, joined with the character of the nozzle, place this lamp fairly close to the time of Type 36 A.

491 (L 4366). Pls. 18, 44.

H. 0.026 m.; D. 0.066 m.

Intact except for handle, chips from nozzle, and left side of top; all except handle restored. Flaky black to red glaze, much worn, all over.

TYPE 37 A

Collars Added to Angular Bodies

Nos. **492-495**. Plates 18, 44.

Corinth: classified under Types XIV and XV.

Late 2nd and early 1st centuries B.C. Dating based on stylistic connections with Type 35 A, and on the finding places.

These lamps are distantly related to Types 36 A and B, although a long period of time separates those earlier lamps with collars from these later varieties. The immediate predecessor is Type 35 A, which has an angular body with a deeply depressed top. The depression is now replaced by a simple flat, concave, or even convex top with an added collar around it, vertical or slightly flaring. The collar prevents spilled oil from trickling down the outer walls of the lamp, as did the depressed tops of Type 35 A. Some lamps have small auxiliary drain-holes punched around the filling-holes, within the collars; these are essential when the area around the filling-hole is slightly convex, as on **495**.

The base is usually raised and slightly concave underneath; an occasional lamp by exception may have a base ring. The angular profile is double-convex, with the upper portion having the major emphasis. The filling-hole is surrounded by a narrow shallow groove. There is always a flat

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vertical band handle. There is normally a solid lug, as on Types 35 A and B, although this is not seen on 495 which has other exceptional features; the lug of 494 has a small hole on its top, but this does not penetrate through the clay.

The nozzles may be long and tubular, with oval wick-holes and terminations as on 493, or flattened on top and spreading out in a triangular manner toward a termination that must have been somewhat pointed, with flukes. None of these latter nozzles is preserved in its entirety, but their preserved portions show similarities to the pointed and fluked nozzles of Types 35 A and 37 B.

This group of lamps is carefully and neatly made, with several small decorative features in addition to the groove around the filling-hole; another groove frequently occurs around the outside of the collar. Both grooves are sometimes scraped of glaze to show the contrast between the pinkish buff Attic clay and the black glaze which otherwise covers all the lamps completely.

Type 37 A seems to have been made during a short period of time; it is allied to Type 35 A stylistically and probably is contemporary. It is unlikely that any lamps of Type 37 A were made after Sulla's invasion, when curved globular profiles became more popular than angular profiles.

492 (L 1300). Pls. 18, 44.

H. 0.046 m.; D. 0.065 m.

Intact except for end of nozzle, chips from collar, and handle; latter restored. Nozzle has curved top, may have terminated as in following lamp. Solid lug; grooves around outside of base of collar and around filling-hole. Glaze all over, fired partly black, partly red.

Hesperia, III, 1934, p. 413, no. E 96, fig. 98.

F 15: 2, cistern: last quarter of 2nd century B.C.

493 (L 1489). Pls. 18, 44.

Pres. H. (to collar) 0.057 m.; D. 0.103 m.

Intact except for center of discus, collar, and handle. Discus had at least eight auxiliary drain-holes around missing filling-hole; solid lug; groove around base of collar, outside; nozzle rounded on top. Badly flaked black glaze all over.

494 (L 599). Pls. 18, 44.

H. 0.045 m.; D. 0.101 m.

Intact except for end of nozzle and part of handle; latter restored. Very neatly made; nozzle has triangular flat top bordered by grooves, and the break shows it had a pointed termination probably with flukes. Lug punched with tiny hole that does not go through. Grooves around outer base of collar and around filling-hole, the latter scraped of glaze; narrow flat top of collar also scraped of glaze, but elsewhere worn black glaze is used all over.

495 (L 3310). Pls. 18, 44.

H. 0.042 m.; D. 0.062 m.

Intact except for end of nozzle and handle; restored. Nozzle triangular and flat on top; grooves around outer base of collar and around filling-hole, the latter scraped. Glaze also scraped from border of discus, through which are pierced four drain-holes. Elsewhere black glaze which, with the Attic clay fabric, has been misfired gray to black.

N 20: 4, cistern: dumped fillings thrown in during second quarter of 1st century B.C., containing mostly debris resulting from Sulla's sack in 86 B.C.

TYPE 37 B

Collars Added to Globular Bodies; Pointed Nozzles

Nos. 496-503 (and 15 others inventoried). Plates 18, 19, 44.

Late 2nd century B.C. into second quarter of 1st century B.C. Dating based on stylistic similarities with Type 37 A and on the finding places.

These lamps are similar to those of the preceding type, but have globular bodies, some of them

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of an extraordinary size. They rest either on raised bases, which are slightly concave underneath, or on base-rings; it seems likely that the former may be usual for lamps early within the type, and the latter common on the later examples. The characteristic high flaring collar surrounds a concave or nearly flat top. A groove normally surrounds the filling-hole, as on Type 37 A, and often a circular groove or series of concentric grooves ornaments the upper part of the body, outside the collar. Occasionally there is a groove around the top of the lamp within the periphery of the collar. There is always a broad flat vertical handle. Always present, also, is a lug on the left side of the lamps; this is solid except for the exceptional example on **496** which is pierced. A few of the lugs are long and curved, reflecting the delphiniform lugs of late Hellenistic and early Roman moulded lamps.

The nozzles, when preserved, are long and pointed with real or incipient flukes. They often have a sharp ridge on their tops. In some of the very large examples the nozzles are ornamented with parallel grooves and ridges, presenting a reeded effect and reflecting the influence of contemporary mouldmade lamps, Type 48 A and succeeding types. Indeed the nozzle of **502** was cast in two moulds and added to the wheelmade body. This union of moulded and wheelmade parts is not surprising in view of **501**. This is not one lamp but three, a *fehlbrand* or waster composed of two examples of Type 37 B and one example of Type 48 A, a moulded variety. The three lamps collapsed and stuck together when they were seriously injured in firing. They demonstrate clearly that both wheelmade and moulded lamps were sometimes made in a single shop on the same day. One may presume that this was frequently the case, that the same shop turned out moulded lamps in quantities, while producing a few of the more expensive wheelmade lamps that were desirable because they were less likely to come apart at the seam after a slight shock.

An unfamiliar shoulder device is seen on the right sides of the two lamps of Type 37 B contained in **501**. This is a raised disc, used ornamentally and as an opposite pendant to the solid lug; the origin for this is to be seen in the contemporary Knidos lamps of Types 40 A and B.

Occasionally there is an auxiliary drain hole on the top, near the filling-hole, as on **497**. Most lamps, however, have concave tops so that any oil spilled in filling will naturally drain back into the body of the lamp through the filling-hole. The enormous size of several of these lamps would indicate an oil capacity enough for several nozzles, yet most of them had but one. Two of the largest, **502** and **503**, are not completely preserved, and may have had one or two additional nozzles. Even with extra nozzles to consume the oil, the reservoirs of these lamps would have contained enough fuel for a long night of illumination with bright lights from thick wicks. There exists the possibility that such behemoths may have been planned for sanctuary use, although no indication of this was suggested by the finding places. They may, on the other hand, have been commissioned shortly after the sack of Athens by arrogant Roman conquerors who felt no compunctions about squandering the captured Athenian oil reserves.

The clay of Type 37 B is Attic; in the earlier examples it is the usual pinkish buff but in the later ones a coarser buff fabric, perhaps indicating a different clay bed in the neighborhood of Athens that was utilized after 86 B.C. The lamps frequently show on their floors the heavy swirl of clay, not smoothed down, that was made by the fabricant's finger while turning the lamp on the wheel. Such swirls are frequent on other Athenian lamps of the 2nd and early 1st centuries B.C. The glaze varies from good Attic black to a poor brownish red, sparsely applied. As on preceding types, there exists on some of these lamps the decorative scraping of grooves and tops of collars, to expose the natural color of the clay in contrast to the dark painted areas.

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496 (L 1853). Pls. 18, 44.

H. 0.043 m.; D. 0.065 m.

Intact except for handle, chips from collar, and end of nozzle; restored. Pierced lug. Attic clay. Good black glaze, badly chipped, all over except for reserved ring around filling-hole, where there is a narrow shallow groove.

E 15: 3, cistern: late 2nd and early 1st centuries, to 86 B.C.

497 (L 3873). Pl. 44.

H. 0.047 m.; D. 0.061 m.

Intact except for handle, three-quarters of collar, and end of nozzle; restored. Profile like preceding. Solid lug; small drain-hole at back of discus. Attic clay. Good black glaze all over except scraped groove around filling-hole.

498 (L 3644). Pls. 18, 44.

H. 0.066 m.; D. 0.112 m.

Parts of left half of lamp preserved with complete profile and solid lug; handle and nozzle restored like those of following lamp, which has similar profile and size. Thin buff clay, dull black glaze all over except for scraped groove around filling-hole and narrow scraped band around inner side of upper edge of collar.

M 20: 1, cistern: use filling, early 1st century B.C.

499 (L 3308). Pl. 44.

H. (rest.) 0.068 m.; D. 0.110 m.

Upper part preserved with handle and nozzle but not base; extant profile like preceding; missing parts of lamp restored accordingly. Solid lug; angle along top of nozzle. Pinkish buff clay, badly peeled black glaze all over except for scraped groove around filling-hole and scraped flat top of collar.

N 20: 4, cistern: dumped filling, thrown in during second quarter of 1st century B.C., containing mostly debris resulting from Sulla's sack of 86 B.C. Three additional inventoried examples of Type 37 B found here.

500 (L 4358). Pls. 18, 44.

H. 0.065 m.; D. 0.083 m.

Complete except for handle and back of collar; restored. Solid lug; top of nozzle rounded. Buff clay, metallic reddish brown glaze all over except for irregular scraped groove around filling-hole and scraped top of collar.

501 (L 3631). Pl. 44.

Max. dim. 0.140 m.

Three twisted lamps, warped and stuck together in firing. One is moulded, of Type 48 A. Two others of Type 37 B with base-rings, solid delphiniform lugs on their left sides, and thin raised discs on their right sides. Both have remains of high flaring collars. One lamp has short nozzle, pointed and fluked; its back portion is missing. The other lacks its nozzle but has remains of flat vertical band handle. Both have ridges and grooves around central filling-holes, and grooves around upper parts of bodies, as in **503** *infra*. Attic clay and glaze burned black.

502 (L 2765). Pls. 18, 44.

Pres. H. 0.133 m.; D. 0.168 m.

Several joining fragments, and two non-joining, preserve nozzle except for its tip, and profile up to start of collar; restored to this point, where a shallow groove encircles top of body. Missing portions of side walls sufficient to have supported a handle and not more than two additional nozzles. Huge size of lamp and comparative smallness of the extant moulded nozzle suggest possibility of these additional members. Ridge along top of nozzle decorated with flaring reeding in manner of Types 52 B-E; small depressed circles on apices of flukes. Pink to buff clay; dull red glaze sparsely applied in interior, badly flaked over all of exterior.

503 (L 4025). Pls. 19, 44.

Pres. H. 0.150 m.; D. 0.270 m.

Several joining fragments, and several non-joining, preserve base of broad vertical handle, shank of nozzle, and profile up to start of collar; restored to this point. Missing portions of side walls sufficient to have supported two additional nozzles; proportions of extant nozzle to body make this seem unlikely; this lamp simply a colossally exaggerated example of the normal type. Ridge of nozzle (handmade, not moulded) like preceding, so termination of nozzle restored accordingly. Pinkish buff clay; reddish brown glaze sparsely applied inside, all over outside.

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TYPE 37 C

Collars Added to Globular Bodies; Large Spoon-Shaped Nozzles

No. 504 (and 1 other inventoried). Plates 19, 45.

Corinth: classified under Type XV.

Second half of 1st century B.C. into 1st century after Christ. Dating based on the stylistic development from Type 37 B and the use of glaze in a manner characteristic of the early 1st century after Christ.

This type has a plain bottom, carefully smoothed, that is not set off from the curving bulbous side walls. The top is high and small, surrounded by a little concave collar that is added separately. There is no lug. The thick fat nozzle has an oval termination and is nearly filled by a large spoon-shaped wick-hole. A thick vertical loop handle, grooved, completes the lamp.

The clay is thick, light red or buff, and is probably Attic. The glaze is a poor dark red to brown, carelessly applied inside and out, with a tendency to heavy unglazed patches on the bottom and lower sides.

Type 37 C may possibly be as early as the first half of the 2nd century B.C.,[100] but the Knidos lamp, which is Broneer's criterion for this date, lasts well into the 1st century after Christ.[101] Moreover, although neither of the Agora examples was found in closed contexts with quantities of dateable pottery, they were both found in association with sherds certainly of the 1st century after Christ. This type also seems to be closely related stylistically to Types 37 A and B, but to follow rather than precede them.

These bulbous lamps with little collars were to become much more popular in Byzantine times, when they were re-introduced from North Africa, as Broneer suggests.[102]

504 (L 2357). Pls. 19, 45.

H. 0.04 m.; D. 0.055 m.

Intact except for handle, restored by analogy with the preserved handle of an uncatalogued specimen (L 4304). Thick red clay, thin dark brown to reddish glaze inside and out, carelessly applied on lower walls and bottom.

TYPE 37 VARIANTS

Collars or Collar-Like Rims; Various Additional Features

Nos. 505-511. Plates 19, 45.

From *ca.* 200 B.C. well through 1st century B.C. Dating based on stylistic similarities with Types 37 A, B and C, and on the finding place of 505.

This miscellany of lamps includes two that are shown by their clay to be imports. One of these, 505, is somewhat earlier than the rest and would seem to be a forerunner of all Types 37 and a link between these types and Type 33 A. The others can be dated during the normal floruit of Types 37 A-C.

None of the lamps can be fitted neatly into any of the preceding categories. Their variant features as well as correspondences to standard types are discussed below.

[100] Broneer, p. 56.
[101] See Type 49 B (mouldmade).
[102] See Broneer, p. 56, note 1, for bibliography.

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505 (L 407). Pls. 19, 45.

Pres. H. 0.030 m.; D. 0.066 m.

Fragment of upper part with shank of long nozzle, trace of vertical handle attachment, and broken base of collar around discus. Very small central filling-hole and two (of original four?) auxiliary drain-holes preserved. Hard gray clay; good black glaze all over. An imported lamp. Allied in clay to **441** of Type 33 A; comparable in profile to **451** of Type 34 A, and (for collar) to **497** of Type 37 B. An early forerunner of Types 37 A and B.

Hesperia, III, 1934, p. 367, no. C 60, fig. 60.

G 6: 2, cistern: *ca.* 200 B.C.

506 (L 4085). Pl. 45.

Pres. L. 0.134 m.

Nozzle only, from a very large lamp (in size and curved profile of body similar to **502** of Type 37 B). Tubular hand-made nozzle with flat-topped thick raised rim around circular wick-hole. Attic clay, dull black glaze inside and (mostly peeled) on outside.

507 (L 4662). Pl. 45.

Pres. L. 0.085 m.; Pres. H. 0.055 m.

Two joining fragments from nozzle of very large lamp, comparable to **503** of Type 37 B. Straight sides, wide raised rim around circular wick-hole (like preceding); lug at beginning of ridge down top of nozzle. Attic clay; black glaze inside and outside.

508 (L 1335). Pls. 19, 45.

Pres. H. 0.030 m.; D. 0.061 m.

Intact except for vertical band handle, nozzle, and top of collar. Two shallow concentric grooves around upper part of body. Buff clay; black to red glaze, much worn. An imported example; common in Egypt (several similar lamps, some with pierced lugs, in the Benachi Collection, Alexandria).

509 (L 4180). Pls. 19, 45.

H. (to rim) 0.046 m.; Est. D. 0.110 m.

Part of bottom, one nozzle with parts of two others, and edge of rim preserved. Groove around edge of rim and start of depressed discus suggest analogy with Type 35 B. Nozzle (mouldmade) with pointed termination and depressed circles like nozzle of **502** of Type 37 B. Dateable by stylistic analogies with these types in the late second or early first centuries B.C. Attic clay and dull reddish black glaze.

510 (L 3780). Pls. 19, 45.

H. 0.029 m.; D. 0.056 m.

Two non-joining fragments preserve complete profile, pierced lug, base of vertical band handle, and part of nozzle's right side; partially restored. Wall forms collar around sunken discus, as in Type 24 B; base and lug similar to **496** of Type 37 B. Attic clay, burned gray; good black glaze all over.

511 (L 5117). Pls. 19, 45.

H. 0.04 m.; D. 0.056 m.

Intact except for vertical loop handle, restored (not shown in photograph). Flat carefully finished bottom; angular profile rising to tall nearly vertical collar around filling-hole. Collar not added separately, as on Type 37 C to which this lamp has some resemblance. Oval nozzle has flattened rim around spoon-shaped wick-hole. Attic clay with worn red to black glaze carelessly applied both inside and outside. To be dated in the late first century B.C., or, more likely, the early first century after Christ by stylistic analogy with Type 37 C and by character of glaze. Cf. the fabric and glaze with those of Type 37 C.

TYPE 38

Delos Type; Globular Unglazed Bodies

Nos. **512-514**. Plates 19, 45.

About second quarter of 2nd century to first quarter of 1st century B.C. Dating based on the finding place of **512** and **514**.

This group is represented by only three examples from the Athenian Agora, but they are

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found by the hundred at Delos,[103] which may have been their center of manufacture, and in great abundance at other Aegean and African sites.[104] They are not connected morphologically with any of our preceding or succeeding types, except that they have globular bodies which fit in appropriately between Types 37 and 39; their date also places them conveniently in this vicinity. At Delos they are called 3rd century B.C., by analogy with the Esquiline lamps,[105] but a closer examination of the contexts may show that they were most popular on the island in the 2nd century B.C., as the Agora examples demonstrate. The deeply sunken concave top is a characteristic of many 2nd century Attic types, and would imply that Type 38 is also a product of the same era.

All lamps of Type 38 are small and remarkably uniform. There is a high flaring base, deeply concave beneath, somewhat like a flaring ring foot. On this is the globular body, which makes an abrupt change into a deep concavity which is the depressed top; a thin groove encircles the top of the body around the periphery of the top. Normally there is no handle, although two or three out of the several hundred examples at Delos have a thin vertical band handle. There is uniformly a large solid lug on the left side projecting out in a wing-like manner. The nozzle is rounded on top and curves out gracefully to a large oval termination that contains the wick-hole. A characteristic of the type is the overhanging lip at the end of the nozzle.

The clay is red, micaceous, and usually hard and thin. It is similar to some varieties of Attic clay used in coarse cooking pots, but since so few of these lamps are found in Attica it is unlikely that they were made here. It is possible that Attic clay was exported to Delos, which lacked good clay beds of its own, for local fabricants to use on the island, or the clay could be from any one of a number of eastern sources. The interiors of the lamps are unglazed. The exteriors are unglazed, also, but a number have a thin dull wash over parts of the exteriors, chiefly the nozzle areas and the upper parts of the sides. It is apparent that the manufacturer held a lamp upside down and quickly dipped the front part of it into a thin wash, in order to prevent, in the finished product, the oil from seeping into the porous nozzle from the wick. This is a cheap and very practical procedure, although the lamps must have exuded considerable oil through their porous bases.

512 (L 3875). Pls. 19, 45.

H. 0.040 m.; D. 0.047 m.

Intact except for two-thirds of top and chips from base; restored. Solid lug; groove around top of body. Carelessly made with nozzle set somewhat askew; left part of body more curved in profile than right, and filling-hole set off center. Dark red, coarse, highly micaceous clay. Unglazed.

D-E 15: 1, drain filling: last quarter of 2nd century B.C.

513 (L 2621). Pls. 19, 45.

Pres. H. 0.039 m.; D. 0.050 m.

Complete except for tops of walls, discus, and bridge of nozzle. Solid lug. Carefully made of thin hard red clay, slightly micaceous; unglazed inside and outside, except for thin red wash around outside of nozzle and upper parts of body.

514 (L 4548).

Pres. H. 0.040 m.; Est. D. 0.060 m.

Nozzle, base, and part of lower body preserved; profile like preceding. Nozzle somewhat smaller. Clay like that of **512**; use of glaze like that of **513**.

P-R 6-12, construction filling: before *ca.* 150 B.C.

[103] *B.C.H.*, XXXII, 1908, p. 143-144, fig. 4.

[104] At Troy: Schmidt, *Schliemann's Sammlung*, p. 200, no. 4063; in Tunisia: Blauchère and Gauckler, *Catalogue du Musée Alaoui*, pl. XXXIV, no. 9; in the Fayûm: Grenfell-Hunt, *Fayûm Towns*, pl. X b, no. 10; in Cyprus: Cesnola, *A Descriptive Atlas, etc.*, Part V, pl. CXXXIX, nos. 1015, 1017, 1020, 1027; in Phoenicia: Renan, *Mission de Phénicie*, pl. XXIV, no. 1; in Thera: *Thera*, II, p. 76, fig. 274c; in Aegina: *Aegina*, pl. 130, no. 9. At Corinth several have been found recently; the type was not included by Broneer.

[105] *B.C.H.*, XXXII, 1908, p. 143.

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TYPE 39

Globular Lamps with Small Raised Rims Around Filling-Holes

Nos. 515-517 (and 2 others inventoried). Plates 19, 45.

Corinth: classified under Type XIV.

Late 2nd century into 1st century B.C. Dating based on the finding place of 516 and stylistic similarity to Type 39 Prime.

This type is in the tradition of handleless lamps with ridges around their filling-holes that began with late examples of Type 25 A and continued on in Type 29 A. This group is the latest manifestation although not a continuation of such characteristics, and at the same time shows affinities with the contemporary Type 37. Type 39 is a small group, but marked by well defined features.

The bottom is flat or very slightly raised; the sides are curving and globular. The central filling-hole has a ridge and concentric groove around it. 517 by exception has a collar wrapped around the whole body, extended downward so that the sides appear straight; because of the resulting high ridge around the upper part of its body this lamp is provided with four drain-holes to collect the oil spilled on the convex surfaces around the filling-hole. The floors of all the lamps have the swirl of clay that has been noticed in other lamps of this period. There is normally no handle, although 517 with its added collar has also been given a vertical band handle. The lug also is usually lacking, although 515 has a small solid protuberance that recalls those of Type 29 A. The absence of both handle and lug is characteristic of this class.

The nozzles are broad, rather short, rounded on top, and flare out to bluntly pointed ends where there are very large oval wick-holes. The nozzles are often set in crookedly so that their ends are slanting away from a horizontal plane. The clay is a soft Attic pinkish buff; the glaze, which is used all over, both inside and outside, is black to red and inclined to be flaky. These lamps were cheaply and carelessly produced, but never in any quantity.

515 (L 4385). Pls. 19, 45.

H. 0.032 m.; D. 0.063 m.

Complete except for minor chips. Solid lug. Nozzle tips slightly to left; dull black glaze, much peeled, all over.

516 (L 1385). Pls. 19, 45.

H. 0.030 m.; D. 0.051 m.

Complete except for right side and most of rim; restored. Nozzle tips decidedly to right. Flaky red glaze on outside, sparsely applied inside.

Hesperia, III, 1934, p. 411, no. E 88, fig. 98.

F 15: 2, cistern: last quarter of 2nd century B.C.

517 (L 2867). Pls. 19, 45.

H. 0.033 m.; D. 0.07 m.

Intact except for handle, chips from rim, and large portions of nozzle; restored. Rim added separately; four small drain-holes between it and central convexity. Thick pinkish buff clay; very badly worn brownish red glaze observable in a few places outside, none inside.

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TYPE 39 PRIME

Globular Lamps with Small Raised Rims Around Filling-Holes; Unglazed

No. 518 (and 1 other inventoried). Plates 19, 45.

Late 2nd century and early years of 1st century B.C. Dating based on the finding place of 518.

This type is like the preceding Type 39 except that the exterior is unglazed. The one catalogued example did not have a handle; the section of wall where a lug might have been is missing. Like some lamps of the parent type (39), the nozzle of 518 slants decidedly downward toward one side.

518 (L 3157). Pls. 19, 45.

Pres. H. 0.05 m.; D. 0.091 m.

Bottom part and nozzle preserved; no handle attachment. Nozzle slants perceptibly to right. Good black glaze inside.

D 11: 4, cistern: bottom filling, late 2nd to early 1st century B.C.

TYPE 39 VARIANTS

Globular Lamps with Small Raised Rims Around Filling-Holes; Variant Features

Nos. 519-520 (and 1 other inventoried). Plates 19, 45.

Late 2nd and early 1st centuries B.C. Dating based on stylistic similarities to Type 39 and on the finding place of 519.

These two variants are larger than most examples of Type 39 and have handles, but of different sorts so that they cannot form a separate sub-type. 519 shows an excellent example of the swirl of clay left on the floor of the interior. The individual vagaries of the lamps are mentioned below.

519 (L 3323). Pls. 19, 45.

H. 0.038 m.; D. 0.069 m.

Bottom and back part preserved with parts of handle (restored) and part of lug on left side. Attic clay, black glaze all over except for scraped groove around filling-hole. Very much like Type 31, but later in date and more advanced in its details, such as swirled clay in bottom of interior and profile of base.

N 20: 4, cistern: use filling, late 2nd to early 1st century B.C.

520 (L 1575). Pl. 45.

Max. dim. 0.079 m.; Est. D. 0.120 m.

Fragment from upper part of large lamp having curved profile like preceding. Lower parts preserved of a double vertical loop handle with prolonged ends resting on shoulder, like handles of Type 40 A. Attic clay, poor black glaze all over except for scraped inner groove around filling-hole. By stylistic analogies with preceding lamp and with Type 40 A, to be dated in late second century or early first century B.C., before Sulla.

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TYPE 40 A

KNIDOS TYPE; IMPORTED

Nos. **521-522** (and 2 others inventoried). Plates 20, 45.

Corinth: classified under Type XIII.

Second half of 2nd century and first quarter of 1st century B.C. These dates limit the very rare use of imported wheelmade Knidos lamps in Athens; this dating is based on the existence of one example in the Musée Alaoui in Tunis, from the Mahdia shipwreck of a vessel that had sailed from Athens shortly after 86 B.C.,[106] and on the finding place of **521**. The comparative absence of this type at Corinth (destroyed by Mummius in 146 B.C.) serves also to confirm a date for local Greek use in the second half of the 2nd century B.C.

Fully developed Knidos lamps, made on the wheel, may have flourished elsewhere as early as the first half of the 2nd century B.C.,[107] but there is no sure attestation of this type before the second half of the century. The moulded versions do not seem to have become current in Athens until the later years of the 2nd century B.C. (see Type 50 A). Both wheelmade and mouldmade varieties reflect an original metal prototype, as the formation of the handle and the color of the fabric will attest. This type is commonly known as the Knidos type because of the vast quantities found at Knidos by Newton.[108] The presence of so many in this location suggests an Asia Minor origin for the type, as does the typical brittle dark gray clay that is decidedly non-Attic.

There is always a high raised base and a double-convex profile like that of Types 29 A and B. The upper parts of the sides are ornamented with a two-lobed leaf and a raised circle on each side. These are not moulded but are either cut out of a sheet of leather-hard clay and stuck on, or laid on in a moist, more fluid, clay. There are grooves around the deeply sunken concave top, with a plain central filling-hole. The fundamental body shape is very reminiscent of that of Type 32, which lasted at least until the end of the 3rd century B.C. and is the link between types 29 B and 40 A. It is obvious that the latter type is simply a continuation of a long tradition that emphasizes the double-convex body. Possibly lamps of Type 32 had been exported to Asia Minor localities which in turn developed the refinements which characterize the lamps now under discussion. The future influence of the applied leaves and circles will be great, as they will continue on moulded lamps well into the second quarter of the 1st century after Christ (Type 50 C).

The handle is a distinctive feature; it is vertical, made of two adjoining loops of clay springing from a simple attachment on the lower part of the body, and it spreads out in two terminations on the shoulder, near the grooves around the top. The loops are bound together by a double band of clay just below the summit of the handle. Such a handle obviously imitates thin coiled bronze rods which would have been appropriate on a metal lamp. Such double loop handles of clay occur often on kantharoi and jugs that date from the late 4th century into the second half of the 2nd century B.C.[109]

[106] *Catalogue Musée Alaoui*, Ier Supplement, Paris, 1907, p. 179, K 708, pl. XCV, no. 3. For the date of the shipwreck cf. A. Merlin and L. Poinssot, *Cratères et candélabres de marbre trouvés en mer près de Mahdia*, Tunis and Paris, 1930, p. 18 (soon after 86 B.C.).

[107] *B. C. H.*, XXXII, 1908, p. 145; Broneer, p. 54.

[108] Newton, *Halicarnassus, Cnidus, and Branchidae*, pp. 378, 379, 393-396.

[109] Many examples are from well dated contexts in the Athenian Agora; early and late examples include P 16732, *Hesperia*, XX, 1951, p. 126, no. 10, 2, pl. 53, a, 2, and P 621, *Hesperia*, III, 1934, p. 373, no. D 20, fig. 58.

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The nozzles are short and broadly flaring, with curved ends and flukes at the sides, accommodating large oval wick-holes. The clay is uniformly thin, finely worked, and dark gray. The dull black glaze is used sparingly, none or very little on the inside and on the lower parts of the outside; more is noticeable on the upper parts of the exterior.

521 (L 2935). Pls. 20, 45.

H. 0.033 m.; D. 0.071 m.

Intact. Crudely shaped leaves and discs on upper part of body. Thick gray clay; black glaze to some extent inside, and outside except for parts of base and lower half of body.

Agora, Pottery of the Roman Period, G 3.

D 4: 1, cistern: Layer I, late 2nd century or early 1st century B.C.

522 (L 4451). Pl. 45.

H. 0.028 m.; D. 0.066 m.

Complete except for discus, parts of left side, and double horizontal band around handle; all but latter restored. Leaves, discs, and lamp in general more carefully made than preceding, although profile similar; somewhat earlier (?). Thin gray fabric; black glaze outside only, but not on base nor lower half of body.

No closed context, but in close association with sherds of 2nd to 1st centuries B.C.

TYPE 40 B

Knidos Type; Attic Imitation

No. 523. Plates 20, 45.

Late 2nd to early 1st centuries B.C. Dating based on stylistic similarities to Types 37 B and 40 A.

At least one Athenian craftsman copied the imported Knidos lamps in local clay with a few touches of his own. The single extant example is generally like the parent type, but has a neat ring foot, curved rather than angular side walls, and a broad flat-topped ridge around the sunken top. The handle arrangement is the same, but with one rather than two horizontal rings binding the double bars of the handle and with a (missing) ornament in front, in place of the second ring.

On the right side is an applied flat disc, but without the accompanying leaf of Type 40 A. This disc used alone is comparable to the decoration of 501 of Type 37 B, which also had the effect of a deep concave top, thanks to its high flaring collar.

The one preserved example of Type 40 B apparently had more than one nozzle, although the average lamp of this group would presumably have imitated the single nozzle of Type 40 A. The clay is a well worked Attic pinkish buff; there is a swirl of clay left on the floor of the lamp as on so many others of this era, and a fine red to black glaze is used inside and out.

523 (L 2131). Pls. 20, 45.

H. 0.042 m.; D. 0.092 m.

Several joining fragments preserve complete profile, discus, handle, most of right side with raised disc, and start of one nozzle to right of main axis of lamp; ornament broken off the handle just below single horizontal band joining its two components. Firm red to black glaze all over.

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TYPE 41

Sanctuary Lamps

Nos. 524-528 (and 1 other inventoried). Plates 20, 45.

Corinth: classified under Type I.

Late years of 5th century to early years of 1st century B.C. Dating based individually on character of clays, glazes, and nozzle formations; only 524 comes from a reliable context.

The Agora Excavations have yielded few multiple lamps that were made for sanctuaries, and those that have been found are merely fragments.[110] The Acropolis has furnished scores of large corona lamps, like 524;[111] the Agora has yielded only this fragment and another that is similar but smaller. The temples dedicated to Hephaistos and Apollo Patroos in the civic center may have been furnished with comparable offerings, but these two are the only sanctuary lamps from the entire Agora area that may be dated as early as the second half of the 5th century B.C.[112] A later version, handmade and rectangular, rather than the familiar circle with a row of nozzles along its edges, is 525. Large rectangular tray-shaped lamps appear also on the Acropolis; the Agora example is a late one; the shape of its nozzles suggests the 2nd century B.C.

Two of the lamps, 526 and 527, are circular tubes of clay with short nozzles projecting at intervals around the perimeter. They were filled through projecting funnels on the top and gave the effect of enormously enlarged askoi. Such lamps could be moved about with less danger of spilled oil and with less chance of dust or foreign matter getting into the oil reservoirs. The covered bodies as well as the character of the nozzles would serve to date both of these specimens in the late Hellenistic period, during the 2nd century or early years of the 1st century B.C.

The final lamp, 528, consists of a circular stand with a series of small individual lamps mounted around its rim. The aggregate resembles an example found in Corinth,[113] but the shape of the component members of the Agora lamps suggests a date much later than that given to the Corinthian prototype. This Agora lamp must certainly fall within the Hellenistic period.[114]

The clay of all lamps of Type 41 may be Attic; detailed descriptions of the individual items follow.

524 (L 2646). Pls. 20, 45.

H. 0.030 m.; Est. D. 0.220 m.

Single fragment preserves parts of flat base, curved wall, wide offset rim, and six of the wick-holes punched through rim; inner overhanging edge of rim broken away. Attic clay; dull black glaze inside and out.

B 13: 6, well: lower fill, late 5th to early 4th centuries B.C.

525 (L 4159). Pl. 45.

H. 0.44 m.; Pres. L. 0.068 m.

Single fragment preserves two nozzles and part of a third. A handmade rectangular lamp, with straight side wall having roughened surfaces at upper and lower edges where flat top and floor were attached. Attic clay; poor metallic black glaze all over except for two parallel irregular scraped grooves above the nozzles. Breaks indi-

[110] For a bibliography of such lamps from other sites see *Hesperia*, V, 1936, p. 180, note 1. For multiple-nozzled lamps from excavations on the North Slope of the Acropolis see *Hesperia*, VII, 1938, pp. 198 ff. Late examples have been found on the Pnyx; *Hesperia*, V, 1936, p. 180.

[111] These are now in the National Museum, unpublished and for the most part unnumbered.

[112] No multiple sanctuary lamps can be safely identified as coming from any 6th century temple or shrine on the west side of the Agora (*Hesperia*, VI, 1937, pp. 8 ff., 79 ff., 117 ff., 222). Nor have any come to light in connection with the early Eleusinion (*Hesperia*, XVII, 1948, pp. 88 ff. and references cited in note 16).

[113] Broneer, p. 34, fig. 16, p. 133, no. 42. This is assigned to Type I, dated in the 6th century B.C.

[114] An early example of such a lamp formerly attached to a stand is 56 of Type 8.

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cate that component elements of lamp were glazed separately before attachment. Glaze alone seems to have served (inadequately) as a binder. Shape of nozzles, glaze, and groove recall lamps of Types 34; thus possible date is 2nd century B.C.

526 (L 4185). Pls. 20, 45.

H. 0.042 m.; Est. D. 0.230 m.

About one-quarter of circumference preserved of a handmade hollow ring lamp, with traces of six nozzles irregularly spaced. Body of lamp glazed before nozzles added, as in preceding; shape of nozzles, clay, and all-over black glaze like preceding; the two presumably contemporary.

527 (L 2356). Pls. 20, 45.

H. 0.021 m.; Est. D. 0.120 m.

About one-quarter of circumference preserved of a hollow ring lamp, with one triangular nozzle and part of another, widely spaced. Traces of filling aperture on top of lamp, at left of extant nozzle. Ring body was wheelmade and then shaped into tube with seam along top. Nozzles, similar to those of Type 37 B, added before glazing. Buff clay (Attic?); red glaze all over. Nozzle and glaze indicate a date in later years of 2nd century or during 1st century B.C.

528 (L 2780). Pl. 45.

H. 0.046 m.; W. (of individual lamps) *ca.* 0.038 m.

Fragment of thick circular stand with one fragmentary and one nearly complete lamp, somewhat reminiscent of Types 25 and 39, attached before glazing. Each lamp has flat rim, ridge around filling-hole, and traces of very broad nozzle. Lamps crowded closely together and thus squeezed into ovoid shapes while leather-hard. Very thick slightly micaceous red clay (Attic?); thin reddish black glaze all over. Fabric and nozzles prevent close association with Types 25 or 39, but shape of lamps suggests certainly a date within the Hellenistic period.

TYPE 42 A

Moulded Globular Bodies and Thick Bases

Nos. 529-530. Plates 20, 46.

Ca. first quarter of 3rd century B.C. Dating based on strong stylistic similarities to 3rd century examples of Type 25 B Prime, and on the finding place of 529.

Here begin the earliest known Greek lamps that are moulded rather than handmade or wheelmade.[115] Types 42 A through 44 D are undecorated and cover the years from the early 3rd century B.C. into the second quarter of the 1st century after Christ. Type 45 A will begin a very long series of moulded lamps with decorations in relief, starting in the middle years of the 3rd century B.C. Decorated moulded lamps will continue into the latest phases of Roman lamp manufacture.

Type 42 A, a very small group, starts a new phase of lychnology, the mass production of cheap lamps that were eventually to drive the wheelmade lamps out of the market after three hundred years of competition side by side. Not only were moulded lamps cheaper to produce, they were usually stronger. The nozzles were not liable to break off, as did the nozzles of so many wheelmade lamps which were added separately. It is true that accidents sometimes caused moulded lamps to split along the horizontal seams, but even if this happened the lower half could be salvaged and used as a saucer-lamp. A few Agora examples show just this use after they were broken laterally.

The introduction of moulded lamps in the early years of the 3rd century B.C. agrees happily with the first appearance of moulded Megarian bowls.[116] The lamps, however, were made more

[115] In the Catalogue henceforth the measurements will include the width rather than the diameter of the lamps, since they were not thrown on the wheel and thus theoretically are not perfect circles.

[116] Thompson dates the earliest Athenian Megarian bowls in the first quarter of the 3rd century B.C.; *Hesperia,*

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simply than the earliest bowls which had a combination of turned surfaces on the inside and moulded imprints on the outside. The lamps were made in two moulds, an upper and a lower, with the horizontal joint between them carefully sealed and smoothed over with wet clay so that, on Type 42 A and other early moulded lamps, it is very difficult to tell that they were made in two pieces. Type 42 A is so carefully made, and so accurate a reproduction of the wheelmade Type 25 B Prime, that one must look inside for the tell-tale finger-prints to make certain that it is not wheelmade.

530 may be called a transitional piece. In this lamp the nozzle was added separately, as in wheelmade lamps, to the body that had been produced in two moulds. 529 had its nozzle made in the upper and lower moulds.

Type 42 A has a solid lug at the left side; this was added separately, although later moulded lamps will have this feature cast in one or both moulds. There is no handle, apparently, on this small group, although the rear portions of 530 are not sufficiently preserved to show whether one existed.

The profile, shape of body, ridge around filling-hole, and nozzle agree perfectly with the corresponding features of Type 25 B Prime. The clay is Attic; the lamps are covered with good black glaze inside; their exteriors are unglazed but covered with a thin clay slip.

529 (L 3522). Pls. 20, 46.

H. 0.036 m.; W. 0.056 m.

Intact. Solid lug. Slight traces (?) of dark glaze inside only.

O 20: 3, well: use filling, first quarter of 3rd century B.C.

530 (L 268). Pls. 20, 46.

Pres. H. 0.045 m.; Est. W. 0.085 m.

Upper part of lamp with front and nozzle. Trace of lug on left side; shallow grooves on either side of nozzle's top. Nozzle was added separately and pierced, as nozzles in Type 25 B Prime. Black glaze inside, thin clay slip on outside.

Hesperia, II, 1933, p. 196, fig. 1, 11 and p. 197, fig. 2, 11.

TYPE 42 B

Moulded; Watch-Shaped Profiles

Nos. 531-533 (and 4 others inventoried). Plates 20, 24, 46.

First half of 3rd century B.C. Dating based on close stylistic similarities to Type 29 A and to the shape (but not the clay) of Type 28 B, and to some extent on the finding places.

Type 42 B is similar to the preceding type, but its profile is double-convex, with a vestigial angle between the halves rather than a continuous curve. With such a watch-shaped profile, like those of contemporary lagynoi, the type recalls vividly the character of Type 29 A. In other respects also, such as the raised base, ridge and groove around the filling-hole, and nozzle formation, the type agrees with the wheelmade counterpart. It seems reasonable to assume that Type 42 B is a conscious imitation, made in two moulds, of the popular Type 29 A. The profile and body formations are also similar to those of Type 28 B. In the mouldmade lamp, however, the angle between the upper and lower parts of the bodies is not so sharp as on Type 29 A.

The nozzle is always produced in the mould, rather than added separately; the small lug on

III, 1934, p. 457. Edwards is inclined to date these bowls later, around the middle of the 3rd century; *Hesperia, Suppl.* X, p. 90.

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the left side of every lamp is a handmade addition, however. The lugs are usually pierced, although one example, **532**, has a solid projection. This lamp may have had a handle (its rear portion is missing), but all the other lamps in this type, with pierced lugs, have no handles.

The clay is uniformly Attic; the insides and exteriors are glazed with the usual black coating.

531 (L 4631). Pls. 20, 24, 46.

H. 0.036 m.; W.0.078 m.

Complete except for tip of nozzle and minor chips; restored. Pierced lug. Clay burned gray; black glaze all over. Incised on top of nozzle: P

Hesperia, XX, 1951, p. 130, no. 14, 1, pl. 54, b, 1.

D 16: 6, pyre: first half of 3rd century B.C.

532 (L 4101). Pls. 20, 46.

H. 0.022 m.; W. 0.032 m.

Intact except for rear portion, restored without handle, following preceding. A miniature lamp; solid lug; flat-topped nozzle shaped at sides. Worn black glaze all over.

533 (L 773). Pls. 20, 46.

Pres. H. 0.031 m.; W. 0.076 m.

Intact except for top which, with top of nozzle, has been chipped out. Angular profile; concentric grooves and ridges around top, suggesting either very wide filling-hole or concave discus within. Pierced lug. Badly worn black glaze all over.

H-I-J 12-13, construction fill: before *ca.* 150 B.C.

TYPE 42 C

Moulded, with Moulded Lugs; Curved and Flat-Rimmed Nozzles

Nos. **534-535** (and 2 others inventoried). Plates 20, 46.

Second to third quarters of 3rd century B.C. Dating based in part on some stylistic resemblances to Types 29 A and 42 B and in part on the finding places. It may be noted that a similar nozzle is found on **363** of Type 25 Variants, well dated in the latter part of 3rd century B.C.

These easily recognized lamps retain more or less the basic body shape of Type 42 B, with a double-convex profile and a suggestion of an angle between the upper and lower halves. The profile also relates the type to the contemporary wheelmade lamps of Type 29 A. There is always a pronounced raised ridge around the filling-hole, more emphatic here than on the two related types; when the mould was freshly used, there is a suggestion of a groove around this collar-like ridge.

The new feature is the casting of the lug in both the upper and lower moulds. The lug now becomes a pointed wing-like projection at one side rather than a little lug on the upper part of the side wall. The lug was pierced after the two parts of the lamp were assembled, but on some lamps the rod or needle used for piercing started through the top of the lug but did not penetrate all the way through to make a hole. A partial penetration is useless for inserting a cord for suspension purposes; it may be considered either a vestigial hole or a little indentation for inserting a needle or stick that could serve at times to poke up the wick. Type 42 C is the earliest of the undecorated moulded types that is equipped with handles. Although some lamps have none, **535** and another inventoried one have simple vertical band handles added after the lamps emerged from the moulds. It is interesting to note that the handleless lamps, however, may have either a pierced lug or (as an uncatalogued example shows) a semi-pierced lug. Apparently there is no correlation between lack of handle and a fully pierced lug. It would seem that in general the pierced lugs were used more for wick-sticks than for suspension purposes; the succeeding group, Type 42 D, tends to corroborate this hypothesis.

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The nozzle is a characteristic feature of this type. It reflects a metal prototype in its tubular rather than angular shank, that swells out and up to a flat oval or circular rim around the wick-hole. It resembles somewhat the up-ended trunk of an elephant, and has been seen once before in a wheelmade clay lamp, **363** of Type 25 Variants.

The clay is Attic; the glaze used on both exteriors and interiors is black, flaky, and of a rather inferior quality characteristic of that used generally on Hellenistic lamps, in contrast to the finer black glaze that is common on earlier fabrics. The glaze of **534** has been fired red, either by intention or accident.

534 (L 3808). Pls. 20, 46.

H. 0.043 m.; W. 0.066 m.

Complete except for right half of body; restored. There was no handle; pierced lug; flat raised band around wick-hole. Glaze, fired red, all over.

N 21: 4, cistern: lower filling, *ca.* 250 B.C. or early in third quarter of 3rd century. Another inventoried example of Type 42 C found here.

535 (L 1854). Pl. 46.

H. 0.033 m.; W. 0.055 m.

Complete except for end of nozzle and most of vertical band handle; except for presence of latter, very much like preceding. Lug is pierced on top but not all the way through. Worn black glaze over all.

E 14: 1, cistern: abandonment fill, accumulated *ca.* 275-225 B.C.

TYPE 42 D

Moulded, with Moulded Lugs; Flat-Topped Nozzles

Nos. 536-538 (and 8 others inventoried). Plates 20, 46.

Second and third quarters of 3rd century B.C. Dating based on stylistic similarities with Types 29 B, 32, and 42 C.

This type is similar to the preceding in that the lug is always cast in both moulds and projects as a wing on the lower left side. The lug is usually pierced through, although one uncatalogued example has the partially pierced hole seen on **535** of Type 42 C. The lamps with pierced holes appear with or without broad flat vertical handles added after the lamps were cast.

The profiles show a raised base and curving sides, sometimes with a suggestion of double convexity. The filling-hole has a raised ridge around it, which may be narrow as on **536**, recalling the similar feature of Type 29 B, or more often broad and concave, recalling the concave rims of Type 32. There is always a little groove around the ridge, also cast in the mould. The nozzles, unlike those of Type 42 C, follow the normal design seen on most lamps of the 4th and 3rd centuries B.C. They have angular shanks, more or less straight sides, and are flat on top like those of the various Type 25's. Often the start of the nozzle is emphasized by a cast groove at right angles to the nozzle's axis. This line serves to articulate the nozzle and set it off from the body of the lamp, as if it were a separate feature rather than a part of the castings that actually include the body and nozzle together. Attic clay and rather worn poor black glaze are used throughout.

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536 (L 528). Pls. 20, 46.

H. 0.030 m.; W. 0.049 m.

Intact except for handle; restored. Pierced lug; groove around rim. Mottled black to brown glaze all over.

537 (L 4570). Pls. 20, 46.

H. 0.030 m.; W. 0.054 m.

Intact except for handle and end of nozzle; restored. Pierced lug, but hole very narrow at bottom; groove around rim, another at base of nozzle. Clay burned gray, badly peeled dull black glaze all over.

538 (L 3287). Pls. 20, 46.

H. 0.033 m.; W. 0.070 m.

Complete except for fragments of sides and rim; restored. Pierced lug like preceding; no handle. Partly peeled metallic black glaze.

TYPE 43 A

Concave or Ridged Tops; Delphiniform Lugs Cast in Upper Mould

Nos. 539-544 (and 21 others inventoried). Plates 20, 46.

Second half of 3rd century B.C. Dating based on close stylistic similarities to wheelmade prototypes, Types 31 and 32, and on the finding places.

A large group of moulded lamps with enclosed bodies, having various features that emphasize the filling-holes, were made during the second half of the 3rd century B.C. and most of the 2nd century. The first subdivision, Type 43 A, is distinguished by the presence of curving cornucopias or delphiniform lugs, cast in the upper moulds only. These are always solid, rather high on the left sides of the lamps' bodies, and are vestigial remainders of the once useful pierced lugs. A few lamps in this group have a pair of such lugs, one on each side, making a symmetrical decoration of this feature.[117] This type is made with or without a flattened vertical band handle.

The general profile, as well as the arrangement of the top, is like that seen in Types 31 and 32. The curving sides set on a raised base nearly enclose the body. The filling-hole is marked either by conspicuous ridges and grooves or by a narrow concave rim. The nozzles are long, flat on top or nearly so, with small wick-holes at the extreme ends.

Several lamps are from the same moulds; **540** is a duplicate of an inventoried but uncatalogued specimen, and **542** also has a counterpart in the Agora inventory. A third set of moulds produced three identical specimens, all in the Agora inventory. An interesting use of wrought iron[118] is seen in the lamp-holder that encases **542**. This is a shallow saucer with a long projection to contain the lamp's nozzle; although it is now badly rusted, sufficient remains to show that it was made in one piece, with a low raised base.[119] Its use was to prevent the oil from the lamp from seeping onto the table, as well as to increase the lamp's stability. **541** has a protective clay rim or collar added by hand around the upper part of the body. This feature will become common in later Hellenistic and early Roman lamps; its use is to collect oil that might spill onto the sides of the lamp when the reservoir is filled through the rather narrow central opening. At the base of the nozzle there should be a drain-hole, within the collared area, to return the spilled oil to the interior; the lamp is broken away at this point.

Type 43 A utilizes Attic clay and rather poor black glaze that is applied to both interiors and exteriors. An occasional example such as **541** may be fired red.

[117] Compare **544**, with a somewhat earlier wheelmade lamp, **313** of Type 25 B, which has a pair of pierced lugs.

[118] Although the metal at first glance appears to be cast, the laminations appearing at the breaks show it to be wrought. Cast iron appears very late; cf. Charles Singer, E. J. Holmyard, A. R. Hall (editors), *A History of Technology*, Oxford, 1954, vol. I, p. 598.

[119] Cf. the similar lead lamp-holder, **346** of Type 25 C Prime.

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539 (L 3777). Pls. 20, 46.

H. 0.030 m.; W. 0.067 m.

Complete except for minor chips. Two concentric ridges and groove around filling-hole; cornucopia lug on left side. Badly worn black glaze.

N 21: 4, cistern: lower filling, *ca.* 250 B.C. or early in third quarter of 3rd century B.C.

540 (L 4569). Pls. 20, 46.

H. 0.034 m.; W. 0.066 m.

Intact except for end of nozzle and part of handle; restored. Body higher and more rounded than preceding; two concentric ridges and groove encircling narrow concave rim around filling-hole; delphiniform lug on left side. Pitted black glaze.

D 17: 5, cistern: lower filling, last quarter of 3rd century B.C.

541 (L 1574). Pls. 20, 46.

H. (to collar) 0.038 m.; W. 0.075 m.

Complete except for handle (like preceding), nozzle, and parts of top and rim. Latter feature handmade and added separately to provide a collar; presumably drain-holes existed at base of nozzle, just within collar (cf. **441** of Type 33 A, nearly contemporary; also lamps of Types 37, somewhat later). Ridge and groove around filling-hole; cornucopia lug on left side. Glaze fired red all over.

542 (L 2939). Pls. 20, 46.

H. (of lamp) *ca.* 0.032 m.; W. (of lamp) 0.058 m.

Lamp intact, rusted into wrought iron lamp-holder that has flat raised base and traces of vertical band handle (cf. **346** of Type 25 C Prime, with its lead lamp-holder). Ridge encircling narrow concave rim around filling-hole; delphiniform lug on left side. Slightly worn dull black glaze.

543 (L 4029). Pls. 20, 46.

H. 0.037 m.; W. 0.062 m.

Intact except for handle and minor chips; restored. Ridge around slightly concave rim on top; delphiniform lug on left side. Badly worn dull black glaze.

544 (L 3776). Pls. 20, 46.

H. 0.039 m.; W. 0.073 m.

Complete except for top of nozzle and parts of bottom; restored. No handle. Two ridges and groove around filling-hole; cornucopia lug on either side. Dull black glaze all over.

Provenance as of **539**.

See also L 554: *Hesperia*, III, 1934, pp. 387-388, fig. 75, D 59 (Hellenistic Group D).

TYPE 43 B

Raised Edges Around Flat Tops

Nos. 545-548 (and 10 others inventoried). Plates 20, 46.

Third and fourth quarters of 3rd century B.C., perhaps a little later. Dating based on stylistic similarities to some lamps of Type 33 A, and on the finding places.

These neatly made lamps have their nozzles and their lower bodies similar to those of the preceding type, but their tops are distinctive. Here the top is a wide flat circle, anticipating the discus of early Roman lamps, with a raised ridge or band around it which is actually the continuation of the tops of the side walls. A thin circular groove, made in the mould, sometimes accompanies this raised edge. The general effect is that of a flat depressed top sunken below the lamp's walls. This depression is a development of the wide concave rim seen sometimes on the preceding type. A few examples of wheelmade Type 33 A have similar depressed tops, but the production of a flat top is difficult on the wheel, although it is easy to make in the mould and is appropriate for this technique. It is possible that the flat tops of Type 43 B reflect the influence of moulded metal lamps. For the first time in the development of moulded lamps one sees here an articulated design that is essentially suitable for the mould rather than a style that imitates the curving contours produced by the wheel.

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The craftsmen who produced Type 43 B, perhaps attached to a single shop, followed no set rule as to the lugs. Some lamps have none; some lamps have a lug on their left sides which may be solid, pierced, or semi-pierced like those seen on Type 42 C. The lug is normally added separately, by hand, although that of **549** was apparently cast in the upper mould. The lamps occur both with and without a vertical band handle. There is no fixed relationship between the handle or lack thereof and the lug or lack of lug; there are several combinations, but the most usual one is a handle on a lamp with a pierced lug. This gives further credence to the theory that at least by the later 3rd century B.C. the pierced lug's function was either purely vestigial or else a support for a wick-stick, rather than a means of suspending the lamp when not in use.

The nozzles, following traditional patterns, are flat on top, have long nearly straight sides, and have small wick-holes at their extremities. The flat top of the nozzle is sometimes level with the circular flat top of the lamp itself, but occasionally the nozzle's top is level with the ridge and forms a part of it. The latter arrangement is more easily made in a mould than the former design. Several lamps come from the same mould; **546** and **547** are duplicates of three other examples in the Agora inventory. The clay is Attic; the fairly good metallic black glaze used on interiors and exteriors corroborates the feeling that these lamps reflect the influence of moulded bronze prototypes.

545 (L 4369). Pls. 20, 46.

H. 0.035 m.; W. 0.064 m.

Complete except for parts of handle; restored. Solid lug, probably cast; nozzle level with top of ridge; flat discus. Worn black glaze.

M 21: 1, cistern: dumped filling of late 3rd and possibly into early 2nd centuries B.C.

546 (L 378). Pls. 20, 46.

H. 0.038 m.; W. 0.068 m.

Complete except for minor chips and end of nozzle; restored. No handle nor lug; nozzle level with top of ridge, around the top of which is a slight circular groove; discus slopes very slightly inward to filling-hole. Good brown to black glaze.

547 (L 1930).

H. 0.038 m.; W. 0.068 m.

Complete except for nozzle and part of side. Exactly like preceding plus a pierced handmade lug on left side. Good black glaze.

E 14: 1, cistern: abandonment fill, accumulated *ca.* 275-225 B.C.

548 (L 3179). Pls. 20, 46.

Pres. H. 0.022 m.; W. 0.066 m.

Upper half of lamp only, intact except for end of nozzle, which is restored. Semi-pierced lug; top of nozzle level with discus, which slopes slightly inward; groove around outer edge of discus. Dull black glaze.

TYPE 43 C

Wide Concave Ridged Tops

Nos. **549-553** (and 7 others inventoried). Plates 21, 46.

Late in third quarter and fourth quarter of 3rd century B.C. Dating based on stylistic affinities with Type 43 B, also on elements that will lead into the development of Type 43 D, and on the finding place of **551**.

This type is very much like the preceding one, but the contours are less precise. The wide circular top or discus is present, but it is concave rather than flat, and the ridge or rim surrounding the top is less pronounced. In fact **551** and a few other examples have no crisply formed rim at all, merely a curving section between the convexity of the side walls and the concavity of the top. This same feature appears on the numerous examples of the succeeding group, Type 43 D. There

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is the usual raised base. The side walls are slightly curved, but tend to approach the vertical in their general effect, like the nearly straight side walls of Type 43 B. There are, on some examples, thin concentric grooves around the edge of the concave top.

These lamps have either a pierced lug or no lug at all; no examples in the Agora inventory have solid or semi-pierced lugs. When they exist the lugs seem to have been added by hand after the two halves of the lamp were joined together. The flat vertical band handle is used on some specimens, absent on others; as on the preceding type, there is no standard arrangement concerning the use of the handle with or without the lug, but usually lamps without handles do support pierced lugs.

550 has an unusual strainer, a concave depression pierced with many small holes, in the filling-hole area. This is a feature to be expected in a lamp made from a mould but would be impossible in a wheelmade example. The mould for the upper half of any lamp has a boss which represents the opening for the filling-hole; usually clay is packed around the boss, so that there will be a resultant void in the center of the finished lamp. In this example the wet clay was packed around and over the boss, so that when the lamp was turned out of the mould it had a shallow cup occupying the filling-hole area; while leather-hard it was punched with several tiny holes rather than cut out entirely. Such a strainer might prove useful in sifting out any large bits of foreign matter that might be in the oil. **551** probably had several very small filling-holes punched through its concave top; these result in the entire top of the lamp serving as a kind of strainer. This same specimen has another unusual element, a narrow slot cut through the leather-hard clay of the nozzle's top, for inserting a thin rod to poke up the wick. This lamp is equipped with both a handle and a pierced lug; it is very evident that the wick-stick, with its function facilitated by the cut-out slot, would be kept in the hole of the lug when not in use.

The nozzles are of standard form and, like those of the preceding type, may have their flat tops either on a level with the ridge around the top of the lamp or at a lower level corresponding to the mean height of the concave top. The clay is Attic, the glaze sometimes a heavy black metallic coating like that of Type 43 B but more often a worn and mottled black, like that of Type 43 A and especially that of Type 43 D, to follow.

549 (L 4412). Pls. 21, 46.

H. 0.032 m.; W. 0.053 m.

Intact. Nozzle's top level with nearly flat discus. Badly peeled dull black glaze over all.

550 (L 849). Pls. 21, 46.

H. 0.035 m.; W. 0.065 m.

Body of lamp complete except for chips from filling-holes; nozzle and handle broken away; restored. Shallow grooves on ridge around discus. Concave pierced depression in place of normal filling-hole; nozzle's top level with ridge. Worn black glaze all over.

551 (L 1852). Pls. 21, 46.

H. 0.039 m.; W. 0.065 m.

Intact except for center of discus and end of nozzle; latter restored. Breaks in top suggest a solid concave discus pierced by a series of small filling-holes, two of which remain in part, one just above nozzle and one between lug and handle. Slit cut in top of nozzle for air-hole or to facilitate poking up of the wick; nozzle's top below level of discus' rim. Good black to red glaze all over.

E 14: 1, cistern: abandonment fill, accumulated *ca.* 275-225 B.C. Another inventoried example of Type 43 C found here.

552 (L 882). Pls. 21, 46.

H. 0.028 m.; W. 0.052 m.

Intact except for end of nozzle; restored. Little ridge around discus, level with top of nozzle. Good metallic black glaze all over.

553 (L 3293). Pl. 24.

Max. dim. 0.067 m.

Fragment from base of lamp with graffito scratched through metallic black glaze.

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TYPE 43 D

Moulded "Poor Relations"; Wide Bodies with Concave Ridged Tops

Nos. 554-561 (and 21 others inventoried). Plates 21, 46.

Last quarter of 3rd century B.C. through first half of second century B.C., and perhaps a little later. Dating based on obvious likenesses to wheelmade Types 33 A and 34 A and on the finding places.

In profile these lamps resemble and, in general, are the moulded counterparts of Types 33 A and 34 A. Type 43 D cannot be divided into two groups, with curved profiles comparable to Type 33 A, and angular profiles comparable to Type 34 A, because Type 43 D is moulded and the profiles are naturally irregular at the point of junction of the two moulds. There is usually a suggestion of an angular or double-convex profile, because of the physical use of two moulds as well as a desire to emphasize the double convexity of Type 34 A. The proportions of the lamps are broad and spreading, rather than narrow and tall; in this respect they recall Type 43 A, rather than Types 43 B and C, as well as their wheelmade counterparts.

The broad concave top or discus is surrounded by a pronounced ridge, sometimes grooved as on Type 43 C, but unlike the crisp ridge of Type 43 B. Such a top is a careless continuation of the concave designs of Type 43 A. There is a simple and sometimes quite small filling-hole, occasionally surrounded by a thin groove, as on 557. Some lamps have vertical band handles, others have none. Sometimes, on lamps equipped with handles, there is lacking the customary lug on the left side. When lugs appear they may be pierced or solid, and both kinds are used on lamps with or without handles. The lugs are made variously, usually handmade but occasionally produced in the upper mould; in one case at least, 559, it was made in both moulds.

The nozzles on some of the earlier lamps, made in the 3rd century B.C., are flat on top, but most of the nozzles are curved on top, following the form used on most lamps of the 2nd century B.C. and later. The ends of the nozzles may be curved or slightly blunted, similar to those on the parent types. The moulding process in which the nozzle was shaped in one piece with the body permitted a longer nozzle than is found on the contemporary wheelmade lamp in which the nozzle was made separately and attached.

Several fragments of moulds have been discovered. 558 could have served for the upper part of a lamp very much like 557. 561 is a bit of a lower mould, and could have served equally well for lamps of Types 43 B and 43 C as well as for this type. Another fragment of a lower mould is similar, but uncatalogued. The clay is Attic, and a rather poor mottled black glaze is used all over.

554 (L 4550). Pls. 21, 46.

H. 0.030 m.; W. 0.066 m.

Fragments preserve base, nozzle, and section of walls with parts of top; restored without handle or lug, although one or both of these must surely have existed. Groove around edge of discus; flat-topped nozzle. Worn black glaze.

P-R 6-12, construction filling, before *ca.* 150 B.C.

555 (L 4568). Pls. 21, 46.

H. 0.030 m.; W. 0.065 m.

Complete except for parts of handle and end of nozzle; restored. Nozzle slightly curved on top, otherwise lamp like preceding, with grooved ridge. Pierced lug. Worn black glaze.

D 17: 5, cistern: lower filling, last quarter of 3rd century B.C.

556 (L 2500). Pls. 21, 46.

H. 0.031 m.; W. 0.059 m.

Intact except for end of nozzle, restored; grooved ridge. Dull black glaze.

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557 (L 1115). Pls. 21, 46.

H. 0.036 m.; W. 0.070 m.

Seven fragments preserve all but parts of base, end of nozzle, and left side wall where presumably a pierced or solid lug existed; restored except for latter. Grooved ridge around discus. Very badly worn black glaze.

Hesperia, III, 1934, p. 366, no. C 57, fig. 50.

G 6: 2, cistern: *ca.* 200 B.C.

558 (L 1441). Pls. 21, 24, 46.

D. (of grooved ridge) 0.057 m.

Clay mould for upper part of preceding lamp or others very similar; nozzle area and edges broken away. On the bottom is incised, in the wet clay, a covered pyxis with sprays. Buff clay.

559 (L 2543). Pls. 21, 46.

H. 0.035 m.; W. 0.066 m.

Intact except for handle and end of nozzle; restored. Solid lug (cast in both moulds). Worn black glaze.

560 (L 367). Pl. 24.

D. (of base) 0.037 m.

Base only, on bottom of which is scratched through the worn black glaze: PP.

561 (L 3755). Pls. 21, 46.

Est. W. (of lamp) 0.032 m.

Part of mould for lower part of lamp, preserving nozzle and bit of raised base. Another (L 1301) mould exists, similar but without the nozzle area. Fine Attic clay.

TYPE 43 D PRIME

MOULDED "POOR RELATIONS"; WIDE BODIES WITH CONCAVE RIDGED TOPS; UNGLAZED

No. **562** (and 1 other inventoried). Plates 21, 46.

First half of 2nd century B.C. Dating based on obvious stylistic analogies with late examples of Type 43 D.

If only one example of Type 43 D Prime had been found it might have been considered an unfinished example of Type 43 D or a sport. The presence of two unglazed lamps, however, shows that a number were intentionally produced. Type 43 D Prime is exactly like Type 43 D except that the exterior is coated with a thin clay slip rather than black glaze. The nozzles are rounded on top rather than flat, which implies a date in the 2nd rather than in the 3rd century B.C. The one catalogued example has both a handle and a solid lug; the uncatalogued example is very fragmentary and does not preserve the areas where a lug or handle may have existed.

562 (L 3801). Pls. 21, 46.

H. 0.029 m.; W. 0.062 m.

Intact. Solid lug; raised flat base. Buff clay, smoothly surfaced with thin slip.

TYPE 43 E

MOULDED LAMPS WITH TWO OR THREE NOZZLES; OTHERWISE LIKE TYPES 43 B, C, D

Nos. **563-566** (and 1 other inventoried). Plates 21, 47.

Ca. last quarter of 3rd century B.C. to early years of 1st century B.C. Dating based on stylistic similarities of the individual lamps to those of Types 43 B-D or to their wheelmade counterparts of Type 35 B.

These lamps are the moulded equivalent of Type 35 B, although none of Type 43 E has more than three nozzles. The body formations, as the profiles show, are similar to those of the

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preceding Types 43 B-D. The individual lamps differ considerably, but their idiosyncrasies are described in detail in the catalogue. It is sufficient to note here that all of the nozzles are made in moulds with the bodies of the lamps, and that all the lamps are of Attic clay. The glaze is generally of poor quality, characteristic of the simpler lamps of this period.

563 (L 406). Pls. 21, 47.

H. 0.048 m.; Est. W. 0.082 m.

Fragment of lamp with one flat-topped nozzle and part of another, perpendicular to it, at the left; lack of nozzle in similar position at right indicates that lamp originally had three nozzles and a handle at the right, equally spaced, as in **566** *infra*. Raised base; well defined rim around flat discus. Traces of good black glaze all over. Comparable to lamps of Type 43 B and to be dated similarly.

564 (L 1337). Pls. 21, 47.

W. (of top) 0.065 m.

Top only, with basket handle; start of one nozzle and trace of another opposite, at handle attachments. Groove around shoulder between side walls and concave discus. Profile similar to those of Type 43 D. Basket handle comparable to that of wheelmade lamp **475** of Type 35 B; to be dated in the 2nd century B.C. (?).

565 (L 4408). Pls. 21, 47.

H. 0.034 m.; W. 0.058 m.

Intact except for handle; restored. Flat raised base, high curved sides, concave discus. Similar in design to wheelmade lamp **476** of Type 35 B. Worn black glaze all over except for scraped line around shoulder. 2nd century B.C. (?).

566 (L 1523). Pls. 21, 47.

H. 0.039 m.; W. 0.054 m.

Intact except for handle, one nozzle, and tip of another; restored. Ring foot, tall rounded body, flat-topped nozzles with flaring grooves ending in small volutes on each side of wick-holes; similar volutes at base of handle adjoining the rim. Two lugs in the shape of lions' heads between nozzles. Worn black glaze all over. A carefully made reproduction of a bronze lamp. Nozzles similar to those of Types 52 B-E. To be dated in late 2nd or early 1st centuries B.C. (?).

TYPE 43 VARIANTS

Moulded; Depressed and Ridged Tops; Variant Features

Nos. **567-568**. Plates 21, 47.

Late in third quarter of 3rd century B.C. through first half of 2nd century B.C. Dating based on strong stylistic similarities to Types 43 C and D, and on the finding place of **567**.

The variants included here, fully described below, differ from normal examples of Types 43 C or D in either the clay or the use of a standard to support the lamp.

567 (L 613). Pls. 21, 47.

H. 0.028 m.; W. 0.054 m.

Intact except for handle; restored. Low raised base, flat sunken discus, solid lug cast in both moulds. Gray clay, dark gray metallic glaze all over. An imported lamp from an eastern source; otherwise comparable to Type 43 C.

I 16: 5, cistern: filling of 2nd century B.C. with some later intrusions.

568 (L 2088). Pls. 21, 47.

H. (of lamp) 0.027 m.; W. 0.050 m.

Lamp intact except for tip of nozzle and parts of handle; restored. Mounted on a hollow wheelmade shaft, broken off below its spreading top which resembles a Doric echinus; like **444** of Type 33 B. Lamp (like Type 43 D) has groove around shoulder, solid lug, and curved-topped nozzle. Attic clay, brown glaze all over.

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TYPE 44 A

Moulded; Undecorated; Nozzles Pointed with Ridge or Grooves on Top

Nos. **569-572** (and 5 others inventoried). Plates 21, 28, 47.

1st century B.C., second quarter to end of century. Dating based on stylistic similarities to decorated moulded lamps of Types 49 A and B and on the finding place of **569** and **571**.

These lamps of the post-Sullan period continue the tradition of the undecorated mouldmade lamps that will finally disappear in the next century, to yield the market entirely to the more interesting decorated lamps.

Type 44 A has a circular flat raised base as a standard feature, the only exception being **570** with a circular base-ring. The bodies tend to be high and globular, with no marked distinction between the lower and upper curves. The tops are broad circles, flat or slightly concave, and set off from the rounded sides by a low circular grooved ridge, recalling the shape of Types 49 A and B. There is always a broad vertical band handle. No lugs are ever seen on this type, nor on any of the other subdivisions of Type 44; this is a significant omission, as a similar absence of lugs will be noted on contemporary decorated moulded lamps, although they had lugs both before and after the 1st century B.C.

The nozzle is a distinctive feature of Type 44 A. It is long and pointed, again following the style of the decorated lamps which borrowed the pointed nozzle from 2nd century B.C. imported prototypes (Type 49 A). The top of the nozzle is either angular or else slightly flattened and decorated with several parallel grooves. The lower profile of the nozzle is usually angular also, a feature seen in 1st century B.C. decorated moulded lamps.

The clay is Attic, of a fairly good pinkish buff color. The glaze, used both inside and outside, is of a good quality and often fired red, although an occasional peeled black glaze may appear.

One lamp bears a signature, the first to be seen on an undecorated moulded lamp, although they were used on ornamented lamps several generations earlier. **572** has Sopatros' name in the genitive, incised in the soft clay of the lamp before it was fired. This is the earliest appearance of this well known Athenian lamp manufacturer who signed many decorated lamps during this period and whose trade-name continued well into the next century.

569 (L 2719). Pls. 21, 47.

H. 0.039 m.; W. 0.072 m.

Intact except for handle and end of nozzle; restored, the nozzle's termination copied from following lamp. Flat circular raised base; flat top; parallel grooves on narrow flattened top of nozzle. Thin red glaze.

Agora, Pottery of the Roman Period, F 102.

N 19: 1, cistern: final dumped fill, *ca.* 75-25 B.C.

570 (L 1811).

H. 0.032 m.; W. 0.063 m.

Intact except for chips from side wall and nozzle. Like preceding except for circular base-ring in place of raised base. Red to black glaze.

571 (L 3222). Pl. 47.

H. 0.042 m.; W. 0.068 m.

Complete except for chips from side walls, end of nozzle, and handle; restored in plaster. Flat circular raised base; concave top. Smoothed angular top of nozzle. Red glaze.

Agora, Pottery of the Roman Period, F 103.

Provenance as of **569**.

572 (L 3024). Pl. 28.

H. 0.039 m.; W. 0.067 m.

Complete except for parts of sides and end of nozzle. Like preceding. Red glaze. Incised on base, before firing, a signature in three lines: CΩ ΠA TPOY.

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TYPE 44 B

Moulded, Undecorated; Nozzles with Rounded Tops and Rounded Ends

No. 573 (and 3 others inventoried). Plates 21, 47.

Ca. 1st century B.C. Dating based on some stylistic similarities to decorated moulded lamps of Type 51 A and on the finding place of 573.

This small group of cheaply made lamps presents a minor and perhaps later variation of Type 44 A. The base continues to be raised and flat, but its circular shape is less regular; the circle is pulled out into an oval, nearly into an almond shape, which suggests not only the almond-shaped bases of the imported Type 49 A, but particularly the continuation of this feature in the almond-shaped bases of many moulded decorated lamps of the turn of the era and early years of the 1st century after Christ.

The slightly concave top is surrounded by a low ridge, but the ridge is plain rather than grooved as in Type 44 A. There is a rather thin vertical band handle; there is no lug. The nozzle illustrates a temporary return to the simple tubular nozzle with an oval termination seen on most Greek and early Hellenistic lamps. This *rétardataire* feature is not so much a conscious revival of an old-fashioned form, nor an influence from contemporary Italian lamps, as it is an economic measure. A rounded nozzle is somewhat easier and cheaper to manufacture, and these lamps are noteworthy for their cheapness in other features. Both the top of the lamp and the nozzle formation suggest comparable features of Type 51 A.

The Attic clay is thin and brittle; the glaze is diluted into a thin coarse reddish black wash which is carelessly applied to the upper parts of the lamp with unsightly dribbles here and there on the under side. The interiors are only partially coated with this wash or thin paint. This careless use of a thin wash is seen on scores of decorated lamps of this period, giving a superficial impression of lateness which the finding places belie. Although many very beautiful and costly lamps were made in Athens during the 1st century B.C., and on into the Augustan period, it must not be assumed that there was no demand for cheap little lamps such as these of Types 44 B and C that continued in an old tradition.

573 (L 2194). Pls. 21, 47.

H. 0.030 m.; W. 0.062 m.

Intact. Raised, roughly oval base. Thin reddish black wash on upper portions, carelessly dripped on lower portions.

D 11: 1, well: dumped filling, turn of the era.

TYPE 44 C

Moulded, Undecorated; Nozzles with Rounded Tops and Pointed Ends

Nos. 574-576 (and 4 others inventoried). Plates 21, 47.

Ca. first half of 1st century after Christ.

Type 44 C is another, later variant of Type 44 A. The base is circular in these lamps, but in the form of a base-ring, wide or narrow, rather than the customary flat raised base. The wide plain top is again flat or slightly concave, enclosed within a well defined circular ridge that may be either grooved or plain. The same rather thin vertical handle is used that appeared on Type 44 B.

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Some lamps may be given an added collar to collect spilled oil, and in such cases there are always the requisite drain-holes at the base of the nozzle.

The nozzle formation is very wide, circular in section as in the preceding types, but it ends in a neatly made triangular point. This pointed nozzle and the use of the base-ring are the main differences from Type 44 B. The same rather thin and brittle Attic clay of Type 44 B is used and there normally appears the same thin red wash that is carelessly applied to the lower parts of the body. **576** has a more neatly painted coating than the others, covering the entire exterior and interior of the lamp.

574 (L 1369). Pls. 21, 47.

H. 0.032 m.; W. 0.068 m.

Intact. Very narrow circular base-ring on bottom; flat top bordered by thick raised band. Thin red wash on upper parts of lamp and interior; trickles on lower parts.

575 (L 3571). Pl. 47.

H. 0.03 m.; W. 0.062 m.

Intact except for left side of handmade flaring collar. Small simulated ring foot; flat top bordered by grooved ridge. Two drain-holes. Reddish black glaze on upper parts of body and interior, very little on lower parts of body.

N 19: 2, well: use filling, accumulated from mid 1st century into first half of 2nd century after Christ.

576 (L 4854).

H. 0.034 m.; W. 0.067 m.

Complete except for handle, upper part of nozzle, and fragments of bottom. Like preceding, but having wide base with grooved simulated ring foot, no collar, concave top bordered by grooved ridge. Thin dull black to red glaze all over exterior and interior.

R 10: 1, well: dumped filling of 1st century after Christ (Augustan).

TYPE 44 D

Moulded, Undecorated; Pointed Nozzles with Narrow Flat Tops

Nos. **577-579** (and 5 others inventoried). Plates 21, 25, 47.

Corinth: classified under Type XIX.

1st century after Christ, especially second quarter.

These very distinctive examples form the last group in the long Hellenistic tradition of undecorated mouldmade lamps. Plain moulded lamps will continue in Athens during the 1st century after Christ and later, but they will be inspired by Italian prototypes and as such will be considered in a future study devoted only to Roman lamps. Type 44 D depends on earlier Greek prototypes, although made during the Roman period. It is allied closely to and is the development of Type 44 A. The bottoms of the lamps are variable. Normally the base is flat and slightly oval or almond-shaped. Several uncatalogued examples show, however, that occasionally this type employed a flat circular raised base, sometimes embellished with a circular groove within its border.

In all other respects the lamps of Type 44 D are remarkably homogeneous. There is a sharp distinction between the convexities of the lower and upper halves of the lamp. There is a wide flat, or nearly flat, circular top with a rather small filling-hole. The top is bordered by a flattened ridge which is on the same plane with the narrow flattened top of the nozzle; this top extends onward and flares out to a bold triangular point around the wick-hole. There is always a narrow vertical ribbon handle, plain or vertically grooved; there are no lugs. The crispness of these lamps

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is notable; the sharp lines and edges suggest that a metal prototype inspired them. It is possible, indeed, that the softly curving lines of Types 44 A, B and C were galvanized into the sharpness of Type 44 D's profiles by influences from lost metal lamps comparable to those that inspired Type 49 A.

The buff or pinkish buff clay is Attic, the glaze in most cases reduced to a thin red to black wash. On a few lamps the wash is carelessly applied, as on Type 44 C, but normally there is an attempt to give a workmanlike even coating to all areas of the exterior and interior.

Two of the lamps bear their makers' devices, in each case a broken-barred *alpha* in relief, made in the mould. It is possible that this letter stands for the name of a fabricant, such as Ariston or Apollonides, who made decorated moulded lamps. An *alpha*, however, is seen as early as the 2nd century B.C., on lamps of Type 48 B, and is a common mark on many lamps from the early Roman period into the 4th century after Christ. Although its use in some periods may have been to distinguish a fabricant, it is possible that later and continued uses of the *alpha* simply served as marks denoting prime quality. Another hypothesis might be that later makers simply pirated the mark for their own uses. It is certain, however, that no fabricant whose name begins with *alpha* can with assurance be identified as the manufacturer of any of these lamps made after the time of Sulla.

577 (L 4883). Pls. 21, 47.

H. 0.032 m.; W. 0.065 m.

Complete except for fragments of body; restored. Plain oval base. Flat discus; grooved handle. Dark reddish brown thin glaze or wash all over.

Agora, Pottery of the Roman Period, G 140.

D 4: 1, cistern: Layer II B, second quarter of 1st century after Christ.

578 (L 2866). Pls. 25, 47.

H. 0.034 m.; W. 0.060 m.

Intact. Oval base within a narrow encircling ridge; flat discus. Dull red wash all over. Large broken-barred *alpha* in relief on base.

Agora, Pottery of the Roman Period, G 220.

D 4: 1, cistern: Layers II and III (in channel), 1st to early 2nd century after Christ.

579 (L 3904).

H. 0.031 m.; W. 0.066 m.

Intact except for handle and chips from base which is flat, almond-shaped, and plain except for broken-barred *alpha* in relief, as above. Concave discus; otherwise lamp is like preceding. Badly peeled black glaze all over.

B 21: 1, cistern: dumped filling, latter part of 1st and early part of 2nd centuries after Christ. 579 would be one of the earliest objects in this filling.

TYPE 45 A

Earliest Imported Relief Lamps

Nos. 580-582 (and 2 others inventoried). Plate 47.

3rd century B.C., middle years into third quarter. Dating based on the fact that these are obvious prototypes of Type 45 C, which assuredly flourished before 225 B.C., and on the finding places. At Tarsus these lamps (Tarsus Group IV) occur in the top layer of the Middle Hellenistic Period, i. e., in the later years of the 3rd century B.C. and early years of the 2nd century.

These imported specimens introduced into Athens the concept of elaborate moulded decoration on lamps,[120] although the earliest decoration on a moulded lamp made in Athens appears, in a

[120] For this and all succeeding types no profiles are given, as the consistently rounded or double-convex bodies of these moulded lamps remain substantially unchanged throughout the next two hundred years or so. The

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very simple form, on 594 of Type 46 B. Type 45 A, decorated, is a little later than the earliest plain moulded variety, Type 42 A, which developed, however, from local contemporary and earlier wheelmade examples. It seems evident that the great development of decorated moulded Athenian lamps sprang from influences outside this center. Lamps of Type 45 A are the earliest imported prototypes.[121] Other imports will be seen in the lamps loosely associated with Ephesos (Type 49 A) and Knidos (Type 50 A).

The origin of Type 45 A presents some doubt. It is possible that Alexandria is the home of the type, or at least had a great deal of influence on the development of decorated moulded bowls.[122] There is a lamp in the Benachi Collection in Alexandria (Pl. 55, Benachi 1) which resembles in many ways our 580. Both lamps have the same pitted light gray clay, but it cannot be said definitely that the fabric is Egyptian, although such clay is often found at Hellenistic Egyptian sites. Lamps of Type 45 A are found occasionally at Delos, but here they were brought in as articles of commerce from abroad. Gray wares in general are often associated with the Aeolic regions of northwestern Asia Minor,[123] but our fabrics are more likely to be from the eastern Mediterranean.[124] Whether Alexandria or not, the eastern center that produced Type 45 A started an exceedingly popular fashion that bloomed in Athens, with a subsequent development of approximately three hundred years before the models from Rome established themselves as the prevailing styles.

The bodies are low, broad and watch-shaped, with the upper part rising in a low convex curve to the filling-hole that is surrounded by a narrow flat or concave rim, sometimes by a narrow ridge. The bottom is either a flat raised circular base or a shallow broad base-ring. The decorative lugs at the sides are usually, though not always, in pairs; they are invariably solid, whether the form is a conventional scroll or a wing-like projection impressed with a leaf. An occasional lamp such as 580 has a lug of each type, rather than a matched pair which is the norm. There are no handles, and this absence is one of the main morphological differences between Type 45 A and its successors. 580, like the comparable lamp in the Benachi Collection (Pl. 55, Benachi 1), has a third lug or wing-shaped projection at the back, where a handle might be expected. This use of three projections on the perimeter of the body gives a kite-shaped or diamond-shaped effect, especially when the lamp is viewed upside down. Kite-shaped bodies will continue to be popular in eastern Mediterranean centers, evolving into the later "toad lamps" of late Roman periods; they are seldom seen in Athens, however, after Type 45 A.[125]

The decoration of the tops consists of broad convex petals or gores, with a circle of very small petals overlying them immediately around the rim. The nozzles are usually long and flat, although occasionally tubular, as 581; their tops are always decorated with relief designs. Usually a palmette with scrolled tendrils appears on the tubular nozzles, while the flat nozzles have tapering panels with floral designs. The abundant decoration of these lamps suggests a metal prototype, and one may see a further reminiscence of a bronze ancestor in the double, especially in the triple, lugs. A metal lamp would have been cast in two moulds (as indeed was the case with the present clay examples), but the upper and lower portions would have needed a firmer fastening than the smearing of clay that sufficed for the terracotta specimens. The projecting lugs would

designs of the nozzles and tops will be far more important criteria than the profiles of the bodies or the proportions of height to width.

[121] Earlier than previously assigned dates: *Tarsus*, I, p. 89, late 3rd century B.C.; *Antioch*, IV, p. 17, also late 3rd century B.C.; Walters, p. xxi, mid 2nd century B.C.

[122] *Priene*, pp. 410 ff.; Pagenstecher, *Expédition E. von Sieglin*, II, 3, pp. 64 ff.; see also Courby, *Les vases grecs à reliefs*, chapter XXIII.

[123] *J.H.S.*, LII, 1932, pp. 1 ff.

[124] *Antioch*, IV, p. 60, suggests Seleucia as the home of a somewhat similar clay.

[125] Type 47 B, of the later 3rd century B.C., reflects a brief local manifestation of this form.

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have been appropriate places for rivets in a metal lamp. This is most evident in lamps with three projecting wings, and the tiny leaf designs appearing on these projections on a terracotta lamp in the Benachi Collection in Alexandria (Pl. 55, Benachi 2) may indeed be copied from rivet-heads or ornamental devices to conceal the rivets.

The clay is coarse, frequently pitted, rather thick, and ranges from light gray to light buff in color. There are traces of very worn, poor black glaze outside and inside on all these lamps.

580 (L 3807). Pl. 47.

H. 0.024 m.; W. 0.061 m.

Complete except for parts of top and upper portion of lug or wing opposite nozzle; restored. On nozzle a tall vase or basket with vertical ribbing, at its top a flower. Left lug a scroll, right lug a blunt projection with leaf-shaped impression. Low circular raised base. Sandy light grayish buff clay; dull black glaze almost all flaked away from interior and exterior.

N 21: 4, cistern: lower dumped filling, *ca.* 250 B.C. or early in third quarter of 3rd century B.C.

581 (L 3783). Pl. 47.

H. 0.024 m.; W. 0.060 m.

Complete except for right side of top; restored. On nozzle a palmette in relief with leaves ending in spirals; narrow flat rim around wick-hole. Left lug a scroll, as on preceding; right lug indeterminate, presumably the same. Low wide base-ring. Very soft flaky buff clay; slight traces of red and black glaze on exterior and interior.

Provenance as of 580.

582 (L 706). Pl. 47.

H. 0.023 m.; W. 0.048 m.

Intact. Scroll lug on left side, none on right side although here the upper and lower halves of the lamp have been pared down, when it was assembled in a leather-hard condition before firing, and a right-hand lug may have been pared away. Vertical garland on nozzle within a panel. Base-ring as preceding. Thick buff clay, burned dark gray; traces of worn black glaze over all.

H-I-J 12-13, construction filling: before *ca.* 150 B.C.

TYPE 45 B

Earliest Athenian Copies of Imported Relief Lamps

No. 583 (and 1 other inventoried). Plate 47.

Third quarter of 3rd century B.C. Dating based on the strong resemblance to Type 45 A, which this type frankly copies.

These lamps are contemporary Athenian copies of Type 45 A, following the imported variety exemplified in Type 45 A's 581 or the sort of lamp appearing in Plate 55, Benachi 3,[126] made of gray clay, presumably from an eastern Mediterranean development of decorated mouldmade lamps, that lasts until the second quarter of the 1st century after Christ, when models from Italy drastically changed the forms.

Size, shape and decoration follow closely the imported prototypes. There is a low broad base-ring, enclosing (on these Athenian Type 45 B's) a rosette in relief. The convex top has a narrow ridge around the filling-hole. The lamps of our two examples have a pair of scrolled lugs; neither, however, has a third lug or wing, at the back. The lugs are cast in both upper and lower moulds, infringing little if at all on the convex tops; adaptations of Type 45 B (Type 45 C) have the lugs higher on the bodies of the lamps. 583 has no handle, following the foreign prototypes; other uncatalogued examples show remains of wide vertical loop handles (none is preserved intact). The nozzle is rather wide and tubular, but with a small flattened triangular area spreading down

[126] This lamp, found at Hadra, is now in the Benachi Collection in Alexandria. Similar lamps occur at Delos.

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to the small circular wick-hole. The moulded decoration is uniform; on the upper part of the nozzle is a curved-leaf palmette; on the top, broad convex petals with a small ring of miniature flattened petals around the filling-hole and its surrounding ridge; at the junction of the nozzle and the body, a narrow strip, either side of the nozzle, decorated with a herringbone or cable pattern.

These little lamps of Attic clay, with rather worn black to brown glaze inside and out, were possibly the product of a single shop, made over a short span of time. The Athenian fabricants were not content merely to copy; very soon in the third quarter of the 3rd century B.C. the local shops started turning out the fanciful and original variations that will be seen in the succeeding types.

583 (L 4578). Pl. 47.

H. 0.024 m.; W. 0.056 m.

Intact. Matching scroll lugs; palmette with curved leaves on nozzle. Low base-ring with rosette in center. Attic clay, worn red to black glaze over all.

TYPE 45 C

Local Athenian Variations of Imported Relief Lamps

Nos. 584-588 (and 20 others inventoried). Plate 47.

Later 3rd century B.C., from about the middle of third quarter through the rest of century, perhaps into earliest years of 2nd century B.C.

The lamps of this group are local variations of Type 45 A, in contrast to the Athenian copies which form Type 45 B. These locally developed examples are larger than their modest predecessors, with certain clearly defined characteristics, particularly the use of lugs in pairs and decorated nozzles.

The base is always circular, slightly raised, but with a pronounced concavity within, which gives the effect of a ring foot. No decoration graces the base nor the lower parts of the sides. The lugs appear on each side of the lamp, boldly modelled, and usually made in the upper mould only, for decorative purposes, so that they are fairly high on the lamp's top. **585** and **586**, however, retain the earlier custom of having the lugs made in both the upper and lower moulds, with considerable lateral projection in a wing-like manner. The normal lugs are ornamental S-shaped scrolls, but on **586** is seen an unmatched pair, a shell on one side and a pierced astragal on the other. A pierced lug is seldom seen on lamps of Type 45 C; the hole recalls the long tradition of pierced lugs on 4th and 3rd century B.C. wheelmade Athenian lamps. It is interesting to see it appear here, used in an Athenian way, on a lug or projection that recalled quite a different function on the foreign prototype. This lamp with the pierced lug is one of the few examples of Type 45 C without a handle, which suggests that the hole may indeed have been for suspension. In the use of lugs, then, one sees in this type reminiscences both of the useful pierced lug and of the projecting pairs of lugs that served as rivet attachments in a metal prototype, as well as a purely decorative use of the lugs.

Around the filling-hole is always a broad rim, flat or slightly concave, that forms another distinguishing feature of the type. Some lamps are handleless, as **584**; others have a broad vertical band handle, a serviceable Athenian addition. The nozzle is broad, rounded on top, and tapers down to an oval termination and an irregularly oval wick-hole. The tops of the nozzles bear relief decorations, usually a curved-leafed palmette, sometimes a variation which is like a double palmette or thunderbolt, and occasionally a female bust with long wavy hair at the sides of the

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head. The top of the lamp is decorated sometimes like the preceding types, with a design of broad rays, less skillfully made than formerly, with a circle of small leaves, now degenerated into dots or ovules, around the inner rim. Another decoration, seen on 587, consists of a wavy garland of ivy leaves. Both of these designs will have a long life, especially the former, appearing again and again in various slight variations until well into the 1st century after Christ. Broad rays or petals are seen frequently on Megarian bowls over a similarly long period; the ivy-leaf design is less common on moulded pottery, but often is used as a painted decoration, in thinned clay, around the interiors or exteriors of West Slope ware [127] of this period. It would seem reasonable to see the strong influence of Athenian potters in this first original type of local lamp that combines relief decoration and a mouldmade fabric.

The clay of all lamps of Type 45 C is the pleasant thick pinkish buff characteristic of locally produced pottery of this era. Fairly good black glaze, sometimes misfired to a reddish brown, covers the exteriors and interiors with a thick coating.

584 (L 1846). Pl. 47.

H. 0.037 m.; W. 0.083 m.

Complete. Rays and circle of small dots or petals on upper part of body. Double scroll lugs cast in upper mould; palmette on nozzle.

E 14: 1, cistern: abandonment fill, accumulated *ca.* 275-225 B.C.

585 (L 932). Pl. 47.

H. 0.029 m.; W. 0.067 m.

Intact except for handle, end of nozzle, and minor chips; nozzle restored. Like preceding except for handle and right lug, which was made in both upper and lower moulds.

H-I-J 12-13, construction fill: before *ca.* 150 B.C.

586 (L 1850). Pl. 47.

H. 0.033 m.; W. 0.077 m.

Intact except for end of nozzle; restored. Like 584 except for lugs; right lug shell-shaped and solid; left lug like an elongated astragal and pierced; both lugs cast in both upper and lower moulds.

Provenance as of 584.

587 (L 4192). Pl. 47.

H. 0.039 m.; W. 0.079 m.

Intact except for end of nozzle; restored. Double scroll lugs cast in upper mould. Wreath of ivy leaves on top; thunderbolt or thin double palmette on nozzle.

M 21: 1, cistern: dumped filling of late 3rd and possibly into early 2nd century B.C. Another inventoried example of Type 45 C found here.

588 (L 4761). Pl. 47.

Pres. L. 0.047 m.; Pres. W. 0.051 m.

Fragment preserving parts of top, left lug, and nozzle. Top design and lug like those of 584. On nozzle a bust with long hair.

Provenance as of 585.

TYPE 46 A

Traditional Body Design, Decorated Tops; Ridge around Filling-Hole

Nos. 589-593 (and 4 others inventoried). Plate 47.

Mid 3rd century B.C. and through its third quarter. Dating based on stylistic similarity to undecorated body shapes of Types 42 B and C, and on the finding places.

All subdivisions of Type 46 represent a return to body designs seen contemporaneously in undecorated moulded lamps of Types 42 and 43, with moulded decorations derived from Types 45 B and C.

[127] A good example is illustrated in *Hesperia*, III, 1934, p. 321, no. A 38, fig. 6.

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Type 46 A is the decorated counterpart of Types 42 B and C. The body is fairly broad and high, double-convex, and rests on the same sort of concave base seen in the preceding type, 45 C. The filling-hole is large, surrounded by a narrow raised ridge, which is a distinctive characteristic of this type and serves to help differentiate it from the other categories of Type 46. Another characteristic of Type 46 A is the presence of a single pierced lug, made in both upper and lower moulds, and projecting prominently in a wing-shaped manner on the left side. This variety of lug is not at all related to the version seen on imported lamps and their adaptations; it is Athenian, and a descendant of the useful pierced lug of 4th century varieties. Only on **592** is the lug more constrained and in harmony with the purely decorative lugs seen on Type 45 C.

The nozzle is long, flat on top, with an oval termination; its top is usually plain, but it may occasionally have a relief rosette at its base, as on **591**. About half the lamps of this group have broad vertical band handles; the remainder are handleless. Most of these above-mentioned characteristics are also typical of Types 42 B and C.

The moulded decorations on the tops of these lamps of Type 46 A echo those of Type 45 C. One sees long broad rays, with a ring of small petals around the filling-hole, as on **589**. Another characteristic decoration, seen on **590**, is a design of broad leaves with small diamonds between them, springing from a narrow circle of ovules or smaller leaves, the whole giving an imbricated effect. This pattern, similar to contemporary Megarian bowl designs,[128] is a prototype for the elaborate imbricated designs that will be popular on moulded lamps in the late Hellenistic, early Roman era. **593** has a somewhat similar pattern of overlapping triangles.

The clay and glaze are like those of Type 45 C; Attic clay, with black glaze inside and out varying in quality and sometimes in purity of the black.

589 (L 1855). Pl. 47.

H. 0.041 m.; W. 0.072 m.

Complete except for handle, end of nozzle, and minor chips; nozzle restored. Rays and narrow ring of petals on top; plain nozzle.

E 14: 1, cistern: abandonment fill, accumulated *ca.* 275-225 B.C.

590 (L 1924). Pl. 47.

H. 0.033 m.; W. 0.067 m.

Complete except for end of nozzle and minor chips; restored. Radiating leaf and diamond pattern on top, with ring of smaller leaves overlying it around filling-hole. No design on nozzle.

Provenance as of **589**.

591 (L 3778). Pl. 47.

H. 0.043 m.; W. 0.08 m.

Intact except for handle and most of nozzle. Like preceding except that top of nozzle has a rosette in relief, at point of junction with body of lamp.

N 21: 4, cistern: lower dumped filling, *ca.* 250 B.C. or early in third quarter of 3rd century B.C. Another inventoried example of Type 46 A found here.

592 (L 402).

H. 0.029 m.; W. 0.063 m.

Intact. Small lug with small hole. Design on top like **590**, but produced from badly worn mould. Nozzle plain on top. Very badly worn black glaze.

Hesperia, II, 1933, p. 453, fig. 2.

H 6: 4, well: latter part of 3rd century B.C.

593 (L 269). Pl. 47.

Pres. H. 0.039 m.; Est. W. 0.070 m.

Fragment preserving nozzle and part of rim with very high ridge. Two rows of overlapping triangles around top; plain nozzle. Thin metallic glaze.

Hesperia, II, 1933, p. 201, fig. 3, 3.

[128] An example may be seen in *Hesperia*, III, 1934, p. 353, no. C 18, fig. 36, b.

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TYPE 46 B

Traditional Body Design, Decorated Tops; Broad Rim around Filling-Hole

Nos. 594-599 (and 12 others inventoried). Plate 47.

Middle of second quarter of 3rd century B.C., and through its third quarter. Dating based on the stylistic similarity to undecorated body shapes of Type 42 D and on the finding places.

This type is comparable to Type 42 D in body and shape, and like Type 46 A in its varieties of moulded decoration as well as a few other features. The same circular concave base of these prototypes appears here, together with a wide high body. A distinguishing feature is the broad raised band, sometimes slightly concave, that surrounds the filling-hole in the manner of Type 45 C. There is always a prominent wing-shaped lug on the left side, made in both upper and lower moulds; this is customarily pierced, although 598 has a solid lug and indeed a somewhat less prominent projection. The nozzles are long and flat with neat oval ends; they are sometimes plain, sometimes given a decoration in relief of a rosette or palmette. An occasional nozzle (596) has a design which is a flat triangle between tapering grooves. This is both reminiscent of some foreign lamps of Type 45 A and prophetic of the characteristic late 2nd century B.C. nozzle decoration of grooves or ridges. The lamps may or may not have plain vertical band handles.

The moulded decoration on the upper half of the body varies. There may be very little, as on 594; here there are several rosettes used sparingly; this lamp is early within the type, and the decoration is not the sort seen on imported moulded lamps or their successors. This lamp is merely a timidly decorated example of Type 42 D; it is perhaps the oldest moulded decorated lamp in the history of lamp-making, and slightly antedates the imported examples of Type 45 A. Decoration on other lamps of Type 46 B recalls the trend that was being established about this time by the foreign imports. There are broad rays with the smaller circlet of leaves, as on 595, and the rays without the leaves, as on 596. One sees also the design made up of large broad leaves, which also appears on Type 45 A; this may be plain as on 597 or with intermediate and triangular leaves, as on 598.

Attic clay is the fabric, of course, and the glaze used both inside and outside is usually a thick black, sometimes misfired to red or brown. Despite the use of glaze, lamps sometimes tend to exude oil, and perhaps to avoid stains, as well as to catch oil that might spill when the lamp was being filled, an iron lamp-holder was devised for 596. This recalls the similar iron holder for 542 of Type 43 A, and is of approximately the same date; they mark the beginning of a development that will be characteristic of thousands of later Hellenistic and early Roman lamps: the use of an enveloping clay collar that surrounds the entire body and nozzle of the lamp and serves to catch oil that spills in filling the lamp, as well as oil that oozes from the nozzle.

594 (L 3183). Pl. 47.

H. 0.032 m.; Est. W. 0.067 m.

Front and part of left side preserved; restored. Rosette and short groove on nozzle; another rosette between nozzle and lug. Slight trace of a third rosette on right side, but this would have been opposite the lug rather than equally spaced in relationship to the other two rosettes.

B 13: 7, well: bottom filling, first to second quarters of 3rd century B.C. 594 must be one of the latest objects from this filling.

595 (L 1931). Pl. 47.

H. 0.041 m.; W. 0.072 m.

Complete except for handle, end of nozzle, and chips; all except handle restored. Palmette with curving leaves on nozzle. Broad rays on top, with circlet of short leaves overlaid, around concave band.

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E 14: 1, cistern: abandonment fill, accumulated *ca.* 275-225 B.C. Another inventoried (uncatalogued) example of Type 46 B found here.

596 (L 3431). Pl. 47.

H. (overall, with holder) 0.048 m.; W. (of lamp only) 0.066 m.

Lamp in wrought iron holder; former intact except for chip from lug; latter much rusted, some fragments of lower portion missing, and vertical band handle only partially preserved; handle attached to holder with rivet or pin. Holder has flat bottom and plain flaring sides. Lamp has tapering grooves on nozzle with small volutes at base; broad rays on top. Another lamp (without holder) from same moulds exists in Agora collections (L 1812).

597 (L 1925). Pl. 47.

H. 0.031 m.; W. 0.070 m.

Complete except for end of nozzle and parts of bottom; restored. Plain nozzle, but with trace of parallel grooves at sides. Broad leaf design on top.

Provenance as of 595.

598 (L 361). Pl. 47.

H. 0.026 m.; W. 0.051 m.

Complete except for end of nozzle and parts of bottom; restored. Nozzle as on preceding. On top a design of alternately broad and narrow triangular leaves. Solid lug. Buff clay, probably Attic; dull black glaze inside and out, very badly worn.

H 6: 4, well: latter part of 3rd century B.C.

599 (L 4414). Pl. 24.

Pres. H. 0.031 m.; Max. dim. 0.061 m.

Fragment of nozzle, right side, and base. Broad rays on top. On base, neatly incised graffito, part of an abecedarium: ΑΒΓΔ.

TYPE 46 C

Traditional Body Design, Decorated Tops; Rims and Lugs Subordinate to Decoration

Nos. 600-605 (and 10 others inventoried). Plate 47.

Corinth: classified under Type XVIII.

3rd century B.C., third into fourth quarters. Dating based on the stylistic similarity to undecorated bodies of Type 43 A and on the finding places.

These lamps are the decorated equivalents of the plain moulded Type 43 A. The bases are raised, slightly concave beneath, and sometimes give the effect of a base-ring. The body is either rounded or watch-shaped; the top is always pronouncedly convex with a narrow ridge and groove around the filling-hole. The solid lug, cast in the upper mould only, is inconspicuous because it tends to merge with the decoration in contrast to the very prominent lugs of contemporary lamps of Types 46 A and B. A single example, uncatalogued, has a hole pierced in the top of the lug but it does not penetrate through. Most of these lamps are handleless, allowing the decoration of the tops to appear untrammelled; two uncatalogued specimens, however, preserve traces of simple vertical handles like those of preceding types. The nozzles are long, rather flat on top, with small oval wick-holes.

The top of the nozzle is invariably decorated, usually with the familiar rosette or thunderbolt (similar to a double palmette); sometimes there is a female head in relief, reminiscent of the heads on lamps of Type 45 C, undoubtedly the prototype. The decoration on the top of the body shows various motifs, but not the ray nor broad leaf patterns so familiar on preceding types. One sees here various patterns concerned with wreaths or garlands, the two most popular being a bold

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wreath of large vine leaves and a garland of leaves and berries tied in a knot at the back of the lamps. **603** has a circle of sportive dolphins [129] and on **604** is a circle of long ovules.

The lamps were made locally of Attic clay; black glaze of a fairly good quality occurs both inside and outside. A mould, **601**, is for a lamp similar to **600**, possibly for this very lamp. The finding of this mould and another, **605**, attests to local workmanship, although in some cases (not these) the original lamp or matrix from which the mould was made could have been imported.

600 (L 772). Pl. 47.

H. 0.036 m.; W. 0.061 m.

Complete except for top of nozzle and minor chips; restored. On nozzle the beginning of a thunderbolt; on top, bold ivy-leaf pattern. Small solid lug on left.

H-I-J 12-13, construction fill: before *ca.* 150 B.C.

601 (L 4544). Pl. 47.

Max. dim. 0.06 m.

Part of mould for upper part of lamp like preceding. Large clear ivy-leaf pattern.

602 (L 1849). Pl. 47.

H. 0.035 m.; W. 0.073 m.

Intact except for end of nozzle; restored. Large rosette on base of nozzle. Wreath of leaves and berries on top, knotted at back of lamp; small solid lug at left; another lamp (uncatalogued, L 1923) from same moulds has added vertical band handle.

E 14: 1, cistern: abandonment fill, accumulated *ca.* 275-225 B.C. Another inventoried example of Type 46 C found here.

603 (L 4672). Pl. 47.

Pres. L. 0.060 m.

Fragment preserving nozzle and front part. Thunderbolt on nozzle; obscure design of dolphins around top.

604 (L 1371). Pl. 47.

Pres. L. 0.051 m.

Fragment preserving parts of nozzle and rim. Bust of female figure (Nike?) on nozzle, with trace of wing at right. Elongated ovules on upper part of body around filling-hole.

605 (L 3772). Pl. 47.

Pres. L. 0.088 m.; Pres. W. 0.066 m.

Fragment of an upper mould, broken all around. Very delicate ivy-leaf decoration encircling entire lamp, including rounded shank of nozzle. Wide ring around filling-hole. Fine pinkish buff clay.

See also L 1114: *Hesperia*, III, 1934, pp. 366-367, fig. 50, C 59 (Hellenistic Group C).

TYPE 46 D

Traditional Body Design, Decorated Flat Tops

Nos. **606-608** (and 1 other inventoried). Plate 48.

Third and fourth quarters of 3rd century B.C. Dating based on stylistic similarity to Type 43 B and on the finding places.

These lamps are the decorated counterparts of the plain moulded Type 43 B. From a low raised base, sometimes slightly concave beneath, the body of the lamp spreads out and then rises in nearly straight walls to the top. The top is flat or nearly so, and slightly sunken below the tops of the walls so that there is the effect of a narrow ridge around it. The nozzles are long and flat on top with nearly straight sides. The wick-holes are small, rounded or oval. The flat top of the nozzle is level with the top of the ridge around the sunken top or discus. Our examples that have their left sides preserved show the presence of a lug, pierced boldly on **606**, but solid on an

[129] Similar dolphins occur on Megarian bowls of this period; *Hesperia*, III, 1934, pp. 361 ff., no. C 31. See also Courby, *Les vases grecs à rélief*, fig. 68, 18.

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uncatalogued lamp. As on lamps of Type 43 B, the lug seems to have been added by hand rather than cast in the top mould. None of our lamps that preserves its rear portion has a handle.

The top of the nozzle may or may not be decorated with a double palmette or thunderbolt. The sunken discus or top is decorated with small figures in relief, motifs comparable to those on Megarian bowls of this period. The bearded satyr masks on **607** offer a particularly close parallel to those on the bowls.[130] Other patterns are less interesting, and include the now familiar rosettes seen on **606**.

These lamps are made locally of pinkish buff clay, glazed inside and out with black glaze of a rather poor quality. **608** is a mould for a lamp similar to but larger than **607**.

606 (L 3469). Pl. 48.

H. 0.033 m.; W. 0.070 m.

Complete except for piece of top and chips from nozzle; restored in plaster. Boldly pierced lug. Traces of thunderbolt on nozzle's top; obscure pattern of alternately large and small rosettes and discs on top.

O 20: 3, well: upper filling, approximately mid 3rd century B.C.

607 (L 4633). Pl. 48.

Est. W. 0.065 m.; Pres. L. 0.059 m.

Fragment preserving nozzle with part of rim and body; double palmette or thunderbolt on nozzle's top; satyr masks with long square beards on top of lamp.

P-R 6-12, construction filling: before *ca.* 150 B.C. Another inventoried example of Type 46 D found here.

608 (L 4151). Pl. 48.

Max. dim. 0.087 m.

Fragment of an upper mould preserving completely the portion for the top of a nozzle, with an elongated double palmette or thunderbolt decoration.

TYPE 46 E

Traditional Body Design, Decorated Sides Surrounding Concave Top

Nos. **609-610** (and 2 others inventoried). Plate 48.

Late third quarter and into last quarter of 3rd century B.C. Dating based on stylistic similarities to Types 43 C and D, and on the fact that Type 46 E seems to be a transitional group from Type 46 D to Type 48 A. Finding places show only that Type 46 E occurs before *ca.* 150 B.C.

These lamps, like those of Type 46 D and their predecessors, have slightly raised concave bases, although a single example, **609**, has a proper neatly made base-ring. The high curved walls rise to join noticeably broad concave tops; these concave tops are reminiscent of Type 46 D; they recall the tops of Types 43 C and D, but are here decorated. The moulded decorations are confined to the upper parts of the side walls. Sometimes a pronounced ridge surrounds the top or discus, as on **609**; otherwise there is no transitional member between the concave walls and the convexity of the top. A solid lug appears on some, not all, cast in the upper mould only and high on the body.

There may or may not be a vertical band handle; the fact that one of our lamps has a handle but no lug and the other a lug but no handle does not signify that they are mutually exclusive; an uncatalogued fragment preserves bits of both handle and solid lug.

The tops of the long flat nozzles are decorated with the familiar motifs of rosette or thunder-

[130] See *Hesperia*, III, 1934, pp. 356 ff. Masks the same as those on this lamp appear on six Megarian bowls (nos. C 22, C 23, C 26, C 37, C 46 and D 49), five of which may be confidently dated in the later years of the 3rd century B.C. See also Courby, *Les vases grecs à rélief*, fig. 72, 42 b, for the same masks and further references.

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bolt. The upper parts of the bodies have patterns of ribbing or broad rays. These derive from the slightly earlier patterns of Types 45 B and C and will continue with monotonous repetition and degeneration not only through the 2nd and 1st centuries B.C., but well on into the 1st century after Christ. The type was made locally of Attic clay, with a rather poor black glaze used inside and outside.

609 (L 4052). Pl. 48.

H. 0.043 m.; W. 0.072 m.

Intact except for parts of handle. Base-ring on bottom; thunderbolt on nozzle. Narrow ridge around discus.

610 (L 822). Pl. 48.

H. 0.036 m.; W. 0.071 m.

Intact except for end of nozzle; restored. Rosette on nozzle. Small solid cornucopia-shaped lug on left.

H-I-J 12-13, construction fill: before *ca.* 150 B.C. Another inventoried (uncatalogued) example is from P-R 6-12, another construction fill of same date.

TYPES 47 A-C

Decorated Lamps of Unusual Shapes, Mid-third to Mid-second Centuries B.C.

TYPE 47 A

Columnar Lamps

Nos. **611-612** (and 3 others inventoried). Plate 48.

Corinth: compare Type IX.

Mid 3rd century B.C., through third quarter. Dating based on the close stylistic similarity of **611** to Type 46 B.

These columnar lamps have standards exactly similar in design. Only one preserves its lamp on top, and this happens to be a specimen very close to Type 46 B; the lamps on the other standards could well have been of other types. Type 47 A is based on the column design, rather than the lamp form. The preserved lamp exhibits all the conventional features of Type 46 B including a bit of the lug. This would serve to confirm further the supposition that the pierced lug was frequently used as a resting place for a small stick or probe useful in adjusting the wick of the lamp. A pierced lug would hardly be used for suspending a lamp of this sort, equipped with its own substantial support.

The decoration of the preserved lamp is not seen on other examples, either in Type 46 B or in any other Hellenistic type: alternating wreaths and narrow pear-shaped pendants.

The lamps themselves, made in two moulds, were attached before firing to the tops of the standards, likewise made in two moulds, but longitudinally: a smaller mould for the decorated front portion of shaft and capital, and a somewhat larger deeper mould for the plain rear of the vertical standard. The hollow column shows a marked diminution from bottom to top; none of our examples preserves the bottom of its flaring base. On the front the shaft is decorated with shallow flutes topped by two horizontal bars. Above these is the Corinthoid capital, with a transverse band of alternating leaves and pear-shaped lobes at its base, from which spring, at either end, simple acanthus volutes. Between the volutes is a simply modelled face with wings at

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the top of the head; no hair is indicated. The figure may possibly be Hermes or more likely a winged gorgoneion; it is difficult to cite an architectural precedent for this.[131] Although the shaft is circular, the capital is roughly triangular in section with only one decorated face, above the fluting of the shaft.

One lamp shaft, **612**, is somewhat smaller than the others and has a reduced number of flutes although it is normal in all other particulars, and need not differ in date. These standard lamps may well have been occasionally dedicated in sanctuaries,[132] but there is nothing that precludes their use in a private household. One sees in these simple terracotta columns a reflection of the bronze or possibly silver prototypes which were the lost ancestors (related to the famous golden lamp of Kallimachos in the Erechtheion) of the late Greek marble and bronze lamp standards that stood by themselves on the floor, and which were so highly prized by early Roman conquerors such as Sulla.[133] These small clay columns are too fragile to be practical and long-lived; they would be more appropriate in metal.[134]

The clay is Attic; the glaze black to red, used all over except for the inside of the shaft and a distinctive reserved band around the middle of its outer surface. This reserved band occurs without exception on all the Agora examples. A few trickles of glaze on the inside of the lower part of the shaft of **611** show that the base of the column was open underneath.

611 (L 140). Pl. 48.

H. (of lamp only) 0.033 m.; W. (of lamp) 0.068 m.; Pres. H. (over-all) 0.208 m.

Complete except for front part of top of lamp (restored), left half of capital, and base; slight trace of lug on left side. Small garland on top of flat nozzle similar to larger garlands which alternate with slim pear-shaped pendants around top of lamp. Drops of glaze inside shaft show that base was open.

Hesperia, II, 1933, pp. 202-203, fig. 4.

612 (L 4565). Pl. 48.

Pres. H. 0.068 m.; Pres. W. 0.043 m.

Fragment preserving capital and upper part of shaft. On top of capital is seen resting surface for a lamp with small base that did not cover the capital's three angles. Black glaze fired metallic gray and red.

TYPE 47 B

Athenian Kite-Shaped Lamps

Nos. **613-614**. Plate 48.

3rd century B.C., third into fourth quarters. Dating based on stylistic similarity to Types **45 A** (imported) and **46 C** (Athenian) and on the finding place of **614**.

These lamps are closely related to Type 46 C. There is the same raised base, concave beneath, a somewhat similar broad tall body, the same small filling-hole with a slight ridge around it, and the same oval wick-hole. The major difference lies in the shape of the body, which is roughly kite-shaped, with a blunted point at the back and one on either side. This shape is fairly common

[131] Cf. the capitals from portals of the "Tufa Period" in Pompeii, e. g. A. Maiuri, *Pompeii*, 7th ed., 1954, p. 100, figs. 68, 69. Also note late Roman capitals of this form from the Rhineland: Heinz Kaehler, *Die Römischen Kapitelle des Rheingebietes*, Berlin, 1939, pls. 10, 11.

[132] Broneer, p. 49.

[133] There are many elaborate marble lamp-stands from the wreckage at Mahdia, now in the Musée Alaoui at Tunis, that formed part of the cargo of a ship transporting booty on Sulla's orders, from Athens to Rome, before it sank shortly after 86 B.C. off the African coast; A. Merlin and L. Poinssot, *Cratères et candélabres de marbre*, Tunis and Paris, 1930.

[134] Cf. the numerous silver candlesticks in the shape of Corinthian columns made in Georgian England.

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in Hellenistic lamps of the eastern Mediterranean; it very rarely occurs in Attica. Examples from Alexandria exist in the Benachi Collection (Pl. 55, Benachi 4); others in the British Museum were found in Cyprus, Egypt and South Russia.[135] Our lamp, 580 of Type 45 A, an import, approximates this shape.

The kite-shaped body is the natural result of an evolution developing from the lugs at the sides. A pair of small solid projecting lugs may be seen on 580 as well as on the comparable Benachi lamp (Pl. 55, Benachi 1). These lamps have an additional third lug at the back, in place of a handle, suggesting rivet-covers on a metal prototype. The design of the terracotta lamp, with three lugs and the nozzle forming four distinctive points, then becomes regularized into a tetragon, and the resulting kite-shaped form appears clearly on the Benachi lamp. The final stage, with no indication of lugs whatsoever, is our rare Attic version, Type 47 B. These lamps may or may not have a vertical band handle at the back, added separately and obliterating part of the design.

The decoration of Type 47 B is uniform on both of our specimens; the nozzle has a large thunderbolt that extends up to the filling-hole, as seen occasionally on Type 46 C. The remainder of the lamp has a pair of striding satyrs, arms stretched out, one on either side of the filling-hole, their heads toward the nozzle; the area around the satyrs is filled with a tendril pattern. Normally when a pair of figures appears on a lamp they have their feet toward the nozzle, as on the Benachi lamp. Our Attic lamp-makers considered the glance of the person holding the lamps, who sees the satyrs right-side up, rather than the view of the lamp by an observer facing the lamp.

The satyrs on lamps of Type 47 B have close affinities with similar figures on Megarian bowls [136] made in Athens.

The clay and all-over black glaze of 613 is certainly Attic. The other example has a heavier fabric generally fired gray and a thicker black glaze; there is no reason to insist upon this being non-Attic, however. The two lamps are of slightly different dimensions and cannot be from the same moulds, although the designs are identical save for a thin groove around the filling-hole of 613 that does not appear on the other.

613 (L 1577). Pl. 48.

H. 0.037 m.; Rest. W. 0.069 m.

Fragments preserving top of nozzle, most of right side, and parts of base; restored (with help of following lamp). No handle (by comparison with following lamp; a handle would have cut off satyrs' inner feet). Attic clay and glaze.

614 (L 3298).

H. 0.039 m.; Est. W. 0.073 m.

Fragments preserving parts of bottom and rear half of top, with vertical band handle. Thick clay, buff to black; thick black glaze.

N 20: 7, cistern: second half of 3rd century B.C.

TYPE 47 C

Plastic Lamps

Nos. 615-619 (and 3 others inventoried). Plate 48.

Late 3rd through late 2nd century B.C. Dating based on some stylistic similarities to Types 46 B, 46 C, 47 B, 50 A and 51 A. Some finding places are also helpful.

In the Agora excavations a very small number of plastic lamps has been found that may be dated in the Hellenistic and early Roman eras. All in this group are assignable to the period

[135] Walters, pp. 42, 43, 46, nos. 302, 311, 324.

[136] *Hesperia*, III, 1934, pp. 357-358, nos. C 23-24, figs. 41, 42. The satyrs appearing on these two Megarian bowls are exactly like those on the lamps. The bowls are from a deposit dated in the late 3rd century B.C. to *ca.* 200 B.C. This agrees well with our independent dating of the lamps.

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before Sulla; there is none that can assuredly be dated after 86 B.C.; the next group of plastic lamps are Roman imports of the later 1st century after Christ.[137] The dearth of plastic lamps in the 1st century B.C. is paralleled by a similar paucity of terracotta figurines. The coroplast and the plastic lamp fabricant were closely allied, very often perhaps the same person. One sees in the scarcity of decorative moulded objects during this period a reflection of the general depression that characterized many aspects of Athenian economy in the long lean years between Sulla and Augustus. The ordinary mouldmade lamps of these decades showed a comparable poverty. Many were needed, of course, but they were cheaply made and had little to offer in the way of vigorous new designs.

There are several different varieties within Type 47 C; some lamps are anthropomorphic, some zoömorphic; all except one, **616**, are mouldmade; all can be of local Attic clay. The production of this group stretched over a century but one may assign an early date, *ca.* late 3rd century B.C. (to early 2nd century?), to **615** and **618**, and place **617** and **619** later in the 2nd century B.C. The reasons for these assignments appear below.

Two of the earlier plastic lamps are in the shape of finely modelled negroes' heads. **615** is perhaps the oldest extant example of this kind of lamp which enjoyed a huge popularity in Roman times.[138] This lamp is cast in two moulds, an upper and a lower, with a short flat moulded nozzle taking the place of the mouth and lower lip. It is this nozzle, comparable to those seen on Types 46 B and C, that gives a clue to the date. Remains of a pierced lug on the negro's left cheek also recall Type 46 B, the latest type to make an important use of this feature. With such a nozzle and lug one can safely give this lamp a date in the later years of the 3rd century B.C., possibly as early as the late third quarter of that century. This lamp, equipped originally with a handle, would have utilized its pierced lug only as a resting place for the wick-probe. A somewhat similar negro's head is seen in **616**, but this was made by hand, not in a mould, by an artisan more accustomed to creating figurines than lamps. The fabric is built up thickly, with obvious marks of hand-smoothing on the face and textured hand-tooling on the hair. There is no proper nozzle; the parted lips served as a hole for the wick. Pierced holes for earrings (or for wick-probes?) give a touch of realism to this skilfully modelled head. One might think this had been constructed as a matrix for a mould, were it not for the fact that the interior is hollow, and signs of burning on the upper lip show that it was indeed used as a lamp.

An early bull's head lamp, **617**, is a late Hellenistic prototype for the vast number of comparable heads produced in early and late Roman periods.[139] This magnificently modelled specimen, certainly copying a metal prototype, has a double coiled and knotted handle which is like those seen on Type 50 A (the Knidos type), also derived from metal prototypes and starting in the 2nd century B.C. This detail, in addition to the finding place, suggests but does not conclusively demonstrate that the lamp was produced sometime during the second half of the 2nd century B.C. The lamp is made in two moulds, upper and lower, but with the joints on the outside skilfully smoothed. The tasselled garland that the bull wears is similar to the tassels of an anthropomorphic lamp in this type, **618**.

The other plastic lamps in Type 47 C are not three-dimensional but rather flat lamps with human heads in high relief forming their chief decoration. **618** and another inventoried example (L 1091) are long, narrow, and flat with small flat circular raised bases. The upper part of each lamp is moulded with a bearded face, filletted and garlanded, of Dionysos or Silenos; the two

[137] Miss Clairève Grandjouan is preparing an exhaustive study of the Roman plastic lamps from the Agora, to appear in the volume of the Agora series on Roman lamps.

[138] For the negro in antiquity see Beardsley, *The Negro in Greek and Roman Civilization*, Baltimore, 1929. For a short bibliography of the negro head on Greek and early Roman lamps, see notes below under **615**.

[139] For a bibliography of comparable and later bull's head lamps, see **617** below.

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fringed ends of the fillet hang straight down on either side of the face. The same head appears, called Pan-Silenos, on a Roman coin of *ca.* 89 B.C.[140] This gives a clue to the date of our lamps, since both coin and lamps echo the same lost original sculpture that must be anterior to this date. The circlet of leaves or ovules around the filling-hole of the lamp recalls similar uses on lamps of Type 46 B, and the narrow raised ridge of the filling-hole resembles those of Type 47 B. It would seem reasonable to place the lamp, then, in the 2nd century B.C., possibly very early in this century or late in the 3rd when such mannerisms were usual. This lamp has no lugs; the nozzle is not preserved of either example, but it starts as a tubular extension.

619 has a curious almond shape, with an elongated almond-shaped base with a rosette in relief.[141] Here the top is taken up by a draped bust of Artemis or Hekate with two flaring torches behind her shoulders. This lamp also is without lugs but the nozzle formation is blunt rather than oval, and recalls the nozzles appearing on lamps of Type 51 A, dated late in the 2nd century B.C. This lamp, like the preceding one, has the human face as the main center of interest on the top; the filling-hole is of minor importance and placed at the back of the composition. In this there is considerable difference from lamps of Type 45 C, which may have female heads, but placed as secondary decorative items on the nozzles of conventionally formed lamps. Another comparable lamp exists in the Agora inventory (L 3295), with the top missing, but indications of a similar moulded bust; its base has a grape design in relief rather than a rosette.

615 (L 4614). Pl. 48.

H. 0.05 m.; L. 0.10 m.

Lamp in shape of grotesque negro head. Intact except for circular band handle at back of lamp and bits from left side of face and lug. Flat oval bottom. Made in upper and lower moulds; pierced lug added separately. Low vertical collar around filling-hole; neat flat-topped nozzle. Attic clay and flaky black glaze; white paint for the eyeballs.

For similar terracotta negro lamps, see Walters, nos. 411-416; *B. C. H.*, XXXII, 1908, p. 167, fig. 33; Baur, *Dura Europos*, IV, Part III, nos. 438, 439; *Tarsus*, I, p. 103, nos. 313, 314; Waldhauer, nos. 501, 513, 514, 516.

P-R 6-12, construction filling: before *ca.* 150 B.C.

616 (L 2207). Pl. 48.

H. 0.067 m.; L. 0.089 m.

Lamp similar to preceding. Intact except for vertical band or ring handle at top of head behind filling-hole; chip from lower lip. Irregular oval ring-foot. Open lips serving as wick-hole; filling-hole at top of head with irregular outline. Ears pierced. Very heavy Attic clay, handmade and modelled, with smoothed flesh surfaces and sharp tooling for hair. A few traces of white slip outside, and bits of black paint or glaze remaining in the hair.

A. J. A., XL, 1936, p. 200, fig. 21.

617 (L 3908). Pl. 48.

H. 0.072 m.; L. 0.134 m.; W. 0.094 m.

Lamp in shape of bull's head. Intact except for end of nozzle (i. e., lower jaw) and small chips from left horn and floral ornament. Very finely modelled and cast in two moulds, upper and lower. Double rolled and knotted handle added separately. Filling-hole on top of head has strainer with five holes. Very realistic details of wrinkles and hair; elaborate floral ornament between horns, moulded separately and added, from which depend two fillets ending in tassels. Neatly made ring foot with concentric moulded rings inside. Pinkish buff clay can easily be Attic; fine light brownish red glaze over all.

Hesperia, IX, 1940, p. 305, fig. 45.

For similar terracotta bull lamps, see Walters, nos. 424-428; Loeschke, *Sammlung Niessen*, no. 2143; Bigot, *Bull. de l'école francaise d'Athènes*, I, 1868, pp. 33-47.

D 19: 2, well: use filling, 2nd century B.C. Another inventoried example of Type 47 C, exactly like **619**, found here.

[140] H. R. Mattingly, *Roman Coins*, pl. XIV, 10; a denarius of C. Vibius C. F. Pansa; the head is a canting device.

[141] This shape would seem to be related to, perhaps a prototype for, the common Egyptian "toad lamps," made and frequently found in Alexandria and other neighboring sites.

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618 (L 3818). Pl. 48.

H. 0.028 m.; W. 0.051 m.

Intact except for ring handle at back of lamp and nozzle. Low raised base. Narrow ridge and circle of ovules around filling-hole. Top of lamp moulded in form of bearded Dionysos or Silenos, wreathed with flowers and leaves above a fillet that ends in tassels, hanging at either side of face. Attic clay and worn black glaze all over.

Another inventoried example of Type 47 C, exactly like this, from H-I-J 12-13, construction filling: before *ca.* 150 B.C.

619 (L 3080). Pl. 48.

H. 0.032 m.; W. 0.05 m.

Intact except for vertical band handle at back of lamp. Almond-shaped flat base with rosette in low relief. Small filling-hole has narrow raised collar. Flaring blunted nozzle. On top of lamp is a draped bust, flanked by lighted torches, of Artemis or Hekate; traces of wings (?) at either side. Gray buff clay; worn black glaze inside and out.

Another inventoried example of Type 47 C, exactly like this, found with **617**.

TYPE 48 A

Late Hellenistic Relief Lamps; Nozzles Oval and Grooved

Nos. **620-634** (and 47 others inventoried). Plates 24, 48.

Corinth: classified under Type XVIII.

Late third quarter of 3rd century into last quarter of 2nd century B.C.

This very large group of Athenian lamps flourished for more than a century with no appreciable changes in shape or decoration. **620** and **623** are at least a hundred years apart, from excellently dated contexts, yet they show practically no differences. This is the standard type of 2nd century B.C. decorated lamp, a development of earlier 3rd century prototypes, that continued monotonously until new importations from the east in the latter part of the 2nd century B.C. enlivened the local designs.

There is always a broad low base, concave beneath, with occasionally the effect of a base-ring. The body is double-convex, usually broad and spreading but sometimes rather narrow in a few very small examples. The nozzle is the characteristic feature of the type, long with an oval termination; it invariably has a pair of lines down its rounded top. These lines are usually grooves, but in a few specimens (such as **628**) where the lines were incised in the mould they stand out as ridges. The lines may be roughly parallel or slightly flaring, and they enclose a long narrow strip down the top of the nozzle that is flat or nearly flat. One sees here the degeneration of the flat-topped nozzle that was characteristic of earlier 3rd century Types 46 A and B. The pair of narrow parallel lines will develop later, during the 1st century after Christ, into a long channel that connects the top with the wick-hole, as **741** of Type 52 F. The filling-holes are comparatively small, always surrounded by a ridge, or a narrow concave band, or a groove, or a concentric combination of these features. There is almost always a single lug cast in the upper mould only, on the left-hand side; this is cornucopia-shaped or delphiniform; **627** alone has none; with a few exceptions these lugs are solid. The pierced lug occurs on only two of the Agora lamps; one of these, **620**, can be dated very early within the type. There is usually, but not inevitably, a broad vertical ring handle. An occasional lamp is given a high vertical collar, made separately by hand and added to the lamp before firing. This corresponds to the collars or rims on contemporary lamps of Types 33 A and 43 A. Lamps with such devices to catch and drain the spilled oil have small drain-holes at the junction of the collar and the decorated top; **624** is such an example.

The decorated tops normally have designs of rays or ridges, sometimes with an additional circlet of dots around the filling-hole as on **628**; this latter feature recalls the circlets of leaves or

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ovules seen on Type 46 A. Occasionally other patterns are seen, as on **629**, which has a design of large oval ribbed leaves between pairs of ridges, a Megarian bowl pattern.[142] This illustrates again the close link between the lamp-maker and the potter.

The clay of these lamps is Attic; they are glazed all over with poor black glaze, usually worn or fired red to brown. A few lamps, such as **624** and **625**, have the glaze scraped from the ridge or groove around the filling-hole. This gives a pleasant pinkish buff accent in contrast to the black glaze; the same practice is seen on contemporary lamps of Types 34 A and B.

The presence of seven fragmentary moulds attests to the manufacture of these lamps on the fringes of the market place. A unique object is **630**, a matrix from which a mould was made; this clay prototype was made on the wheel, a solid tubular handmade nozzle added and the decorative rays carefully scratched in the wet clay before firing. That this is a matrix and not an unglazed lamp is proved by the fact that the nozzle has never been pierced. One lamp bears on its bottom three letters in relief that had been scratched into the mould. These letters are the reverse impressions of the mould's ΧΑΙ, and represent, probably, the earliest Hellenistic lamp-maker's signature. Such signatures will be common only after the last quarter of the 2nd century B.C. There are scores of Greek names beginning with ΧΑΙ. No lamp-maker is represented in this or other collections with a name beginning with these three letters, so no likely candidate appears who might be credited with this lamp as well as his later examples. An Athenian potter is known by the name of ΧΑΙΡΕΣΤΡΑΤΟΣ,[143] and possibly it was this potter, turning out occasional lamps as a side line, who signed the mould that produced this lamp. We have already seen the close union between the makers of pots and lamps; perhaps this example may show that they were often the same people and that the fabricants who made only lamps were rather in the minority.

620 (L 1926). Pl. 48.

H. 0.028 m.; W. 0.061 m.

Complete except for end of nozzle, handle, right side and back of top; restored except for handle. Pierced lug. Badly peeled glaze, fired red.

E 14: 1, cistern: abandonment filling, accumulated *ca.* 275-225 B.C.

621 (L 4370). Pl. 48.

H. 0.028 m.; W. 0.065 m.

Complete except for end of nozzle (restored), handle, and chip from solid lug. Thick black glaze.

Hesperia, XVII, 1948, p. 161, L 4370, pl. XLIII.

M 21: 1, cistern: dumped filling, late 3rd and possibly into early 2nd century B.C.

622 (L 553). Pl. 48.

H. 0.030 m.; W. 0.072 m.

Complete except for chip from left side of nozzle, back of handle, and minor chips on top; restored. Solid lug. Worn black glaze.

Hesperia, III, 1934, p. 387, no. D 58, fig. 75.

See also L 551, *ibid.*, p. 387, D 56, fig. 75.

H 16: 4, pithos: *ca.* 150 B.C. Another inventoried example of Type 48 A found here, L 551 *supra*.

623 (L 1389).

H. 0.031 m.; W. 0.062 m.

Complete except for handle and edges of top; latter restored. Like preceding. Badly worn black glaze.

Hesperia, III, 1934, p. 413, no. E 98, fig. 98.

See also L 1304, L 1330, L 1388, L 1390, L 1393, L 1394-1398: E 97, E 99, E 100, E 102, E 104, E 101, E 108, E 110, E 111, E 109; *ibid.*

F 5: 2, cistern: last quarter of 2nd century B.C. 10 inventoried examples of Type 48 A, mentioned *supra*, also found here.

624 (L 3695). Pl. 48.

H. (without collar) 0.021 m.; W. (with collar) 0.066 m.

[142] For comparable leaves on a Megarian bowl, of this same era, see *Hesperia*, III, 1934, p. 357, no. C 23, fig. 41.
[143] Phrynichos Com., Frag. 15 (Athenaeus, XI, 474 b; Kock, *C.A.F.*, I, p. 374).

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Intact except for handle, most of collar's rim, and minor chips; restored except for handle. Collar added around entire lamp, its edge scraped. A similar scraped line around filling-hole. Four drain-holes around base of decorated top. Good black glaze.

625 (L 4325). Pl. 48.

H. 0.023 m.; W. 0.040 m.

Complete except for handle. Very small lamp, from badly worn mould. Scraped groove around filling-hole. Worn black glaze.

626 (L 3918). Pls. 24, 48.

H. 0.032 m.; W. 0.056 m.

Intact except for handle and end of nozzle, latter restored. Scratched on shoulders and either side of nozzle: ΙΕΡΟΣ (left side), ΑΡΤΕΜΙΔΟΣ (right side). There was no notable shrine of Artemis in or near the Agora; the closest were one on the Acropolis, one near the Ilissos, and another on the road to the Academy. It would seem likely that this lamp was used in a household shrine. The circumstances of finding (with much broken household pottery) preclude the possibility that it was part of a temple's debris; its insignificant size and simplicity also argue for a household lamp rather than a sanctuary dedication.

627 (L 1506). Pls. 24, 48.

H. 0.026 m.; W. 0.048 m.

Intact except for handle. No lug. Base-ring, rather than normal raised base that is concave; within this, three letters in relief (scratched into mould): ΙΑΧ; to be read ΧΑΙ, (for ΧΑΙΡΕΣ ΤΡΑΤΟΣ?). Clay fired gray, worn dull black glaze.

628 (L 745). Pl. 48.

H. 0.035 m.; W. 0.064 m.

Intact except for handle, right-hand edges, and chip from lug. Rays, with circlet of raised dots around filling-hole. Purplish brown metallic glaze.

629 (L 1578). Pl. 48.

Est. W. 0.066 m.

Fragment from right side of top, with trace of handle. Unusually small filling-hole. Decoration of large oval ribbed leaves rising from small tendrils and separated by vertical lines. Comparable leaves on Megarian bowls (cf. *Hesperia*, III, 1934, p. 357, no. C 23, fig. 41). Worn black glaze.

630 (L 4517). Pl. 48.

H. 0.034 m.; W. 0.070 m.

Intact except for about two-thirds of top, at left and back. A matrix for a mould. Body wheel-made, with rays scratched in leather-hard clay. Nozzle handmade, solid, added separately; depression but no opening for wick-hole. Attic clay, unglazed. For a similar matrix, see 814 of Type 58 B.

631 (L 4391). Pls. 24, 48.

Est. W. of lamp 0.060 m.; Max. dim. of mould 0.100 m.

Mould for upper part of lamp comparable to 622, intact except for end of nozzle and edges. On outside an incised cross (made by crossed strings to unite this mould with lower mould during manufacture). Attic clay.

632 (L 1896). Pl. 48.

Est. W. of lamp 0.060 m.; Max. dim. of mould 0.072 m.

Mould for upper part of lamp comparable to 628; side preserved with start of lug. Design for raised rays with circlet of raised dots around filling-hole. String mark outside, across top of mould.

633 (L 4452). Pls. 24, 48.

Est. W. of lamp 0.060 m.; Max. dim. of mould 0.085 m.

Mould for upper part of lamp; front half largely preserved, with parts of nozzle, decorated top, and center. Design like preceding. Two letters scratched on back of mould: ΛΛ.

634 (L 4015). Pls. 24, 48.

Est. W. of lamp 0.055 m.; Max. dim. of mould 0.079 m.

Mould for front half of upper part of lamp, including nozzle, cornucopia-shaped lug and center. Design of raised rays. On either side of mould, a string-groove; on exterior top surface, an incised letter, Κ.

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TYPE 48 B

Late Hellenistic Relief Lamps; Signed Alpha; Palmettes on Nozzles

Nos. 635-637 (and 1 other inventoried). Plates 25, 48.

Second half of 2nd century B.C. Dating based on stylistic similarities to Type 48 A and on the finding place of 637.

This small group of lamps may properly be regarded as a sub-type within Type 48 A, rather than a separate development. There are many similarities between the two types, seen in the broad spreading double-convex bodies, the large filling-holes surrounded by ridges or narrow bands, and the broad vertical strap handles. Type 48 B, however, has its own peculiarities. There is always a ring foot, within which is a broken-barred *alpha* in high relief. This letter appears as the first definite instance of a maker's monogram; it may possibly stand for the lamp manufacturer who during this period signed lamps with ΑΛΕ (see 641 of Type 48 C), or, more probably, for Apollonides, Ariston, or Aineos/-as, whose full names will appear on lamps of the 1st century B.C.

The shape of the nozzle, roughly oval at the end, recalls the nozzles of Type 48 A, but here it is rounded on top without grooved lines or ridges. There may be one or two lugs, made in the upper mould only. When a single lug is used it is cornucopia-shaped, but 635 has a pair of S-shaped lugs that recall those of Type 45 C. The lugs are invariably solid.

The decoration on all the Agora specimens is uniform: a curved-leaf palmette in relief (recalling that of Type 45 C) on the nozzle and broad rays on the top; there is also a small ring of ovules or dots around the filling-hole, recalling the decoration of 628, of Type 48 A, as well as such decorative features on earlier Types 45 A, B and C. The continuation of 3rd century B.C. features on a 2nd century type shows again the conservatism of the lamp-makers during the middle and later years of the 2nd century B.C. before the importation of fresh new designs from abroad at the end of the century.

The clay and the black to reddish glaze that covers the lamps inside and out point assuredly to a local Athenian origin for Type 48 B.

635 (L 1910). Pls. 25, 48.

H. 0.031 m.; W. 0.069 m.

Intact. Very worn palmette on nozzle. Two S-shaped spiral lugs. Circlet of ovules around filling-hole. On reverse the letter *alpha* in relief, within base-ring.

636 (L 4323). Pl. 48.

H. 0.031 m.; W. 0.068 m.

Intact except for part of handle and end of nozzle; latter restored. Like preceding except that this has but one lug, cornucopia-shaped, on left side. Worn black to reddish glaze.

637 (L 4558).

Max. dim. 0.078 m.

Fragment from base, preserving part of handle and base-ring with *alpha*. Like preceding.

D 17: 5, cistern: upper filling, third quarter of 2nd century B.C.

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TYPE 48 C

Late Hellenistic Relief Lamps; Plain Tops, Decorated Sides

Nos. **638-644** (and 2 others inventoried). Plates 25, 26, 48.

Corinth: classified under Type XVIII.

Third and fourth quarters of 2nd century B.C. Dating based on stylistic similarities with Types 35 A and 48 A, as well as on the finding place of **640**.

The lamps in this type are somewhat diverse in details of construction and decoration, but they have similarities that establish them as a distinct variety of Type 48 A. They form a subdivision, as lamps of Type 48 B, rather than a development.

A flat raised base is normal, although **640** has a base-ring which is like a raised base unusually depressed or concave in its center. The walls are comparatively high, with usually a rather pronounced division between the two convex areas. The top is the dominant and characteristic feature here, being wide, devoid of decoration, and flat or slightly concave. The absence of little grooves or ridges around the filling-hole separates these lamps definitively from Types 48 A and B. There may or may not be a lug on the left side; when it exists it is made in the upper mould and is normally solid, although **639** has a pierced lug. **642** has a pair of large leaves in place of lugs, recalling the large shell seen on **586** of Type 45 C. There is usually a broad vertical band handle. The nozzles are long and may be curved on top or flattened; they presumably had oval or blunted terminations. No lamp preserves intact the end of its nozzle, but the extant portions always suggest that the ends were not pointed or fluked in the manner of early 1st century B.C. lamps. The basic shape in general is the moulded and decorated counterpart of Type 35 A.

The decoration is varied but always appears on the shoulder of the lamp, i. e., the upper part of the body, as an important feature. The nozzle, too, carries moulded decorations on its top and sometimes on its sides, as on **642**, where there are raised volutes outlining the sides of the flat-topped nozzle. The patterns on the shoulders include the familiar ray or tongue pattern seen on contemporary lamps of Types 48 A and B; also seen is a pattern of ovules or small leaves that recalls designs of Type 46 A. Sometimes the ornament is a wavy garland of leaves, stemming from sources close to Type 46 C. The nozzles may bear palmettes or leaves, or sometimes a continuation of the principal ornamentation across their tops. All of these motifs, seen earlier in one form or another, show again the lack of imaginative development in this period as well as the continued close connection between the fabricants of lamps and the fabricants of pottery, especially Megarian bowls, with which these motifs have close connections.

A further tie with pottery manufacturers is offered by a signature that appears on some of these lamps. Hephaistion signed two: with his first initial on **639** and with the first four letters of his name on **638**. The same man or a man with the same name also made Megarian bowls; his signature appears on a mould for a bowl in the Agora inventory.[144] Although this fabricant is known only by the first letters of his name, not the whole, Hephaistion is suggested as the restoration since it is a common name in Greek prosopography and one of the few that will fit.[145]

[144] P 1523, mentioned *A.J.A.*, XLV, 1941, p. 221, note 78. This mould was found in the construction fill for the Middle Stoa (H-I-J 12-13) so cannot be later than *ca.* 150 B.C. The signature was incised in the mould before firing ΗΦΑΙϹ. It would have been retrograde on the finished bowls, as on our lamp. The grapevine design of this mould has only a distant relationship to the wavy garland of leaves on lamp **639**.

[145] There is no proper name Hephaistos. This is reserved for the god, and there is no indication that these lamps

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The monogram H or the letters HΦAI are not known on lamps later than the beginning of the 1st century B.C. This fabricant seems to have gone out of business after Sulla's sack of Athens in 86 B.C. It is interesting to see that his trade-mark, in the 2nd century B.C., was sometimes just the initial letter of his name, like the A of the unknown fabricant who placed that mark on lamps of Type 48 B. Single letters were used first, the complete names coming as a later development, perhaps as a result of several fabricants having the same initial, such as Ariston and Apollonides. Hephaistion could have been confused with Heras, whose name (in the genitive, HPAΔOΣ) appears on a lamp of the next generation.

Another lamp-maker who signs an example of Type 48 C is AΛE— (Alexander?). His signature, incised on the lamp itself before firing, occurs on **641**. It is also seen on fragments of bases that cannot be assigned with assurance to any individual type (**838-840**).

Local Attic clay, as well as the presence of two moulds, attests to the Athenian manufacture of these wares. The lamps are glazed inside and out, with rather poor glaze, ranging from black to various shades of brown and red.

638 (L 134). Pls. 26, 48.

H. 0.033 m.; W. 0.063 m.

Intact except for a part of top and end of nozzle; restored. No lug. Raised ovules around top, small raised dots forming rosettes, at either side of start of nozzle, which is rounded on top. In relief on bottom: IAΦH (from mould that had HΦAI incised in clay before firing).

Hesperia, II, 1933, p. 201, fig. 3 and p. 203, fig. 5.

639 (L 4155). Pls. 26, 48.

H. 0.032 m.; W. 0.057 m.

Intact except for end of nozzle (restored) and handle. Pierced lug. Decoration of wavy tendril and flowers on side; raised dots and wreath (?) on top of nozzle. In relief on bottom: H.

640 (L 1400). Pl. 48.

H. 0.043 m.; W. 0.076 m.

Complete except for parts of top, side walls, and nozzle; restored. Base-ring, high side walls curved rather than angular. No lug. Ovules in relief around top, below which a debased leaf or vine pattern; on flat-topped nozzle a palmette in relief; nozzle enclosed at sides by ridges, ending in volutes against the body.

Hesperia, III, 1934, p. 414, no. E 114, fig. 98.

F 15: 2, cistern: last quarter of 2nd century B.C.

641 (L 1419). Pls. 25, 48.

H. 0.033 m.; W. 0.059 m.

Intact except for end of nozzle (restored) and handle. Solid delphiniform lug. Jewelled tongue or ray pattern on sides; palmette (incised, not in relief) on narrow flattened top of nozzle. On reverse, incised before glazing, the letters AΛE (for Alexander?).

642 (L 4097). Pl. 48.

H. 0.038 m.; W. 0.074 m.

Intact except for handle and end of nozzle. Concave top; two leaf-shaped lugs on sides and a third at base of nozzle. Flat-topped nozzle with palmette in relief; on either side of nozzle narrow ridges ending in volutes, as on **640**. Garland of leaves surrounding small circle of petals on upper part of body.

643 (L 3826). Pl. 48.

Max. dim. 0.10 m.

Fragment of upper mould for preceding, preserving right side and base of nozzle. Patterns appear more clearly here than on lamp. Good pink to buff clay.

644 (L 2313). Pl. 48.

Max. dim. 0.073 m.; Est. W. of lamp 0.064 m.

Rear half of an upper mould, preserving parts of two lugs, comparable to those on preceding. Rays on top, circlet of small dolphins around edge of flat top.

had any connection with sanctuary use. Another man named Hephaistion is known from this period, a sculptor who was making statues in Athens at the end of the 2nd and the earliest part of the 1st centuries B.C. (Kirchner, *Prosopographia Attica*, I, p. 423, no. 6553).

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TYPE 48 D

Late Hellenistic Relief Lamps; Plain Re-inforced Concave Tops

Nos. **645-647** (and 1 other inventoried). Plate 48.

Late 2nd century B.C. Dating based on the stylistic similarity to Type 48 C and on the finding place of **647**.

This small group of lamps has the tall decorated sides and flat nozzle formations characteristic of Type 48 C, of which it may almost be considered a variant, together with a pronouncedly concave plain top. A single lamp, **645**, preserves its raised and slightly concave base. The sides of all these lamps are in two parts, the lower one shallow and flaring, the upper one taller and more vertical. There is always a pronounced ridge around the sunken concave discus, in the center of which is a simple filling-hole. A unique feature of this type is the reinforcing ring of clay applied by hand around the under side of the filling-hole before the two moulded halves of the lamp were joined. This procedure is not known on any other lamps (although it is almost impossible to detect its lack or existence on well preserved specimens). The clay ring strengthens the thin concave discus and prevents the chipping of the edge of the filling-hole. The lamps have vertical band handles. The characteristic nozzle formation is long, flattened on top, with an oval or blunted end, not pointed; in this there is a strong reminiscence of Type 48 C. There is never a lug.

The decoration in relief is applied to the upper halves of the body; the egg-and-dart and meander designs are similar to motifs that will be seen on imported lamps of Type 49 A. Here, however, the decoration is normally carried along the vertical sides of the nozzle as well. **646** has an exceptional nozzle with plain sides, but with the addition of a moulded decoration on its top.

The clay and black to red glaze used both inside and outside point to an Athenian manufacture for most of Type 48 D; the clay of **647** is grayish which suggests a foreign origin for this specimen. Since the decorations of this specimen are suggestive of an eastern origin and bear relationships to those of the Ephesos type (49 A), it may be supposed that **647** was imported, and copied locally soon after its arrival. It is likely that the lamps (except the imported example) are the work of a single fabricant; perhaps he himself was a foreigner familiar with the strange technique of the inner reinforcing circle. A local Athenian manufacturer might well copy the imported exterior by taking casts, but would not, presumably, take the lamp apart and familiarize himself with its odd interior. None of the lamps of Type 48 D bears a signature.

645 (L 4096). Pl. 48.

H. 0.035 m.; W. 0.064 m.

Complete except for handle and minor chips; restored. Bold egg-and-dart pattern on upper sides of body and nozzle, except for area under handle. Attic clay.

646 (L 4058). Pl. 48.

Pres. H. 0.023 m.; W. 0.058 m.

Upper part only preserved; handle restored. Egg-and-dart pattern like preceding, but only on upper sides of body. On top of nozzle a female head in relief, wavy hair at sides and a mural (?) crown; neck toward filling-hole. Attic clay.

647 (L 4503). Pl. 48.

Max. dim. 0.054 m.; Est. W. 0.059 m.

Fragment preserving front half of top with portions of upper sides and start of nozzle. Bold meander pattern on upper sides of body and nozzle. Thick gray clay, traces of good black glaze.

C 19: 3, bronze-casting pit: late 2nd century B.C.

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TYPE 48 E

Late Hellenistic Relief Lamps; Palmettes on Nozzles, Rims around Wick-Holes

No. 648. Plate 48.

Last quarter of 2nd century B.C. Dating based on similar lamps from Antioch (assigned to second half of 2nd and early years of 1st centuries B.C.) and on the finding place of 648.

This type, at present seen in only one example at the Agora, is well known at other sites, such as Delos,[146] Alexandria,[147] and Antioch.[148] The specimens from these other sites are not of Attic clay, unlike the Agora example which is undoubtedly a local product. It is difficult to say whether the Athenian lamp served as a model for the others or vice-versa. Due to the relative scarcity of the type in Athens and because of certain decorative features, it seems plausible to assume that the originals flourished outside of Athens and were occasionally copied here.

Our specimen has a double-convex body rising from a low ring foot; the filling-hole is comparatively small, in the middle of a small concave top. There is no lug. The lamp was equipped with a broad vertical strap handle. The nozzle has a rounded termination with a flat band surrounding the wick-hole, projecting from the tubular shank of the nozzle, which is decorated with a palmette in relief.

The decorated upper sides of Type 48 E, with concentric semicircles and nodules between pairs of dotted lines, may be seen more clearly in an Alexandrian example in the Benachi Collection (Pl. 55, Benachi 5). One sees here, more accurately portrayed than in the Agora example, the rope motif that bridges the top of the nozzle.

The use of the flat rim around the wick-hole recalls not only a metal prototype, but specific imported clay lamps that have this feature, such as 659 of Type 49 A. The use of the palmette on the nozzle, although often seen in Hellenistic Athenian lamps, also seems originally to have had a foreign origin (cf. Type 45 A). These features would suggest that Type 48 E originated abroad, although a careful consideration of the concentric semicircles and nodules that serve as the lamps' chief decorations might suggest an Athenian origin. Such motifs appear on local Megarian bowls of this period.[149]

The clay is Attic; metallic glaze mottled black and brown covers the inside and outside.

648 (L 1401). Pl. 48.

H. 0.024 m.; W. 0.044 m.

Complete except for right side, handle, and part of nozzle. Concentric semicircles and nodules on body; palmette on nozzle and cable pattern across its top. Attic clay and mottled black to brown glaze.

Hesperia, III, 1934, p. 413, no. E 113, fig. 98.

F 15: 2, cistern: last quarter of 2nd century B.C.

[146] *B.C.H.*, XXXII, 1908, pl. II, 1.

[147] A number of examples are in the Benachi Collection, found at Alexandria. Photographs of two of these are seen on Plate 55, Benachi 5 and 6.

[148] *Antioch*, III, p. 59, 13 d: 44, fig. 75.

[149] *Hesperia*, III, 1934, p. 406, no. E 78, figs. 95 a, b. Note Thompson's suggestion that this motif may have been taken from designs on Protogeometric pottery (*ibid.*, p. 442).

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TYPE 49 A

Ephesos Lamps; Collars and Decorated Sides

Nos. **649-664** (and 2 others inventoried). Plate 49.

Corinth: classified under Type XIX.

From last quarter of 2nd century B.C. into first quarter of 1st century after Christ. Dating based on the finding places of the lamps. At other sites this type flourished at about the same time.[150]

This type is known as the Ephesos type because of the vast numbers found at that site, now in the Museum in Vienna, the British Museum,[151] and elsewhere.[152] It was produced in Asia Minor fairly early in the 2nd century B.C., but there is no certain evidence for its importation into Athens before 125 B.C. In the generation following that date Athens enjoyed an unusual prosperity with a marked taste for luxuries, unlike most other Greek cities. Many foreign goods were imported through Delos which was particularly active commercially in this period, under Athenian domination, down to 88 B.C.[153] It is interesting that the first appearance of Type 49 A occurs in Athens at the same time that the new Roman province of Asia was organized (133-129 B.C.). Trade was opened up even further between the east and Hellas after this date, as may be seen by the great importations of pottery and other objects from Asia Minor that are evident in Athens during these and subsequent years.

The lamps vary little in shape, but enormously in decoration. The typical Ephesos lamp has a slightly raised base which is oval rather than circular, with a suggestion of a point toward the nozzle. These lamps are adaptations in clay of metal prototypes; the projection and weight of a heavy metal nozzle might have been the reason for the extension of the base toward the front of the lamp. The sides are double-convex with a sharp angle between the two halves. The top is flat with a central filling-hole usually surrounded by a narrow ridge; the filling-hole and ridge are normally made in the mould, not punched through after the lamp was removed from the moulds. **664**, however, shows an unusual instance of a punched filling-hole. Occasionally the little ridge is omitted, and this may be taken as one of the few distinguishing marks between early and late lamps within this remarkably homogeneous group that spans more than a hundred years: **662** and **664**, without these ridges, are dateable in the earliest years of the 1st century after Christ.[154]

A distinctive feature of the Ephesos lamps is the flaring collar, made separately and added by hand, that surrounds the top; this collar or flange serves a useful purpose in keeping the oil from spilling over the sides when the lamp is filled. Since the spilled oil that might collect within the collar cannot drain back through the filling-hole, because of its little ridge, there are necessarily drain-holes. These are normally three in number, punched through the leather-hard clay at the

[150] In Corinth these lamps appear during the second half of the 1st century B.C. (Broneer, p. 70). Lamps of this type have been found in Sardis (T. L. Shear, *A.J.A.*, XXVI, 1922, p. 401) with figurines dated in the late 2nd or 1st centuries B.C. (D. Burr, *Terracottas from Myrina*, Vienna, 1934, p. 17). One undecorated specimen was found among the objects from the shipwreck at Anticythera, *ca.* middle of 1st century B.C. (?): Svoronos, Ἐφ. Ἀρχ., 1902, pp. 145 ff., pl. H, 28. It is significant that none has come to light in the extensive groups of pottery and lamps, dated before 150 B.C., that underlie the Stoa of Attalos and the Middle Stoa in the Athenian Agora.

[151] Walters, nos. 326-349.

[152] See Broneer, pp. 66-70, for a good discussion of the type.

[153] Ferguson, *Hellenistic Athens*, pp. 373-374, 406-407.

[154] The former because of its finding place; the latter because its signature, ΠΑΡΑΜΟΝΟΥ, also occurs on **665** of Type 49 B that was found in a filling of this date.

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same time the collar is added. **664** is an exceptional example without these ancillary holes, but needs none since its filling-hole was punched and lacks the little ridge around it. **663** and **651** also have none, but they are provided with channels on their nozzles that lead superfluous oil into the wick-hole, although on **651** this was prevented by the added collar that cuts across the channel.

The handles show their bronze ancestry. They are broad vertical ring handles, but grooved as if the original metal handles had been made of three narrow bands. A pair of Ephesos lamps in Corinth show clay cross pieces, made as if to hold the bands together.[155] All Type 49 A lamps had these handles, which were made separately and added to the lamps on top of the decorated sides. No lamp has a lug, which seems to have been an Attic device.

The nozzles are another characteristic feature of this group. They are normally flat on top but flare sharply downward on the sides; the usual tips are crisply triangular with sharp flukes, but some Ephesos lamps have wide circular or oval terminations often bordered by a narrow flat band. None of these latter forms can be assuredly dated before Sulla. Corinth has many[156] from the second half of the 1st century B.C.; it is quite possible that this oval form is a later development within the type, occurring during the middle and later years of the 1st century B.C. An occasional nozzle is tubular in section, as **660**, without decoration and perhaps to be assigned to the later years of the type's development. A few lamps are seen with a channel on top of the nozzle uniting the flat top or discus with the wick-hole. This feature was to be very popular in Roman lamps, but was not used by Athenian fabricants before the appearance of Type 49 A.

The flattened top of the nozzle is normally decorated with a device in relief. The upper parts of the sides are also decorated with a rich vocabulary of designs.[157] All of the decoration was produced from moulds, although sometimes it may be so crisp and in such high relief that one might mistakenly think that separate stamped or moulded motifs had been added to the lamp before firing. The moulds themselves may have been made occasionally from metal lamps, but more often they were created independently. A lamp-maker would incise his mould or the mould for his matrix with a running design, cutting into its unfired clay with a sharp stylus, or he would stamp his mould with a series of small dies, *poinçons*, bearing individual motifs. A clear example of the former practice may be seen on **653** where the petals are individually designed by cutting into clay, and where there is a great profusion of dots which are simply the reverse of little punched holes; **654** was made similarly. A good example of the other manner of manufacture, using small dies, may be seen on **650**; here three different dies were used, several times each, to cut a series of repeated motifs into the mould. **651** was also made this way; its rosettes are exactly alike with the same uneven elements in the same places. Sometimes both methods of mould-making may be used together, as on the mould that produced **656**. The designs on the little dies, consisting of rosettes and leaves for the most part, are similar to dies or stamps used by potters of this period; no moulded and decorated pottery, however, of the same gray clay and glaze as these lamps is known to have come from the Ephesos area to Athens. The designs on the lamps are varied; few are alike, nor does any of our lamps absolutely match another from sites elsewhere. The multiplicity of designs is due to the fact that moulds could have served only for a short time before their delicate patterns were blurred; new ones were frequently made. An infinite number of designs may be made for moulds with a few stamps and freehand incision.

The clay is gray, usually quite thin and almost brittle. The glaze is dark gray, with occasionally a metallic sheen, as on **649**.

[155] Broneer, pp. 68-69, nos. 343, 370, fig. 31.

[156] Broneer, p. 68; p. 162, no. 335, fig. 88.

[157] The various decorative motifs are mentioned below; every one of the Agora lamps bears a different decoration except for two uncatalogued examples that are similar to **659**.

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Only one fabricant is known by a signed lamp in the Agora collections. **664** bears a name on its base in raised letters, retrograde. The maker had incised his name in the genitive, ΠΑΡΑΜΟΝΟ[Υ] , in a cursive hand in the soft clay of the mould. He also signed (or his signature was pirated for) **665** and **667** of Type 49 B. Paramonos is the only lamp-maker in late Greek and early Roman times to use a cursive hand. In the Benachi Collection in Alexandria a lamp of Type 49 A is signed by Archetimos, the signature incised in the mould in capital letters, thus appearing retrograde on the lamp (Pl. 55, Benachi 8).

649 (L 1817). Pl. 49.

H. 0.029 m.; W. 0.057 m.

Intact except for part of handle. On body bead and reel pattern, below it rope pattern; dots either side of nozzle; on nozzle a blurred design of double scrolls and a large dot. Highly metallic glaze.

E 15: 3, cistern: late 2nd and early 1st centuries to 86 B.C.

650 (L 4466). Pl. 49.

H. 0.034 m.; W. 0.060 m.

Intact except for handle, end of nozzle and minor chips; nozzle restored. On body four vertical motifs of bead and reel, between each two a rosette and a leaf, large sparsely scattered dots below all. A leaf of identical design (from the same stamp?) appears with large dots on an Ephesos lamp in the Benachi Collection in Alexandria, signed by Archetimos. Several large dots either side of nozzle; top of nozzle undecorated. Metallic dark gray glaze.

651 (L 2087). Pl. 49.

H. 0.036 m.; W. 0.065 m.

Intact except for handle and end of nozzle; latter restored. On body rosettes similar to but slightly larger than those of preceding, all made from the same *poinçon*. Top of nozzle plain but enclosed by ridges tapering to wick-hole. No drain holes in top.

D 11: 4 and D 12: 2, cistern system: fillings of late 2nd to early 1st centuries B.C.

652 (L 2020). Pl. 49.

H. 0.031 m.; W. 0.062 m.

Intact except for handle and end of nozzle. On body horizontal band of scale pattern, a row of dots above and below it; large dots either side of nozzle; on nozzle a long loop ending in dots, resembling a sistrum without cross pieces.

Provenance as of **651**.

653 (L 513). Pl. 49.

H. 0.031 m.; W. 0.062 m.

Intact except for end of nozzle. On body large ovules or tongues, raised dots below; three similar dots either side of nozzle; on nozzle a line of more dots.

G 14: 2, well: upper filling, late 2nd century B.C.

654 (L 3158). Pl. 49.

Pres. H. 0.039 m.; W. 0.074 m.

Upper half only, handle and end of nozzle missing; shape like preceding but somewhat larger. On body long narrow tongues; on either side of nozzle, cluster of three dots; tall vertically-ribbed vase on nozzle with three dots above it and three below.

Provenance as of **651**.

655 (L 272). Pl. 49.

Pres. H. 0.023 m.; Est. W. 0.062 m.

Fragment of top only, without nozzle; on body a pattern of repeated horizontal S-shaped scrolls, above them a line of short diagonal strokes and below a similar line sloping oppositely.

Hesperia, II, 1933, p. 203, no. L 272, fig. 5, 2.

656 (L 3154). Pl. 49.

H. 0.035 m.; W. 0.066 m.

Complete except for handle and nozzle. On body a band of heart-shaped ivy leaves; on either side of curved-top nozzle, bold tendril scrolls. Thick fabric.

Provenance as of **651**.

657 (L 382). Pl. 49.

H. 0.032 m.; W. 0.062 m.

Intact except for handle and end of nozzle. On body a band of horizontal fasces, a row of dots above and below; on nozzle a caduceus. Thin brittle clay.

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658 (L 5086). Pl. 49.

H. 0.028 m.; W. 0.059 m.

Intact except for handle. Rounded termination at end of plain flat-topped nozzle. A border of individual spirals on body.

659 (L 2098). Pl. 49.

H. 0.034 m.; W. 0.064 m.

Intact except for handle, end of nozzle, and minor chips. Rounded nozzle termination surrounded by raised border. On body, triangular leaves with corded edges, alternating with large dots. Sistrum, a dot on either side, on nozzle. Two similar fragmentary lamps, uncatalogued, with comparable decoration of triangular leaves and dots, are in the Agora collections (L 1972 and L 2545).

660 (L 4405). Pl. 49.

H. 0.032 m.; W. 0.062 m.

Intact except for handle, most of tubular nozzle, and minor chips. On body a border of short vertical cables. No motif on nozzle. Thick clay.

661 (L 2979). Pl. 49.

Pres. L. 0.067 m.

Fragments of nozzle only; tubular in section like preceding, but with groove running down the top and around edges of sharply pointed termination, which is also given impressed dots at side angles. Base of nozzle decorated with three palmettes, stamped into the leather-hard clay of lamp rather than moulded. Thin brittle clay.

Agora, Pottery of the Roman Period, G 142.

D 4: 1, cistern: Layer II A, very early years of 1st century after Christ.

662 (L 2649). Pl. 49.

H. 0.031 m.; W. 0.057 m.

Complete except for handle, nozzle, and most of base. Border of individual spirals on body, like those of **658** but turning in opposite direction. There is no raised ridge around filling-hole. Thin brittle clay.

Q 13: 1, shaft: dumped filling, early 1st century after Christ.

663 (L 4542). Pl. 49.

Max. dim. 0.043 m.

Small fragment of top of lamp and start of flat-topped nozzle. No collar, but a low ridge outlining the top and continuing as the side of a channel along the top of the nozzle, as on **651**. On shoulder small angular palmettes, with dots below and double dots at end of pattern.

664 (L 4027). Pls. 27, 49.

H. 0.027 m.; W. 0.057 m.

Intact except for handle, almost all of nozzle, and minor chips. No ridge around filling-hole, which was punched, not cast; no drain-holes. The handle exceptionally constructed so that it went from collar to lower part of body without covering any of shoulder's pattern. Design of dotted rosettes separated by wavy line of dots. Thick fabric, signed on the bottom ΠΑΡ | ΑΜΟ | ΝΟ, retrograde in three lines, the cursive letters in relief having been incised in the mould.

TYPE 49 B

Imitations of Ephesos Lamps

Nos. **665-667** (and 4 others inventoried). Plates 27, 49.

Early years of 1st century after Christ. Dating based on stylistic similarities with late examples of Type 49 A, and on the finding place of **665**.

These are simplied variants of the Ephesos type, rather carelessly made, without the crispness of the gray clay and black glaze that forms such a striking characteristic of the prototype. The base of Type 49 B is very large, slightly raised and flat, and either circular as in **666** or almond shaped, recalling the typical form of Type 49 A. The low double-convex body usually has the same sharp angle between the two halves as on the preceding type. The broad flat discus or top has a small filling-hole without any ridge around it (thus obviating the need for extra

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drain-holes), as on **664**, a late example of Type 49 A. There is no collar, a normal feature of the preceding type, but instead a narrow rim runs around the top separating it from the decorated sides; this feature also appears occasionally in late examples of Type 49 A. There are no lugs, of course. The handles are simple vertical ribbon handles, without the grooves that were a standard characteristic of the parent group. The nozzles are the same in both types, flat on top, flaring downwards at the sides, and ending in sharply pointed terminations.

The decorative motifs are similar, but not in such a great variety; whereas all of the Agora specimens of Type 49 A differ to some extent from one another, there are only three patterns used on our examples of Type 49 B. The clay and glaze are different, of course, and point to a source far away from the home of the dark gray clay of the originals. The light brown clay can be Attic, and the red to brown glaze is characteristic of some Athenian products of this era. Two lamps are signed by Paramonos, who signed **664** of Type 49 A. It is possible that his signature was pirated, as well as his designs, by the fabricant who made **665** and **667** of Type 49 B. On the other hand, it is not improbable that this fabricant came to Athens and began production with his own models but utilized local materials.

665 (L 2933). Pls. 27, 49.

H. 0.029 m.; W. 0.06 m.

Intact except for handle and minor chips. Broad almond-shaped flat base. Plain flat-topped nozzle; imbricated leaf design, in three rows, on shoulder. Crumbly red clay, remains of red to black glaze inside and out. Signed in a cursive hand, in relief and retrograde, ΠΑΡ | ΑΜΟ | ΝΟΥ, signature incised in mould or taken from another lamp that served as matrix for this lamp's mould.

Agora, Pottery of the Roman Period, G 134.

D 4: 1, cistern: Layer II A, very early years of 1st century after Christ.

666 (L 3950). Pl. 49.

H. 0.036 m.; W. 0.067 m.

Intact. Broad circular flat base. Flat-topped nozzle with rosette on top. On shoulder, a double row of small pointed leaves beneath a row of bold triangular leaves. Light brown clay, dark brown glaze. The same shoulder design occurs on the other two uncatalogued lamps of Type 49 B (L 3128 and L 4026).

667 (L 1332). Pls. 27, 49.

H. 0.032 m.; W. 0.061 m.

Intact except for handle, end of nozzle, and part of bottom. Plain flat-topped nozzle; on shoulder a moulded wreath of very large ivy leaves, similar to those on **656** of Type 49 A. Signature in relief and retrograde, like that on **665**; but only the first five letters of the name: Π[Α]ΡΑΜ.

TYPE 50 A

Knidos Lamps (Mouldmade)

Nos. 668-669. Plate 50.

Late 2nd century B.C. and 1st century B.C. Dating based on the similarities with wheelmade Knidos lamps of Type 40 A and on the associations with Type 50 B, which copies these imported examples and occurs in Athens as early as the late 2nd century B.C. The context of **668** offers a certain amount of information.

This is not the proper Knidos type, which is wheelmade with a very different nozzle formation, and is considered under Types 40 A and B. The specimens that form Type 50 A are moulded and have the sharply fluked nozzles that characterize Type 49 A. The normal lamp has a flat raised base with a circular groove around its border, double-convex sides with a sharp angle between them, and a flat or concave top surrounded by a groove. The handle on **668** is missing, but may have been a banded double-coil handle as on the wheelmade Knidos lamps of Type 40 A. How-

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ever, **669** retains a bit of its plain vertical band handle and it seems safer to consider this kind as the standard for the moulded Knidos lamps. There is no lug. The nozzle has a very narrow flat top, spreading out in a triangular shape to the wick-hole which is enclosed in a sharply pointed termination. The under side of the nozzle has a long central ridge or sharp angle, extending back to the lamp's raised base.

The moulded decorations of Type 50 A are simple, consisting of broad heart-shaped ivy leaves in relief, two on either side of the lamps shoulder.

The gray clay and dark gray glaze, both inside and outside, show an origin close to the eastern center where Type 49 A was made. Although few of Type 50 A seem to have been imported into Athens, their features became popular; not only were they reproduced locally, as seen in the following types, but various characteristics such as the circular grooved base and the nozzle formation became influential on the designs of other late Athenian types of lamps.

668 (L 2696). Pl. 50.

H. 0.043 m.; W. 0.114 m.

Complete except for back portion that held handle, and minor chips. Handle restored. Circular groove within slightly raised base. Two leaves on either side of shoulder; nearly flat discus with punched (not moulded) filling-hole, slightly off center. Gray clay, badly flaked dark gray glaze outside and partly inside.

N 19: 1, cistern: final filling, *ca.* 75-25 B.C.

669 (L 448).

Est. W. 0.070 m.

Fragment preserving bit of shoulder, discus, and handle stub of lamp like preceding but smaller. One leaf preserved at left of handle. Concave discus. Clay and glaze like preceding.

TYPE 50 B

Athenian Imitations of Knidos Lamps

Nos. **670-676** (and 14 others inventoried). Plates 26, 50.

Corinth: classified under Type XVIII.

From last quarter of 2nd century B.C. into early years of 1st century after Christ.

These Athenian versions of the Knidos lamps enjoyed popularity and a long life. They first appeared during the prosperous decades that preceded the sack of Athens by Sulla, and then were revived later in the 1st century B.C., when local lamp production was again resumed. There is no appreciable difference between the early and late examples of this remarkably uniform type except that the earlier lamps tend to be somewhat larger and made of a finer quality of clay. Occasionally, however, a fine large one turns up at the end of the era, as **671**.

There is always a definite flat raised base, sometimes plain but sometimes with a light groove around its circumference as on the parent lamps of Type 50 A. A single example, **675**, has the almond-shaped raised base which recalls that characteristic of Type 49 A, also an imported group. The sides are double-convex, without the sharp angle between them that is typical of the parent Type 50 A. The nozzle formation, however, is an exact replica of the prototype's. It is flat on top, flaring out to a pronouncedly bold triangular termination, with a little impressed dot on either side of the wick-hole; its bottom has the usual sharp angle down the center. There is never a lug, always a vertical flat band handle, although **674** varies the scheme by having a basket handle that bridges the circular top. The top is always deeply concave with a well-marked groove around it. Sometimes the whole upper part of the lamp is encased in a protective collar, added by hand, that

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serves to collect oil that might spill over when the lamp is filled. In such cases there are, of course, several ancillary drain-holes to allow the return of the oil to the reservoir.

The relief decoration does not vary. There is always a neatly moulded heart-shaped leaf and a convex disc on each shoulder. The leaf was seen on Type 50 A, and the disc appeared on wheel-made Knidos lamps of Type 40 A. A single example, **676**, adds another motif between the leaf and the disc, a small bud, shaped like the letter *psi*.

The clay is Attic, rather coarse in some of the later examples. All the lamps are glazed inside and outside; the glaze is poor and flaky, black to brown to red, although the earlier examples seem to have more careful applications.

Two lamps bear signatures. That of **670** is completely illegible; the letters were incised, under the glaze. In a similar way **673** was signed by Demetrios. This is the first instance of his signature, which will be seen elsewhere on several fragmentary signed bases that cannot be assigned to specific types.

670 (L 3091). Pl. 50.

H. 0.039 m.; W. 0.086 m.

Intact except for handle. Base has circular groove, within which faint traces of incised signature. Good red metallic glaze.

F 5: 1, cistern: dumped filling of 3rd and 2nd centuries B.C.; not later than late 2nd century B.C.

671 (L 2240).

H. 0.043 m.; W. 0.091 m.

Intact except for nozzle. Like preceding, but no traces of signature. Black glaze, mostly peeled.

D 11: 1, well: dumped filling, turn of the era. Another inventoried example of Type 50 B found here.

672 (L 4710).

H. 0.032 m.; W. 0.066 m.

Intact except for back portion of handle. Like preceding. Dull brownish glaze.

R 10: 1, well: dumped filling of 1st century after Christ (Augustan).

673 (L 3823). Pl. 26.

H. 0.036 m.; W. 0.075 m.

Complete except for small fragments from nozzle and collar. Like preceding except for addition of handmade collar around entire lamp and two drain-holes at base of nozzle. Dull brownish black glaze. On base, incised before firing, faint signature in three lines: ΔHM | HTPI | OY.

674 (L 3204). Pl. 50.

H. 0.032 m.; W. 0.083 m.

Complete except for handle and many fragments of concave top, collar, and nozzle. All restored except for basket handle that was attached above and below the central concavity and partially covered it. Plain raised base. At least four drain-holes, within a collar made like preceding. Small filling-hole, if any, off center. Mottled brown glaze.

Agora, Pottery of the Roman Period, G 128.

D 4: 1, cistern: Layer II A, very early years of 1st century after Christ. Another inventoried example of Type 50 B, found here.

675 (L 3824).

H. 0.034 m.; W. 0.063 m.

Intact except for handle and end of nozzle. Almond-shaped plain raised base; otherwise like **670**. Dull red to brown glaze.

676 (L 4855). Pl. 50.

Max. dim. 0.071 m.; Est. W. 0.082 m.

Small fragment of rim and discus with start of nozzle. Between the leaf and disc, a conventionalized bud or the letter *psi* in relief. Dull black glaze, badly worn.

Provenance as of **672**.

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TYPE 50 C

Late and Degenerate Versions of the Knidos Type

Nos. **677-678**. Plate 50.

1st century after Christ, *ca.* second to third quarters, perhaps a little later. Dating based on the fact that the slim broken-barred *alpha* that appears on **677** is common on lamps of later types, beginning with Type 52 H, that may be dated in the second quarter of 1st century after Christ or later, and on the finding place of **677**.

These are examples of the decline in the local production of Type 50 B. The traits that they have in common with Types 50 A and B are numerous. These include the presence of a flat raised circular base, the double-convex body, the flat-topped, flaring nozzle terminating in a pronounced triangle, the sharp angle down the under side of the nozzle, and the ubiquitous moulded decoration in which the heart-shaped leaves and the convex discs play an important role. The concave discus surrounded by a groove is also here, contrasting strongly with the convex body. These lamps are coarsely made of thick clay which can be a local product. They are glazed, or washed, with thin red or brown paint.

One lamp, **677**, is signed with an *alpha* in relief. This is made in a manner similar to the *alphas* of Types 52 H, 53, etc. There is no clue to the meaning of this letter or to the maker's identity. It will be seen later that there are at least five known fabricants of the 1st centuries B.C. and after Christ whose names begin with this initial (Apollonides, Apollonios, Ariston, Aineios/-as, and Asklepiades).

677 (L 3905). Pl. 50.

H. 0.035 m.; W. 0.077 m.

Intact except for vertical band handle. Circular base surrounded by two concentric ridges, within which a slim broken-barred *alpha* in relief, like that of 578 of Type 44 D. Neat raised ridge outlining entire nozzle formation, another extending straight down center of nozzle's top. Usual leaves and discs, separated by groups of dots in relief; pairs of dots on sides of nozzle and a single dot on globule on each disc. Red clay with buff surface; dull light red wash.

B 21: 1, cistern: dumped filling, latter part of 1st and early part of 2nd centuries after Christ.

678 (L 1669). Pl. 50.

H. 0.033 m.; W. 0.052 m.

Intact. Plain circular raised base. No handle. Ridge down top of nozzle, bifurcating to border triangular termination and wick-hole. Pronounced raised ridge on angular underside of nozzle. Poorly made leaves and discs separated by groups of globules; straight raised lines and more globules on rear of lamp. Heavy buff clay, streaked brownish purple glaze.

TYPE 50 D

Miscellaneous Imported Lamps of Gray Clay

Nos. **679-682** (and 1 other inventoried). Plate 50.

Last quarter of 2nd century B.C. to *ca.* 86 B.C. Dating based on the similarity of the clay and glaze with the Ephesos and Knidos types (Types 49 A and 50 A), and on the finding places.

This is a small group of very fragmentary lamps with little in common except their gray clay and glaze, and use of moulded decoration, and the fact that the rather large filling-holes are

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depressed in a concavity or surrounded by an emphatic ridge or collar, reminiscent of the treatment seen on Types 49 A and 50 A. The ridges are moulded rather than added separately as on Type 49 A. Their shapes demonstrate a certain uniformity also, and recall Types 49 A and 50 A in the broad spreading convex shoulders that bear the decoration. No lower portions, nozzles, nor handles are preserved. The clay is non-Attic, always gray; the black or dark gray glaze used inside and out, except on 681 which is unglazed inside, is similar to that of Types 49 A and 50 A. An eastern origin or origins may be claimed for Type 50 D, places that produced the *terra nigra* which is a common feature with the Ephesos and Knidos types. They were all imported during the later Hellenistic period and bear witness again to the close commercial relations between Athens and the east that culminated in the vast expansion of trade through Delos in the last quarter of the 2nd century B.C.

The individual details of construction and decoration of the various lamps are discussed in their descriptions below.

679 (L 1504). Pl. 50.

Max. dim. 0.047 m.; Est. W. of lamp 0.066 m.

Fragment of upper body and high rim with edge of filling-hole, around which is a small raised ridge. Large dolphin in high relief on shoulder. The under side of the shoulder shows that the lamp was not much broader than this fragment. Start of handle visible at edge of high rim, beyond dolphin's tail.

680 (L 1403). Pl. 50.

Max. dim. 0.051 m.; D. of rim 0.043 m.

Fragment preserving part of nozzle's top, with portion of high rim around concave discus; narrow ridge around filling-hole. On nozzle part of a three-leaved palmette or lotus.

Hesperia, III, 1934, p. 414, no. E 115, fig. 98.

F 15: 2, cistern: last quarter of 2nd century B.C.

681 (L 4461). Pl. 50.

Max. dim. 0.070 m.; Est. D. of rim 0.064 m.

Fragment of very large lamp preserving part of upper body, traces of very broad thin band handle, and part of broad-grooved rim around flat discus; no trace of filling-hole. On shoulder, below handle, very delicate relief design of curved foliate elements; at one end of handle, on shoulder, a simple rosette in high relief. Thin clay, unglazed inside.

682 (L 2884). Pl. 50.

Max. dim. 0.066 m.; Est. W. of lamp 0.073 m.

Fragment of top preserving depressed filling-hole with thick raised ridge around the depression; at top the start of a vertical band handle, at left side a broad projecting lug, part of another at right. The edge of the lamp is preserved at back, showing a kite-shaped body, reminiscent of Types 45 A and 47 B. Heavy looped garlands on top; irregular bosses on body either side of base of the flat-topped nozzle.

N 19: 1, cistern: dumped filling, late 2nd century B.C.

TYPE 51 A

Late Hellenistic Relief Lamps, Pointed Nozzles, Depressed Tops

Nos. 683-685. Plate 50.

Last quarter of 2nd century B.C. Dating based on the stylistic similarity to Types 48 C, D, and on the finding places.

With Type 51 A the sequence of late Hellenistic lamps is resumed after the interruptions caused by the imported examples of Types 49 and 50. Type 51 A is really a morphological continuation of the various Types 48, but both here and in the succeeding types one sees the impact of the foreign influences, especially in the emphasis on the pointed nozzle. The whole character of

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late Greek and early Roman lamps was changed by the virtual abandonment of the oval-tipped nozzle that had been a heritage from early wheelmade types.

Type 51 A is a small group of locally made lamps that conservatively repeats many aspects of Types 48 C and D. Only the bluntly-pointed triangular nozzle tip and the base show new developments that were unknown to the parent groups. Type 51 A has a flat raised base with a suggestion of an almond shape, as if the base of the nozzle were pulling the circular bottom a little out of line. More emphatic almond-shaped bases were seen in Type 49 A. The sides are high, double-convex, and the flat or slightly concave circular top is depressed below the level of the decorated sides. There is not, however, any pronounced ridge or groove around the top nor around the wide filling-hole. The nozzles are broad and flat, extending out to their bluntly-pointed ends. They have decorations on them; an incised herringbone pattern is seen on two examples; a third has a pair of ridges emphasizing the sides of the nozzle.

There is always at least one lug as on **685**, where it is a simple solid protuberance. Other lamps have pairs of S-shaped scroll lugs, recalling those features of Type 45 C; the lugs are always high on the lamps' shoulders. One lamp is without a handle, but **683** shows that the normal handle was of the usual flat vertical band variety. The decorations are simple, consisting of the parallel rays or grooves around the upper part of the body that are characteristic of Type 48 A. Good thick Attic clay and a very decent black to brown glaze establish the local origin of the type. None bears a signature.

683 (L 4104). Pl. 50.

H. 0.037 m.; W. 0.064 m.

Intact except for vertical band handle. Two S-shaped lugs on upper body. Herringbone pattern incised on nozzle before lamp was fired; moulded ray decoration on upper body. Brownish red glaze.

684 (L 1391).

H. 0.36 m.; W. 0.064 m.

Complete except for right side and handle area. Like preceding. Dull black glaze.

Hesperia, III, 1934, p. 413, no. E 103, fig. 98.

F 15: 2, cistern: last quarter of 2nd century B.C.

685 (L 3137). Pl. 50.

H. 0.033 m.; W. 0.062 m.

Intact except for nozzle, restored; the restoration should have shown a nozzle like that of **683**. Solid lug. Raised rays and the ridges on nozzle made by incisions in the mould. Thin brown glaze.

Hesperia, Suppl. IV, p. 121, fig. 90 e.

H 12: 1, drain filling: last quarter of 2nd century B.C.

TYPE 51 B

Late Hellenistic Relief Lamps; Pointed Nozzles with Flame Palmettes

Nos. **686-692** (and 4 others inventoried). Plates 24, 26, 50.

Last years of 2nd century B.C. and down to 86 B.C.

This group of crisply made lamps continues the tradition of Type 48 A, but employs the new pointed nozzle, with a very neat pattern of a fan-shaped or flame-shaped palmette, made of a group of rays. The clay is Attic, very finely worked, and the good black or red glaze on inside and outside shows that this group was the product of several very meticulous Athenian craftsmen. All of our examples come from clean moulds; none is carelessly made or defective as the result of a mould being used too many times. Two moulds have been found and are included in the catalogue.

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The lamps have a variety of bases, all circular, but ranging from a raised concave bottom to a simulated ring foot to an actual ring foot. The presence of the latter shows a close connection between the lamp-maker and the potter. There is nearly always a solid lug on the left side of the shoulder, invariably cornucopia-shaped; one of the uncatalogued examples, however, omits this feature. There is always a broad vertical band handle. The nozzle is rounded on top and ends in a blunt triangle. A very low thin ridge outlines the periphery of the end of the nozzle, which is decorated on top with the moulded palmette design, the individual lines of which are arranged in a flame pattern with curving ends. Some of the nozzles have a sharp angle on their under sides, as on Types 50 A and B, while others have the old-fashioned rounded throat. The shoulders are usually decorated with moulded rays, numerous and very close together; a few lamps have an imbricated leaf pattern reminiscent of Type 46 B. The tops are small, with little concentric ridges around them and the filling-holes. Those lamps bearing the imbricated decorations on their shoulders have wide concave tops with moulded rosettes on the centers. Some lamps have hand-made collars surrounding the entire body and nozzle; in such cases of course there are the necessary drain-holes, usually one on either side of the junction of the nozzle and the body. An unusual touch of artistry is seen occasionally in the scraping away of the glaze around the edge of a collar or from the top of a ridge around a top. This makes a pleasant contrast between the revealed buff clay and the glazed surface of the remainder of the lamp. Similar scraped grooves were seen on contemporary wheelmade lamps.

A couple of fabricants are known. Ariston signed one of the moulds, **689**, and three of the lamps. In every case the signature was incised in the mould, so that the letters are in relief on the lamps. His signature appears always in the genitive form, whether the letters run around the base in a circular manner or appear in two horizontal lines. Ariston is not known as a fabricant on later lamps, after 86 B.C. His signature is known on two other Agora lamps, both of them fragments of bases, **850** and **851**, which need not date after the first quarter of the 1st century B.C. He and his shop must have been among the casualties of Sulla's invasion. He is also known as a potter who worked in this period.[158] Another lamp, **690**, is signed ΣΩ (?) which may stand for Sopatros who signed lamps in the later years of the 1st century B.C.

686 (L 1858). Pls. 26, 50.

H. 0.030 m.; W. 0.062 m.

Intact except for the handle. Ring foot. Rays on top and flame-shaped palmette on nozzle. Fairly good black glaze. Signed with letters in relief around two concentric grooved circles: APIΣTΩNOΣ.

E 15: 3, cistern: late 2nd and early 1st centuries, down to 86 B.C.

687 (L 1392). Pl. 26.

H. 0.028 m.; W. 0.056 m.

Complete except for handle, much of side walls, and part of low raised base. Like preceding. Buff clay, flaked red glaze. On base, in relief, the signature AP ..... Σ for APIΣTΩNOΣ.

Hesperia, III, 1934, p. 413, no. E 106, fig. 98; pp. 463-464 where a Rhodian origin is suggested for the lamp, but the clay and glaze may well be Attic and the presence of two other lamps of indubitably Attic clay and glaze, of the same design and signed by the same fabricant, would tend to demonstrate that this lamp is also Attic.

F 15: 2, cistern: last quarter of 2nd century B.C. Another inventoried example of Type 51 B found here.

688 (L 3863). Pl. 26.

H. (incl. collar) 0.032 m.

Fragment preserving end of nozzle and parts of raised base; exactly like preceding except for addition of high collar around entire lamp, its edge scraped. Firm brown to black glaze. Signature in relief, in two horizontal lines: APIΣTΩ|NOΣ.

[158] Ariston signed a moulded vase with strainer and spout in the Agora inventory: P 15207; the upper part of its body (with the signature) was made in a Megarian bowl mould. This vase was found with sherds of the turn of the 2nd and 1st centuries B.C.

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689 (L 2128). Pls. 24, 50.

Max. dim. 0.093 m.; Est. W. of lamp 0.054 m.

Lower mould, intact except for part of back, for lamp very much like preceding. Nozzle angular in section on under side. On floor of mould a signature incised in two lines retrograde: APIΣT Ω | NOΣ; like preceding. On the exterior top surface an incised B on either side wall, outside, an incised P or Latin D. Pinkish buff clay, unglazed.

690 (L 4502). Pl. 28.

H. 0.024 m.; W. 0.053 m.

Complete except for front part of body and most of nozzle. Low ring foot; otherwise like **686**. Worn black glaze. Letters in relief on base around two concentric grooves: ≥ω. No traces of other letters, although base is intact.

C 19: 3, bronze-casting pit: late 2nd century B.C.

691 (L 1816). Pl. 50.

H. 0.031 m.; W. 0.062 m.

Intact except for chips from filling-hole and side of nozzle; latter restored. Low base-ring, sharp angle along bottom of nozzle. Imbricated leaf pattern on top; double rosette in relief on concave top; usual palmette on nozzle. Red to brown glaze.

Provenance as of **686**.

692 (L 3690). Pls. 24, 50.

Max. dim. 0.125 m.; W. of lamp 0.061 m.

A lower mould, intact except for part of side walls. Base-ring; nozzle angular at bottom, as on preceding lamp. On the exterior top surface, an incised H. Three string grooves preserved, one on either side of nozzle, a third on right side. Pinkish buff clay, unglazed.

TYPE 51 C

Late Hellenistic Relief Lamps; Pointed Undecorated Nozzles

Nos. **693-694** (and 2 others inventoried). Plate 50.

Late years of 2nd century B.C. and down to 86 B.C. Dating based on stylistic similarities to Type 51 B and the finding place of **693**.

This small group of lamps abandons the decorated nozzle which had been a feature of most relief lamps since Type 45 A, in the 3rd century B.C. The plain nozzle combined with a decorated top appeared in the later imported Hellenistic lamps, however, such as the influential Types 49 A and 50 A. These latter are doubtless the prototypes for this new group, which flourished (in later versions) into the early Roman period, after 86 B.C.

The bottoms are always raised and circular, with the bottom end of the nozzle flush with the raised base. When the mould is worn the round base gives the illusion of being pointed and continuing into the bottom of the nozzle formation; this arrangement was to be common on lamps of the later 1st century B.C. and the early 1st century after Christ. The plain nozzle is rounded or slightly angular on top and ends in a pointed termination. Both of the catalogued examples have restored tips, but one of the uncatalogued specimens shows that its nozzle could not have had the earlier Hellenistic rounded end. The filling-holes are set in small round centers that are flat or nearly so, with a raised ridge encircling the whole top and sometimes also the filling-hole. There is always a vertical ribbon handle; sometimes a solid cornucopia-shaped or delphiniform lug appears high up on the left side of the shoulder.

The moulded decoration is of two types. **693** shows an imbricated leaf pattern, like that appearing on **691** of Type 51 B. Lamps with this pattern have the lug on the left side and a rosette on the right side, a combination that will continue on lamps made after 86 B.C. The other decorative arrangement is simpler, a moulded rosette on either side of the body with no other adornment.

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Attic clay and fairly good black or brownish red glaze, both inside and out, indicate an Athenian origin for this little group. None is signed, nor are any moulds preserved.

693 (L 2542). Pl. 50.

H. 0.025 m.; W. 0.061 m.

Intact except for tip of nozzle; restored. Two ridges around filling-hole; circlet of small raised dots around slightly depressed top. Imbricated leaf pattern on shoulders, with delphiniform lug on left side and rosette on right. Glaze fired brownish red.

E 6: 2, cistern system: west chamber, supplemental filling, late 2nd and earliest 1st centuries B.C.

694 (L 1362). Pl. 50.

H. 0.032 m.; W. 0.056 m.

Intact except for handle and end of nozzle; latter restored. Raised ridge around depressed top. Rosette on either shoulder. Fair black glaze.

TYPE 51 D

Very Large Late Hellenistic Relief Lamps; Pointed Nozzles

Nos. **695-696**. Plate 51.

Late 2nd and early 1st centuries B.C.

If but one of these lamps had been found it might have been considered an exceptionally large variant of Type 48. Fragments of at least three are from fills of around 86 B.C. There were presumably few of these monstrous examples made, but as such they are sufficiently important and distinctive to be classed as a separate type.

The huge size is their most striking characteristic. They are the mouldmade counterparts, in size at least, of the large wheelmade Type 37 B. The base is circular and raised, slightly concave, and on **695** ornamented with an incised eight-petalled rosette. The lower sides are sharply rounded, the upper sides gently curved. The filling-hole is in the center of a deeply depressed circular center, which is bordered by two pronounced concentric ridges. There is a broad vertical ribbon handle; neither example is preserved sufficiently to show whether or not decorative lugs were used.

The nozzle formation is distinctive, with an oval wick-hole encased within a pointed termination and flanked by snail-shell volutes. On **695** these volutes are ornamented by small punches. The top of the nozzle is flat and offset, narrower than its base. Along the top are three ridges, descending from the body of the lamp and converging at a point on the rim of the wick-hole, which is in turn bordered by a neatly-made raised ridge; other ridges outline each side of the nozzle's top. It is possible that these large lamps had more than one nozzle, although none is sufficiently preserved to make this fact certain.

The top of the lamp is decorated with a radiating design of long, neatly made tongues, arranged closely together like the ray pattern so common on Type 48 A. The clay is Attic as well as the good black glaze. The glaze on **695** is scraped from the groove between the two concentric ridges separating the top from the sides. This decorative scraping is seen on other lamps, both wheelmade and mouldmade, of the very early 1st century B.C., and may be taken in itself as a criterion for dating in these years.

Such large and sophisticated lamps may have been used in wealthy households, but their size also suggests a sanctuary use. Both of the catalogued specimens, although found with household pottery, are from cisterns not very far from sanctuaries on the Areopagus and on Kolonos Agoraios. **696** was accompanied in its cistern by several multi-nozzled wheelmade lamps that might suggest provenance from a sanctuary.

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A later version of Type 51 D, made during the 1st century B.C., has some additional early Roman characteristics and is considered under Type 52 G.

695 (L 3313). Pl. 51.

Rest. H. 0.086 m.; Rest. W. 0.166 m.

Several non-joining fragments preserving parts of nozzle, top, sides, bottom, and handle. All restored except relief pattern on top. Grooved rosette on bottom with eight angular leaves, four of them overlapping the others, alternately. Areas missing where a lug might have been and where nozzle (or nozzles) might have been attached. Ridges on nozzle, but their projection to central concavity conjecturally restored. Small punches on snail-like volutes of nozzle. Tongue pattern on top. Partly peeled black glaze, inside and outside. Glaze scraped between ridges around top.

N 20: 4, cistern: dumped filling, thrown in during second quarter of 1st century B.C., containing mostly debris resulting from Sulla's sack in 86 B.C.

696 (L 3156).

Pres. H. 0.105 m.; Pres. L. 0.105 m.

Nozzle only, similar to nozzle of preceding in every way except this is slightly smaller and the snail-shell volutes are plain, not punched. Peeled black glaze.

D 11: 4, cistern: bottom filling, late 2nd to early 1st centuries B.C.

TYPE 51 VARIANTS

Various Late Hellenistic Relief Lamps; Pointed and Lined Nozzles

Nos. **697-699**. Plates 25, 50.

Late 2nd and early 1st centuries B.C. to 86 B.C. Dating based on stylistic similarities to Types 51 B, 51 C and late examples of Type 48 A, as well as on the finding place of **698**.

These three lamps differ in details, which are considered under their catalogued descriptions, but they all bear some relationship to Type 51 rather than to other types, and are a miscellany that were made shortly before the disastrous events of 86 B.C. All have pointed nozzles, vertical band handles, and decorated tops and nozzles that follow established patterns. **697** looks backward to Type 48 A, but it has the pointed nozzle of other types that come in after the middle of the 2nd century B.C. **698** and **699** look forward; they have some aspects of Types 51 B and C, but certain traits continued into the early Roman period of the later 1st century B.C. These two were both signed by the fabricant Apollonides who survived the Sullan disaster to continue the manufacture of later lamps in Athens. An Apollonides is also known as a potter of this period.[159] All lamps in this group of Type 51 Variants show by their clay and glaze that they were locally produced.

697 (L 3871). Pl. 50.

H. 0.040 m.; W. 0.082 m.

Intact except for handle and minor chips. High raised base; solid lug cast in upper mould only; pointed nozzle with pair of flaring grooves on its rounded top. Large filling-hole in concave top bordered by circular ridge. Ribbed upper body with impressed dots along alternate ribs. Pinkish buff clay; worn glaze inside and out fired red. This lamp may well have emerged from plain moulds and been decorated by incision when in a leather-hard state before firing.

698 (L 3307). Pls. 25, 50.

H. 0.044 m.; W. 0.074 m.

Intact except for end of nozzle. Broad raised circular base; parallel ridges on nozzle. Three concentric ridges around filling-hole; rosette on right side and lug on left, delphiniform or cornucopia-shaped, the combination recalling **693** of Type 51 C. Moulded rays on body. Yellow buff clay, worn black glaze inside and out. On base, a relief signature in two lines, retrograde, having been incised on the mould: ΑΠΟΛΛΩ | ΝΙΔΟΥ.

N 20: 4, cistern: dumped fillings, thrown in

[159] He signed a Megarian bowl (P 16096) found in a deposit with sherds of the late 2nd century B.C.

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during second quarter of 1st century B.C., containing mostly debris from Sulla's sack in 86 B.C.

699 (L 2089). Pls. 25, 50.

H. 0.026 m.; W. 0.054 m.

Intact except for handle. Raised base, concave beneath. Small solid lug; short nozzle enclosed by narrow ridged lines converging to point at top; small raised tongue between these lines, as on Type 53 A. Two concentric ridges around filling-hole. Imbricated leaf pattern on upper body as on Type 51 C. Lamp neatly made, recalling crispness of Type 51 B. Thin red glaze. On base a relief signature curving around, retrograde, the letters having been faintly incised on the mould: ΑΠΟΛΛΩΝΙ[ΔΟΥ].

TYPE 52 A

Early Roman; Rays with Rosette and Lug (Early)

Nos. **700-704** (and 3 others inventoried). Plates 25-27, 51.

1st century B.C., *ca.* second to third quarters. Dating based on some stylistic similarities to Type 51 C, and on the finding place of **700** and **702**.

These lamps form a kind of transitional group from the vast bulk of lamps decorated with rays made before 86 B.C. to those manufactured in Athens after that disastrous year. It is quite possible that a few of these were made just before Sulla's invasion. One is signed by Apollonides whose factory flourished both before and after the sack of Athens. The finding place of **700** and **702** would allow a possible date before 86 B.C., although the inference is that they were made after that year. One assumes that very little production took place in the years immediately following Sulla, but when the industry was revived the lamps of Type 52 A were among the first to be produced.[160] The decoration of the lamps recalls that seen occasionally on Type 51 C, yet it was to appear more frequently on types of the late 1st century B.C.

The normal lamp has a simple circular raised base, sometimes concave. The double-convex body has a vertical ribbon handle, a large filling-hole surrounded by several concentric grooves and ridges, and always a solid lug. The lug is usually a slim delphiniform or cornucopia-shaped device, but **703** introduces a lug in the shape of a flaming torch, an appropriate *insigne*. Except on this lamp, Type 52 A always has a moulded rosette on the right side, as seen occasionally on Type 51 C. The tops are invariably decorated with the ray pattern, seen so often on both earlier and later lamps. Sometimes there is an encircling collar around the entire lamp.

The nozzles form one criterion of the type. Very long and bluntly pointed, they are rounded on top and have a pattern of nine to eleven parallel ridges, each one, except for the central one, ending in a small spiral. The nozzles are invariably rounded on their under sides.

Attic clay and fairly good although worn black glaze testify to an Athenian origin; occasionally the glaze is scraped away from the edge of the collar, when such exists. Three fabricants' names appear; they include Apollonides who had produced examples of Type 51 Variants and Ion, not known earlier, who signed two of these Agora examples. Ion signed other lamps of the later first century B.C.; this later appearance of his name (on Type 54 C) is further evidence to corroborate a date for Type 52 A in the 1st century somewhere between 86 B.C. and its last quarter. A third maker, not known previously nor afterward, is Aphrodisios who carefully signed **704** in relief and added a dolphin below. This is a well known Athenian name among public figures in this period, but it is not known as that of an artisan. Perhaps this fabricant who apparently produced few

[160] Two of these, although not found in trustworthy contexts, were associated with pottery fragments that seem far more characteristic of the middle years of the 1st century B.C. than of its first decade.

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signed works belonged to a distinguished family and for that reason added his personal device, a family *insigne*, the dolphin of Aphrodite.

700 (L 1787). Pls. 27, 51.

H. 0.030 m.; W. 0.072 m.

Intact except for handle and chips from high vertical collar; latter restored. Small cornucopia-shaped lug on left side, rosette on right. Two drain-holes at base of nozzle. Worn black glaze, scraped from edge of collar. Signature on base, incised before firing: ΙΩΝΟC. From same moulds as succeeding lamp.

E 14: 3, cistern shaft: middle filling, beginning of 1st century B.C. to third quarter.

701 (L 2221).

H. 0.030 m.; W. 0.060 m.

Intact except for handle. Like preceding in every way (from same moulds) except no surrounding collar nor drain-holes. Worn black glaze. Signature on base incised before firing: ΙΩΝΟC, exactly as on preceding; cf. Plate 27.

702 (L 1770). Pl. 25.

H. 0.030 m.; Est. W. 0.070 m.

Complete except for handle and right side. Like 700, including collar with scraped top. Good black glaze. On the base, in relief and retrograde (incised in the mould) a signature in two lines: ΑΠΟΛΛ | ΩΝΙΔΟΥ.

Provenance as of 700.

703 (L 4356). Pl. 51.

H. 0.029 m.; W. 0.071 m.

Intact except for handle and minor chips. Torch-shaped lug; no rosette. Raised band with punched dots around flat top. Incised jewelled tongue pattern, rather than rays, on body; incised lines on nozzle. All of the decorative elements could have been incised on a plain lamp before firing. Grayish buff clay; very worn dull black glaze.

704 (L 4438). Pl. 26.

Pres. H. 0.025 m.; Est. W. 0.065 m.

Fragment preserving part of base and portion of upper part with cornucopia-shaped lug. Good black glaze. On base a signature in two lines, in relief: ΑΦΡ[Ο] | ΔΙCΙ[ΟΥ]. Below this, a dolphin drawn in relief (from incised outline in mould).

TYPE 52 B

Early Roman: Rays with Rosette and Lug (Late)

Nos. 705-713 (and 13 others inventoried). Plates 27, 28, 51.

Corinth: classified under Type XVIII.

Last quarter of 1st century B.C. and into early years of 1st century after Christ.

These later variants of Type 52 A can be easily distinguished from their predecessors, despite the uniformity of the decorations in both types. Type 52 B always has an almond-shaped base, usually flat but sometimes slightly concave or raised and with the effect of a base-ring. The almond-shaped base appears on Roman lamps in the last quarter of the 1st century B.C. but never earlier. The double-convex body is similar to that of the preceding type, together with the customary vertical band handle and the little round center that is surrounded by a circular ridge and nearly entirely occupied by the filling-hole. The decoration of the upper body is the same, with a ray pattern on which are superimposed a solid lug and a rosette, on the left and right sides respectively. The lugs are of various shapes; a cornucopia diagonally banded appears often, as does a device that seems to be a torch with a fluted handle and conventionalized flame. A third lug device appears on some lamps, very low in the body but cast only in the upper mould, that portrays a thunderbolt with a narrow grip between two effulgent flames. The form of the rosette does not change.

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The nozzle formation is another criterion that separates Type 52 B from 52 A. Here it is a long projection with three parallel ridges along the top; the two side ridges flare out at their ends and turn back sharply to form little volutes either side of the wick-hole; the central ridge ends in a point at the edge of the wick-hole, which is contained in a large flat pointed termination. There is a small impressed dot on either side of the triangular tip of the nozzle. All of these features are intended on every lamp, but worn moulds and careless workmanship have sometimes obliterated one or more of the small details.

The rather thin brittle clay is Attic. The glaze is also thin, often no more than a diluted wash and carelessly applied. It normally is used for the entire outside and inside coating, but one does not see here the decorative scraping away of the glaze from the edge of the encircling collar, when such a device is used to surround a lamp, as often appeared on earlier lamps of the 2nd and 1st centuries B.C. The thin glaze or wash is sometimes very poorly applied, with no attempt to cover completely the lower parts of the body. In such cases the wash dribbles down in an unsightly way from the coated surfaces above. This was to be characteristic of many Athenian lamps of these years, although such poor workmanship might be thought characteristic of later Roman periods. It must not be forgotten that although many very handsome lamps were made in Athens around the turn of the era, inspired by Italian prototypes, a substantial amount of shoddy work was produced like these, utilizing old-fashioned designs and providing the poorer citizens with cheap lamps.

Several manufacturers are known. Two lamps are signed by Proteas, the name being incised in the genitive before the lamps were fired. His signature appears also on lamps of other types of this period. Isidotos also signed two, in the same manner; he also will produce other designs during these years. One lamp is signed with *sigma, omega, pi*; the letters are in relief since they had been scratched hastily in the mould when it was leather-hard. These letters stand for the name Sopatros, who is a well known fabricant signing many lamps in the late 1st century B.C. and early 1st century after Christ. The manufacturer made a small error, however, for the lunate *sigma* is turned the wrong way. This is understandable if one considers a hasty poorly-educated craftsman confronted with the task of writing a name backwards, as it had to be on the mould in order to come out correctly on the lamp.[161] A fourth fabricant is represented on a lamp signed by Poplios. This is the Hellenized form of Publius, and represents an Italian craftsman working in Athens. His name is not known on other lamps. The example that he signed, **706**, does not differ at all from other lamps of Type 52 B, and he incised his signature in the same manner and with the same letter forms as Proteas and Isidotos.

705 (L 2344). Pl. 51.

H. 0.034 m.; W. 0.066 m.

Intact. Almond-shaped base, slightly concave. Delphiniform lug. Thin brownish black glaze all over.

Q 13: 1, shaft: dumped filling, early 1st century after Christ.

706 (L 4087). Pl. 28.

H. 0.031 m.; W. 0.062 m.

Only bottom, lower part of nozzle, and half of upper part preserved. Like preceding. Dull brownish red glaze all over but only a trickle came through the nozzle into interior. Signature incised in soft clay, in two lines: ΠΟΤΠ | ΛΙΟΥ.

707 (L 4009). Pls. 28, 51.

H. 0.034 m.; W. 0.068 m.

Intact except for part of collar that surrounds entire lamp. Slightly concave almond-shaped base. Cornucopia-shaped lug, diagonally banded. Two drain-holes. Clay and glaze badly darkened by conflagration; glaze applied to upper body of

[161] It is conceivable that the fabricant had written a name in the normal left-to-right order on the mould, in which case it would appear retrograde on the lamp, and the three letters would then stand for the initial letters of a name beginning with ΠΩΣ. No lamp-maker in this or other collections, however, is known whose name begins with ΠΩΣ, so it seems reasonable to assume that the letters stand for Sopatros despite the reversed lunate *sigma*.

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lamp, only in thin trickles on lower parts. Signature incised in soft clay, in three lines: ΠΡΩ| ΤΕΟ|Υ.

708 (L 2105). Pl. 28.

H. 0.034 m.; W. 0.064 m.

Complete except for handle and nozzle. Like preceding except for absence of collar and drain-holes. Thin black glaze-wash, all over, including the interior. Signature incised in soft clay, in two lines: ΠΡΩΤ|ΕΟΥ.

709 (L 3702). Pl. 27.

H. 0.034 m.; W. 0.066 m.

Intact except for handle. Like preceding. Thin red glaze all over. Signature incised in soft clay, in two lines: ΙCΙΔ|ΟΤΟΥ.

710 (L 2868). Pl. 28.

H. 0.035 m.; W. 0.067 m.

Intact except for handle and tip of nozzle; restored. Like preceding. Signature in relief ϽΩΠ (no letters missing at either end).

Agora, Pottery of the Roman Period, G 219.

711 (L 2058). Pls. 27, 51.

H. 0.033 m.; Est. W. 0.062 m.

Complete except for handle and most of right sides of body and nozzle. Flat almond-shaped base. Lug in form of simplified torch with flame and fluted handle. Thin red to black glaze all over but only a few trickles on interior, through nozzle. Signature incised in soft clay, in three lines: ΙCΙ|ΔΟΤ|ΟΥ (although the part where the rosette presumably existed is not preserved, this lamp is assigned to Type 52 B because the nozzle formation, ray pattern, and position and size of the lug agree perfectly with this type and not with the succeeding types).

712 (L 2482). Pl. 51.

H. 0.034 m.; W. 0.069 m.

Complete except for handle, end of nozzle, and minor chips. Flat almond-shaped base with suggestion of base-ring. Lug in shape of thunderbolt, placed very low on left side. Thin red glaze all over, including interior.

R 13: 1, well: upper filling, early 1st century after Christ.

713 (L 2201).

H. 0.037 m.; W. 0.075 m.

Intact except for handle. Like preceding except that base is concave almond-shaped and a collar has been added around entire lamp together with two drain-holes. Thin brownish red wash on upper parts of lamp, only in smears and trickles on lower parts.

D 11: 1, well: dumped filling, turn of the era. Three additional examples of Type 52 B found here.

TYPE 52 C

Early Roman: Rays with Single Lug

Nos. 714-725 (and 16 others inventoried). Plates 25-28, 51.

Corinth: classified under Type XVIII.

Ca. third quarter of 1st century B.C. and at least into first quarter of 1st century after Christ.

The bases are always almond-shaped, and either flat or slightly concave; they are never raised. Those lamps with concave bases combined with a fairly decent black or red glaze are early within the type, certainly in the 1st century B.C., as 718 shows. There is always a narrow little flat top with a large filling-hole, the whole surrounded by a neat circular ridge. All of the Agora examples were given handles, and an occasional lamp has an encircling collar with the requisite drain-holes.

The lugs are the distinctive feature here. Often they are placed very low, on the left side of the lamp, and here they always have the shape of a small thunderbolt. This recalls the thunderbolt placed low on the left side of an occasional lamp of Type 52 B. The low thunderbolt is used throughout the entire duration of the type; it cannot be classed as an early or late feature. All the other lug designs occur fairly high up on the body, overlying the ray pattern of the shoulders; their varying designs include the delphiniform shape, the torch shape seen on Type 52 B, and a

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rough boss that could be either delphiniform or a cornucopia, punched with small dots. This last variety of lug occurs only on lamps having a certain distinctive nozzle formation, where there is a single groove on top that bifurcates and extends out to a dot on either side of the triangular termination. **722** illustrates this combination of the dotted lug and bifurcating groove. The nozzles on other lamps are the same as those seen on Type 52 B; the top decoration consists of three parallel ridges, the two side ridges turning back on themselves in a volute-like manner. A single lamp, **725**, has a short flat-topped nozzle with a grape cluster in relief as an ornament.

A mould for the tops of lamps shows that Type 52 C was produced in Athens; the clay of all is Attic, of a fairly good quality. It is used in a heavy fabric for some of the early Augustan examples and these have a thick glaze fired red, carefully applied all over, both inside and outside. The clay is somewhat thinner and the black glaze is very much poorer on the majority of the other examples of the type. No lamps have the careless applications seen occasionally on Type 52 B, where the lower parts were treated only with stray streaks dribbling down from the upper portions.

Several fabricants signed Type 52 C. Isidotos, seen on Type 52 B, signed one example with the first three letters of his name, in relief. Proteas, also appearing on Type 52 B, signed one example with the first three letters of his name incised in the soft clay before firing. Apollonides, known on Types 51 Variants and 52 A, signed another one in relief, retrograde. Other lamp manufacturers who signed at least one example of Type 52 C include Aineias (or Aineios) who signed his lamp in the mould, retrograde, so that the signature appears in relief and reading in the right direction; he will be seen on other carefully made lamps of this era that show the work of a deliberate craftsman. **716** bears a fragmentary signature in relief that may be that of Lysias (or Lysios or Lykios) who will be known from other lamps of this period. An unknown fabricant signed **724** with ≤A in relief; there are no manufacturers whose names begin with these two letters; the signature is presumably not retrograde for Asklepiades, who is known, because the carefully made *sigma* is not reversed. **723** is signed with a ligature that is difficult to transcribe, but possibly may be resolved as AΔPI–; Adrianos is not known elsewhere as a lamp-maker.

714 (L 4705). Pls. 27, 51.

H. 0.036 m.; W. 0.075 m.

Intact. Flat almond-shaped base. Lug in shape of thunderbolt very low on left side, made in both moulds. Three parallel ridges on nozzle, two dots on angles either side of wick-hole. Fairly good light brownish red glaze over all. On base in relief: ΙCΙ (for Isidotos), made in mould.

R 10: 1, well: dumped filling, 1st century after Christ (Augustan).

715 (L 2546).

H. 0.040 m.; W. 0.064 m.

Intact except for end of nozzle. Like preceding. Fairly thick fabric, red glaze over all.

E 11: 2, well: use filling, first half of 1st century after Christ.

716 (L 4153). Pl. 27.

H. 0.038 m.; W. 0.075 m.

Complete except for handle, end of nozzle, and chip from base. Like preceding. Thick fabric, good red glaze over all. On base, signature in relief, made in mould: ΛΥ . . ΟΥ (for Lykios or Lysias or Lysios?).

717 (L 3991). Pl. 25.

H. 0.032 m.; W. 0.082 m.

Intact except for handle and minor chips. Fairly thin fabric, good but worn red glaze over all. On base a signature in relief (incised in mould) ΑΙΝΕΙΟΥ for Aineias or Aineios.

718 (L 2697). Pl. 51.

H. 0.031 m.; W. 0.062 m.

Intact except for handle; restored. Almond-shaped base, slightly concave. Lug and nozzle like preceding. Good thick clay, good black to brown glaze carefully applied all over.

Agora, Pottery of the Roman Period, F 100.

N 19: 1, cistern: final dumped filling, *ca.* 75-25 B.C.

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719 (L 1267). Pl. 25.

H. 0.030 m.; W. 0.062 m.

Intact except for handle and most of encircling collar that once enveloped entire lamp. Two drain-holes at base of nozzle. In other respects like preceding. Thick clay, worn black glaze all over. Signature on base in three lines, in relief, retrograde; the hand almost cursive as letters were incised in soft clay of mould before firing: ΑΠΟΛ ΛΩΝΙ ΔΟΥ.

720 (L 3552). Pl. 28.

H. 0.034 m.; W. 0.064 m.

Intact except for handle and end of nozzle. Like preceding in every respect, including clay and glaze. On base a signature cut in lamp when leather-hard: ΠΡΩ (for Proteas).

721 (L 3629). Pls. 27, 51.

L. overall 0.131 m.; W. of lamp made from this 0.079 m.

An upper mould, intact. Torch-shaped lug with fluted handle, very low on left side of lamp. Nozzle formation like preceding. Buff Attic clay, finished very smoothly. On back of mould incised letters: ΛΛ. Six incisions around edge of mould, outside, for strings to bind this with lower mould during manufacture.

722 (L 1537). Pl. 51.

H. 0.033 m.; W. 0.065 m.

Intact except for handle. Slightly concave almond-shaped base. Amorphous lug with small punched holes made after lamp was cast, while leather-hard. Single groove on nozzle, bifurcating and ending in two impressed circles. Thick clay, badly worn black glaze all over.

723 (L 4353). Pl. 28.

Est. H. 0.032 m.; Est. W. 0.066 m.

Fragments of left side and base from lamp exactly like preceding. Hard thin clay, worn red glaze all over. On base letters in relief, forming a ligature; possibly to be read ΑΔΡΙ if the initial character is presumed to be a *rho* backward, a mistake (rectified by the actual *rho*) by the fabricant unused to cutting inscriptions retrograde (in the mould).

724 (L 3010). Pls. 28, 51.

H. 0.032 m.; W. 0.061 m.

Intact except for tip of nozzle. Flat almond-shaped base. Lug high on body in form of flaming torch. Nozzle like 722 *supra*. Firm fabric, badly peeled dull black glaze all over. On base, letters in relief, ΣΑ, very carefully made (presumably not retrograde for ΑΣ and thus Asklepiades).

725 (L 3120). Pl. 51.

H. 0.026 m.; W. 0.054 m.

Intact. Small slightly raised circular base, a suggestion of a point toward nozzle. Delphiniform lug high on left side. Grooved ridge around filling-hole. Short flat-topped nozzle with grape-cluster in relief between two grooves. Rays are more like tongues and swirled rather than straight. Dull black glaze all over, much peeled.

E 14: 2, well: use filling, 1st century after Christ.

TYPE 52 D

Early Roman Rays with Double Lugs

No. 726 (and 2 others inventoried). Plate 51.

Ca. third quarter of 1st century B.C. to early years of 1st century after Christ. Dating based on stylistic similarities with Type 52 C and other lamps of the period between Sulla and Augustus.

This small group of lamps shows a revival of interest in an early Hellenistic motif, a pair of lugs as ornamentation. These appeared as early as the 3rd century B.C. on Types 45 A, B and C. This manifestation in the post-Sullan period may be considered less as a proper revival than a regularization of the lug and rosette theme that appears on contemporary Type 52 B.

In every respect these lamps are characteristic of the second half of the 1st century B.C. The

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large base is flat and almond-shaped, the ray pattern is finely detailed, the little flat top is surrounded by a broad low ridge. All of these lamps have handles. The lugs are uniformly in the shape of a cornucopia, placed fairly high up on the body and cast in the upper mould only. The nozzle is exactly like that of Type 52 C, the popular variety with three ridges along its top that is seen so many times on post-Sullan lamps.

The clay is Attic, the glaze is a good reddish brown application all over the lamp, evenly coated. None of these lamps is signed, unfortunately; one would like to know the names of the craftsmen who turned out these neat little productions. Two of the Agora examples are from the same mould, **726** and one of the uncatalogued examples (L 1825). It is likely that one shop produced the whole type, probably during a very few years of the rather wide era that can be assigned to it.

726 (L 4305). Pl. 51.

H. 0.035 m.; W. 0.07 m.

Intact except for handle. Flat almond-shaped base. Dull red brown glaze, somewhat chipped.

TYPE 52 E

Early Roman: Rays without Lugs; Flat Tops; Grooves on Nozzles

Nos. **727-738** (and 13 others inventoried). Plates 25-28, 51.

Corinth: classified under Type XVIII.

Third quarter of 1st century B.C. into the earliest years of the 1st century after Christ (Augustan).

A number of craftsmen in the second half of the 1st century B.C. decided to make lamps without any lugs at all. The lugs had not served any useful purpose for a generation or so; they were decorative and vestigial remnants of a device that was functional only when pierced. After the Augustan period the lug was never again to be seen on Roman lamps.

Type 52 E is not so uniform as its predecessor. There are slight variations in the bases and nozzle formations, but it is impossible to date them as occurring early or late within the type. Some lamps have a circular base; this might be thought an early feature, yet it occurs not only on **736**, a known early lamp, but also on **735**, one of the latest examples. Usually the bases are almond-shaped, typical of lamps around the turn of the era; these are slightly concave or flat, with the possibility existing that the former may be early and the latter more advanced within the years of the type's floruit.

The bodies are uniformly double-convex, with a carefully modelled ray pattern on the upper parts. There is always a thick vertical band handle and a small flat circular top surrounded by a broad raised ridge. The filling-hole usually occupies most of the top, although on occasion it may be small in proportion to the diameter of the top, as **736** or surrounded by its own little ridge, as **734**. The nozzle is always long and pointed; its usual decoration is that of the two preceding types: three parallel ridges of which the outer two turn back on themselves, and an impressed circle either side of the wick-hole. The variations on the nozzle design are slight; **736** has multiple ridges and grooves on its top; **735** omits the flaring returns and the impressed circles; **737** has a pair of grooves that curl back at both ends with an impressed palmette between. These three lamps show the only exceptions to the standard nozzle design seen not only on this type but often on other types during the years between Sulla and Augustus.

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The clay of Type 52 E is Attic. The lamps are glazed all over with sometimes a good thick black or red glaze, sometimes with a thin red wash. When the thin wash is applied it is often carelessly used without a complete coverage of the under sides. Such a treatment is typical of other types made around the turn of the era.

A large number of signatures turns up on Type 52 E. Apollonios appears once, not to be confused with the Apollonides previously known. His name signed in the genitive is in high relief, having been incised in the mould retrograde. Two catalogued lamps and two uncatalogued examples all bear the cryptic signature ΠΑ, incised on the lamp itself when leather-hard, with a small *pi* and large *alpha*. Since it is very clear that the inscriptions were incised rather than being the imprint of raised letters on the mould, the two letters must be read in their proper sequence, left to right. If they had been made in the mould it would seem natural to read them backwards, interpreting them as the first two letters of Apollonides or Apollonios. It is possible that the well known lamp-maker's name, Paramonos, which appeared on Types 49 A and B, was pirated or maintained in this later period, reduced to its first two letters. It is odd that the initial *pi* is so much less emphasized than the *alpha*. Perhaps the large *alpha* that appeared alone on Type 48 B came to be associated with a certain high quality of workmanship, and a later fabricant during the post-Sullan years of the first century B.C., wishing to identify himself with a grade-A product, purposely made his initial *pi* very small. It will be seen that shortly after this period, beginning around 25 after Christ, the *alpha* is used alone for a long duration, at least two hundred years, on many divergent types of lamps. This later and profuse use of the *alpha* can hardly be associated with the product of a single factory and might well signify a standard of quality that was desirable even though some of the products fell far short of the mark.

Another lamp is signed by Isidotos, in the same manner that he used on a couple of lamps of Type 52 B. Sopatros signed another, in relief but with the letters reading correctly from left to right showing that it had been incised in the mould retrograde. Aineias (or Aineios) placed his name on 729 in the same manner. Dionysios appears once, with his signature incised directly on the clay before firing; his products are many, although this is the first of his signatures to be met. 730 is signed with two letters in relief, ΕΙ, made in the mould. No known fabricant has a name beginning with these letters, nor are these two letters seen on any other lamp in the Agora or other collections. A large number of names could be suggested that begin with ΕΙ; Eirenaios is the most common of them that occurred in Athens in this era. It is not inconceivable, of course, that the ΕΙ is a variant spelling for ΑΙ, and that the lamp is one of the products of Aineios' or Aineias' shop. An unlettered fabricant might spell with either an *alpha* or *epsilon* the syllable that would be pronounced about the same in either case. Two lamps of Types 52 G and H are signed with ΑΙ, to be taken as the first two letters of this same manufacturer's name. Another lamp, 738, has letters in relief on its base, but they resemble no known signature and are difficult to decipher; they are probably retrograde, having been incised in the unbaked clay of the mould in their correct order.

727 (L 2983). Pls. 27, 51.

H. 0.032 m.; W. 0.058 m.

Complete except for parts of handle and minor chips; restored. Slightly raised circular base, pulled out opposite nozzle to suggest an almond shape. Standard nozzle with three parallel ridges, two impressed circles. Worn red to black glaze all over. Signature incised in the unbaked clay ΠΑ, the *pi* much smaller than the *alpha*.

Agora, Pottery of the Roman Period, G 131.

D 4: 1, cistern: Layer II A, very early years of 1st century after Christ.

728 (L 3744).

H. 0.035 m.; W. 0.062 m.

Intact except for handle and parts of nozzle. Slightly raised base, concave and almond-shaped; otherwise exactly as preceding with small *pi* and large *alpha*. Two more uncatalogued lamps like this in every respect, including signatures: L 1961 and L 4456.

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F 19: 6, cistern: filling of first half of 1st century B.C. Another inventoried example of Type 52 E found here.

729 (L 4580). Pl. 25.

H. 0.032 m.; W. 0.066 m.

Intact except for handle. Concave almond-shaped base (not raised); otherwise exactly like preceding. Thin red glaze or wash over most of the lamp, but only partially applied to lower parts. Signature in relief in two lines, AIN <E> II OY, reading from left to right and from nozzle end to handle end.

730 (L 3855). Pl. 26.

H. 0.031 m.; W. 0.058 m.

Intact except for handle. Like preceding. Poor brownish red glaze or wash all over, badly worn. Signature in relief, EI (it might have been incised in the mould retrograde or normally, the interpretation depending upon which way the lamp is held while reading).

731 (L 3646). Pl. 28.

H. 0.036 m.; W. 0.064 m.

Complete except for upper part of nozzle and parts of body. Flat almond-shaped base; otherwise like preceding. Thin brownish red glaze well applied all over. Signature in relief in three lines: CΩ|ΠA|TPOY.

732 (L 3726).

H. 0.037 m.; Est. W. 0.060 m.

Single fragment preserving nozzle with parts of top, sides, and base. Like preceding. Dull red glaze well applied all over. First three letters of signature, incised before firing: ICI, to be restored ICIΔOTOY. Incised exactly as 714.

733 (L 3685). Pl. 26.

H. 0.031 m.; W. 0.066 m.

Intact except for handle. Exactly like two preceding lamps except for addition of flaring collar around entire lamp and a drain-hole on either side of nozzle's beginning. Badly peeled red glaze all over. Signature in relief in two lines: ΔION| YCIOY.

734 (L 2647). Pl. 51.

H. 0.030 m.; W. 0.058 m.

Intact except for handle and parts of wide flaring collar. Flat almond-shaped base. Small ridge around filling-hole. Nozzle formation and drain-holes like preceding. Dull red glaze carefully applied all over.

Q 13: 1, shaft: dumped filling, early 1st century after Christ (Augustan).

735 (L 2982). Pls. 26, 51.

H. 0.028 m.; W. 0.057 m.

Intact except for part of upper portions, restored in plaster. Slightly raised circular base, concave. Very wide filling-hole; nozzle with two parallel grooves flaring out to enclose wick-hole; no impressed dots. Worn black glaze carefully applied all over. Signature in relief in two lines: ATTOΛ|ΛΩNIOY.

Agora, Pottery of the Roman Period, G 130.

Provenance as of 727.

736 (L 2721). Pl. 51.

H. 0.033 m.; W. 0.081 m.

Complete except for handle, parts of nozzle, and much of high flaring collar; restored. Circular raised base, slightly concave. Small filling-hole in wide flat top. Flat-topped nozzle with multiple grooves and ridges, the two outer ridges bent back on themselves as on normal nozzles of Type 52 E. No impressed circles beside wick-hole. Ray design omitted under handle. Two drain-holes beside nozzle. Reddish black glaze all over.

Agora, Pottery of the Roman Period, F 101.

N 19: 1, cistern: final dumped filling, *ca.* 75-25 B.C. Another inventoried example of Type 52 E found here.

737 (L 3122). Pl. 51.

H. 0.033 m.; W. 0.070 m.

Intact. Broad raised base, flat and almond-shaped. Double rays like long tongues on upper body, none under handle. Nozzle bears pair of flaring grooves turned back on themselves at wick-hole and curling into volutes at opposite ends; an impressed palmette between. An impressed dot either side of wick-hole. Dull black glaze all over.

738 (L 1843). Pl. 27.

H. 0.025 m.; W. 0.037 m.

Complete except for handle and front parts with nozzle. Miniature lamp; base like preceding. Little ridge around filling-hole that occupies all of top. Normal rays on body. Worn red glaze all over. On base letters in relief, in two lines; difficult to read; a signature (?).

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TYPE 52 F

Early Roman: Rays without Lugs; Flat Tops; Channels on Nozzles

Nos. **739-741** (and 3 others inventoried). Plate 51.

Late 1st century B.C. into early 1st century after Christ. Dating based on stylistic similarities with Type 52 E and on the finding place of **740**.

These neatly made lamps are so completely homogeneous that they could well be the work of a single anonymous fabricant working during the later years of the period of Type 52 E. He used the same small flat top with the broad flat ridge encircling it, seen on that type, but he went a step further. The flat top was connected with the wick-hole by a narrow channel, the sides of which are a continuation of the top's encircling ridge; these sides also take the place of the two outer ridges with which the nozzle was usually decorated in Type 52 E. The channel that results is useful, as any oil that oozes out of the wick-hole can be returned to the reservoir via the channel and filling-hole. Such a channel had appeared before, on Type 49 A, but it was not to achieve its greatest popularity until well on in the 1st century after Christ. There is a vestigial remnant of the third center ridge that was seen on Type 52 E, in the little raised tongue that emerges at the mouth of the channel adjoining the wick-hole. The triangular nozzle formation is completed by the addition of two impressed dots, exactly as in Type 52 E. The bottom of the nozzle is sharply angular in section.

The base of Type 52 F is slightly almond-shaped and always given a false ring foot, a simulated base-ring. This was made in the mould, of course, but appears as a slightly raised base that is pronouncedly concave within a narrow border. It is an exaggeration of the slightly concave almond-shaped base often seen on Type 52 E and other lamps of the later 1st century B.C. There is always a thick vertical band handle, an absence of lugs, and a pattern of rays on the upper portion of the lamp. The rays are neatly fashioned into long tongues or petals, recalling the tongues seen on **737** of Type 52 E.

The lamps come in two sizes. Both are of local Attic clay, but the large ones are covered with a thin red wash that is carelessly applied on the lower portions, leaving much uncoated; the small lamps have a black wash or thin dull glaze which was applied evenly all over but has worn badly.

739 (L 540). Pl. 51.

H. 0.025 m.; W. 0.054 m.

Intact. Thin black glaze or wash all over, but badly flaked.

740 (L 2199).

H. 0.025 m.; W. 0.055 m.

Intact except for handle. Like preceding in every way; presumably from same moulds.

D 11: 1, well: dumped fill, turn of the era. Another inventoried example of Type 52 F found here.

741 (L 4649). Pl. 51.

H. 0.040 m.; W. 0.080 m.

Intact. Thin red glaze or wash, carelessly applied to lower portions where it exists only in dribbles. A mass of clay left within the encircling ridge of the top shows that the lamp did not come cleanly out of the mould.

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TYPE 52 G

Early Roman: Rays without Lugs; Concave Tops (Early)

Nos. 742-743. Plates 25, 27, 51.

1st century B.C. Dating based on stylistic similarities in the nozzle formation to Types 52 B-E, and on the finding places.

These large handsome lamps may be considered in some ways a later development of Type 51 D. The nozzle formation, however, relates them to Types 52 B-E of the 1st century B.C.; here is seen the same use of three parallel ridges with the two outer ones curving back on themselves; there is also the pair of impressed circles at the sides of the wick-hole in its bold triangular enclosure.

The base is raised and circular, with a slight suggestion of concavity. The curving sides are decorated on their upper portions with a pattern that is basically rays, but carefully arranged into long deeply grooved petals or tongues, comparable to those on lamps of Type 52 F. The top is deeply concave, bordered by a narrow ridge. One of the lamps preserves its wide flat vertical handle. There are no lugs.

The Attic clay is of a fine quality; the good black glaze is thickly applied all over the exterior and on the floor of the interior. The quality of the clay and glaze would suggest a date fairly early in the 1st century B.C., as would the raised circular base. The nozzle formation could occur any time between the early 1st century B.C. and the early years of the 1st century after Christ. The finding place of 742 might suggest that this type flourished over a long period, but there are only two lamps in this type, very much alike, and it is more likely that they were made at about the same time, shortly after Athens was recovering from the Sullan invasion. In that case 742 would be a carefully cherished household possession or sanctuary lamp that had a useful life for a number of decades before it was broken and thrown away shortly after the turn of the era.

Both of the lamps are signed by fabricants known to have produced other wares during the 1st century B.C. One bears the letters AI, in relief, the first two letters of Aineias' (or Aineios') name, known from Types 52 C and E. The other lamp is signed in relief by Lysias (or Lysios or Lykios) in the genitive, who also signed Type 52 C.

742 (L 4711). Pls. 27, 51.

H. 0.058 m.; W. 0.120 m.

Several fragments preserving parts of handle, nozzle, top, sides, and base. Restored. Good black glaze all over. On base signature in relief reading from left to right: ΛΥ[Σ]ΙΟΥ (for Lysias, Lysios, or Lykios).

R 10: 1, well: dumped filling, 1st century after Christ (Augustan). This lamp would be one of the earliest objects from this deposit.

743 (L 2097). Pl. 25.

Pres. H. 0.052 m.; Est. W. 0.110 m.

Fragments preserving parts of base, nozzle, and a small bit of upper sides of a lamp exactly like preceding; two impressed circles on side angles of nozzle. On base letters in relief: AI (for Aineias or Aineios).

D 11: 4, cistern: bottom filling, late 2nd to early 1st centuries B.C. This lamp would be one of the latest objects from this deposit.

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TYPE 52 H

Early Roman: Rays without Lugs; Concave Tops (Late)

Nos. 744-752 (and 13 others inventoried). Plates 25, 27, 51.

Corinth: classified under Type XVIII.

1st century after Christ, from early years at least through third quarter.

Type 52 H is the degenerate offspring of Type 52 G and at the same time is very closely related to Type 50 B, especially in the design of the top and the nozzle. Although it seems to have flourished for nearly a century, with comparatively few changes within the type, its greatest popularity was probably in the second and early third quarters of the 1st century after Christ.

The usual form of the base is distinctive; it is prominently raised and completely flat, circular or very slightly ovular in shape. There are no almond-shaped bases here as seen so often on lamps of the 1st century B.C. and earliest years of the 1st century after Christ. A very few bases vary from the standard; a circular or oval base may occur that is flat or slightly concave rather than raised, and 746 has an oval base-ring with a moulded rosette within it. The tops are invariably concave and always surrounded by a circular ridge or groove, very often both. There is always a vertical band handle, sometimes flat but occasionally grooved down the middle. The handles tend to be thinner and narrower than those of previous decades; they are approaching the slimness that will be more characteristic of handles of the late 1st and early 2nd centuries after Christ. The pattern of rays on the upper body may be finely modelled as long petals or tongues, reminiscent of Type 52 G, or very crudely indicated, as on 750, or conventionally arranged as on most of Types 52 A-F. The degree of delicacy in the modelling of the rays is not, however, to be taken as a criterion for dating.

The short nozzles are like those of Type 50 B. Most of them have pointed ends, narrow flaring flat tops, and an impressed circle either side of the wick-hole. Although the majority of their tops are plain, a few have decorative grooves or ridges; these are perhaps early within the group and related to Types 52 B-E; of these 748, 749 and 751 have the three parallel ridges, the multiple ridges, or the flaring grooves that are known on the earlier types. The normal nozzle has an angular profile on its under side, but this is exchanged for a rounded profile on a few of the lamps with the variant grooves or ridges on top of their nozzles.

The presence of two moulds, one very fragmentary and uncatalogued, attests to local manufacture; the clay also seems in all cases attributable to Attica. The glaze varies; it is never very good, but ranges from a well-applied dull black to a thin red to a brownish wash that trickles unevenly over the lower portions.

Four lamps are signed. One bears the letters AI in relief, like an example of Type 52 G, and may be attributed to Aineias (or Aineios). Another has a single *alpha* in relief, like an example of Type 50 C; this was to be common on subsequent lamps, especially on those of the second quarter and middle of the 1st century after Christ. The *alpha* may stand for the initial of a fabricant or shop, or possibly, as suggested before, may be a symbol denoting prime quality, used freely by numerous artisans who occasionally lapsed from the high standards of workmanship implied. One lamp has the incised letters ΛA, presumably for a lamp-maker whose name begins with these letters; no certain one is known from this or other collections; there are numerous names in Attic prosopography to choose as candidates that begin with ΛA, but no certainty that any

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was a lamp-maker. A fourth lamp, 748, has an incised signature or signatures, in two lines. One line reads ΑΠ, which may stand for Apollonides or Apollonios; the lower line is incised upside down (not retrograde) and reads, when the lamp is held in the opposite direction, ΛΕ. There seem to be no missing letters. Perhaps this represents a collaboration between two fabricants, one already known through his full signature and the other one to be identified with the ΛΕ whose first two letters, carefully made in relief, are found on a fragment of a raised circular base, 840, which cannot be assigned to a particular type of lamp.

744 (L 2407). Pls. 27, 51.

H. 0.044 m.; W. 0.097 m.

Intact except for handle. Circular raised base. Ridge and groove around concave discus; rays terminating in petals; plain top on nozzle, two impressed circles at sides of wick-hole. Poor brownish black glaze all over, mostly peeled. On the base, incised, ΛΑ.

B 12: 1, well: use filling, accumulated from 1st to 3rd centuries after Christ.

745 (L 2345).

H. 0.031 m.; W. 0.061 m.

Intact except for handle and end of nozzle. Exactly like preceding except for size. Dull brownish black glaze all over.

Q 13: 1, shaft: dumped filling, early 1st century after Christ.

746 (L 1840). Pl. 51.

H. 0.045 m.; W. 0.096 m.

Intact. Oval base with eight-petalled rosette in relief, within base-ring. Ribbed handle. Groove around discus; simple ray pattern; plain top on nozzle, two impressed circles at sides of wick-hole. Flaring collar around entire lamp with two drain-holes at base of nozzle. Worn red glaze all over.

747 (L 653).

Max. dim. 0.055 m.; Est. W. 0.060 m.

Nozzle and fragment of upper portions and discus of a lamp like preceding, except for the omission of flaring collar and drain-holes. Thin red glaze all over.

748 (L 3119). Pls. 27, 51.

H. 0.036 m.; W. 0.064 m.

Intact except for parts of handle and chips from nozzle. Circular flat raised base. Ridge and groove around discus. Three parallel grooves on long nozzle, the two outer ones flaring back at their ends. Signature on base, incised in unbaked clay in two lines; one line reads ΑΠ; the lower one, when lamp is reversed, reads ΛΕ or ΝΕ.

E 14: 2, well: use filling, 1st century after Christ.

749 (L 4464). Pls. 25, 51.

H. 0.028 m.; W. 0.058 m.

Intact except for narrow handle and end of nozzle. Flat oval base. Ridge, but no groove, around discus. Four parallel ridges on nozzle, the two outer ones flaring back at their ends. Dull dark brown wash all over. On base a monogram in relief, a broken-barred *alpha*.

750 (L 4469). Pl. 51.

H. 0.033 m.; W. 0.058 m.

Intact. Flat oval base. Groove around discus. Narrow handle. Carelessly made broad rays. Two grooves and two impressed circles on nozzle. Thin dull brown glaze on top and trickling down over lower portions.

751 (L 4552). Pls. 25, 51.

H. 0.032 m.; W. 0.059 m.

Intact except for parts of thin handle. Oval flat raised base. Groove around discus. Rays like tongues or petals. Pair of grooves on nozzle flaring out to enclose wick-hole in an angular frame. Good black to red glaze all over. Signature in relief on base, ΑΙ, for Aineias (or Aineios).

752 (L 2809). Pl. 51.

W. of lamp from this mould 0.060 m.

A little more than half of an upper mould for a lamp like preceding; nozzle features missing. Two string-grooves on outer edges, opposite each other. Good buff clay.

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TYPE 52 VARIANTS

Early Roman: Rays with Various Other Features

Nos. **753-756**. Plate 51.

All from the later years of 1st century B.C. and the early years of 1st century after Christ. Dating based mostly on the finding places.

These variants have in common only the ray decoration on their upper portions. They are sufficiently distinctive to defy attribution to any of the preceding varieties of Type *52*, although they have many aspects recalling one or another of the subdivisions of Type *52*. There is no reason to believe that they are not all Attic; none is signed by its fabricant. The individual vagaries are noted below.

753 (L 1157). Pl. 51.

H. 0.040 m.; W. 0.075 m.

Intact except for chips from upper portions and parts of thin vertical band handle. Raised circular base-ring, enclosing eight-petalled rosette in relief, like that of **746** of Type *52* H. Concave discus surrounded by circular grooves and ridges. Rays on upper portion with traces of small rosette on either side. Triangular nozzle with three ridges and two impressed circles, as on Types *52* B-E. Device resembling a satyr's mask on nozzle. Pinkish buff clay, poor black glaze all over.

R 13: 1, well: upper filling, early 1st century after Christ (Augustan).

754 (L 2761). Pl. 51.

H. 0.036 m.; Est. W. 0.080 m.

Complete except for handle and most of sides. Circular base-ring. Concave top with wide ridge around it; narrow ridge around filling-hole. Broad rays or tongues on upper portions; existence of lugs uncertain. Two flaring ridges on top of nozzle, its sides decorated with multiple ridges like those of Type *52* A. Pink Attic clay, poor red to brown glaze, much peeled.

D 11: 1, well: dumped filling, turn of the era.

755 (L 413). Pl. 51.

H. 0.034 m.; W. 0.069 m.

Complete except for vertical band handle. Base has oval base-ring. Concave discus surrounded by groove, like that of Type *52* H. Broad rays, no lugs, on upper portion. Nozzle has spreading oval termination. Shaft of nozzle rounded and undecorated. Buff Attic clay; mottled black to brown glaze all over.

756 (L 4856). Pl. 51.

Max. dim. 0.052 m.; Est. W. of lamp 0.066 m.

Small fragment of mould for upper part of lamp with rays on body and three ridges on nozzle. Could be for any one of Types *52* B-E. Fine pinkish buff clay.

R 10: 1, well: dumped filling, 1st century after Christ (Augustan).

TYPE 53

Early Roman: Broad Tongue Pattern

Nos. **757-761** (and 2 others inventoried). Plates *27*, *52*.

First half of 1st century after Christ.

Type *53* forms a small group, the members of which are distinctive and unrelated to other early Roman lamps except in some small details. The usual base is flat and oval rather than

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pronouncedly almond-shaped. Occasionally the oval flat base may be raised, with a groove around its outer edge, as on 757. The double-convex sides have a very pronounced curve on their upper parts so that the body of the lamp has a resemblance to a fat pin-cushion. The flat circular top has a raised ridge around it, the whole somewhat wider and more pronounced than the tops of Types 52 B-E. The filling-hole is pierced in the middle of this plain top, without any surrounding groove or ridge. There is always a vertical band handle, sometimes grooved; never a lug of any sort. The decoration of the upper parts of the lamp is notable, composed of very broad convex tongues alternating with slim parallel ribs, the latter sometimes ornamented with a cable pattern. At the top of every tongue, forming a decorative circle around the discus, is a small nodule or petal. At the root of the nozzle, included in the circle of nodules, are two miniature spirals in relief, facing each other.

The nozzles are always plain with gently rounded tops. The usual termination is a wide oval one with a little flat band around the large wick-hole. This kind of nozzle has been seen rarely in the past. It was first introduced with Type 49 A, where it was a reflection of a metal prototype; most bronze lamps of the late Hellenistic and Roman periods bear this kind of swollen oval nozzle. A variant nozzle termination, used also with the plain rounded shank, is the pointed variety which has been seen so often on contemporary lamps. Here one finds the usual impressed circles, one on either side of the wick-hole and another circle at the tip. The third circle is not usually seen on preceding types, and here it is seen only in a well preserved mould. These impressed circles presumably represent vestigial rivets, which in some forgotten metal ancestor were used to attach the upper part of the moulded nozzle to its lower section.

The clay is Attic and the glaze comparable to that of contemporary types; on some lamps it is a fairly good black to brown glaze all over; on a few it is a thin reddish wash, carelessly applied to the lower surfaces.

Two lamps are signed. One bears the broken-barred *alpha* in relief, which has been seen already on Type 52 H, and which will be fairly common on other lamps of the second quarter of the 1st century after Christ. Another is signed with an incised signature, IN or NI, presumably the latter; this very likely represents the first two letters of a name otherwise unknown among lamp-makers in Athens at this time.

757 (L 3949). Pls. 27, 52.

H. 0.038 m.; W. 0.074 m.

Intact. Oval base, raised with groove around outer edge. Broad convex tongues with cabled ribs between. Pointed nozzle with an impressed dot either side of wick-hole. Badly worn red to black glaze all over. On bottom incised letters, IN or NI, for fabricant's name.

758 (L 3148). Pl. 52.

Max. dim. 0.141 m.; W. of lamp made from mould 0.078 m.

Upper mould, intact except for piece from back, for a lamp exactly like preceding, but a trifle smaller. Traces of a third impressed circle on tip of nozzle. On the outside of the mould, four incised dots arranged diamond-wise. Pinkish buff clay.

759 (L 2648). Pl. 52.

H. 0.038 m.; W. 0.060 m.

Intact except for handle and parts of nozzle; restored. Plain flat oval base. Convex tongues alternating with thin plain ribs. Oval nozzle with narrow flat edge encircling wick-hole. Dull brownish glaze all over, badly flaked. From same mould as another specimen, L 3130.

Q 13: 1, shaft: dumped filling, early 1st century after Christ.

760 (L 2760).

Est. H. 0.036 m.; W. 0.060 m.

Lower parts and handle missing of a lamp exactly like preceding. Thin red wash applied to upper portions and in dribbles on lower parts.

D 11: 1, well: dumped filling, turn of the era.

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761 (L 2971). Pl. 52.

H. 0.032 m.; W. 0.056 m.

Intact except for handle; restored. Like preceding, but circlet of nodules and small spirals very faint. Thin reddish black wash all over. On base a broken-barred *alpha* in relief like that of 749 of Type 52 H.

Agora, Pottery of the Roman Period, G 133.

D 4: 1, cistern: Layer II B, second quarter of 1st century after Christ.

TYPE 54 A

Early Roman: Garland of Olive Leaves and Berries; Long Grooved Nozzles

Nos. 762-771 (and 15 others inventoried). Plates 25, 26, 52.

Corinth: classified under Type XVIII.

From early 1st century B.C. to early years of 1st century after Christ.

Type 54 A is a very popular early Roman group that was among the first to be made in Athens after the Sullan destruction of 86 B.C. There is no certain trace of this unique form before the sack of Athens. The pattern may have been introduced by a Roman prototype, perhaps a metal one, but it was taken up immediately and enthusiastically by the local fabricants, all of whom have Greek names when they appear as signatures. Perhaps the decorative pattern is significant, an olive wreath that would commemorate a new era of peace, although a bitter one for the Athenians. The olive wreath might also recall to the Athenians in a chauvinistic way the symbol of their goddess and their agricultural wealth that had been one of the foundations of Athenian economy. The olive also suggests the source of the oil burned in the lamp.

The base is either oval or almond-shaped. The earlier lamps have the former, appearing as a kind of base-ring or a raised oval that is slightly concave. The later lamps have the latter formation, where the base usually appears as slightly raised with a concavity, but sometimes as a plain flat almond. These distinctions in the base are the only means of separating the earlier lamps in the group from the later ones. In every other respect there is no morphological change during the century that Type 54 A flourished.

The sides are double-convex; there is usually a flat vertical band handle; there is no lug. The nozzle formation is the distinguishing characteristic of Type 54 A. It is long and pointed, sloping sharply downward on the sides from a narrow flat top occupied by a single flaring groove which spreads out toward the wick-hole. At its end the groove becomes a triangular flat area bordered by its side ridges. There are two impressed dots either side of the wick-hole. At the start of the nozzle are three raised pellets, the central one heading the main groove, the two side pellets heading groups of three narrow ridges that separate the nozzle from the decorated body of the lamp, in a well articulated way. An occasional lamp, as 770, substitutes the three ridges of Types 52 B-E for the single flaring groove, but maintains the three pellets and their adjacent ridges. The under sides of all the nozzles are angular rather than rounded.

The filling-hole occupies most of the small flat center, which is surrounded by a narrow ridge. The flat center may sometimes be perceptibly wider, as on Types 52 B-E, and here the ridge around it becomes a wide flat band.

The top of the lamp is embellished with a carefully moulded open wreath of olive leaves and berries, starting from a knot under the handle and symmetrically arranged on either side to the ends, adjacent to the nozzle. This is the first appearance of an olive wreath on Athenian lamps, although somewhat similar garlands of other leaves are familiar decorations in the repertory of

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earlier Hellenistic lamps and will be the main characteritic of the Roman Type 55. A few lamps are enclosed by wide handmade flaring collars to receive any spilled oil, with two or three useful drain-holes for returning the oil to the reservoir.

The clay is Attic, but in the later lamps it is brittle and more apt to be buff than pink; the fine pinkish buff varieties of Attic clay common in Greek and Hellenistic lamps and pottery is seldom seen in fabrics made locally after the early years of the 1st century B.C. The lamps are glazed inside and outside with a thin glaze usually fired red or brownish black. A single lamp may be questionable; 771 has a thick very flaky clay that resembles Samian wares, although the clay could be a variant Attic ware.

The names of several fabricants appear on the lamps. Heras signed one, in the genitive; the letters are in relief that read in the right direction, showing that they were carefully incised in the mould retrograde. In the same manner Aineias (or Aineios) signed another lamp. These two signatures show that lamp manufacturers were taking deliberate pains, as Ariston had done a generation or two earlier with his Type 51 B's, to present their trade-names legibly and boldly, rather than with incised or retrograde names. The competition was keen in the later years of the 1st century B.C.; some individual craftsmen seem to have taken pride in their work and to have been alert to the values of a recognized name. Heras does not appear as a fabricant of other lamps, but Aineias (or Aineios) has signed a number of examples of various 1st century B.C. types, either with the genitive case of his name or with its first two letters.

The signature ΑΠΟΛ appears once, in relief but retrograde, with the inference that this may be either for Apollonides or for Apollonios, both of them known previously. One catalogued lamp, 768, and two uncatalogued examples all bear the cryptic ΠΑ, incised on the lamp itself when leather-hard, but with a small *pi* and a large *alpha*. This is the same signature seen on Type 52 E and it will appear again on some fragmentary bases. The lamp with thick flaky clay, 771, is signed by Sopatros who had carefully incised his mould retrograde to produce neat raised letters reading in the correct manner. This is his normal way of signing, as his other signatures show. Since Sopatros' other productions are all of Attic clay it is possible that this lamp may be of an unusual local fabric rather than an importation.

762 (L 2698).

H. 0.035 m.; W. 0.057 m.

Intact except for handle; restored. Small oval raised base, slightly concave. Small center with narrow raised ridge around it. Single flaring groove on nozzle. Metallic red glaze.

Agora, Pottery of the Roman Period, F 97.

N 19: 1, cistern: final dumped filling, *ca.* 75-25 B.C.

763 (L 2023).

H. 0.032 m.; W. 0.068 m.

Intact except for handle and end of nozzle. Oval base, slightly raised and deeply concave giving effect of base-ring; otherwise like preceding. Red to black glaze.

D 12: 2, cistern shaft: filling of late 2nd and early 1st centuries B.C.

764 (L 2286).

H. 0.031 m.; W. 0.060 m.

Intact. Slightly concave almond-shaped base, otherwise like preceding. Badly peeled brownish black glaze.

R 13: 1, well: upper dumped filling, early 1st century after Christ.

765 (L 4708). Pl. 25.

H. 0.030 m.; W. 0.064 m.

Intact except for handle and part of nozzle. Like preceding. Red glaze. Signature in relief, in one line from base of nozzle to back of lamp: AINEIOY.

R 10: 1, well: dumped filling, 1st century after Christ (Augustan).

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766 (L 4487). Pls. 26, 52.

H. 0.030 m.; W. 0.065 m.

Intact. Like preceding. Red glaze. Signature in relief, in one line from base of nozzle to back of lamp: HPAΔOC.

767 (L 2776). Pls. 25, 52.

H. 0.031 m.; W. 0.075 m.

Complete except for basket handle and parts of added collar; restored. Three drain-holes between collar and body of lamp. Small almond-shaped flat base. Thin purplish red glaze. Signature in relief, retrograde (incised in mould), from side to side (unlike positions of signatures on preceding lamps): ΑΠΠΟΛ.

768 (L 4709). Pl. 27.

H. 0.031 m.; W. 0.057 m.

Intact except for handle. Large almond-shaped base, slightly raised and concave; otherwise like **762**. Red glaze. Signature incised on lamp when leather-hard, ΠΑ, the *pi* smaller than the *alpha* (for Paramonos?). Two other lamps of Type 54 A, inventoried but uncatalogued, are like this and are signed in the same manner (L 4167 and L 4306).

Provenance as of **765**.

769 (L 2244).

H. 0.031 m.; W. 0.051 m.

Intact except for handle and end of nozzle. Like preceding. Badly peeled red to black glaze. The base is entirely covered by small irregularly stamped circles, made by the end of a hollow reed when the clay was leather-hard, before firing.

D 11: 1, well: dumped filling, turn of the era.

770 (L 3985). Pl. 52.

H. 0.036 m.; W. 0.070 m.

Intact. Large flat almond-shaped base. Wide flat center surrounded by raised band. Three parallel ridges on nozzle, the two outer ones flaring back on themselves, the central one ending in a tongue. Usual pair of dots and three pellets with their attendant ridges either side of nozzle. Flaky brownish glaze.

771 (L 3751).

H. 0.031 m.; W. 0.057 m.

Complete except for handle and nozzle. Shape exactly like **762** *supra*. Very flaky light brown clay in a thick fabric, like some Samian wares. Scanty remains of flaky red glaze. Remains of a signature in raised letters, in two lines: CΩΠΑ|ΤΡΟΥ, very similar to the signature on **879**, Signed Bases, and more legible there.

TYPE 54 B

EARLY ROMAN: GARLAND OF OLIVE OR IVY LEAVES; CONCAVE TOP AND SHORT PLAIN NOZZLE

Nos. **772-775** (and 5 others inventoried). Plate 52.

Corinth: classified under Type XVIII.

Later 1st century B.C. through early years of 1st century after Christ. Dating based on stylistic similarities to Types 50 B and 52 H, and on the finding places.

This easily recognized group is unusual among Roman lamps of this period in that the bases are always circular. They are flat and raised, when the olive wreath decoration is used, flat with a thin, finely moulded base-ring when the ivy wreath appears on the top. There is no suggestion of the almond-shaped base seen on the preceding type, although occasionally the raised flat circle may have a suggestion of an oval contour. This, however, is due more to careless workmanship in the mould than to intent. There is always a fairly thick vertical band handle. The top or discus is pronouncedly concave, with a deep groove around it, as on Types 50 B and 52 H. The nozzle also is like those of these preceding types; it is short, triangular, with a narrow plain flat top. There is always an impressed dot either side of the wick-hole.

The decoration of the upper sides is a wreath, either a counterpart of the garland of olive

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leaves and berries that appeared on Type 54 A, or a delicate garland of small heart-shaped ivy leaves arranged in groups of three. There is no chronological distinction between these two kinds of vegetation. All of the lamps bearing the ivy wreath are of exactly the same size and came from the same mould. They are the short-lived product of a single shop, but it is impossible to date them closely within the type. A few lamps have the familiar broad flaring collar added to collect spilled oil, together with the requisite drain-holes.

The clay is thin, sometimes brittle, and can be Attic. The lamps are glazed all over with a fairly thin black or red or reddish brown coating. This is usually well applied, although one uncatalogued example shows the well known drip technique that is frequently seen on other lamps of the early 1st century after Christ. None of Type 54 B is signed.

772 (L 3127). Pl. 52.

H. 0.035 m.; W. 0.073 m.

Intact except for handle. Flat circular raised base. Wreath of olive leaves and berries on upper portion. Thin black to brown glaze. A similar pattern appears on a slightly smaller lamp of this type, L 2998: Roman Group M, no. 16.

773 (L 3719).

H. 0.034 m.; W. 0.062 m.

Intact except for handle and nozzle. Like preceding. Worn brown glaze.

S 21: 1, well: late 1st century B.C. and early 1st century after Christ.

774 (L 2484).

H. 0.030 m.; W. 0.062 m.

Complete except for chips from sides and from flaring collar that surrounds entire lamp. Drain-hole either side of nozzle. In all other respects like preceding. Thin reddish brown glaze.

R 13: 1, well: upper filling, early 1st century after Christ (Augustan).

775 (L 3902). Pl. 52.

H. 0.029 m.; W. 0.062 m.

Complete except for handle; tip of nozzle restored. Flat circular base with thin finely modelled base-ring. On upper parts a delicate wreath of heart-shaped ivy leaves in groups of three. Dull black glaze (discolored in a conflagration). From the same mould as two other, uncatalogued, examples: L 3798 and L 4169.

TYPE 54 C

Early Roman: Garland of Leaves; Small Concave Top and Long Plain Nozzle

Nos. 776-780 (and 8 others inventoried). Plates 26, 27, 52.

About second quarter of 1st century B.C. to end of century.

These lamps, like those of Type 54 A, were also among the first to be made in Athens after the city had recovered from the invasion of Sulla. They are remarkably homogeneous. There is always a circular base; here it is slightly concave beneath so that the effect is that of a base-ring. There is always a small concave top or discus bordered by a narrow ridge, always a rather broad vertical band handle. No lugs ever appear. The nozzle is characteristically long and pointed with an impressed circle on either side of the wick-hole. The shank of the nozzle is curved but rises to a suggestion of a ridge down its center; it has a somewhat similar angular profile on its under side. No moulded or incised decoration appears on the nozzle; its ridge is so slight that on lamps coming from worn moulds it is imperceptible.

The moulded decoration of the upper parts of the bodies is always a garland of leaves. This may be of laurel or olive leaves, but without the olives that are seen on Types 54 A and B as

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accompaniments of their foliage. The other garland design is of small heart-shaped ivy leaves, like those seen on Type 54 B. In all cases the garland starts with a center under the handle area and falls symmetrically around either side, leaving a small vacant space at the start of the nozzle.

The clay seems to be a fairly firm Attic fabric; the black or reddish glaze, although sometimes badly flaked, was carefully applied to the lamps, all over the outside but sparsely within.

Two fabricants' names are known. Ion, who signed two examples of Type 52 A, is known by one signature here. His name appears in the genitive, in relief but retrograde, since it had been incised in the mould in the correct left-to-right manner. Another lamp bears in relief the first two letters of Dionysios' name.

776 (L 1824). Pl. 52.

H. 0.034 m.; W. 0.057 m.

Intact except for handle. Garland of veined laurel or olive leaves. Red to black glaze, somewhat peeled.

777 (L 2055). Pl. 27.

H. 0.033 m.; W. 0.060 m.

Complete except for handle, nozzle, and parts of sides. Like preceding. Dull black glaze. On base a signature in relief in two lines, retrograde: ΙΩ|ΝΟC.

778 (L 1783). Pl. 26.

H. 0.031 m.; W. 0.065 m.

Back part only, with part of broad handle, preserved. Like preceding. Worn red to black glaze. On base remains of two letters in relief: ΔΙ (for Dionysiou).

E 14: 3, cistern shaft: middle filling, beginning of 1st century B.C. to its third quarter.

779 (L 1417). Pl. 52.

H. 0.35 m.; W. 0.060 m.

Intact except for handle. Garland of small heart-shaped ivy leaves, in groups of three. Badly flaked dull black glaze. From same moulds as four other uncatalogued lamps: L 2762, L 2999, L 3683, and L 4732.

780 (L 2236).

H. 0.023 m.; W. 0.056 m.

Intact except for handle and part of bottom. Like preceding, but worn mould and poor brown glaze prevent pattern of ivy leaves from showing clearly.

D 11: 1, well: dumped filling, turn of the era. Another inventoried example of Type 54 C found here.

TYPE 54 D

Early Roman: Garland of Leaves; Flat Ridged Top and Long Plain Nozzle

Nos. 781-783 (and 1 other inventoried). Plates 25, 52.

1st century after Christ; first and into second quarters.

These few late lamps show the last version of the wreath design before it passed into obscurity, in favor of new Italian types with large decorated centers. Type 54 D is crisp and brittle; its circular base is like its predecessor's, but completely flat and sometimes outlined by a thin circular ridge. The top is broad and flat, or at least intended to be flat; the top is surrounded by a high ridge. This emphasis on the central part or discus is a characteristic of lamps made well within the 1st century after Christ and connects them stylistically with the new Italian models that were beginning to be popular at this time. The handles tend to be thin and narrow, often grooved down the center as on many other lamps of the second quarter of the 1st century after Christ.

The relief decoration is on the rather narrow shoulders, the upper part of the lamp that is not occupied by the plain discus. Here is seen a variety of wreath designs, not so well modelled as

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those of Types 54 A-C, but all associated with the laurel leaf or the olive leaf with berries. No example of Type 54 D seems to utilize the ivy wreath seen on Type 54 C.

The nozzles are long and broad. The one well-preserved nozzle shows a flat raised platform around the wick-hole, without the customary impressed circles. The shank of the nozzle is gently rounded without decoration and without the ridge seen on the preceding type. The under parts of the nozzle are also rounded rather than angular. One lamp has a curious added decoration on its lower sides, a series of six raised motifs that were impressed into the mould with a stamp or *poinçon* and represent the Isis symbol, a sistrum. One need not assume an Egyptian provenance for the lamp, since such a symbol simply reflects the increasing importance of the Isis cult in cosmopolitan centers of the Roman world during this period.

The thin brittle red clay can be Attic. The thin glaze or wash is black to red and was applied all over the exteriors of the lamps. Two examples are signed with the broken-barred *alpha* in relief which is seen so frequently on Athenian lamps after the turn of the era.

781 (L 2978). Pl. 52.

H. 0.032 m.; W. 0.064 m.

Fragments of nozzle, top, sides, and base; restored. Thin circular ridge around base. Grooved (?) handle. Relief design of leaves and thistle-shaped buds or olives. Nozzle has flat top; restored as pointed although it conceivably could have been rounded. Dull red glaze. On base very slight traces of a broken-barred *alpha* in relief.

Agora, Pottery of the Roman Period, G 138.

D 4: 1, cistern: Layer II A, very early years of 1st century after Christ.

782 (L 3514). Pls. 25, 52.

H. 0.029 m.; W. 0.058 m.

Intact except for nozzle and handle. Like preceding, but with relief design of olive leaves and berries as on following. On lower sides five motifs in relief, sistrums, and traces of a sixth under handle attachment; these made in the mould which had been indented six times with punch bearing this device (cf. the decoration on the lower parts of 809 of Type 58 B). Dull red to black wash. On the base a broken-barred *alpha* in relief (as on preceding).

783 (L 2972). Pl. 52.

H. 0.030 m.; W. 0.062 m.

Complete except for handle, nozzle, and chips from top. Like preceding except that lower portions are undecorated. Thin red to black wash.

Agora, Pottery of the Roman Period, G 135.

D 4: 1, cistern: Layer II B, second quarter of 1st century after Christ.

TYPE 54 VARIANTS

Early Roman: Garland of Leaves; Various Individual Features

Nos. 784-787. Plates 26, 52.

Second quarter of 1st century B.C. into second quarter of 1st century after Christ. Dating based on stylistic similarities to Types 54 A-D.

There are a few variants that bear wreath designs but do not fit at all into the preceding types. They are described individually in the catalogue with an approximate date when it is possible to assign one with certainty. One is signed by Dionysios who is known as a fabricant of the latter years of the 1st century B.C. The clay of most of the lamps is Attic; one may be an eastern import. The glaze or wash varies considerably on the separate examples.

784 (L 1416). Pl. 52.

H. 0.036 m.; W. 0.073 m.

Intact except for handle. Low circular raised base, flat rather than concave. Small depressed top with ridge around it, like Type 54 A. Bold asymmetrical ivy-leaf decoration. Double ridge down length of nozzle; an impressed dot either side of wick-hole. Buff clay, thin black glaze all

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over but much flaked. Assignable to the 1st century B.C. rather than after Christ.

785 (L 1550). Pl. 52.

H. 0.029 m.; W. 0.063 m.

Complete except for handle and entire nozzle. Small circular base-ring. Irregular concentric ridges around filling-hole. Crude olive wreath decoration. Heavy orange clay and thin orange glaze all over. An importation; a very similar lamp with same clay and glaze, called Egyptian, is in the Benachi Collection in Alexandria.

786 (L 3895). Pl. 52.

H. 0.030 m.; W. 0.059 m.

Complete except for handle. Oval raised base, slightly concave and with a groove around its edge. Grooved ridge around concave discus. Good olive wreath discus. Pointed nozzle with three parallel ridges, the outer ones ending in volutes. Buff clay; thin dull black glaze or wash almost entirely peeled. This lamp combines features of both types 54 A and 54 C and thus may be dated similarly.

787 (L 2102). Pls. 26, 52.

H. 0.035 m.; W. 0.061 m.

Complete except for thin handle, tip of pointed nozzle, and fragments of base which is a slightly raised flat oval. Flat discus with ridge like Type 54 D. Sparse olive wreath and berry decoration. Top of nozzle flat and on same plane as discus' ridge. Thin brittle buff clay, poor thin black glaze on top but only dribbles on lower parts. Signature incised on base, in soft clay, in three lines Δ[I]Ο|NYCI|ΟΥ. Handle, top, clay, and glaze all point to date in 1st century after Christ.

TYPE 55 A

EARLY ROMAN: IMBRICATED LEAF DECORATION; SMALL CONCAVE TOP AND LONG PLAIN NOZZLE

No. 788. Plate 53.

Ca. second quarter of 1st century B.C. to end of century. Dating based on stylistic similarities to Type 54 C.

The use of a circle of triangular leaves as moulded decoration has been seen as early as the 3rd century B.C. on Type 46 B. It has also appeared on Type 48 C, and in tiers forming an imbricated pattern on Types 51 B and C of the late Hellenistic period down to 86 B.C. It now continues in the post-Sullan epoch. Although only one example of Type 55 A is preserved in the Agora collections it forms a recognizable type by itself, the counterpart in many ways of the more numerous examples of Type 54 C; it is not a variant, but the transitional step between the late Hellenistic versions of the imbricated pattern and those produced in quantity around the turn of the era.

The base is circular, slightly raised and concave, giving the effect of a base-ring. The top is small and concave, bordered by a pronounced circular ridge. The nozzle is wide and without decoration; a slight ridge appears along the top of its shank and another down the under side of its projection. There is a fairly wide vertical band handle. In all of these respects Type 55 A is exactly like Type 54 C and thus must have been made during the same years, perhaps by the same fabricants.

The termination of the nozzle on the single existing example is angular, but the tip is gently rounded rather than pointed. The preserved tips of Type 54 C are pointed, but rounded tips could have existed on some of their broken nozzles. The relief decoration of Type 55 A is carefully executed, with two circles of delicately modelled veined leaves, the upper tier overlapping the lower. The circles of leaves are complete, extending around the entire lamp as the garlands do on Type 54 C; there is no break on either side of the nozzle.

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The clay is Attic and the glaze, although worn, a deep black and carefully applied all over the lamp.

788 (L 318). Pl. 53.

H. 0.025 m.; W. 0.063 m.

Intact except for most of handle. Slight ridge on nozzle's top, flattened platform around wick-hole. Worn black glaze all over.

TYPE 55 B

Early Roman: Imbricated Leaf Decoration; Concave Top and Grooved Nozzle

Nos. 789-793 (and 7 others inventoried). Plates 26, 53.

Corinth: classified under Type XVIII.

Last years of 1st century B.C. to well into first quarter of 1st century after Christ.

The base is always circular, raised perceptibly, and flat. The usual lamp has a groove around the outer periphery of the base, but very occasionally this is missing. The top is inevitably concave with a pronounced grooved ridge surrounding it; the vertical band handle is fairly broad and thick, unlike the slimmer handles characteristic of lamps of the late first and second quarters of the 1st century after Christ.

The upper parts of the sides are decorated with regular rows of tiny overlapping leaves, arranged in an imbricated manner. On lamps that may be late within the type or on lamps from worn moulds the leaf-pattern appears as rows of small diamonds. The nozzles are fairly long with triangular ends, where there is an impressed dot on either side of the wick-hole. The shafts of the nozzles always bear parallel grooves or ridges that flare out at the wick-hole. The usual lamp has three such ridges, the two outer ones turning back on themselves in a volute-like manner, the central ridge broadening into a flat tongue. A variant design on 793 has a pair of grooves that flare out and then are bent around to outline the wick-hole area.

The fairly heavy fabric is Attic. The glaze or thin wash varies in color and in application; on some lamps it is applied all over, but on a large number the coating is carelessly applied, appearing only in dribbles on the lower portions.

One lamp is incised with the signature of Dionysios, already known as a fabricant of this period. Another bears a very faint incised signature that is undecipherable.

789 (L 3984). Pl. 53.

H. 0.037 m.; W. 0.062 m.

Intact. Flat circular raised base with groove around edge. Standard nozzle design with two flaring ridges turning back in volutes, a central ridge ending in a tongue. Collar wrapped around lamp; two drain-holes at base of nozzle. Thin red to brown glaze on upper portions, applied only in dribbles on lower portions.

N 20: 1, well: use filling, first half of 1st century after Christ.

790 (L 2456).

H. 0.036 m.; W. 0.072 m.

Intact except for handle and chips from nozzle. Exactly like preceding except no collar nor drain-holes. Glaze as on preceding. Faintly incised on base is a completely illegible signature, in two lines.

D 12: 1, well: lowest use filling, 1st century after Christ.

791 (L 2241).

H. 0.035 m.; W. 0.069 m.

Intact except for handle and end of nozzle. Exactly like preceding. Black glaze, much peeled, all over. On base an incised signature in two lines: ΔΙΟΝ|ΥCΙΟΥ, exactly like 804 of Type 57; cf. Plate 26.

D 11: 1, well: dumped filling, turn of the era. Another inventoried example of Type 55 B found here.

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792 (L 4683). Pl. 53.

Pres. L. 0.070 m.

Fragment of upper mould preserving most of nozzle and bit of imbricated leaf pattern. For a lamp similar to preceding. Fine pinkish buff clay.

793 (L 4706). Pl. 53.

H. 0.033 m.; W. 0.075 m.

Intact except for parts of handle. Raised base, flat and circular. Two flaring grooves on nozzle spreading out to surround wick-hole. Dull red glaze all over.

R 10: 1, well: dumped filling, 1st century after Christ (Augustan).

TYPE 55 C

Early Roman: Imbricated Leaf Decoration; Flat Tops

Nos. **794-796** (and 1 other inventoried). Plate 53.

1st century after Christ, first to third quarters. Dating based on stylistic similarities to Types 52 H and 54 D; the finding place of **795** is helpful.

These are the late degenerate manifestations of Type 55 B, and are analogous to and contemporary with Type 52 H (the late descendant of Type 52 G) and Type 54 D (a similar continuation of Type 54 B).

The bases, insofar as they are preserved, are circular or somewhat oval, either slightly raised and flat or depressed with a small concavity. The top is the chief characteristic of the type. It is noticeably flat and always surrounded by a thick high ridge, as on Type 54 D. The upper part of the sides that bears the moulded decoration is comparatively narrow, thus restricting the imbricated leaf pattern to a decorative border. The leaves of the pattern have lost most of their foliate character and appear sometimes as rows of diamonds or even of angular dots.

The nozzle formations are missing on most of the lamps, but enough remains to indicate that they were pointed, as those of Types 52 H and 54 D; some may have been rounded on top. One well preserved nozzle, that of **794**, has a long channel on its top enclosed by two parallel ridges that are continuations of the ridge around the discus. This lamp and one other have added collars and drain-holes.

The handle formations are thin and narrow, sometimes with a vertical groove which is typical of work in the first half of the 1st century after Christ, after its opening years.

The clay is a rather thin coarse fabric, pink to buff, certainly Attic. The glaze is thin and reddish, usually applied evenly all over but sometimes with the familiar careless dribbling seen on Type 52 H and other contemporary lamps.

One lamp bears in relief the broken-barred *alpha*, which is in itself indicative of a date somewhat after A.D. 1.

794 (L 3191). Pl. 53.

H. 0.035 m.; W. 0.058 m.

Complete except for handle, fragments of body, and about half of flaring collar. Slightly oval base-ring. Channel from flat top to wick-hole. Small diamond-shaped leaves. Dull red glaze all over, badly peeled.

795 (L 3356). Pl. 53.

Pres. H. 0.030 m.; W. 0.061 m.

Fragment from upper part preserving top and parts of thin handle, sides, and flaring collar. Leaves degenerated into two rows of angular knobs. Dull red glaze all over.

N 20: 5, well: level of second half of 1st century into early 2nd century after Christ.

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796 (L 3730). Pl. 53.

H. 0.025 m.; W. 0.058 m.

Complete except for nozzle, parts of right side, and minor chips. Oval raised base. Discus flat in center, although concave around edges. Leaves like preceding. Dull red wash on upper parts but unevenly applied below. On base in relief: a broken-barred *alpha*, like that of **749** of Type **52** H.

TYPE 56 A

Early Roman: Imbricated Leaf with Tongue Decoration; Concave Top and Grooved Nozzle

Nos. **797-799** (and 7 others inventoried). Plate 53.

Last years of 1st century B.C. into first quarter of 1st century after Christ. Dating based on stylistic similarities to Type 55 B; the finding place of **798** is helpful.

Type 56 A has the same basic shape as Type 55 B as well as a fairly close relationship in its moulded decoration. The base is circular, flat, and slightly raised with a groove around it. The top is pronouncedly concave, surrounded by a heavy grooved ridge or occasionally by a deep groove used alone. The vertical handle is wide and thick. The nozzle formation normally follows the established pattern with three parallel ridges, of which the outer two flare back into volute formations and the central one ends in a narrow tongue; there are the usual impressed dots either side of the wick-hole on its pronouncedly triangular termination. An occasional lamp has a pair of flaring ridges on the top of the nozzle with a flat area between, unadorned by a tongue or other device.

The moulded decoration shows a pattern of large ribbed and pointed tongues, alternating with slim ribbed panels. Sometimes these motifs are close together, sometimes not, but always there is an imbricated leaf design between them, appearing as a background. As on Type 55 B, the leaf pattern usually devolves into small angular dots or even into tiny circles. Sometimes the central strips in both tongues and panels are jewelled with more tiny round dots. Normally the lamp has five tongues around its upper part but in a few cases only three. Jewelled tongues are a familiar late Hellenistic motif on Megarian bowls, but the combination of these with a background pattern of imbricated leaves has not been seen before its use on these lamps around the turn of the era.

Type 56 A is made of local clay with the familiar red or black glaze, applied all over, which is characteristic of this early Roman period in Athens. None bears a signature. This is a fairly sizable group with a number of minor varieties within the moulded decorations, so it would seem that they were produced by more than one shop and probably over a period of several decades.

797 (L 2007). Pl. 53.

H. 0.036 m.; W. 0.064 m.

Intact. Upper portion has five tongues alternating with six panels; the central strips of all are jewelled. Imbricated leaf pattern degenerated into small dots between the motifs. Good red glaze, somewhat chipped.

798 (L 3036). Pl. 53.

H. 0.036 m.; W. 0.066 m.

Intact except for handle and end of nozzle, both originally like preceding. Three tongues alternating with two panels. Imbricated leaf pattern made up of six rows of veined triangular leaves, some recognizable and some appearing as triangular dots. Worn red glaze.

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799 (L 2013). Pl. 53.

H. 0.027 m.; W. 0.070 m.

Intact except for handle and most of nozzle which has pair of narrow ridges enclosing flat top. Groove but no ridge around top. Five tongues alternating with six very narrow panels; imbricated leaf pattern degenerated into small dots or nodules. Black glaze, much flaked.

B 13: 7, well: upper dumped filling, 2nd and 1st centuries B.C.

TYPE 56 B

Early Roman: Imbricated Leaf with Tongue Decoration; Concave Top and Plain Nozzle

Nos. 800-801. Plate 53.

Late 1st century B.C. into early 1st century after Christ. Dating based on stylistic similarities to Types 52 H and 54 B, and on the finding place of 801.

This group seems to be of about the same period as Type 56 A, although there is a pronounced change in the nozzle which here is undecorated on its flat triangular top. There is the usual pointed termination and an impressed circle on either side of the wick-hole. This nozzle formation, as well as the deeply concave top with a groove around it, rather than a ridge, is characteristic of Types 52 H, and 54 B. The base is circular, slightly raised and flat. One base has the groove around it seen on the preceding type, another is plain. The usual thick vertical handle is seen; there may or may not be an enveloping flaring collar with the requisite pair of drain-holes.

The decorated top is generally like that of Type 56 A; there are always alternating ridged tongues and panels. The imbricated leaf design, however, is used more capriciously; in both of the catalogued examples it is omitted in two interstices. One lamp leaves these areas blank, another example fills them with crosses and dots that were incised in the soft clay of the lamp after it came out of the mould.

The clay and red or black glaze are similar to those of the parent, Type 56 A, although one lamp has a thin black wash very sparingly applied to the under sides. No lamps are signed.

800 (L 3125). Pl. 53.

H. 0.032 m.; W. 0.060 m.

Intact. Plain circular raised base. Three tongues alternating with four narrow panels; imbricated leaf pattern between these motifs except for one omission on each side. Red glaze, somewhat worn.

801 (L 2202). Pl. 53.

H. 0.037 m.; W. 0.056 m.

Intact except for handle, end of nozzle, and minor chips. Base like preceding but with thin circular groove as on Type 56 A. Flaring collar and two drain-holes. Moulded decorations on upper parts like preceding; in blank areas on either side an incised cross and dots. Remains of very thin black wash, only partially applied to lower portions.

D 11: 1, well: dumped filling, turn of the era.

TYPE 56 VARIANTS

Early Roman: Tongue Decoration with or without Imbricated Leaf Pattern

Nos. 802-803. Plate 53.

Late 1st century B.C. and early 1st century after Christ. Dating based on stylistic similarities to Type 56 B and on the finding place of 803.

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These variants use the same tongue decoration that appears on Types 56 A and B, but either the other elements of the decorated design or the basic shape present specific and unique departures from these two standard types; they are classed as variants, rather than single examples of separate sub-types; detailed descriptions of them are found below. Neither is signed.

802 (L 4554). Pl. 53.

H. 0.028 m.; W. 0.064 m.

Intact except for chips. Circular flat raised base. Concave discus (with groove) and undecorated nozzle as on Type 56 B. Impressed circle either side of wick-hole. Five broad ridged tongues on upper portions, no panels nor imbricated leaves. Buff Attic clay, thin red glaze all over.

803 (L 2962). Pl. 53.

H. 0.036 m.; W. 0.065 m.

Complete except for entire nozzle and chips from body. Flat almond-shaped base and very small flat top as on Type 52 C; thus nozzle presumably similar to that type's. Circular ridges around filling-hole and top. Three ridged tongues on upper part of body with wide stretches of imbricated leaf pattern between. Buff clay, thin black glaze all over.

Agora, Pottery of the Roman Period, G 132.

D 4: 1, cistern: Layer II A, very early years of 1st century after Christ.

TYPE 57

Early Roman: Garlanded Boukrania

Nos. 804-805 (and 2 others inventoried). Plates 26, 53.

1st century B.C., between its second quarter and the earliest years of 1st century after Christ. Dating based on some stylistic similarities to Type 55 B and on the finding places.

This small group of lamps exhibits a boukranion design that never became so popular as the preceding arrangements of leaves, garlands, rays, etc. The documented examples seem to show that they were all made at one place, Athens, at about one time, possibly the late third quarter of the 1st century B.C. It is conceivable, however, that the motif of garlanded boukrania began earlier, in the period just before Sulla. Similar devices are seen occasionally on late Megarian bowls, and they may have appeared for a short time on lamps, to be revived in the later years of the 1st century B.C. when pottery and lamps were again manufactured in quantity in Athens.

The base and top are like those of Type 55 B; the former is a slightly raised flat circle with a groove around it; the latter is markedly concave with a grooved ridge around it. The handle formation is stout and usually of the vertical band variety. 805 has an exceptional basket handle that bridges the top of the lamp from back to front.

The moulded decoration on the upper sides consists of a series of five boukrania garlanded with a wool fillet tied so as to resemble bead and reel; at each side of every boukranion depends a bell-shaped tassel and between the boukrania are rosettes. The long pointed nozzle interrupts the moulded design. Although no nozzle is completely preserved there is sufficient evidence to show that it would be like that of Type 55 B. There are three parallel ridges, the central one ending in a tongue at the wick-hole. The two side ridges would end in volute scrolls.

The fabric is heavy, again resembling that of Type 55 B, and the glaze is red or reddish brown all over. One lamp was inscribed while the clay was still soft with the name of the maker, Dionysios, who also produced at least one example of Type 55 B.

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804 (L 2699). Pls. 26, 53.

H. 0.034 m.; W. 0.065 m.

Intact except for end of nozzle; roughly restored without the details that its termination once had, like those of Type 55 B. Dull red glaze all over. Signature inscribed on base when clay still soft, in two lines: ΔΙΟΝ|ΥCΙΟΥ.

Agora, Pottery of the Roman Period, F 98.

N 19: 1, cistern: dumped filling, *ca.* 75-25 B.C.

805 (L 2203).

H. 0.040 m.; W. 0.065 m.

Intact except for nozzle and handle. Like preceding in every way except for addition of flaring collar around entire lamp, drain-hole either side of the nozzle, and the substitution of a broad thick basket handle; this started at the back of the lamp and ended at the front of the concave discus, opposite the nozzle, bridging the discus and thus making the flaring collar a necessity, to catch the oil that inevitably would spill during filling. Red glaze, much peeled.

D 11: 1, well: dumped filling, turn of the era.

TYPE 58 A

Early Roman: Rosette Motif with Large Leaves

Nos. 806-807. Plate 53.

Late 2nd and well into 1st century B.C. Dating based on stylistic similarities to Types 50 A and B, and on the finding place of 806.

This very small group was initiated shortly before the sack of Athens in 86 B.C.; it was revived soon afterwards and had a brief floruit well within the bounds of the 1st century B.C. There is a slightly raised circular base, somewhat concave rather than flat. The sides are high, curving up to a flat circular top encircled by a thick ridge. This feature as well as the nozzle formation recalls Type 52 E which begins toward the end of Type 58 A's period. The tips of the nozzles are not preserved, but the long shafts have the three parallel ridges that are seen not only on Type 52 E but on many other varieties of 1st century B.C. lamps. There is the usual thick vertical band handle.

The moulded decoration on the upper sides consists of a series of large rosettes alternating with broad heart-shaped leaves. Such rosettes were familiar motifs on late Hellenistic lamps. The leaves are of the same size and shape seen on Types 50 A and B, and certainly derive from them. If it were not for their pronouncedly flat tops these lamps might indeed be classed as a sub-type of the Knidos group.

The clay is a well worked pinkish buff Attic fabric; there is a liberal use of glaze all over, either orange-red or black. Both of the Agora specimens came from the same moulds, but their glazes were fired differently.

806 (L 2934). Pl. 53.

H. 0.041 m.; W. 0.069 m.

Intact except for end of nozzle and chips from body. Three moulded motifs on each side, a large heart-shaped leaf between two large rosettes. Dull black glaze.

Agora, Pottery of the Roman Period, G 4.

D 4: 1, cistern: Layer I, late 2nd or early 1st century B.C., down to 86 B.C.

807 (L 4691).

H. 0.042 m.; W. 0.070 m.

Complete except for handle and much of nozzle. From same moulds as preceding. Dull glaze, mostly orange red, partly black.

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TYPE 58 B

Early Roman: Rosette of Pellet Motif; Broad Tops

Nos. 808-814. Plates 25, 28, 54.

1st century after Christ, second and third quarters principally, but on to 2nd century after Christ. Dating based on some stylistic similarities to Types 44 D and 54 D, and on the finding places.

In the early and middle years of the 1st century after Christ a few craftsmen sporadically turned out lamps that were not members of recognizable groups or families, but were rather individual creations. These have all been brought into Type 58 B because they have in common the same general period and the same decorative motif, a rosette or the simplification of a rosette that may be termed a pellet. This circular device may be used alone or in combination with other devices; no two lamps in Type 58 B have exactly the same decoration, so a description of the several treatments is reserved for the discussions of the individual lamps below. In most cases the decoration is carefully moulded, but on two lamps, 811 and 813, which are probably late within the type, the devices are very crudely made, reflecting a real decline in craftsmanship in this particular group of early Roman lamps.

Another element common to all lamps of Type 58 B is a broad plain discus, flat or very slightly concave, bordered by a high ridge as on Types 44 D and 54 D. All lamps were equipped with rather thin high vertical handles that are occasionally grooved, typical of many other lamps of this epoch. Another feature shared by all members of Type 58 B is the nozzle treatment. The shank is never grooved nor ribbed as on lamps of a generation or two earlier; it may have a narrow flat top on the same plane as the discus' surrounding ridge, again as on Type 44 D; or the shank may have a slight ridge down its length or be gently rounded. The shank never bears any decoration except in the case of 814, where the main decoration of the lamp is continued on top of the nozzle. The tip of the nozzle is pointed, but usually with a blunt point made by two converging arcs rather than two straight lines meeting at the tip. The wick-hole is centered in a flat platform that is set off from the curved sides of the nozzle's shank.

Aside from the variations in the moulded decoration, lamps of Type 58 B differ in their bases which may be flat and circular surrounded by a ridge, like a miniature base-ring, or flat and almond-shaped. In several cases the bases are not sufficiently preserved to show whether or not they followed either of these two schemes.

The clay also varies, from the thin rather brittle fabric of 808 to the heavy bulk of 811. There is nothing in between; both of these varieties of clay have already been seen in lamps of the first century after Christ. The glaze varies from black to reddish brown to red, evenly applied all over. The sloppy application of glaze seen on some lamps around the turn of the era is not evident here.

One lamp, 814, is a curious creation. This was never actually used as a lamp since there is no wick-hole and the filling-hole is represented by a very narrow insertion. This is a workshop piece, clearly demonstrating the presence of local manufacture. It was made in two moulds but seems nearly solid within; the solid nozzle shows that it is not an unfinished lamp. The white coating or slip covering its exterior suggests that it may be a matrix for moulds. If a matrix, however, it was made itself from two moulds. Its clay is a fine pinkish buff that is normally associated with Attica. An actual matrix has been seen before, 630 of Type 48 A, but this was made on the wheel

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and finished by hand. It would be safe to call the present lamp, 814, a trial piece made from moulds that were not yet finished or were in the process of further refining; it may be noted that the relief decoration that came out of impressions in the mould is not symmetrical, nor are the usual outlines present that normally were cut in the mould to mark the wick-hole, at least, if not the filling-hole.[162] It is very likely that this lamp was never fired. The clay rubs off very easily where it is exposed under the white coating; this coating itself was presumably applied to the soft clay of the object after emergence from the mould to facilitate handling without having to wait for the firing. The lamp is well preserved today, in spite of having been perhaps only sun-baked, thanks to this white integument.

Two makers' marks are seen on Type 58 B. The familiar broken-barred *alpha* appears twice, on lamps that are similar in most respects and probably came from the same factory; they were also found together in the debris of one household. The other mark is a ligature rather than a letter, appearing in relief on two lamps very much alike, and resembling a *delta* with an *iota* down its center. This may be a symbol adopted during these years by the fabricant named Dionysios or his successors. It will be seen occasionally on other products of the middle decades of the 1st century after Christ.

808 (L 2970). Pls. 25, 54.

H. 0.031 m.; W. 0.069 m.

Complete except for parts of one side; restored. Circular flat base surrounded by thin ring, within which a broken-barred *alpha* in relief. Thin grooved handle; slight ridge along top of nozzle to flat platform at end. On shoulder a ring of small rosettes, below which a ring of large rosettes alternating with pairs of bars. Hard thin red clay, thin black to red glaze.

Agora, Pottery of the Roman Period, G 136.

D 4: 1, cistern: Layer II B, second quarter of 1st century after Christ.

809 (L 2969). Pl. 54.

H. 0.030 m.; W. 0.062 m.

Most of top with portions of nozzle and base preserved. Base, nozzle, and handle formation like preceding. On shoulder four large rosettes interspersed between double and triple lines of small pellets or nodules. On lower parts of body additional and similar rosettes (cf. the decoration on lower parts of 782, of Type 54 D). On base traces of a broken-barred *alpha* in relief, like preceding. Clay and glaze like preceding.

Agora, Pottery of the Roman Period, G 137.

Provenance as of 808.

810 (L 4303). Pls. 28, 54.

H. 0.032 m.; W. 0.061 m.

Intact except for handle and tip of nozzle. Flat almond-shaped base. Narrow flat top along nozzle, on same plane as discus ridge and platform around wick-hole. Small rosettes on shoulder. On base a relief ligature resembling a *delta* with an *iota* (for ΔΙΟΝΥCΙΟΥ?). Thin buff clay; dull red to black wash.

811 (L 1660). Pls. 28, 54.

H. 0.034 m.; W. 0.057 m.

Intact except for handle and tip of nozzle. Base, thin handle, and nozzle formation exactly like preceding. Around shoulder a coarse moulded decoration of large circles or pellets alternating with groups of triple bars. Fairly thick pink clay, worn red wash or thin glaze. On base a ligature like that of preceding (for ΔΙΟΝΥCΙΟΥ?).

812 (L 2963). Pl. 54.

Est. W. 0.064 m.; Max. dim. 0.068 m.

Fragment of top only with bit of handle attachment. Very small rosettes on shoulders. Light red clay, reddish brown wash.

Agora, Pottery of the Roman Period, G 222.

D 4: 1, cistern: Layers II and III (in channel), 1st to early 2nd centuries after Christ.

813 (L 3185A). Pl. 54.

H. 0.035 m.; Est. W. 0.056 m.

Fragment of left side with bit of bottom and handle attachments. Flat base, but of uncertain shape. Small discus with high thin rim. Shoulder

[162] Cf. 792, a mould for a nozzle with a definite marking for the wick-hole.

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decoration of two bands of small pellets irregularly moulded. Thick pinkish buff clay, light red glaze.

B 14: 3, cistern: dumped filling, second half of 1st century after Christ.

814 (L 3095). Pls. 28, 54.

H. 0.035 m.; W. 0.066 m.

Intact except for chips. No handle was added. Circular flat base surrounded by thin ring, within which a moulded decorative device resembling an acute triangle with large circles at the angles. On shoulders and also across top of curved shank of nozzle are small rosettes, beneath which a band of small rectangular labels. Pinkish buff clay, coated all over with a thick white slip or paint. This is not a usable lamp, but presumably a matrix or shop's trial piece, from unfinished moulds. Made in two moulds, but practically solid inside. No indication of wick-hole and only an unusually small aperture (drilled through slip?) for filling-hole. Clay is very soft, perhaps never fired in kiln. The white coating is never seen on finished lamps. The moulded decoration comes out asymmetrically at the handle area; one more impression is needed in the mould to produce another label to balance the right side.

Cf. 630 of Type 48 A.

C 14: 4, well: lowest level of use filling, first half of 2nd century after Christ.

TYPE 58 VARIANTS

Early Roman: Extreme Variations of Rosette or Pellet Motif

Nos. 815-816. Plates 25, 54.

Between second quarter of 1st century B.C. and latest years of 1st century after Christ. Dating based on stylistic similarities to other types and on the finding place of 816.

These lamps present extremely early and late versions of the decorative motif composed of the isolated circle, whether in the form of a developed rosette or that of a simple pellet. They are described fully in the catalogue. One is signed with the broken-barred *alpha* in relief, seen often on other lamps of the 1st century after Christ.

815 (L 4668). Pl. 54.

H. 0.027 m.; W. 0.061 m.

Complete except for vertical band handle, all of nozzle, and parts of sides. Slightly raised circular base, concave beneath; small concave discus surrounded by a groove. Body design of tiny pellets at random. Thin Attic clay, worn gray to red glaze all over. The base and concave top forms are so close to Type 54 C that this lamp must be dated accordingly, *ca.* later two-thirds of 1st century B.C.

816 (L 3893). Pl. 54.

H. 0.030 m.; W. 0.054 m.

Intact except for vertical band handle. Base is rounded, unlike any other previous types. Crudely made with small discus encircled by thick ridge; pointed nozzle with triangular top. Large coarse rosettes, each with an impressed cross and four dots, on the sides and one on the nozzle. Thick buff clay (Attic?), poor worn brown glaze. On the base a broken-barred *alpha* in relief. This lamp, not earlier than the later years of the 1st century after Christ, is the latest product in this series of early Roman lamps.

B 21: 1, cistern: dumped filling, latter part of 1st and early part of 2nd centuries after Christ.

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MISCELLANEOUS MOULDED LAMPS

Hellenistic through Early Roman, both Plain and Decorated

Nos. 817-834 (and 3 others inventoried). Plates 25-28, 54.

These lamps do not fit into any of the types between 42 A and 58 Variants, but have occasional connections with them. The finding places, when helpful, are given below with the detailed descriptions of the lamps, together with suggested dates for the individual examples based either on stylistic similarities to various types or on the finding places. These dates range from the 3rd century before Christ well into the 1st century after Christ.

817 (L 3779). Pl. 54.

H. 0.030 m.; W. 0.059 m.

Complete. Flat raised base, double-convex profile, groove and ridge around filling-hole as in Type 42 B. Pierced lug, cast in upper mould. In high relief, at start of flat-topped nozzle, a head of Pan with pipes. Grayish buff clay, unglazed but with smooth clay slip.

Hesperia, IX, 1940, p. 275, fig. 11.

N 21: 4, cistern: lower filling, *ca.* 250 B.C. or early in third quarter of 3rd century B.C.

818 (L 3785). Pl. 54.

H. 0.034 m.; W. 0.074 m.

Complete except for chips and end of flat-topped nozzle; restored with nozzle modelled after preceding. Ring foot, curving sides, concave discus bordered by groove; profile like that of wheelmade 350 of Type 25 D Prime. Groove and ridge around filling-hole; lug on either side, cast in mould with upper half of lamp (cf. 544 of Type 43 A); left lug pierced, right lug solid. Attic clay, worn black glaze all over.

Provenance as of 817.

819 (L 4617). Pl. 54.

H. (of rim) 0.026 m.; W. 0.045 m.

Intact except for chips and upper part of a central rod. False ring foot, curving sides, flat-topped nozzles made in moulds with body of lamp. Solid rod is handmade; its thickness and the small size of lamp would have made filling difficult.

Its resemblance to wheelmade lamps of Type 27 D suggests a contemporary date, late 3rd century down to *ca.* 150 B.C.

820 (L 1365). Pl. 54.

H. 0.027 m.; W. 0.053 m.

Complete except for parts of right side; restored. Simulated ring foot, double-convex profile similar to Type 42 B. Nozzle slightly curved on top. No lug, handle, nor grooves around filling-hole. Attic clay, worn black glaze all over.

Its simplicity recalls the preceding, and it might be given a similar date. More likely it is closer in date to Type 42 B, *ca.* first half of 3rd century B.C.

821 (L 555). Pl. 54.

H. 0.030 m.; W. 0.060 m.

Intact. Profile similar to preceding, with addition of broad raised band around filling-hole as in 538 of Type 42 D. Solid lug cast in both upper and lower moulds. Flat-topped nozzle broadening at end around wick-hole, reminiscent of nozzle of 534 of Type 42 C. Gray clay; dull gray glaze all over.

Hesperia, III, 1934, p. 388, no. D 61, fig. 75.

H 16: 4, pithos: *ca.* 150 B.C.

822 (L 4378). Pl. 54.

W. 0.062 m.

Top of lamp only, preserving grooved handle, solid handmade lug, start of curved-top nozzle, and about half of upper part of its double-convex profile. Partially restored. Groove and ridge around filling-hole, as well as profile, suggest Type 42 B. Pinkish gray clay; gray wash badly worn. An import (?).

Perhaps as early as Type 42 B, but the handle resembles the grooved handle of Type 40 A and its successors, implying a date in the late 2nd century B.C. or later.

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823 (L 524). Pl. 54.

H. 0.032 m.; W. 0.051 m.

Intact except for chips; restored. Base-ring, curved sides, convex top; thick and thin ridges around filling-hole; solid cornucopia-like lug; grooves on top of spreading pointed nozzle. Fine gray clay, thin dark gray glaze all over (from Asia Minor?).

Nozzle and narrow handle suggest date in late 2nd or 1st centuries B.C.

824 (L 4762). Pl. 54.

H. 0.043 m.; Est. W. 0.084 m.

Fragment comprising full height of wall with part of top and bottom; no trace of handle, nozzle, or filling-hole. Ring base, high double-curved wall extending to form collar around domed top: lightly incised (not moulded) rays around filling-hole. One drain-hole preserved. Thin Attic clay, fairly good but worn metallic black glaze. There is some stylistic analogy with lamps of Type 33 B (wheelmade), which would place the date of this lamp *ca.* late 3rd century to early 2nd century B.C.

H-I-J 12-13, construction filling: before *ca.* 150 B.C.

825 (L 1402). Pl. 54.

Max. dim. 0.06 m.; W. of base 0.036 m.

Part of lower half preserving base, beginnings of vertical strap handle and nozzle, and parts of curving sides. Low base-ring, within which a five-petalled raised rosette (cf. rosette on 695 of Type 51 D); on under side of nozzle the beginning of a palmette, in relief. Attic clay, metallic black glaze.

Hesperia, III, 1934, p. 414, no. E 116, fig. 98.

F 15: 2, cistern: last quarter of 2nd century B.C.

826 (L 4884). Pls. 25, 54.

H. 0.030 m.; W. 0.065 m.

Complete except for handle and parts of sides and top; restored. Flat circular raised base. Very wide flat discus surrounded by ridge that continues along top of nozzle to form channel and embrace wick-hole. Tip of nozzle rounded. Reddish buff clay; red glaze all over. On base a broken-barred *alpha* in relief.

Agora, Pottery of the Roman Period, G 139.

D 4: 1, cistern: Layer II B, second quarter of 1st century after Christ.

827 (L 4379). Pl. 54.

H. 0.032 m.; W. 0.055 m.

Fragments preserving base with parts of top and sides. Circular base slightly raised and concave; small concave top with low ridge around it; both of these features resemble those of Type 54 C. Wide vertical band handle. Around top a ring, not a wreath, of small ivy leaves. Attic clay, poor black to brown glaze over all.

S 21: 1, well: dumped filling, late 1st century B.C. and early 1st century after Christ.

828 (L 2926). Pls. 28, 54.

H. 0.029 m.; W. 0.067 m.

Intact except for wide vertical band handle and end of nozzle. Flat raised almond-shaped base. Wide flat discus with ridge surrounding it and continuing down top of nozzle to form channel to wick-hole. On shoulder a few large detached ivy leaves in relief, not a wreath. Pinkish buff clay, thin black to brown glaze, much worn. On base a ligature in relief composed of *delta* and *iota* (?) for ΔIONYCIOY (?). This device was apparently cut in the mould twice, one overlapping the other.

Same device as on Type 58 B, and to be dated accordingly since wide flat top and ridge are also similar to those of that type.

829 (L 2057).

Pres. L. 0.079 m.

Fragment preserving part of base and pointed nozzle; channel on nozzle, base, clay, and glaze like preceding. On base remains of a ligature like preceding, for ΔIONYCIOY (?), to be dated similarly with 828, cf. Plate 28.

830 (L 4573). Pls. 25, 54.

H. 0.031 m.; W. 0.059 m.

Complete except for thin vertical handle, nozzle, and chips. Flat circular base encircled by low ridge. Concave discus with high ridge. Three parallel grooves on top of nozzle. On shoulder a zigzag line in relief. Pinkish buff clay, worn black to brown glaze. On base a broken-barred *alpha* in relief.

Fabric and signature both suggest a date *ca.* second quarter of 1st century after Christ.

831 (L 3832). Pl. 54.

Max. dim. 0.095 m.; W. of lamp 0.064 m.

Fragment of an upper mould preserving top, half of sides, and part of nozzle; area missing

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where lug might have been. Curved sides, flat top surrounded by groove and ridge; nozzle flat on top with straight ridges, similar ridges setting off the top and sides of nozzle from body of lamp. Attic clay. An unusually precisely modelled lamp, reflecting a metal prototype. Stylistically similar in some respects to Type 48 C, and may be dated similarly.

832 (L 4986). Pls. 27, 54.

L. of lamp 0.115 m.; W. of lamp 0.068 m.

Mould for lower part of lamp, intact except for piece from side. Flat circular raised base, long slightly pointed nozzle, rounded on under side. Thick pinkish buff clay; on the bottom, under the nozzle, three small holes (for a stacking-trivet in kiln?); also on bottom on incised ΠΙ (for Paramonos or Poplios?). Along sides, string marks for attaching this mould to upper mould; these lines could also be incised grooves for matching upper and lower moulds.

Shape suggests a late Hellenistic type, probably just before or after Sulla.

833 (L 4686). Pl. 54.

W. of lamp 0.060 m.

Front half of lower mould, preserving circular base with base-ring and long nozzle, curved on its under side. Good pinkish buff clay.

D-E 15: 1, drain filling: last quarter of 2nd century B.C.

834 (L 1399). Pl. 54.

H. 0.025 m.; W. 0.063 m.

Front part broken away. Low base-ring; watch-shaped body; indeterminate design on shoulder from very worn mould; cornucopia on left side made in upper mould only. Vertical strap handle. Attic clay; metallic black glaze all over.

Hesperia, III, 1934, p. 413, E 105.

F 15: 2, well: last quarter of 2nd century B.C.

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SIGNED BASES

Nos. 835-889 (and 1 other inventoried). Plates 25-28.

Second half of 2nd century B.C. into third quarter of 1st century after Christ.

These fragmentary bases preserve none of the characteristic upper portions of the lamps that would permit them to be assigned to specific types. In a few cases one might hesitantly deduce the type of the lamp from the signature, as in the case of Hephaistion who at present is known only for his signatures on Type 48 C; the several bases here that are signed by him have the shape, clay, and glaze of Type 48 C and probably belong to that type. In most cases, however, there is some possibility that the fragmentary base may belong to one of several catalogued types or to a variant or to a type not completely preserved or represented in the Agora inventory. The bases are described briefly in the catalogue, with suggestions in some cases as to the probable type or types to which they may belong. When there is additional evidence for dating, that is given along with the catalogue description.

Most of the fabricants who have been seen on lamps of known types, between Types 44 A and 58 Variants, are represented among the names on the fragmentary bases. A few names occur that have not appeared previously, and there are several ligatures and initials that cannot easily be associated with any of the familiar names.

It is possible to assemble some scraps of information concerning the dates of a number of the fabricants whose names appear more than once. In recapitulation one can see clearly that some flourished during specific periods; any scrap of lamp that may turn up with a signature of one of these men can thus be assigned to his floruit, whether the top design of the lamp is known or not. There is no clay nor glaze represented among these signed bases that need not be Attic. Many varieties of both are present, but the group contains no obvious importations. Paramonos remains then as the only fabricant represented in this collection who worked elsewhere and shipped his product, Type 49 A, into Athens.

The few following names are those of Athenians whose careers can be dated more or less closely; no mention is made of those whose work or the work of whose shops extended over an average lifetime, nor of those whose work is represented by only a single type:

Ariston and Hephaistion: flourished in the later years of the 2nd century B.C. and down to 86 B.C.; their work is not known after Sulla.

Ion and Sopatros: flourished in the period after Sulla, but probably did not extend into the 1st century after Christ.

Aineias (Aineios), Isidotos, Lysias (Lysios), and Proteas: flourished during the second half of the 1st century B.C. and into the early years of the 1st century after Christ.

The fabricants who signed with the ligature that resembles a *delta* or *iota* worked only in the second and third quarters of the 1st century after Christ.

835 (L 3368). Pl. 25.

W. of base 0.031 m.

Slightly raised oval base, concave; part of nozzle preserved at top. Fairly thick fabric, worn black glaze. Well-made letters in relief: AE.

Not duplicated on preceding types. Possibly an abbreviation for a variant spelling of AINEIOΣ (AINEIAΣ), who would be dated *ca.* second half of 1st century B.C.

836 (L 1898).

W. of base 0.032 m.

Flat raised oval. Part of nozzle at top. Thin buff clay, poor black glaze. Letters in relief: AI, exactly as on 751 of Type 52 H.

Seen on Type 52 G as well as on 52 H. Possibly an abbreviation for AINEIOΣ (AINEIAΣ) who flourished *ca.* second half of 1st century B.C.

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837 (L 4470).

W. of base *ca.* 0.030 m.

Flat raised oval like preceding. Part of nozzle at top. Thin pink clay, thin brown glaze only partially applied to outside. Letters in relief: AI as on preceding.

Dated as preceding.

838 (L 4628). Pl. 25.

Est. W. of base 0.033 m.

Circular, with simulated base-ring. Fine thin fabric, metallic black glaze; letters incised in clay before firing: AΛ, perhaps to be associated with AΛE of Type 48 C.

839 (L 938). Pl. 25.

W. of base 0.044 m.

Prominent flat circular raised base. Pinkish buff clay, worn brown glaze. Letters in relief, the first one or two missing: ΛE, to be restored [A]ΛE. Perhaps to be associated with AΛE of Type 48 C, but letters very different.

No suggested date.

840 (L 2130). Pl. 25.

W. of base 0.030 m.

Circular raised base, slightly concave. Pinkish buff clay, black to red glaze. Letters in relief ΛE on lower half; missing upper half might well have had a letter, and signature could read AΛE, to be associated with the AΛE of Type 48 C and preceding lamps.

Shape and fabric could be late 2nd century B.C. down to Sulla.

841 (L 2062). Pl. 25.

W. of base 0.036 m.

Concave almond-shaped base; trace of nozzle at top and bit of moulded design on shoulder of rays in relief; thus to be assigned to one of the Types 52 (B, C, E, or F). Pinkish buff clay, worn black glaze. Signature in relief, retrograde: AM. . . . Not duplicated on preceding types. Several names might fit, e. g. Amnion or Amphion, but no lamp-maker is known whose first two letters are AM. Suggested date between third quarter of 1st century B.C. and first quarter of 1st century after Christ.

842 (L 1619). Pl. 25.

Est. W. of base 0.063 m.

Wide raised circular base slightly concave. Fairly thick fabric; dull black glaze. Carefully made letters in relief: AΠ. Not duplicated on preceding types. Probably an abbreviation for Apollonides or Apollonios, and to be assigned to the 1st century B.C. This signature could be read retrograde, ΠA, and if so might have a connection with the shop that incised a small *pi* and large *alpha* on lamps of Types 52 E and 54 A. This supposition is less likely than the former.

843 (L 4152). Pl. 25.

W. of base 0.042 m.

Circular base with real ring foot. Part of nozzle preserved. Pinkish buff clay, red to black glaze. Letters in relief around the base retrograde, having been incised in the mould correctly and rather hastily: AΠ[OΛΛ]ωNIΔOY. The same signature appears on Types 51 Variants, 52 A, and 52 C and may be assigned to the first century B.C.

The ring foot is rare on early Roman lamps; it may indicate a date early in the 1st century B.C.

844 (L 2165). Pl. 25.

W. of base 0.038 m.

Circular raised base, slightly concave. Pinkish buff clay, worn black glaze. Carefully made letters in relief, in two lines: AΠOΛ[Λω]|NIΔOY.

Same shop as preceding; the carefully made neat letters suggest a date early in its career.

845 (L 4577). Pl. 25.

W. of base 0.048 m.

Base like preceding. Pinkish buff clay, brown to black glaze. Letters in relief retrograde, having been incised in the mould correctly and in three lines: [AΠOΛ]|ΛωNIΔ|OY.

Same shop as preceding. Clay and glaze suggest date early in the shop's era.

846 (L 1995).

Est. W. of base 0.040 m.

Base like preceding. Pinkish buff clay, dark brown glaze inside but all worn off outside. Letters in relief retrograde, like preceding, but in two lines: AΠOΛΛω|NIΔOY.

Same shop as preceding. Same date suggested, for same reasons. Letters from a mould similar to that which produced 702 of Type 52 A.

847 (L 4127).

Est. W. of base 0.045 m.

Almond-shaped base, slightly concave. Part of

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nozzle preserved. Pinkish buff clay, brown to black glaze. Letters in relief, retrograde, running from nozzle end to handle in three lines: ΑΠΟΛ|Λ ΩΝΙΔ|ΟΥ.

Same shop as preceding, but almond-shaped base suggests date well after middle of 1st century B.C. Letters from a mould similar to that which produced 719 of Type 52 C.

848 (L 2858). Pl. 26.

Est. W. of base 0.070 m.

Flat raised base, probably circular. Thick pinkish buff clay, worn black glaze. Letters in relief (probably in two lines): -ΠΟΛ-. For ΑΠΟ-ΛΛΩΝΙΔΟΥ (same as preceding or ΑΠΟΛΛΩΝΙΟΥ (same as following).

Large size and massive fabric suggest shop of 843-847 and a fairly early date in its floruit.

849 (L 4652). Pl. 26.

Est. W. of base 0.045 m.

Concave base (circular, oval, or almond-shaped). Thin buff clay, worn brown glaze. Letters in relief in two lines: [ΑΠΟΛΛ]|ΩΝΙΟΥ,

His name is known on Type 52 E (735) and this signature may be assigned to the same date, *ca.* second half of 1st century B.C., since clay, glaze, and shape agree with those of Type 52 E.

850 (L 864). Pl. 26.

W. of base 0.047 m.

Circular flat base with base-ring; concentric grooves in center. Traces of nozzle and handle. Thick pinkish buff clay, red glaze. Around the base, within the ring, neatly made letters in relief: ΑΡΙΣΤΩΝ ; none missing. An unusual example of a signature in the nominative rather than the genitive.

The same fabricant signed lamps of Type 51 B, during the late 2nd century, perhaps to 86 B.C. This base has the unusual features of the bases of Type 51 and possibly belongs to that type.

851 (L 1870). Pl. 26.

Est. W. of base 0.050 m.

Shape like preceding, as well as clay and glaze. Letters are similarly arranged, in relief: [ΑΡΙΣΤΩ]-ΝΟΣ. Normal signature in the genitive for this manufacturer.

Possibly a fragment of Type 51 B and to be dated accordingly.

852 (L 4718). Pl. 26.

W. of base 0.038 m.

Oval base, slightly concave. Part of nozzle at top. Thin buff clay, no trace of glaze or wash. Signature incised before firing: ΑCΚ|ΛΗΤΙ|ΑΔΟΥ. Not duplicated on preceding types.

The shape of base and character of incision suggest a date between middle of 1st century B.C. and early years of 1st century after Christ.

853 (L 4768). Pl. 26.

W. of base 0.038 m.

Flat circular raised base. Pinkish buff clay, black to red glaze. Signature: ΑƆ; incised before firing, but retrograde, a most unusual occurrence. Cf. the fabricant ΠΑ- (or ΑΠ- ?) of Types 52 E and 54 A and below. If this signature came out of the mould the letters would have read correctly there but would have been in relief. This implies that the matrix which produced the mould would have had the incised letters retrograde, the same as this lamp; the problem is the same. Letters presumably incised intentionally retrograde on the soft clay, for ΑCΚΛΗΤΙΑΔΟΥ, as preceding.

The character of clay, glaze, and shape suggest a date a little earlier than preceding lamp. They could both have been produced *ca.* 50 B.C., however.

854 (L 3752). Pl. 26.

Est. W. of base 0.032 m.

Base like preceding but smaller. Thin clay, black glaze. Letter in relief retrograde: Ꞅ for Asklepiades. Clay, glaze, and shape suggest a date similar to that of preceding.

N 21: 4, cistern: upper dumped filling, 2nd and 1st centuries B.C.

If this lamp and the two preceding are all from the same factory, it may have begun to flourish just before or just after Sulla's invasion and continued for perhaps forty to fifty years, introducing new styles but withdrawing from production well before the end of the 1st century B.C.

855 (L 3768). Pl. 26.

W. of base 0.037 m.

Circular raised base slightly concave. Parts of handle attachment and flaring collar around lamp. Thin pinkish buff clay, worn black glaze all over but carefully scraped from edge of col-

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lar. Letters in relief retrograde, in two lines: [Γ]ΛΑ|[Υ]ΚΙΟ, genitive of Glaukias, the only example of this fabricant's name on a lamp; the name is well known in Athenian prosopography.

Fabric and scraped ridge (cf. Type 48 A and others) suggest date in late 2nd century B.C.

856 (L 2014). Pl. 26.

W. of base 0.033 m.

Concave almond-shaped base with suggestion of base-ring; part of nozzle preserved at top. Buff clay, flaky brown glaze. Signature in relief, retrograde, in three lines: ΔΗΜ|ΗΤΡ|[ΙΟΥ]. Same maker signed lamps of Type 50 B, which covers broad period including all of 1st century B.C.

Almond-shaped base indicates a date certainly after Sulla.

857 (L 2056).

Est. W. of base *ca.* 0.030 m.

Small bit of flat almond-shaped base and entire under side of long nozzle, angular in section. Pinkish buff clay, worn black glaze. Signature in relief retrograde, in two or three lines: [ΔΗΜ]|ΗΤΡ|[ΙΟΥ] exactly as preceding.

Same date as preceding for same reasons.

858 (L 4915). Pl. 26.

W. of base 0.039 m.

Flat circular raised base, part of nozzle preserved at top. Buff clay, thin red to brown glaze carelessly applied. Signature incised in soft clay: ΔΗ; for ΔΗΜΗΤΡΙΟΥ, as preceding.

Shape and fabric suggests that this probably belongs to Type 50 B.

859 (L 46).

W. of base 0.039 m.

Flat circular raised base with groove around it. Pinkish buff clay, slight traces of brown glaze. Signature incised in soft clay in two lines: ΔΙΟΝ|ΥCΙΟΥ, exactly as on 804 of Type 57.

This well known fabricant signed many lamps of Types 52 E, 54 Variants, 55 B, and 57; this signature may thus be dated in the period between middle of 1st century B.C. and first quarter of 1st century after Christ.

Hesperia, II, 1933, pp. 205-206, 213-214, L 46, fig. 11, 3, where it is called Broneer Type XXVII rather than Type XVIII.

860 (L 1560). Pl. 26.

W. of base 0.038 m.

Circular flat base with base-ring; part of nozzle preserved at top. Pinkish buff clay, good black glaze. Letters in relief in two or three lines, the *nu* appearing backwards although the rest of name reads correctly left-to-right: ΔΙΟ|ΝΥCΙ|[ΟΥ].

Same maker as preceding. Shape and fabric indicate a date in the earliest years of his shop's production, probably somewhat before second quarter of 1st century B.C.

861 (L 2763). Pl. 26.

Est. W. of base *ca.* 0.040 m.

Flat base with narrow ridge around it, circular or oval. Trace of nozzle at top. Pinkish buff clay, remains of poor red glaze. Letters in relief, probably retrograde, to read: Ζ . . . ΑΔ . No lampmaker known in this or other collections whose name would fit. A name such as Zoriades or Zariadres would fit, but no restoration is suggested.

D 11: 1, well: dumped filling, late 1st century B.C. and early 1st century after Christ.

862 (L 2159).

W. of base 0.040 m.

Circular flat raised base; trace of nozzle at top. Pinkish buff clay, peeled black to red glaze. Signature in relief retrograde: ΗΦΑΙ, for Hephaistion (?) who signed Type 48 C. This lamp agrees in shape and fabric with Type 48 C and signature is exactly like that of 638.

D 12: 2, cistern shaft: filling of late 2nd and early 1st centuries B.C.

863 (L 4090). Pl. 26.

W. of base 0.040 m.

Base and bit of nozzle like preceding; same clay and glaze. Letters in relief retrograde: ΗΦ, for Hephaistion (?) as preceding.

Dated same as Type 48 C and 862 because of stylistic similarities.

864 (L 2267). Pl. 27.

Est. W. of base 0.038 m.

Base, clay, and glaze like preceding. Letters in relief retrograde: -ΦΑ-, for Hephaistion (?) as preceding.

Dated same as Type 48 C because of stylistic similarities.

865 (L 4057).

W. of base 0.038 m.

Base, clay, and glaze like preceding. Large bit

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of nozzle at top, rounded on under side. Single letter in relief: H, for Hephaistion (?) as preceding, or possibly for Heras who signed Type 54 A.

Form and fabric suggest Type 48 C and letter is exactly like H of 639 of Type 48 C; presumably Hephaistion was the maker, the lamp may be dated accordingly.

866 (L 4717). Pl. 27.

W. of base 0.035 m.

Raised oval base, concave; part of nozzle with angular underside preserved at top. Thin pinkish buff clay, worn black glaze. Signature in relief, retrograde: ΘΥΡ, incised in the mould almost cursively. Not duplicated on preceding types. The only known definitely Attic name that could be restored is Thyrbaios; one lived *ca.* 1st century B.C. There are, however, many names beginning with ΘΥΡ in general Greek prosopography; none known as a lamp-maker.

Shape and fabric suggest date in 1st century B.C., after Sulla.

867 (L 2000).

W. of base 0.034 m.

Almond-shaped base, slightly concave; bit of nozzle preserved at top. Pinkish buff clay, dull red glaze badly peeled. Signature incised in three line ΙCΙ|ΔΟΤ|ΟΥ. This fabricant signed his whole name on Type 52 B, 711, exactly as here; ΙCΙ appears on Types 52 C and 52 E; this lamp can fit stylistically into the floruit of these types, between middle of 1st century B.C. and early years of 1st century after Christ.

868 (L 4381). Pl. 27.

W. of base 0.038 m.

Slightly raised flat base, perhaps almond-shaped. Clay and glaze like preceding. Signature incised in three lines: [ΙCΙ]|ΔΟ|ΤΟΥ

Same fabricant as preceding; lamp to be dated as preceding for stylistic reasons. (Signature might be restored as ⌊ΘΕΟ⌋ΔΟΤΟΥ, but no lamp-maker known in this period by that name).

869 (L 1796). Pl. 27.

Est. W. of base 0.030 m.

Flat almond-shaped base with bit of nozzle. Pinkish buff clay, dull black glaze. Signature in relief, from nozzle end to handle end: ΙCΙΔ̣[ΟΤΟΥ]. Same fabricant as on preceding two lamps. Although ΙC ΙΔ[ΩΡΟΥ] would be a permissible restoration, no Isidoros is known in this period as a lamp fabricant.

Shape and fabric suggest date early in maker's period, probably not after middle years of 1st century B.C.

870 (L 2188). Pl. 27.

W. of base 0.046 m.

Circular raised base, very concave. Pinkish buff clay, good black glaze. Well made letters in relief, could be retrograde or not: ΙΣΙ; for ΙΣΙΔΟΤΟΥ or ΙΣΙΔΩΡΟΥ; presumably the former, as on preceding.

Shape and fabric require a date as early as that of preceding; perhaps earlier, in the 1st century B.C. just before Sulla. If this is true, the early years of the shop must be pushed back half a century.

871 (L 4528). Pl. 27.

Est. W. of base 0.040 m.

Fragment of raised circular base, concave. Thin pinkish buff clay, worn black glaze. Signature in relief retrograde: [Ι]ΩΝΟ[C].

This fabricant signed lamps of Types 52 A and 54 C during the first century B.C., between its second quarter and the earliest years of 1st century after Christ. This fragment can be assigned for stylistic reasons to this period, in its earlier rather than later years.

872 (L 2745). Pl. 27.

W. of base 0.046 m.

Circular flat raised base. Buff clay, thick black glaze. Letters in relief retrograde: ΛΥ, for the ΛΥ.ΙΟΥ of Types 52 C and 52 G (?).

Shape and fabric suggest a date earlier than Types 52 C and G, perhaps as early as late 2nd century B.C.

873 (L 1974). Pl. 27.

W. of base 0.046 m.

Almond-shaped base, slightly concave. Pinkish buff clay, metallic black glaze. Letters in relief, probably retrograde: ΛΥ, for ΛΥ.ΙΟΥ mentioned on preceding.

Almond-shaped base permits this lamp to be dated within the floruit of Lysias/-os or Lykios.

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874 (L 4351).

W. of base 0.030 m.

Flat oval base, almost almond-shaped. Pinkish buff clay, worn dull red glaze. Incised letters in soft clay: ΠΑ, the *pi* much smaller than the *alpha*. The same signature seen on Types 52 E and 54 A.

The lamp can be easily dated during the era of Types 52 E and 54 A, presumably during the second half of the 1st century B.C., on stylistic grounds.

875 (L 3658).

W. of base 0.030 m.

Slightly raised oval base, concave. Part of nozzle preserved with rounded lower section. Same clay, glaze, and signature as preceding: ΠΑ.

Same date as preceding.

876 (L 373).

Est. W. of base *ca.* 0.030 m.

Base, clay, glaze, and signature like preceding: ΠΑ.

Same date as preceding.

877 (L 2132).

W. of base 0.034 m.

Almond-shaped concave base. Part of lower portions of nozzle, angular in section. Pinkish buff clay, worn black glaze. Signature incised in soft clay: ΠΡΩΤΕΟΥ. This fabricant signed lamps of Type 52 B with his whole name and of Type 52 C with its first three letters.

This lamp is presumably either 52 B or 52 C and to be dated accordingly. The signature is exactly like that of 708 of Type 52 B.

878 (L 1789). Pl. 28.

W. of base 0.065 m.

Circular raised base, slightly concave. Pinkish buff clay, black glaze. Signature incised: ΠΡ, for ΠΡΩΤΕΟΥ, as on preceding lamp.

Shape and size suggest a date early in Proteas' career, as on preceding lamp, earlier than Types 52 B and 52 C, to neither of which could this lamp belong. This lamp produced shortly before or shortly after 86 B.C.

879 (L 4847). Pl. 28.

W. of base 0.036 m.

Almond-shaped base, slightly concave. Trace of nozzle at top. Thin buff clay, dull black glaze. Signature in relief in two lines: CΩΠΑ|[ΤΡ]ΟΥ. Sopatros signed Types 44 A, 52 E and 54 A.

This fragment can be assigned stylistically to the periods of Types 44 A, 52 E and 54 A although it probably cannot belong to any of them.

A 14: 2, cistern chamber: context of 1st century after Christ. An inventoried example of Type 44 A also found here.

880 (L 1408). Pl. 28.

Est. W. of base *ca.* 0.036 m.

Flat almond-shaped base with bit of lower, angular, portions of nozzle. Pinkish buff clay, red glaze. Signature in relief: CϑΠΑ; the *omega* had been incised upside down, while the fabricant was cutting the signature in the mould retrograde.

This fragment may belong to Type 52 E and may be dated accordingly.

881 (L 4571).

Est. W. of base 0.035 m.

Oval base with false ring foot; part of nozzle preserved at top. Pinkish buff clay, dull red glaze. Signature in relief in three lines CΩ|ΠΑ|ΤΡΟΥ

Stylistically related to preceding and to be dated similarly. Signature exactly like that of 731 of Type 52 E; cf. Plate 28.

882 (L 1860). Pl. 28.

W. of base 0.040 m.

Flat circular raised base. Pinkish buff clay, red glaze. Signature incised in soft clay in two lines: ΦΙΛΟ|ΜΟCΟΥ. This name not known on preceding types, but a fabricant by this name signs later Roman lamps (Corinth Type XXVII) in the second half of the 1st century after Christ.

This fragment appears stylistically to be between late 2nd and late 1st centuries B.C.

883 (L 3709). Pl. 28.

W. of base 0.040 m.

Base and fabric like preceding; dull black to brown glaze. Signature in relief: ; abbreviation of preceding name.

Clay, glaze, and shape suggest date like preceding.

884 (L 1407).

W. of base 0.036 m.

Almond-shaped base with false ring foot. Part

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of nozzle at bottom, with rounded under side. Pinkish buff clay, worn red glaze. Signature in relief: ΦΙ; like preceding.

Stylistically to be dated in the 1st century B.C., but after Sulla.

885 (L 4091). Pl. 28.

W. of base 0.040 m.

Almond-shaped base with false base-ring. Traces of nozzle with angular lower portion and bit of top with ray pattern in relief. Thin pinkish buff clay, dull brown glaze. Single letter in relief: Φ, Probably initial of Philomousos.

Suggested date same as preceding.

886 (L 2265). Pl. 28.

Est. W. of base 0.045 m.

Wide circular raised base with a groove around it; pinkish buff clay, traces of red to brown glaze. Very slight traces of faintly incised signature: ΠΟC. No suggested restoration.

Shape and fabric, as well as letters, imply a date after Sulla and before second quarter of 1st century after Christ.

887 (L 2086). Pl. 28.

W. of base *ca.* 0.040 m.

Slightly raised flat base, could be circular or oval or almond-shaped. Good pinkish buff clay, worn red glaze. Remains of signature in relief, retrograde, in more than one line: - ΟΥ. This could be the ending of one of several known fabricants' names.

Suggested date in the 1st century B.C., but anywhere between its beginning and end.

888 (L 5056). Pl. 28.

W. of base 0.035 m.

Oval base, raised and slightly concave. Pinkish buff clay, flaked dull red glaze. Traces of nozzle and handle attachment. On base a monogram composed of several letters forming a device, in relief and retrograde. Letters include Α, Κ, Ρ, and Τ. Perhaps this indicates the name of a fabricant such as ΑΚΡΑΤΟΣ. This name does not appear elsewhere as that of a lamp manufacturer. Possibly the device indicates prime quality, "unmixed," and is allied to the *alpha* on lamps of the 1st century after Christ that may signify excellence (*v. supra s.* Type 44 D). Similar monograms or devices appear on Athenian coinage of 229-197 B.C., but not this.

Shape and fabric imply a date certainly after the third quarter of the 2nd century B.C., perhaps after Sulla.

889 (L 2861). Pl. 28.

W. of base 0.033 m.

Small circular base, concave with false ring foot. Thin pinkish buff clay, chipped black glaze. Remains of a monogram comparable to preceding, in relief and retrograde. Letters include Π, Α, and Ρ. Perhaps the device of Paramonos who signed Types 49 A and B. Similar to monograms of magistrates on Athenian coins, 229-197 B.C.

Dated like preceding.

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CONCORDANCE OF AGORA INVENTORY NUMBERS, LAMP TYPES AND CATALOGUE NUMBERS

This list includes all terracotta lamps of the Greek period, and their survivals, inventoried in the Agora Excavations from 1931 up to the spring of 1954, and covered by the present study. Items for which the inventory numbers are not listed will appear in the publication of Roman lamps. The selection of the Greek lamps published here is indicated by the catalogue number at the right.

Type abbreviations:
MM = Miscellaneous Moulded
SB = Signed Bases
Var. = Variant
′ = Prime

Inv.	*Type*	*Cat.*
L 5	27 A	—
L 6	25 A	—
L 17	5	—
L 18	23 A	—
L 19	5	—
L 26	25 A	—
L 29	23 C	—
L 32	23 A	213
L 33	23 C	—
L 37	21 C	—
L 46	SB	859
L 47	49 B	—
L 80	48 A	—
L 81	24 C′	—
L 82	23 C	—
L 109	25 A′	—
L 110	25 B′	—
L 116	25 A	—
L 117	21 C	—
L 119	25 A	—
L 123	27 C	—
L 134	48 C	638
L 140	47 A	611
L 145	33 A	—
L 147	33 A	—
L 157	34 A	—
L 158	25 A	—
L 161	25 A	—
L 162	21 D	—
L 163	25 A	—
L 164	27 A′	382
L 165	46 B	—
L 166	25 A′	—
L 167	32	—
L 168	34 B	—
L 169	26 A	—
L 170	32	—
L 178	23 B	—
L 179	42 B	—
L 181	25 A′	—
L 182	24 C′	—
L 184	52 H	—
L 188	25 A	282
L 189	25 B′	—
L 190	25 B	—
L 191	43 D	—
L 192	25 A	274
L 210	21 C	—
L 213	47 A	—
L 214	25 B′	—
L 231	52 B	—
L 243	21 D	179
L 245	34 A	—
L 250	22 A	—
L 251	16 B	—
L 252	34 A	—
L 253	25 A	—
L 257	21 B	—
L 258	21 B	—
L 259	21 B	—
L 260	21 C	—
L 261	24 A	—
L 262	26 A	—
L 263	23 C	—
L 264	25 A	284
L 265	25 A	—
L 266	25 A	—
L 267	25 A	—
L 268	42 A	530
L 269	46 A	593
L 270	43 C	—
L 271	43 D	—
L 272	49 A	655
L 273	45 A	—
L 318	55 A	788
L 321	25 A	—
L 322	34 A	455
L 325	25 B	—
L 326	25 A	—
L 330	25 Var.	359
L 345	33 A	434
L 346	48 A	—
L 350	34 A	—
L 354	25 B′	—
L 357	21 B	—
L 361	46 B	598
L 366	24 B	254
L 367	43 D	560
L 369	32	428
L 373	SB	876
L 374	16 B	—
L 375	25 A	—
L 376	25 A′	—
L 377	25 B	—
L 378	43 B	546
L 382	49 A	657
L 383	25 A	—
L 384	34 B	—
L 386	33 A	—
L 388	25 A	269
L 392	34 A	—
L 399	25 B′	—
L 400	52 C	—
L 401	25 B′	—
L 402	46 A	592
L 403	23 C′	—
L 405	25 Var.	363
L 406	43 E	563
L 407	37 Var.	505
L 410	54 A	—
L 413	52 Var.	755
L 414	52 H	—
L 415	2 B	16
L 417	25 B′	—

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Inv.	Type	Cat.
L 418	25 A	—
L 419	48 A	—
L 420	29 A	—
L 421	27 A	—
L 424	43 D	—
L 425	34 A	—
L 426	34 A	—
L 427	23 C	233
L 428	25 B′	—
L 429	25 A	275
L 430	25 B	—
L 436	34 A	—
L 439	25 D′	—
L 440	43 C	—
L 441	34 A	—
L 443	21 B	—
L 444	29 A	—
L 446	28 B	—
L 447	50 B	—
L 448	50 A	669
L 449	2 B	—
L 450	4	27
L 451	2 B	—
L 452	23 D	—
L 453	25 A	—
L 454	25 A	281
L 455	12 A	—
L 458	25 A	—
L 459	27 B	384
L 460	33 A	438
L 461	34 A	449
L 462	33 A	—
L 466	24 A	—
L 467	17 A	—
L 468	2 B	—
L 469	16 B	—
L 470	23 E	241
L 472	25 A	—
L 474	16 B	—
L 475	16 B	—
L 477	25 A	—
L 478	25 B	—
L 479	21 B	—
L 480	24 C′	—
L 481	23 C	—
L 482	30 B	422
L 484	18	128
L 485	52 C	—
L 491	2 B	—
L 492	29 A	414
L 493	15	—
L 494	21 A	163
L 495	24 A	—
L 496	23 D	—
L 500	27 Var.	396
L 502	25 B	—
L 503	5	—
L 504	25 A	—
L 505	43	—
L 506	25 A′	295
L 508	21 B	—
L 513	49 A	653
L 524	MM	823
L 526	29 A	—
L 527	45 C	—
L 528	42 D	536
L 529	25 Var.	361
L 530	25 A′	297
L 531	25 A′	—
L 532	25 B′	—
L 533	26 A	369
L 534	25 B	—
L 535	25 A	283
L 536	25 A	—
L 537	21 Var.	191
L 538	21 C	—
L 539	25 B	311
L 540	52 F	739
L 542	24 A	—
L 546	25 B′	—
L 549	25 A′	288
L 550	25 B	—
L 551	48 A	—
L 552	*ca.* 48 A	—
L 553	48 A	622
L 554	43	—
L 555	MM	821
L 556	27 D	387
L 557	27 D	388
L 558	33 A	441
L 559	34 B	460
L 564	1	2
L 566	27 A′	—
L 567	50 B	—
L 599	37 A	494
L 600	30 B	—
L 609	21 C	—
L 611	30 A	417
L 612	21 C	—
L 613	43 Var.	567
L 616	24 A′	—
L 617	25 A	—
L 618	25 A′	285
L 620	23 A	—
L 621	24 C′	262
L 622	23 A	—
L 623	24 A	—
L 624	21 B	—
L 626	23 A	—
L 627	2 B	20
L 632	24 A	—
L 634	23 A	—
L 635	26 A	365
L 648	12 A	75
L 649	46 B	—
L 650	25 B′	329
L 653	52 H	747
L 657	16 B	—
L 658	16 B	—
L 659	16 B	—
L 660	16 B	—
L 661	16 B	—
L 662	16 B	—
L 663	16 Var.	116
L 664	6 Var.	—
L 665	14	85
L 666	5	31
L 667	19 A	—
L 668	5	32
L 669	2 B	13
L 670	2 Var.	21
L 671	2 B	14
L 672	5	33
L 673	16 B	—
L 674	16 B	—
L 675	16 B	96
L 676	16 B	—
L 677	17 A	122
L 678	20	152
L 679	16 B	—
L 680	16 B	—
L 681	16 B	—
L 683	16 B	—
L 684	16 B	—
L 685	16 B	—
L 686	16 B	—
L 687	16 B	—
L 688	19 A	134
L 689	19 A	—
L 690	19 A	—
L 697	25 A	—
L 701	25 A′	291
L 702	25 B	313
L 703	25 B′	326
L 705	43	—
L 706	45 A	582
L 712	34 A	—
L 714	56 A	—
L 740	30 B	—
L 741	32	429
L 742	29 A	—
L 743	29 A	—

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Inv.	Type	Cat.
L 744	25 B	312
L 745	48 A	628
L 766	22 B	—
L 772	46 C	600
L 773	42 B	533
L 774	43 B	—
L 775	25 D′	—
L 776	25 B	—
L 794	43 D	—
L 822	46 E	610
L 835	54 A	—
L 841	48 A	—
L 842	33 A	—
L 843	33 A	—
L 846	25 A′	—
L 849	43 C	550
L 856	35 D	483
L 857	46 C	—
L 859	25 A	272
L 860	25 A′	286
L 861	25 D′	350
L 862	25 A′	287
L 863	25 B′	323
L 864	SB	850
L 869	43 A	—
L 870	25 A	—
L 877	23 C′	234
L 882	43 C	552
L 892	34 A	—
L 893	34 A	—
L 894	43 D	—
L 895	43 A	—
L 896	34 A	—
L 916	25 A′	—
L 925	54 A	—
L 931	34 A	—
L 932	45 C	585
L 934	25 A	—
L 936	25 B′	336
L 937	24 A	—
L 938	SB	839
L 951	43 D	—
L 966	23 E	—
L 1003	29 A	412
L 1004	25 A′	—
L 1005	24 A′	—
L 1006	43 D	—
L 1008	52 E	—
L 1010	44 D	—
L 1011	52 E	—
L 1012	2 B	—
L 1013	2 B	—
L 1047	23 B	226
L 1048	21 C	—
L 1090	25 B′	—
L 1091	47 C	—
L 1096	16 B	103
L 1099	25 C′	—
L 1109	46 E	—
L 1110	21 B	168
L 1111	21 B	—
L 1112	21 B	—
L 1113	24 A	245
L 1114	46 C	—
L 1115	43 D	557
L 1123	32	432
L 1125	25 B′	—
L 1157	52 Var.	753
L 1172	25 B′	—
L 1174	21 B	—
L 1176	16 Var.	109
L 1177	20	—
L 1178	19 A	—
L 1179	16 B	—
L 1180	16 B	—
L 1181	16 B	—
L 1182	16 B	—
L 1183	21 A	157
L 1184	20	—
L 1185	16 B	101
L 1186	20	149
L 1187	20	153
L 1188	15	86
L 1189	21 Var.	185
L 1190	19 B	139
L 1191	16 B	97
L 1192	16 Var.	—
L 1193	18	127
L 1193 bis	18	—
L 1194	21 A	159
L 1195	20	—
L 1196	*ca.* 16 B	—
L 1197	*ca.* 16 B	—
L 1198	16 B	—
L 1199	19 A	—
L 1200	16 Var.	113
L 1201	16 B	102
L 1202	19 Var.	144
L 1203	12 B	—
L 1204	18	129
L 1205	21 Var.	186
L 1206	19 Var.	145
L 1207	22 Var.	205
L 1208	18	—
L 1209	21 C	—
L 1210	23 A	—
L 1211	23 A	214
L 1212	21 C	173
L 1213	23 A	—
L 1214	23 A	—
L 1215	24 A	—
L 1216	29 A	407
L 1217	25 A′	—
L 1225	35 A	—
L 1236	16 B	—
L 1237	2 B	—
L 1238	2 B	—
L 1239	6 B	—
L 1241	25 B	317
L 1242	8	—
L 1247	2 B	—
L 1267	52 C	719
L 1293	35 A	—
L 1294	48 A	—
L 1295	54 C	—
L 1296	27 B	383
L 1299	52 A	—
L 1300	37 A	492
L 1301	43 D	—
L 1303	51 B	—
L 1304	48 A	—
L 1305	35 A	—
L 1306	35 A	468
L 1307	27 Var.	393
L 1308	57	—
L 1309	35 A	—
L 1310	35 A	—
L 1312	35 A	—
L 1313	35 A	—
L 1322	34 A	450
L 1326	35 A′	472
L 1327	52 C	—
L 1328	25 B′	—
L 1330	48 A	—
L 1331	25 A	—
L 1332	49 B	667
L 1333	48 A	—
L 1335	37 Var.	508
L 1336	16 B	—
L 1337	43 E	564
L 1341	45 C	—
L 1343	8	57
L 1347	34 A	—
L 1349	24 C′	—
L 1350	43 D	—
L 1354	25 A	—
L 1359	36 B	488
L 1360	16 B	—
L 1361	17 B	124
L 1362	51 C	694
L 1363	6 Var.	—
L 1364	35 A	—

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Inv.	*Type*	*Cat.*
L 1365	MM	820
L 1366	6 A	—
L 1367	6 B	46
L 1369	44 C	574
L 1370	34 A	—
L 1371	46 C	604
L 1376	20	—
L 1377	35 A	—
L 1379	35 B	475
L 1384	37 B	—
L 1385	39	516
L 1386	35 A	—
L 1387	35 A	—
L 1388	48 A	—
L 1389	48 A	623
L 1390	48 A	—
L 1391	51 A	684
L 1392	51 B	687
L 1393	48 A	—
L 1394	48 A	—
L 1395	48 A	—
L 1396	48 A	—
L 1397	48 A	—
L 1398	48 A	—
L 1399	MM	834
L 1400	48 C	640
L 1401	48 E	648
L 1402	MM	825
L 1403	50 D	680
L 1407	SB	884
L 1408	SB	880
L 1415	25 B′	—
L 1416	54 Var.	784
L 1417	54 C	779
L 1419	48 C	641
L 1425	21 C	—
L 1426	25 B	303
L 1427	23 D	239
L 1430	52 C	—
L 1441	43 D	558
L 1447	25 A	—
L 1451	21 B	—
L 1452	16 B	—
L 1454	10	65
L 1467	54 A	—
L 1468	11	69
L 1481	25 A	—
L 1483	34 A	—
L 1484	27 A	377
L 1485	48 A	—
L 1487	5	—
L 1488	25 A	279
L 1489	37 A	493
L 1490	12 A	71
L 1496	25 A	—
L 1498	35 B	—
L 1502	43 D	—
L 1503	48 A	—
L 1504	50 D	679
L 1505	35 B	477
L 1506	48 A	627
L 1507	25 A	268
L 1508	23 C	—
L 1510	2 B	—
L 1511	16 A	—
L 1521	23 D	238
L 1522	34 A	—
L 1523	43 E	566
L 1524	35 B	—
L 1525	35 A	—
L 1527	39	—
L 1528	48 B	—
L 1529	35 A	—
L 1530	27 C	386
L 1531	25 B′	—
L 1532	25 B	308
L 1537	52 C	722
L 1541	52 C	—
L 1550	54 Var.	785
L 1553	16 B	—
L 1554	19 B	137
L 1555	16 Var.	111
L 1556	48 A	—
L 1559	25 B′	330
L 1560	SB	860
L 1563	2 B	—
L 1564	*ca.* 12 A	—
L 1565	25 B′	—
L 1566	25 C′	342
L 1572	33 B	444
L 1573	35 D	—
L 1574	43 A	541
L 1575	39 Var.	520
L 1576	16 B	—
L 1577	47 B	613
L 1578	48 A	629
L 1579	28 B	—
L 1580	21 Var.	190
L 1584	MM	—
L 1585	25 C′	344
L 1586	23 D	—
L 1587	23 D	—
L 1588	25 A	—
L 1605	43 A	—
L 1606	45 C	—
L 1607	36 B	489
L 1614	23 D	—
L 1615	45 C	—
L 1616	46 B	—
L 1619	SB	842
L 1635	2 B	9
L 1636	6 A	39
L 1637	22 C	—
L 1644	50 B	—
L 1645	52 H	—
L 1656	23 D	—
L 1657	23 D	—
L 1658	11	68
L 1660	58 B	811
L 1664	21 B	—
L 1669	50 C	678
L 1674	21 B	—
L 1675	21 B	—
L 1676	22 C	204
L 1677	23 B	—
L 1678	26 A	367
L 1686	25 C′	347
L 1706	50 B	—
L 1713	24 A	—
L 1727	29 B	415
L 1740	24 C′	266
L 1741	23 A′	—
L 1770	52 A	702
L 1779	35 A	—
L 1781	48 C	—
L 1782	43 D′	—
L 1783	54 C	778
L 1784	35 A	469
L 1785	27 A′	381
L 1786	44 D	—
L 1787	52 A	700
L 1788	35 B	476
L 1789	SB	878
L 1791	55 B	—
L 1796	SB	869
L 1806	45 C	—
L 1807	48 A	—
L 1808	34 A	452
L 1811	44 A	570
L 1812	46 B	—
L 1813	25 B′	—
L 1814	27 Var.	395
L 1816	51 B	691
L 1817	49 A	649
L 1818	55 B	—
L 1821	25 D′	—
L 1823	52 H	—
L 1824	54 C	776
L 1825	52 D	—
L 1840	52 H	746
L 1841	52 E	—
L 1843	52 E	738

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Inv.	*Type*	*Cat.*
L 1845	23 D	—
L 1846	45 C	584
L 1847	25 B′	335
L 1848	25 Var.	362
L 1849	46 C	602
L 1850	45 C	586
L 1851	25 A′	—
L 1852	43 C	551
L 1853	37 B	496
L 1854	42 C	535
L 1855	46 A	589
L 1856	43 C	—
L 1857	42 D	—
L 1858	51 B	686
L 1859	25 B′	—
L 1860	SB	882
L 1866	2 B	19
L 1867	21 B	—
L 1868	27 A	—
L 1870	SB	851
L 1873	30 A	418
L 1874	23 A	216
L 1876	25 B′	—
L 1877	21 A	162
L 1885	35 A	—
L 1886	35 A	467
L 1888	45 B	—
L 1892	6 B	48
L 1893	2 B	—
L 1894	5	—
L 1895	5	—
L 1896	48 A	632
L 1897	19 Var.	146
L 1898	SB	836
L 1899	30 B	421
L 1907	48 A	—
L 1908	48 A	—
L 1909	43 D	—
L 1910	48 B	635
L 1911	25 A′	—
L 1912	34 A	—
L 1913	25 A	—
L 1919	6 A	—
L 1923	46 C	—
L 1924	46 A	590
L 1925	46 B	597
L 1926	48 A	620
L 1927	25 A′	298
L 1928	25 A′	290
L 1929	31	424
L 1930	43 B	547
L 1931	46 B	595
L 1932	36 B	490
L 1933	28 A	399
L 1934	50 B	—
L 1935	25 B	—
L 1936	48 A	—
L 1941	14	84
L 1942	2 B	8
L 1943	21 B	—
L 1944	24 A	—
L 1945	16 B	—
L 1946 bis	12 B	—
L 1946	12 B	77
L 1947	7	54
L 1948	18	—
L 1949	16 B	—
L 1950	19 Var.	143
L 1954	25 B	—
L 1955	27 A′	—
L 1959	19 A	—
L 1960	37 B	—
L 1961	52 E	—
L 1968	26 B	374
L 1969	25 A	—
L 1970	25 A	278
L 1972	49 A	—
L 1974	SB	873
L 1994	43 E	—
L 1995	SB	846
L 1997	27 A	—
L 1999	52 E	—
L 2000	SB	867
L 2001	35 A	—
L 2003	25 A	—
L 2005	48 A	—
L 2006	34 A	—
L 2007	56 A	797
L 2010	43 D	—
L 2013	56 A	799
L 2014	SB	856
L 2015	52 C	—
L 2019	25 B	315
L 2020	49 A	652
L 2023	54 A	763
L 2024	44 D	—
L 2025	23 C	232
L 2027	52 B	—
L 2029	34 A	—
L 2041	52 C	—
L 2053	50 B	—
L 2054	21 C	—
L 2055	54 C	777
L 2056	SB	857
L 2057	MM	829
L 2058	52 B	711
L 2060	54 D	—
L 2061	37 B	—
L 2062	SB	841
L 2078	6 B	—
L 2080	52 C	—
L 2082	25 B	—
L 2083	25 B′	—
L 2085	37 B	—
L 2086	SB	887
L 2087	49 A	651
L 2088	43 Var.	568
L 2089	51 Var.	699
L 2090	52 B	—
L 2091	52 A	—
L 2092	54 A	—
L 2094	35 B	478
L 2095	37 B	—
L 2097	52 G	743
L 2098	49 A	659
L 2099	48 A	—
L 2101	33 A	433
L 2102	54 Var.	787
L 2105	52 B	708
L 2106	46 C	—
L 2119	27 A	—
L 2122	34 Var.	464
L 2128	51 B	689
L 2130	SB	840
L 2131	40 B	523
L 2132	SB	877
L 2151	32	—
L 2159	SB	862
L 2160	23 A′	—
L 2161	50 B	—
L 2163	26 A	371
L 2165	SB	844
L 2168	43	—
L 2175	16 B	95
L 2176	2 B	—
L 2179	23 D	—
L 2181	16 Var.	106
L 2182	25 B′	—
L 2186	16 Var.	110
L 2187	29 A	408
L 2188	SB	870
L 2189	24 A	—
L 2194	44 B	573
L 2196	17 A	121
L 2197	21 B	—
L 2199	52 F	740
L 2200	52 B	—
L 2201	52 B	713
L 2202	56 B	801
L 2203	57	805
L 2204	50 B	—
L 2205	55 B	—

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Inv.	*Type*	*Cat.*
L 2207	47 C	616
L 2217	27 A	—
L 2221	52 A	701
L 2224	29 A	—
L 2225	25 A′	294
L 2226	5 A′	—
L 2228	25 B	—
L 2229	25 A′	296
L 2230	23 D	240
L 2232	25 A′	292
L 2233	25 A	—
L 2236	54 C	780
L 2237	52 B	—
L 2240	50 B	671
L 2241	55 B	791
L 2242	25 B	301
L 2243	23 D	236
L 2244	54 A	769
L 2245	52 B	—
L 2261	6 B	44
L 2265	SB	886
L 2267	SB	864
L 2285	44 A	—
L 2286	54 A	764
L 2313	48 C	644
L 2320	24 C′	—
L 2321	26 A	—
L 2322	21 B	—
L 2323	25 B′	—
L 2324	23 C	—
L 2342	22 Var.	207
L 2344	52 B	705
L 2345	52 H	745
L 2356	41	527
L 2357	37 C	504
L 2358	50 B	—
L 2360	29 A	409
L 2376	23 C	—
L 2380	28 B	402
L 2381	25 B′	328
L 2382	25 C′	343
L 2385	35 C′	482
L 2399	48 A	—
L 2400	29 A	—
L 2401	25 B′	—
L 2403	25 B′	—
L 2404	34 A	—
L 2407	52 H	744
L 2445	23 D	—
L 2446	19 B	141
L 2447	16 B	104
L 2448	25 B	—
L 2449	12 Var.	79
L 2450	21 C	176
L 2451	23 C	231
L 2456	55 B	790
L 2482	52 B	712
L 2483	52 E	—
L 2484	54 B	774
L 2497	29 A	—
L 2500	43 D	556
L 2506	29 A	—
L 2542	51 C	693
L 2543	43 D	559
L 2544	34 A	456
L 2545	49 A	—
L 2546	52 C	715
L 2602	25 B	—
L 2613	34 Var.	466
L 2617	23 D	—
L 2618	26 A	—
L 2620	34 B	—
L 2621	38	513
L 2622	25 D′	—
L 2623	25 A	—
L 2624	23 C	—
L 2627	25 A	—
L 2628	25 A	—
L 2629	25 B′	—
L 2636	25 B′	—
L 2637	25 C′	—
L 2638	25 A′	—
L 2639	29 A	—
L 2640	29 B	—
L 2641	43 B	—
L 2642	23 A	—
L 2643	23 A	—
L 2644	24 A	—
L 2645	24 A	—
L 2646	41	524
L 2646 bis	41	—
L 2647	52 E	734
L 2648	53	759
L 2649	49 A	662
L 2653	23 A	215
L 2655	25 Var.	360
L 2656	21 Var.	187
L 2657	20	—
L 2658	20	—
L 2659	23 C	—
L 2663	23 D	—
L 2664	52 H	—
L 2666	34 B	—
L 2672	34 B	461
L 2676	5	—
L 2678	5	30
L 2694	29 B	416
L 2696	50 A	668
L 2697	52 C	718
L 2698	54 A	762
L 2699	57	804
L 2700	19 A	131
L 2701	15	88
L 2702	13	82
L 2715	28 A	400
L 2719	44 A	569
L 2720	48 A	—
L 2721	52 E	736
L 2722	24 A	—
L 2730	37 B	—
L 2731	3	23
L 2732	3	—
L 2734	43 C	—
L 2735	21 A	—
L 2738	43	—
L 2739	45 C	—
L 2741	45 C	—
L 2742	21 Var.	192
L 2743	25 A	—
L 2745	SB	872
L 2755	33 A	435
L 2756	54 A	—
L 2757	52 E	—
L 2758	52 F	—
L 2759	52 H	—
L 2760	53	760
L 2761	52 Var.	754
L 2762	54 C	—
L 2763	SB	861
L 2764	37 B	—
L 2765	37 B	502
L 2766	40 A	—
L 2769	23 B	225
L 2770	24 A	—
L 2771	24 A	—
L 2772	24 A′	—
L 2773	24 A′	—
L 2776	54 A	767
L 2778	34 A	—
L 2780	41	528
L 2784	17 A	—
L 2785	20	—
L 2786	16 Var.	114
L 2788	16 B	—
L 2789	16 B	—
L 2790	51 B	—
L 2791	23 C	—
L 2802	46 B	—
L 2803	28 B	—
L 2804	25 Var.	358
L 2806	25 B′	—
L 2807	24 A′	—

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Inv.	*Type*	*Cat.*
L 2808	48 A	—
L 2809	52 H	752
L 2814	25 B′	332
L 2815	25 A	—
L 2816	43 B	—
L 2817	25 B′	—
L 2824	21 B	—
L 2825	21 B	169
L 2826	23 A	209
L 2827	24 A	—
L 2828	21 C′	178
L 2829	24 A	—
L 2830	21 C′	177
L 2832	24 A	244
L 2833	16 Var.	107
L 2834	21 B	167
L 2840	24 C′	261
L 2856	23 B	—
L 2857	16 Var.	115
L 2858	SB	848
L 2859	23 A′	222
L 2860	48 A	—
L 2861	SB	889
L 2862	23 B	223
L 2866	44 D	578
L 2867	39	517
L 2868	52 B	710
L 2884	50 D	682
L 2885	35 A	—
L 2886	25 B	—
L 2887	25 B′	—
L 2888	25 B′	—
L 2889	25 A′	—
L 2890	30 B	419
L 2891	25 A	—
L 2895	25 D′	351
L 2897	24 C′	264
L 2898	23 A	—
L 2899	21 C	—
L 2900	36 A	486
L 2908	50 B	—
L 2919	25 D′	—
L 2920	48 A	—
L 2925	34 A	—
L 2926	MM	828
L 2929	34 A	—
L 2932	50 B	—
L 2933	49 B	665
L 2934	58 A	806
L 2935	40 A	521
L 2936	29 A	413
L 2937	29 A	—
L 2938	25 D′	—
L 2939	43 A	542
L 2946	52 C	—
L 2962	56 Var.	803
L 2963	58 B	812
L 2969	58 B	809
L 2970	58 B	808
L 2971	53	761
L 2972	54 D	783
L 2978	54 D	781
L 2979	49 A	661
L 2982	52 E	735
L 2983	52 E	727
L 2984	23 A	—
L 2989	48 A	—
L 2990	23 A	—
L 2991	21 C	—
L 2992	34 A	—
L 2993	34 A	—
L 2995	44 A	—
L 2998	54 B	—
L 2999	54 C	—
L 3001	35 B	—
L 3002	21 A	158
L 3003	21 C	—
L 3004	24 A	—
L 3010	52 C	724
L 3015	4	26
L 3016	34 A	—
L 3018	35 A	—
L 3022	1	1
L 3023	25 B′	—
L 3024	44 A	572
L 3036	56 A	798
L 3037	37 B	—
L 3038	52 C	—
L 3039	45 C	—
L 3040	46 C	—
L 3041	29 A	406
L 3042	26 B	372
L 3043	25 B′	325
L 3052	25 B′	338
L 3053	25 B′	—
L 3055	25 B′	—
L 3056	25 B′	331
L 3057	25 B′	337
L 3068	25 A	280
L 3076	23 D	237
L 3077	34 A	445
L 3080	47 C	619
L 3082	23 A	—
L 3083	24 A′	251
L 3084	21 C	—
L 3085	46 B	—
L 3086	24 A	247
L 3087	35 A	—
L 3088	21 C	175
L 3089	52 C	—
L 3090	55 B	—
L 3091	50 B	670
L 3093	4	26
Joins 3015		
L 3094	1	4
L 3095	58 B	814
L 3096	25 B′	324
L 3097	25 B	306
L 3106	16 A	92
L 3107	34 A	453
L 3108	25 A′	—
L 3119	52 H	748
L 3120	52 C	725
L 3121	52 C	—
L 3122	52 E	737
L 3123	52 C	—
L 3124	54 C	—
L 3125	56 B	800
L 3127	54 B	772
L 3128	49 B	—
L 3129	50 B	—
L 3130	53	—
L 3131	52 B	—
L 3133	21 C	172
L 3134	21 C	—
L 3135	24 A	249
L 3136	24 A′	252
L 3137	51 A	685
L 3138	22 A	195
L 3139	22 C	202
L 3148	53	758
L 3149	6 B	50
L 3150	15	—
L 3152	52 C	—
L 3153	35 B	479
L 3153 bis	35 B	—
L 3154	49 A	656
L 3155	33 A	442
L 3156	51 D	696
L 3157	39′	518
L 3158	49 A	654
L 3159	21 C	—
L 3160	21 C	171
L 3161	21 C	174
L 3162	24 A	248
L 3163	23 A	211
L 3164	23 A	212
L 3165	24 C′	259
L 3166	16 B	—
L 3178	43	—
L 3179	43 B	548
L 3180	45 C	—

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Inv.	*Type*	*Cat.*
L 3181	43 B	—
L 3183	46 B	594
L 3185a	58 B	813
L 3185b	SB	—
L 3186	29 A	—
L 3187	25 A	—
L 3189	57	—
L 3190	54 B	—
L 3191	55 C	954
L 3194	21 C	—
L 3195	2 B	—
L 3196	23 A′	221
L 3197	45 C	—
L 3198	43 D	—
L 3199	42 D	—
L 3200	43 B	—
L 3204	50 B	674
L 3205	28 B	—
L 3215	43 B	—
L 3216	46 B	—
L 3220	24 A′	—
L 3221	25 A	270
L 3222	44 A	571
L 3223	52 E	—
L 3239	8	59
L 3240	6 A	42
L 3253	15	—
L 3269	23 A	220
L 3285	43	—
L 3287	42 D	538
L 3291	43	—
L 3292	32	427
L 3293	43 C	553
L 3294	42 D	—
L 3295	47 C	—
L 3296	46 B	—
L 3297	46 C	—
L 3298	47 B	614
L 3299	21 A	160
L 3302	35 Var.	485
L 3306	43 B	—
L 3307	51 Var.	698
L 3308	37 B	499
L 3309	35 A	471
L 3310	37 A	495
L 3312	48 A	—
L 3313	51 D	695
L 3320	37 B	—
L 3321	35 A	470
L 3322	2 Var.	22
L 3323	39 Var.	519
L 3324	37 B	—
L 3325	45 C	—
L 3326	17 A	123
L 3327	15	87
L 3344	25 A	—
L 3349	21 A	—
L 3350	23 C	229
L 3356	55 C	795
L 3361	19 Var.	147
L 3362	22 A	—
L 3363	25 B′	—
L 3368	SB	835
L 3369	16 B	98
L 3370	16 B	—
L 3371	21 A	161
L 3372	20	151
L 3373	19 B	140
L 3374	19 A	133
L 3375	4	25
L 3376	9	60
L 3377	3	24
L 3378	3	—
L 3385	5	34
L 3386	2 B	10
L 3387	2 B	—
L 3388	11	70
L 3397	23 C	—
L 3398	25 A	—
L 3409	2 B	—
L 3411	16 Var.	117
L 3412	25 B	—
L 3413	21 Var.	184
L 3414	20	—
L 3415	16 Var.	112
L 3416	19 B	138
L 3418	25 B	—
L 3420	45 C	—
L 3428	27 D	—
L 3429	25 A	—
L 3430	46 B	—
L 3431	46 B	596
L 3433	24 A	—
L 3443	19 A	—
L 3444	21 A	156
L 3445	12 B	76
L 3446	*ca.* 12 A	—
L 3461	23 C	—
L 3468	25 B′	—
L 3469	46 D	606
L 3472	25 A′	—
L 3483	46 B	—
L 3487	24 A′	—
L 3488	8	58
L 3489	2 A	6
L 3490	2 B	—
L 3491	16 A	93
L 3492	22 Var.	206
L 3493	6 B	47
L 3494	2 A	5
L 3495	2 B	18
L 3496	23 A	219
L 3497	2 B	12
L 3498	6 A	41
L 3499	4	28
L 3502	29 A	—
L 3503	25 A	—
L 3505	25 A	—
L 3506	24 A′	253
L 3514	54 D	782
L 3522	42 A	529
L 3523	28 A	398
L 3524	28 B	401
L 3525	28 A	397
L 3528	25 D′	—
L 3529	25 C′	346
L 3530	30 B	420
L 3531	25 B	—
L 3532	25 A	273
L 3533	25 B′	333
L 3534	25 C′	349
L 3535	25 C′	348
L 3536	25 D′	355
L 3537	25 D′	354
L 3538	25 D′	—
L 3539	29 A	410
L 3540	25 B	310
L 3541	25 B	—
L 3545	28 B	—
L 3552	52 C	720
L 3554	19 B	136
L 3558	24 A	—
L 3559	24 A′	—
L 3560	25 B′	340
L 3561	44 D	—
L 3566	25 A	—
L 3567	25 B′	—
L 3568	26 B	373
L 3571	44 C	575
L 3573	16 B	105
L 3579	1	3
L 3580	33 A	440
L 3584	45 C	—
L 3589	15	—
L 3590	6 B	—
L 3591	6 B	45
L 3592	7	55
L 3593	16 B	—
L 3594	16 B	—
L 3595	16 B	—
L 3596	16 B	—
L 3597	6 B	—

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Inv.	*Type*	*Cat.*
L 3598	15	90
L 3599	5	37
L 3600	13	—
L 3601	12 A	—
L 3602	15	91
L 3603	19 A	—
L 3604	2 B	—
L 3605	12 B	—
L 3606	12 B	78
L 3607	5	—
L 3608	8	56
L 3612	16 Var.	—
L 3616	13	83
L 3624	39′	—
L 3625	25 A	—
L 3626	23 A	—
L 3627	28 B	403
L 3628	25 C′	—
L 3629	52 C	721
L 3630	25 B′	334
L 3631	37 B	501
L 3632	26 A	366
L 3633	49 B	—
L 3634	12 Var.	81
L 3637	33 A	—
L 3638	45 C	—
L 3639	48 A	—
L 3640	34 A	447
L 3641a	54 A	—
L 3641b	56 A	—
L 3643	12 A	74
L 3644	37 B	498
L 3646	52 E	731
L 3652	6 Var.	52
L 3653	25 A	276
L 3654	23 C	—
L 3655	17 B	—
L 3658	SB	875
L 3661	25 B	—
L 3662	23 C	230
L 3663	25 A	—
L 3664	25 A	—
L 3665	25 C′	263
L 3666	16 B	100
L 3667	16 B	—
L 3668	21 A	—
L 3670	25 A	—
L 3672	52 B	—
L 3673	55 B	—
L 3675	52 E	—
L 3676	35 A	—
L 3677	2 B	—
L 3678	5	—
L 3683	54 C	—
L 3685	52 E	733
L 3689	52 H	—
L 3690	51 B	692
L 3693	25 A′	—
L 3694	19 A	132
L 3695	48 A	624
L 3702	52 B	709
L 3709	SB	883
L 3718	44 A	—
L 3719	54 B	773
L 3720	28 B	—
L 3722	16 B	99
L 3723	20	150
L 3724	25 A	—
L 3726	52 E	732
L 3727	52 F	—
L 3728	21 B	—
L 3730	55 C	796
L 3736	52 H	—
L 3741	34 B	—
L 3742	25 A	271
L 3744	52 E	728
L 3745	52 E	—
L 3748	21 B	—
L 3749	23 A	210
L 3751	54 A	771
L 3752	SB	854
L 3753	35 D	—
L 3754	33 A	—
L 3755	43 D	561
L 3757	43	—
L 3759	43 D	—
L 3760	52 H	—
L 3766	21 A	—
L 3767	10	63
L 3768	SB	855
L 3769	52 F	—
L 3772	46 C	605
L 3773	25 A	277
L 3774	27 D	389
L 3775	27 D	—
L 3776	43 A	544
L 3777	43 A	539
L 3778	46 A	591
L 3779	MM	817
L 3780	37 Var.	510
L 3781	42 C	—
L 3782	23 C′	235
L 3783	45 A	581
L 3784	27 A	380
L 3785	MM	818
L 3790	34 B	459
L 3792	37 B	—
L 3794	43 D	—
L 3796	34 A	—
L 3797	53	—
L 3798	54 B	—
L 3799	35 A	—
L 3801	43 D′	562
L 3803	21 B	—
L 3804	24 A	243
L 3806	5	35
L 3807	45 A	580
L 3808	42 C	534
L 3809	46 A	—
L 3818	47 C	618
L 3819	35 A	—
L 3820	43 D	—
L 3821	52 E	—
L 3823	50 B	673
L 3824	50 B	675
L 3825	50 B	—
L 3826	48 C	643
L 3827	35 C	481
L 3828	34 B	457
L 3829	27 D	—
L 3830	34 A	—
L 3831	48 A	—
L 3832	MM	831
L 3833	34 B	—
L 3834	48 A	—
L 3838	40 A	—
L 3841	21 B	—
L 3842	22 B	198
L 3843	22 B	—
L 3853	29 A	—
L 3854	52 E	—
L 3855	52 E	730
L 3856	55 C	—
L 3857	48 A	—
L 3858	34 B	463
L 3860	54 C	—
L 3861	54 A	—
L 3863	51 B	688
L 3864	42 D	—
L 3871	51 Var.	697
L 3872	27 C	385
L 3873	37 B	497
L 3875	38	512
L 3878	28 B	—
L 3882	35 A	—
L 3893	58 Var.	816
L 3894	25 B′	—
L 3895	54 Var.	786
L 3902	54 B	775
L 3903	43 D	—
L 3904	44 D	579
L 3905	50 C	677

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Inv.	*Type*	*Cat.*
L 3906	25 A	—
L 3907	51 C	—
L 3908	47 C	617
L 3909	33 A	—
L 3910	24 A	—
L 3912	34 A	—
L 3913	48 D	—
L 3914	25 A	—
L 3915	25 B′	—
L 3916	2 B	17
L 3918	48 A	626
L 3919	26 A	370
L 3920	51 C	—
L 3928	25 D′	—
L 3929	27 D	—
L 3930	25 B′	—
L 3931	21 C	—
L 3932	25 C′	—
L 3946	16 A	—
L 3947	29 A	—
L 3949	53	757
L 3950	49 B	666
L 3960	34 A	—
L 3961	19 Var.	142
L 3966	25 B	—
L 3967	21 B	—
L 3968	17 A	120
L 3969	16 B	—
L 3970	22 A	—
L 3971	21 B	165
L 3972	21 B	166
L 3973	21 B	170
L 3974	22 C	203
L 3979	29 A	—
L 3984	55 B	789
L 3985	54 A	770
L 3986	21 C	—
L 3989	7	53
L 3990	32	426
L 3991	52 C	717
L 3994	5	—
L 3995	25 B′	—
L 3996	24 A	—
L 3997	24 C′	—
L 3998	25 A	—
L 3999	19 A	135
L 4000	19 Var.	148
L 4001	22 B	—
L 4002	21 B	—
L 4003	21 D	—
L 4004	24 A	—
L 4005	18	130
L 4006	22 B	—
L 4007	21 B	—
L 4008	25 Var.	356
L 4009	52 B	707
L 4011	21 C	—
L 4012	50 B	—
L 4013	23 C	—
L 4015	48 A	634
L 4016	48 A	—
L 4017	21 C	—
L 4018	25 A	—
L 4019	23 D	—
L 4020	25 B	304
L 4021	25 B'	318
L 4022	23 C	—
L 4023	25 B	307
L 4024	23 C	228
L 4025	37 B	503
L 4026	49 B	—
L 4027	49 A	664
L 4028	48 A	—
L 4029	43 A	543
L 4030	51 B	—
L 4032	43	—
L 4033	33 B	443
L 4036	34 B	—
L 4037	42 D	—
L 4038	35 B	474
L 4047	52 H	—
L 4051	34 A	454
L 4052	46 E	609
L 4053	45 C	—
L 4054	24 A′	—
L 4056	48 A	—
L 4057	SB	865
L 4058	48 D	646
L 4059	43 D	—
L 4060	25 A′	—
L 4062	18	126
L 4077	29 A	—
L 4079	25 Var.	357
L 4082	21 C	—
L 4083	24 A	—
L 4084	23 B	227
L 4085	37 Var.	506
L 4086	24 A	246
L 4087	52 B	706
L 4088	47 C	—
L 4089	34 Var.	465
L 4090	SB	863
L 4091	SB	885
L 4094	43 D	—
L 4095	28 B	404
L 4096	48 D	645
L 4097	48 C	642
L 4098	48 A	—
L 4099	35 A	—
L 4100	25 B′	—
L 4101	42 B	532
L 4104	51 A	683
L 4107	25 A′	293
L 4108	25 A′	—
L 4109	43	—
L 4110	43 D	—
L 4114	25 B′	—
L 4115	54 B	—
L 4116	52 B	—
L 4117	56 A	—
L 4118	44 D	—
L 4122	27 A	—
L 4123	27 A	—
L 4127	SB	847
L 4129	5	—
L 4130	25 B	302
L 4131	48 A	—
L 4133	25 A′	300
L 4134	24 C	258
L 4136	22 Var.	208
L 4137	24 A′	—
L 4138	25 A	—
L 4139	9	62
L 4140	2 A	7
L 4141	33 A	—
L 4142	52 B	—
L 4143	22 B	—
L 4146	2 B	15
L 4147	23 C	—
L 4151	46 D	608
L 4152	SB	843
L 4153	52 C	716
L 4155	48 C	639
L 4159	41	525
L 4163	37 B	—
L 4164	24 C′	—
L 4165	25 A′	—
L 4166	28 A	—
L 4167	54 A	—
L 4169	54 B	—
L 4170	27 A	—
L 4171	42 C	—
L 4172	43 C	—
L 4173	25 B′	—
L 4174	25 B′	—
L 4175	25 B′	—
L 4176	25 A′	—
L 4177	27 D	—
L 4178	55 B	—
L 4180	37 Var.	509
L 4183	35 D	484
L 4185	41	526

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Inv.	*Type*	*Cat.*
L 4190	16 B	94
L 4191	6 B	43
L 4192	45 C	587
L 4193	32	431
L 4194	32	430
L 4195	28 B	405
L 4211	25 B′	—
L 4212	25 A	267
L 4223	52 C	—
L 4224	6 A	40
L 4225	24 A′	250
L 4226	24 A	—
L 4227	22 C	201
L 4228	29 A	—
L 4229	43 D	—
L 4232	35 B	—
L 4233	25 B′	339
L 4234	25 B′	—
L 4271	10	67
L 4272	37 B	—
L 4283	52 D	—
L 4291	43 A	—
L 4294	52 B	—
L 4297	27 Var.	392
L 4298	29 A	—
L 4299	29 A	411
L 4300	25 B	309
L 4301	21 C	—
L 4303	58 B	810
L 4304	37 C	—
L 4305	52 D	726
L 4306	54 A	—
L 4314	25 B	—
L 4319	44 B	—
L 4321	25 B′	322
L 4322	21 C	—
L 4323	48 B	636
L 4325	48 A	625
L 4326	39	—
L 4331	52	—
L 4332	37 B	—
L 4333	35 A	—
L 4335	25 D′	353
L 4337	25 A′	—
L 4338	27 C	—
L 4340	2 B	11
L 4341	2 B	—
L 4342	12 A	73
L 4343	12 A	72
L 4344	19 A	—
L 4345	19 A	—
L 4346	23 D	—
L 4351	SB	874
L 4353	52 C	723
L 4354	25 B′	321
L 4355	25 D′	352
L 4356	52 A	703
L 4358	37 B	500
L 4364	22 A	193
L 4365	21 B	—
L 4366	36 Var.	491
L 4367	25 B	—
L 4368	33 A	436
L 4369	43 B	545
L 4370	48 A	621
L 4371	28 B	—
L 4372	32	425
L 4373	30 C	423
L 4374	43 A	—
L 4376	21 C	—
L 4377	21 B	—
L 4378	MM	822
L 4379	MM	827
L 4380	56 A	—
L 4381	SB	868
L 4382	21 D	182
L 4383	21 B	—
L 4384	23 B	224
L 4385	39	515
L 4386	24 A	—
L 4387	22 B	200
L 4388	25 A	—
L 4389	24 C′	—
L 4391	48 A	631
L 4396	54 C	—
L 4399	29 A	—
L 4400	25 B′	319
L 4405	49 A	660
L 4408	43 E	565
L 4409	46 B	—
L 4410	37 B	—
L 4411	48 A	—
L 4412	43 C	549
L 4413	21 C	—
L 4414	46 B	599
L 4415	20	154
L 4416	19 A	—
L 4417	15	89
L 4431	56 A	—
L 4436	35 A	—
L 4437	52 H	—
L 4438	52 A	704
L 4439	*ca.* 12 B	—
L 4440	24 C	257
L 4446	23 D	—
L 4451	40 A	522
L 4452	48 A	633
L 4456	52 E	—
L 4459	24 C′	265
L 4460	16 Var.	118
L 4461	50 D	681
L 4464	52 H	749
L 4466	49 A	650
L 4469	52 H	750
L 4470	SB	837
L 4472	48 A	—
L 4473	22 A	194
L 4474	21 D	183
L 4475	24 C′	—
L 4478	25 D′	—
L 4479	25 B′	—
L 4480	25 B′	—
L 4484	32	—
L 4485	54 A	—
L 4487	54 A	766
L 4494	21 C	—
L 4495	6 A	—
L 4499	24 C	—
L 4500	22 B	—
L 4501	22 B	197
L 4502	51 B	690
L 4503	48 D	647
L 4504	10	66
L 4505	10	64
L 4506	26 Var.	375
L 4507	25 B′	—
L 4508	23 C	—
L 4509	25 A′	299
L 4517	48 A	630
L 4528	SB	871
L 4529	25 B′	—
L 4530	6 Var.	51
L 4531	25 A	—
L 4532	4	29
L 4533	21 B	—
L 4534	22 A	—
L 4535	21 D	180
L 4536	21 B	164
L 4537	22 C	—
L 4538	25 B′	—
L 4542	49 A	663
L 4544	46 C	601
L 4548	38	514
L 4549	33 A	439
L 4550	43 D	554
L 4552	52 H	751
L 4554	56 Var.	802
L 4556	52 H	—
L 4558	48 B	637
L 4561	22 C	—
L 4565	47 A	612
L 4567	34 A	446

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Inv.	*Type*	*Cat.*
L 4568	43 D	555
L 4569	43 A	540
L 4570	42 D	537
L 4571	SB	881
L 4572	33 A	—
L 4573	MM	830
L 4574	33 A	—
L 4575	22 B	199
L 4576	25 B′	—
L 4577	SB	845
L 4578	45 B	583
L 4580	52 E	729
L 4584	25 B	—
L 4585	23 A	217
L 4586	23 A	218
L 4587	52 C	—
L 4588	25 B	316
L 4590	23 A	—
L 4592	27 Var.	394
L 4595	21 Var.	—
L 4598	23 C	—
L 4599	23 E	242
L 4600	23 C	—
L 4601	23 C	—
L 4602	24 C′	260
L 4603	24 C′	—
L 4604	24 C′	—
L 4605	24 C′	—
L 4606	21 C	—
L 4608	25 C′	—
L 4609	34 B	462
L 4611	22 B	—
L 4612	24 B	255
L 4613	33 A	437
L 4614	47 C	615
L 4615	34 A	448
L 4616	42 B	—
L 4617	MM	819
L 4618	23 C	—
L 4619	43 B	—
L 4620	43B	—
L 4621	46 A	—
L 4622	20	—
L 4623	24 B	256
L 4624	16 Var.	119
L 4626	56 A	—
L 46228	SB	838
L 4629	51 B	—
L 4630	23 C	—
L 4631	42 B	531
L 4632	25 B'	320
L 4633	46 D	607
L 4634	25 A	—
L 4635	25 Var.	364
L 4636	25 B	—
L 4637	25 B′	—
L 4638	36 A	487
L 4639	25 B	—
L 4641	25 B	305
L 4642	27 A	376
L 4643	24 C′	—
L 4644	46 D	—
L 4645	27 A	379
L 4646	25 B′	—
L 4647	46 A	—
L 4648	33 A	—
L 4649	52 F	741
L 4650	44 B	—
L 4652	SB	849
L 4653	43 C	—
L 4654	25 B′	—
L 4655	34 B	—
L 4656	52 B	—
L 4658	27 D	391
L 4659	16 Var.	108
L 4662	37 Var.	507
L 4664	25 A′	289
L 4665	25 C'	341
L 4666	25 B′	—
L 4667	35 A′	473
L 4668	58 Var.	815
L 4669	34 A	—
L 4670	25 A′	—
L 4672	46 C	603
L 4673	43 C	—
L 4675	6 B	—
L 4676	16 B	—
L 4677	20	—
L 4678	20	155
L 4679	21 Var.	188
L 4683	55 B	792
L 4685	6 B	—
L 4686	MM	833
L 4691	58 A	807
L 4695	21 D	181
L 4697	25 A	—
L 4698	2 B	—
L 4699	51 D	—
L 4700	6 A	38
L 4701	2 B	—
L 4702	27 D	390
L 4703	25 B	314
L 4705	52 C	714
L 4706	55 B	793
L 4707	5	36
L 4708	54 A	765
L 4709	54 A	768
L 4710	50 B	672
L 4711	52 G	742
L 4712	35 B	—
L 4713	56 A	—
L 4714	50 D	—
L 4716	52 B	—
L 4717	SB	866
L 4718	SB	852
L 4719	25 B′	—
L 4720	25 C′	345
L 4721	27 A	378
L 4722	34 B	458
L 4723	34 A	—
L 4724	16 B	—
L 4725	16 B	—
L 4726	16 B	—
L 4727	19 A	—
L 4728	21 Var.	189
L 4729	6 B	49
L 4730 Joins with L 4727		
	19 A	—
L 4731	45 C	—
L 4732	54 C	—
L 4734	16 B	—
L 4735	54 A	—
L 4736	23 C	—
L 4737	23 D	—
L 4738	25 B′	—
L 4739	26 A	368
L 4740	12 Var.	80
L 4741	2 B	—
L 4743	28 B	—
L 4744	46 C	—
L 4745	32	—
L 4746	43 B	—
L 4747	25 B′	—
L 4748	27 A	—
L 4749	45 C	—
L 4753	48 A	—
L 4755	25 B′	—
L 4756	34 A	451
L 4757	25 B′	—
L 4758	25 B′	—
L 4759	25 B′	327
L 4761	45 C	588
L 4762	MM	824
L 4763	47 A	—
L 4768	SB	853
L 4771	22 B	196
L 4784	44 B	—
L 4785	21 B	—
L 4786	21 C	—
L 4791	21 B	—
L 4793	25 B′	—
L 4794	25 A	—

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Inv.	*Type*	*Cat.*
L 4797	25 B	—
L 4798	23 D	—
L 4799	21 B	—
L 4816	16 B	—
L 4819	39 Var.	—
L 4822	25 B′	—
L 4823	24 A	—
L 4824	21 B	—
L 4825	19 Var.	—
L 4826	23 C	—
L 4827	23 A	—
L 4828	21 C	—
L 4829	23 A	—
L 4830	24 A′	—
L 4831	24 A′	—
L 4832	24 A	—
L 4833	2 B	—
L 4834	2 B	—
L 4835	17 B	125
L 4836	25 B′	—
L 4837	18	—
L 4847	SB	879
L 4853	21 B	—
L 4854	44 C	576
L 4855	50 B	676
L 4856	52 Var.	756
L 4857	35 B	480
L 4863	21 B	—
L 4864	21 B	—
L 4865	21 B	—
L 4866	20	—
L 4867	21 B	—
L 4868	20	—
L 4869	21 Var.	—
L 4870	21 D	—
L 4872	25 B′	—
L 4873	52 H	—
L 4874	25 B	—
L 4875	25 Var.	—
L 4883	44 D	577
L 4884	MM	826
L 4886	25 B	—
L 4897	25 B′	—
L 4902	42 B	—
L 4906	48 A	—
L 4911	12 B	—
L 4915	SB	858
L 4917	35 C	—
L 4921	43	—
L 4935	6 A	—
L 4950	25 A	—
L 4963	2 B	—
L 4964	54 A	—
L 4965	MM	—
L 4978	23 A	—
L 4979	9	61
L 4980	1	—
L 4985	*ca.* 25 A	—
L 4986	MM	832
L 4988	43 A	—
L 4989	44 C	—
L 4990	46 A	—
L 4991	*ca.* 34 A	—
L 4992	*ca.* 43 C	—
L 4993	27 B	—
L 4994	45 C	—
L 4995	18	—
L 5005	25 C′	—
L 5006	23 C	—
L 5008	54 A	—
L 5010	43 A	—
L 5012	27 A	—
L 5013	43 A	—
L 5014	42 D	—
L 5016	34 A	—
L 5017	34 A	—
L 5018	47 A	—
L 5019	44 C	—
L 5020	25 A′	—
L 5021	44 C	—
L 5022	46 B	—
L 5025	33 A	—
L 5029	46 C	—
L 5030	33 A	—
L 5031	33 A	—
L 5032	48 C	—
L 5033	46 C	—
L 5034	28 B	—
L 5035	16 B	—
L 5036	21 Var.	—
L 5040	25 B′	—
L 5041	46 C	—
L 5042	45 C	—
L 5043	28 B	—
L 5044	23 A	—
L 5045	25 A′	—
L 5046	MM	—
L 5047	34 A	—
L 5048	33 A	—
L 5049	42 B	—
L 5050	34 A	—
L 5051	45 C	—
L 5052	*ca.* 43 C	—
L 5053	42 D	—
L 5054	33 A	—
L 5055	45 A	—
L 5056	34 A	—
L 5057	44 A	—
L 5058	43 A	—
L 5059	27 Var.	—
L 5060	28 B	—
L 5061	48 A	—
L 5062	6 A	—
L 5063	46 E	—
L 5064	42 D	—
L 5065	SB	888
L 5067	16 B	—
L 5068	19 B	—
L 5069	25 B′	—
L 5072	16 B	—
L 5073	16 B	—
L 5074	*ca.* 20	—
L 5075	25 A	—
L 5076	16 B	—
L 5077	21 B	—
L 5079	25 B′	—
L 5080	34 A	—
L 5081	55 B	—
L 5084	23 C	—
L 5085	25 A	—
L 5086	49 A	658
L 5090	24 A	—
L 5091	23 C	—
L 5092	*ca.* 18	—
L 5093	44 A	—
L 5097	19 A	—
L 5098	16 B	—
L 5100	25 B′	—
L 5101	9	—
L 5102	2 B	—
L 5103	6 A	—
L 5104	23 A	—
L 5105	25 C′	—
L 5106	34 A	—
L 5107	24 A	—
L 5108	44 C	—
L 5109	23 B	—
L 5110	27 A	—
L 5111	*ca.* 16 B	—
L 5112	21 A	—
L 5113	33 B	—
L 5115	23 C	—
L 5117	37 Var.	511

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INDEX OF DEPOSITS

This list includes, in summary form, those deposits (or levels of deposits) which are important to the present study. In addition to the deposits cited in the Catalogue for the dating of a given type, it includes a few others of special interest, including several excavated too late for inclusion in the text.

The deposits are listed in alphabetical order by code numbers consisting of a letter and number combination. These refer to the 20-meter squares within the topographic survey now applied to the Agora area; see the plan, Plate 56. Serial numbers, set off from the code (or grid) number by a colon, serve to differentiate different deposits within a given square. A few extensive fillings, extending over several squares, have grid numbers only.

Publication references in this list apply to a group or deposit as a whole, whether its discovery or the full or partial publication of its contents. Publication references for individual lamps are given in the Catalogue.

Beneath each deposit heading are listed the type numbers (in ordinary type) and the catalogue numbers (in bold-face type) of the lamps from this deposit which are included in this catalogue; where uncatalogued lamps of other types also appear in a deposit, the type numbers of these are also given.

A 17:1 Well on the lower slope of the Hill of the Nymphs (*Hesperia*, XVII, 1948, p. 184 and pl. 65, 2-3); second quarter of 6th century B.C.

2 B: **11**; 10: **67**; 12 A: **72, 73**

A 18:1 Cistern in the valley between the Areopagus and the Hill of the Nymphs; lower filling, 3rd century B.C.

25 B′, 29 A, 42 C, 43 C, 43 D

A 18-19:1 Pit in the valley between the Areopagus and the Hill of the Nymphs (cf. *Hesperia*, XVII, 1948, p. 193; XX, 1951, p. 253); dumped filling containing many ostraka of the 480's, but with some pottery as late as second quarter of 5th century B.C.

16 Var.: **108**; 21 B: **164**; 21 D: **180**; 22 C: **201**

A 20:3 Pyre in the industrial area west of the Areopagus (*Hesperia*, XX, 1951, pp. 115-116 and pl. 50 b: pyre no. 2); middle to third quarter of 4th century B.C.

25 B′: **318**

B 12:1 Well on south slope of Kolonos Agoraios (*Hesperia*, VI, 1937, pp. 349-352); use filling accumulated from 1st to 3rd century after Christ.

35 C′: **482**; 52 H: **744**

B 12:5 Well near west edge of level area south of the Temple of Hephaistos (*Hesperia*, XXIV, 1955, p. 179, under no. 7); dumped filling thrown in near end of 4th century, but by far the greater part belonging to the thirty years before 350 B.C.

23 C, 24 C′, 25 A

B 13:6 Well on south slope of Kolonos Agoraios; lower fill, late 5th to early 4th century B.C.

23 A, 24 A, 41

B 13:7 Well on south slopes of Kolonos Agoraios: bottom filling, first to second quarters of 3rd century B.C.

25 B′: **331, 337, 338**; 46 B: **594**

upper dumped filling of 2nd and 1st centuries B.C.

56 A: **798**; also 37 B

B 13:8 Well on south slope of Kolonos Agoraios; bottom filling, last quarter of 4th century B.C.

25 B′: **325**; 26 B: **372**; 29 A: **406**

B 14:3 Cistern on lower south slope of Kolonos Agoraios; dumped filling of second half of 1st century after Christ.

58 B: **813**

B 14:5 Storage pit or cellar, cut in the rock at the south edge of the levelled top of Kolonos Agoraios; filled at end of first quarter of 6th century B.C. with an accumulation dating from 8th through 7th century.

1: 4; 4: **26**

B 15:1 Well on lower south slope of Kolonos Agoraios (*Hesperia*, XVIII, 1949, pp. 298-351); last quarter of 5th century B.C.

21 C: **171, 174**; 23 A: **211, 212**; 24 A: **247, 248**; 24 A′: **251**; 24 C′: **259**

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B 18:1 Pyre in the industrial area west of the Areopagus (*Hesperia*, XX, 1951, pp. 117-119 and pl. 51 a: pyre no. 4); third to last quarter of 4th century B.C.

25 B′: **319**

B 18:2 Pyre in the industrial area west of the Areopagus (*Hesperia*, XX, 1951, pp. 125-126 and pl. 52 c: pyre no. 9); shortly before middle of 3rd century B.C.

29 A

B 18:3 Pyre in the industrial area west of the Areopagus (*Hesperia*, XX, 1951, pp. 119-120 and pl. 51 b: pyre no. 5); mid-4th century B.C. or a little earlier.

24 C′

B 18:4 Pyre in the industrial area west of the Areopagus (*Hesperia*, XX, 1951, pp. 116-117 and pl. 50 c: pyre no. 3); first quarter of 4th century B.C. rather than third quarter as previously published.

24 C: **257**

B 18:7 Well in the industrial area west of the Areopagus: use filling, second half of 4th century B.C.

25 B′: **322**

upper filling, 3rd century B.C.

46 C: **603**

B 18:10 Well in the industrial area west of the Areopagus; dumped filling of first quarter of 6th century B.C., with much earlier material.

10: **64, 66**

B 18:11 Pit beneath one of the early houses in the industrial area west of the Areopagus (House D: *Hesperia*, XX, 1951, p. 217); late archaic, *ca.* 500-480 B.C.

22 A: **194**

B 19:3 Pyre in the industrial area west of the Areopagus (*Hesperia*, XX, 1951, pp. 120-121 and pl. 51 c: pyre no. 6); end of 4th century B.C.

25 A′

B 19:6 Pyre in the industrial area west of the Areopagus (*Hesperia*, XX, 1951, p. 122 and pl. 52 a: pyre no. 7); end of 4th or beginning of 3rd century B.C.

25 B′: **321**; 25 D′: **352**

B 19:7 Filling in the valley west of the Areopagus (*Hesperia*, XX, 1951, pp. 210-212), thrown in behind the west wall of the Great Drain at the time of the building of the drain and the extension of House C; *ca.* 430-410 B.C.

21 D: **182**; 23 B: **224**; 24 A′: **250**

B 21:1 Cistern in the valley west of the Areopagus (*Hesperia*, XX, 1951, p. 263, note 130); dumped filling of latter part of 1st and early part of 2nd centuries after Christ.

44 D: **579**; 50 C: **677**; 58 Var.: **816**

B 22:3 Pyre in the industrial area west of the Areopagus (*Hesperia*, XX, 1951, p. 126 and pl. 53 a: pyre no. 10); end of 4th century B.C.

25 A′

C 9:6 Pit to the southwest of the Temple of Hephaistos (*Hesperia*, Suppl. V, pp. 128-150); filled at the time of the construction of the temple, *ca.* 450 B.C., but with considerable earlier material.

16 Var.: **107**; 21 B: **167**

C 12:2 Well on Kolonos Agoraios, filled in the 3rd century B.C. with rubbish for the most part accumulated during second and third quarters of 4th century.

23 D: **236**; 25 B: **301**; also 25 A, 25 B′

C 14:4 Well on Kolonos Agoraios, dug through an earlier cistern: from the lowest level of the use filling, first half of 2nd century after Christ.

58 B: **814**

C 17:2 Pyre in the industrial area west of the Areopagus (*Hesperia*, XX, 1951, pp. 129-130: pyre no. 13); first quarter of 3rd century B.C.

25 D′: **353**

C 18:4 Filling below the courtyard floor in the Poros Building west of the Areopagus (*Hesperia*, XX, 1951, pp. 178-179); first half of 5th century B.C.

15: **89**; 20: **154**; also 19 A

C 19:3 Bronze-casting pit on the lower northwest slope of the Areopagus (*Hesperia*, XVII, 1948, pp. 170-171, fig. 7; XX, 1951, p. 269); late 2nd century B.C.

48 D: **647**; 51 B: **690**

C 19:9 Well in a house of the industrial area west of the Areopagus (House K: cf. *Hesperia*, XX, 1951, pp. 242-243); use filling and dumped

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filling, both of the late 5th century B.C.; upper filling of beginning of 4th century B.C.:

from the dumped filling.

22 B: 200

C 20:2 Debris from a factory for making terracotta figurines, in the area west of the Areopagus (*Hesperia*, XX, 1951, pp. 249, 268); the factory probably destroyed in the sack of Sulla (86 B.C.), and the filling used in a building operation of the 1st century after Christ.

39: 515; Signed Bases: 868

D 4:1 Cistern north of the Temple of Hephaistos (Roman Group G: *Agora, Pottery of the Roman Period*):

layer I, use filling of late 2nd century or early 1st century B.C., down to 86 B.C.

40 A: 521; 58 A: 806

layer II A, very early years of 1st century after Christ.

49 A: 661; 49 B: 665; 50 B: 674; 52 E: 727, 735; 54 D: 781; 56 Var.: 803

layer II B, second quarter of 1st century after Christ.

44 D: 577; 53: 761; 54 D: 783; 58 B: 808, 809; Misc. Moulded: 826

layers II and III (in channel), 1st to early 2nd century after Christ.

39: 517; 44 D: 578; 52 B: 710; 58 B: 812

D 5:1 Pit near the Temple of Hephaistos; first half of 4th century B.C.

24 C′: 261

D 7:2 Filling over bedrock west of the Temple of Hephaistos (*Hesperia*, Suppl. V, p. 126); probably associated with the destruction of an earlier sanctuary in 480/479 B.C.

16 Var.: 110; 21 Var.: 187; also 20

D 11:1 Well on the south slope of Kolonos Agoraios; dumped filling, turn of the era.

37 B: 502; 44 B: 573; 50 B: 671; 52 B: 713; 52 F: 740; 52 Var.: 754; 53: 760; 54 A: 769; 54 C: 780; 55 B: 791; 56 B: 801; 57: 805; Signed Bases: 861; also 40 A

D 11:2 Cistern-shaft on Kolonos Agoraios; early (?) 3rd century B.C.

26 A: 371; 29 B: 416; also 25 A′, 25 B′, 25 C′, 29 A and 43 B

D 11:4 Cistern on Kolonos Agoraios; bottom filling, late 2nd to early 1st century B.C., the same cistern-system as D 12:2, below, and part of the same filling.

33 A: 442; 35 B: 478, 479; 39′: 518; 49 A: 656; 51 D: 696; 52 G: 743; also 37 B, 48 A

D 12:1 Well on Kolonos Agoraios; use fillings of 1st to 3rd century after Christ; dumped fillings of 4th to 6th century:

from the lowest use filling, 1st century after Christ.

55 B: 790

from the upper dumped filling.

47 C: 616; Signed Bases: 864

D 12:2 Cistern-shaft on Kolonos Agoraios; filling of late 2nd to early 1st century B.C., the same cistern-system as D 11:4, above, and part of the same filling.

49 A: 652, 654; 54 A: 763; Signed Bases: 862

D 15:3 Cistern on the lower southeast slope of Kolonos Agoraios; middle of 4th century B.C.

30 B: 421; also 25 B

D 16:6 Pyre near north edge of east-west street, to the west of the Great Drain bridge, in the area west of the Areopagus (*Hesperia*, XX, 1951, p. 130 and pl. 54 b: pyre no. 14); first half of 3rd century B.C.

42 B: 531

D 17:2 Rubbish pit at the foot of the northwest slope of the Areopagus; filling of end of first quarter of 5th century B.C.

20: 155; 21 Var.: 188; also 16 B

D 17:3 Cistern in the northwest room of the annex to the Poros Building west of the Areopagus (*Hesperia*, XX, 1951, p. 182, above); from *ca.* 300 B.C. into the early years of the 3rd century.

26 A: 368; also 23 D, 25 B′

D 17:5 Cistern built against the south wall of the annex to the Poros Building west of the Areopagus (*Hesperia*, XX, 1951, p. 182, above):

lower filling, last quarter of 3rd century B.C.

34 A: 446; 43 A: 540; 43 D: 555

upper filling, third quarter of 2nd century B.C.

48 B: 637; also 33 A

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D 17:7 Pyre (disturbed) in the area of the Poros Building west of the Areopagus; 4th century B.C.

23 A: 217, 218

D 17:9 An unfinished well in the northwest room of the Poros Building west of the Areopagus (*Hesperia*, XX, 1951, pp. 179-180); first quarter of 4th century B.C.

23 E: 242; 24 C′: 260; also 21 C, 23 C

D 17:10 Well beneath drain in corridor of the Poros Building west of the Areopagus (*Hesperia*, XX, 1951, p. 174, below); context of end of 6th or beginning of 5th century B.C., with considerable earlier material.

12 Var.: 80; also 2 B, 16 B

D 17:12 Unfinished well south of the annex to the Poros Building west of the Areopagus (*Hesperia*, XX, 1951, p. 182); filling of the 4th century B.C., probably the third quarter. From the upper filling, possibly disturbed:

25 C′: 341; also 25 B

D 17:14 Pyre (disturbed) in the area of the Poros Building west of the Areopagus; 3rd century B.C.

42 D: 537

D 19:1 Cistern in the industrial area west of the Areopagus (*Hesperia*, XX, 1951, p. 253, top); dumped filling of late 5th century B.C., thrown in during the 3rd century.

23 C: 228; also 21 C

D 19:2 Well on the lower west slope of the Areopagus (*Hesperia*, IX, 1940, p. 304); use filling of 2nd century B.C.

47 C: 617; also 51 C

D-E 15:1 Filling in west branch of Great Drain, to north of east-west road. Late Hellenistic context, similar to Hellenistic Group E (F 15:2); last quarter of 2nd century B.C.

38: 512; Misc. Moulded: 833

E 3:1 Cistern at the north foot of Kolonos Agoraios; filled during years just before and after 300 B.C.

23 D: 240; 25 A′: 292, 294, 296; 25 B′: 328; 25 C′: 343; 28 B: 402; 29 A: 408; also 25 B

E 6:1 East chamber of cistern-system under the southwest corner of the Hellenistic Building to the north of the Temple of Hephaistos; abandonment filling, third quarter of 2nd century B.C.

34 A: 456

E 6:2 West chamber of cistern-system under the southwest corner of the Hellenistic Building to the north of the Temple of Hephaistos:

abandonment filling, third quarter of 2nd century B.C.

43 D: 559

supplemental filling, late 2nd and earliest 1st centuries B.C.

51 C: 693

E 11:2 Well dug through a cistern on Kolonos Agoraios; use filling of first half of 1st century after Christ.

52 C: 715; also 49 A

E 14:1 Cistern at the southeast foot of Kolonos Agoraios; from the abandonment fill, accumulated *ca.* 275-225 B.C.

25 A′: 290, 298; 25 B′: 335; 25 Var.: 362; 27 Var.: 395; 28 A: 399; 31: 424; 26 B: 490; 42 C: 535; 43 B: 547; 43 C: 551; 44 A: 570; 45 C: 584, 586; 46 A: 589, 590; 46 B: 595, 597; 46 C: 602; 48 A: 620; also 23 D, 42 D

E 14:2 Well at the southeast foot of Kolonos Agoraios; use filling of the 1st century after Christ.

52 C: 725; 52 H: 748

E 14:3 Cistern-shaft at the southeast foot of Kolonos Agoraios; middle filling, beginning of 1st century B.C. to third quarter.

35 A: 469; 35 A′: 473; 35 B: 476; 52 A: 700, 702; 54 C: 778; also 43 D′ and 48 C

E 14:5 Well near the road leading from the southwest corner of the market square; early 5th century B.C. down to *ca.* 480 (cf. *Hesperia*, Suppl. VIII, p. 399, no. 12 a).

15: 88; 16 B: 104; 19 A: 131; 19 B: 141

E 14:7 Well outside the southwest corner of the market square, to the west of the north-south road; lower use filling, of 1st to early 2nd century after Christ.

52 E: 737; 54 B: 772; 55 C: 794; 56 B: 800; also 52 C, 54 C

E 15:3 Cistern at the southeast foot of Kolonos

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Agoraios; late 2nd and early 1st centuries, to 86 B.C.

37 B: **496**; 49 A: **649**; 51 B: **686**, **691**; also 55 B

E 15:6 Well at the east edge of the road leading from the southwest corner of the market square, its mouth later covered by the east wall of the Great Drain. Filling of late 6th and early 5th centuries down to about 480 B.C., including 10 ostraka of the 80's.

19 Var.: **146**; also 19 A

E 16:1 Well outside the southwest corner of the market square, to the east of the north-south road (*Hesperia*, XXIV, 1955, p. 178, under no. 1); latest 5th to beginning of 4th century B.C.

24 C′: **266**; also 23 A′

E-F 12-13-14 Construction filling in and to the north of the Strategeion (?), at the southwest corner of the market square; filling of *ca.* 460-450 B.C., but bulk of material prior to 480 and including many ostraka of the 80's.

7: **54**; 12 B: **77**; 19 Var.: **143**; also 16 B, 18

F 2:1 Foundry pit in the courtyard of a small metal-working establishment outside the Agora to the northwest (*Hesperia*, XXIV, 1955, p. 179, under no. 4, and the earlier references there); second quarter of 4th century B.C.

23 C: **230**; 24 C′: **263**; also 25 A

F 5:1 Cistern on the north slope of Kolonos Agoraios; dumped filling of 3rd and 2nd centuries B.C.; not later than late 2nd century.

34 A: **453**; 50 B: **670**; also 43 D, 45 C

F 5:2 Pyre on the north slope of Kolonos Agoraios (*Hesperia*, VII, 1938, pp. 354-355); 4th century B.C.

25 D′: **351**; 36 A: **486**; also 21 C, 23 A

F 5:3 Pit on north slope of Kolonos Agoraios; third quarter of 5th century B.C., or early in last quarter.

23 A′: **221**

F 11:2 Well associated with the Tholos (*Hesperia*, VI, 1937, pp. 165-166; Suppl. IV, pp. 98-101; A, on plan, p. 99, fig. 75); dumped filling mostly of third quarter of 4th century B.C., but thrown in near end of century.

23 D: **239**; 25 B: **303**; also 21 C, 25 A

F 12:3 Well associated with the Tholos (*Hesperia*, VI, 1937, pp. 165-166; Suppl. IV, pp. 98-101; C, on plan, p. 99, fig. 75); use filling, third quarter of 4th century B.C.

23 D: **238**; 25 C: **344**

F 12:5 Well to the southwest of the Tholos; dumped filling of early 6th century B.C., but with much material of the 7th (cf. e.g. *Hesperia*, XV, 1946, p. 125, no. 6 and p. 136, no. 34).

11: **68**

F 13: 2 Well near the southwest corner of the market square; the lowest use filling, second half of 1st century after Christ.

52 H: **746**; also 52 E

F 13: 3 Well near southwest corner of market square; filling of 2nd century B.C.

34 A: **452**; also 35 A, 43 E, 45 C, 48 A

F 15:2 Cistern to the east of the road leading from the southwest corner of the market square: Hellenistic Group E (*Hesperia*, III, 1934, pp. 392-427); last quarter of 2nd century B.C.

27 Var.: **393**; 35 A: **468**; 37 A: **492**; 39: **516**; 48 A: **623**; 48 C: **640**; 48 E: **648**; 50 D: **680**; 51 A: **684**, 51 B: **687**; Misc. Moulded: **825**, **834**

F 15: 4 Well near the southwest corner of the market square; dumped filling of 7th century B.C. down to about 600 B.C.

2 B: **16**; 4: **27**

F 16:1 Small cistern at the northwest foot of the Areopagus (*Hesperia*, XXIII, 1954, pp. 87-88, "Demeter Cistern"); dumped filling of third quarter of 4th century, with some material of the last quarter.

25 A: **275**; 26 A: **365**; also 25 B′

F 16:6 Rectangular shaft at the northwest foot of the Areopagus; dumped filling of second half of 4th century B.C.

25 A′: **295**

F 19:2 Cistern on the northwest slopes of the Areopagus; the lower filling, mid 4th century B.C.

25 A: **271**, **277**; also 25 B′

F 19: 4 Well on the northwest slope of the Areo-

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pagus; *ca.* 490-460 B.C. (cf. van Hoorn, *Choes*, no. 219, fig. 74).

21 B: **165**, **166**, **170**; 22 C: **203**; also 16 B, 22 A

F 19:5 Well on the northwest slope of the Areopagus; early 5th century to *ca.* 480 B.C.

16 B: **99**; 17 A: **120**; 20: **150**

F 19: 6 Cistern on northwest slopes of the Areopagus; filling of first half of 1st century B.C.

52 E: **728**

F-G 9-10 Fillings associated with the construction of the New Bouleuterion (*Hesperia*, VI, 1937, pp. 153-156); down to last quarter of 5th century B.C., with some earlier material.

23 A: **216**; 30 A: **418**

F-G 10-11 Accumulated earth flooring over Bouleuterion Plateia (*Hesperia*, VI, 1937, p. 168). Level of 1st or 2nd century after Christ.

Signed Bases: **851**

F-G 12:1 Accumulated road metal of early north-south road along west side of market square, in the area of the Geometric cemetery to south of the Tholos; the layers cited as in *Hesperia*, Suppl. II, p. 8, fig. 2; cf. also Suppl. IV, p. 106:

layer I, level of 6th century B.C.

14: **84**

layer II, level of second half of 7th and early 6th centuries B.C. (cf. Suppl. II, pp. 127-128).

2 B: 8; 6 A: **39**

sixth century filling in plundered trench over precinct wall (cf. Suppl. II, pp. 118-122).

2 B: **9**

(For levels in the same road further north, see deposits H 12:9 and I 9:1.)

G 3:1 Pit containing burned debris, in the area outside the market square to the northwest (*Hesperia*, IX, 1940, p. 300); context of the early 5th century B.C., probably to be associated with the Persian sack.

16 B: **100**; also 21 A

G 6:2 Cistern under the northeast corner of the Hellenistic Building to the north of the Temple of Hephaistos; Hellenistic Group C (*Hesperia*, III, 1934, pp. 345-369); *ca.* 200 B.C.

27 B: **384**; 33 A: **438**; 34 A: **449**; 37 Var.: **505**; 43 D: **557**; also 46 C

G 6: 3 Rectangular Rock-Cut Shaft (*Hesperia*, II, 1933, pp. 456-459); cut in the slopes of Kolonos Agoraios above the Stoa of Zeus:

lower filling, *ca.* 575-535 B.C. (*Hesperia*, VII, 1938, pp. 363-411).

5: **33**; 6 A: **42**; 8: **59**

upper filling, *ca.* 500-480 B.C. (*Hesperia*, XV, 1946, pp. 265-336).

15: **86**; 16 B: **96**, **97**, **101**, **102**; 16 Var.: **109**, **113**; 17 A: **122**; 18: **126**, **127**, **129**; 19 A: **134**; 19 B: **139**; 19 Var.: **144**, **145**; 20: **149**, **152**, **153**; 21 A: **157**, **159**; 21 Var.: **185**, **186**; 22 Var.: **205**; also 12 B

G 8:1 Well on east slope of Kolonos Agoraios, lower use filling of 1st century after Christ, about A.D. 15 into second half of century.

44 C: **574**

G 11:3 Well near middle of Tholos (*Hesperia*, VIII, 1939, pp. 229-232; Suppl. IV, pp. 30-33: the second well of Building F); accumulated filling, from last years of 6th century to *ca.* 480 B.C.

16 B: **98**; 16 Var.: **112**; 19 A: **133**; 19 B: **138**, **140**; 20: **151**; 21 A: **161**; 21 Var.: **184**

G 11:5 Explorations inside the Tholos; the lowest layer overlying bedrock, with pottery of second half of 6th century B.C.

16 Var.: **111**; 19 B: **137**; also 16 B.

G 12:22 Refuse pit to the southeast of the Tholos (*Hesperia*, Suppl. IV, pp. 126-128); filled up in the second quarter of the 5th century B.C.

22 A: **195**; 22 B: **196**

G 12:23 Rubbish dump associated with the Tholos (*Hesperia*, Suppl. IV, pp. 132-134); second quarter of 4th century B.C.

23 C: **229**

G 13:1 Pocket in bedrock near the southwest corner of the market square; first quarter of 5th century B.C.

18: **128**; also 15, 16 B, 21 B

G 13:4 Well 30 m. south of Tholos, Hellenistic Group A (*Hesperia*, III, 1934, pp. 313-330); use filling of *ca.* 340-310 B.C.

25 A: **272**; 25 A′: **286**, **287**; 25 B′: **323**; 25 C′: **342**; 25 D′: **350**; 29 A: **407**

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G 14:2 Tiled well near the southwest corner of the market square between the Southwest Fountain House and the Great Drain:

middle filling, a continuous accumulation from first half of 4th century B.C. into 2nd century B.C.

21 Var.: **191**; 25 A: **283**; 25 A′: **297**; 25 Var.: **361**; 26 A: **369**; 42 D: **536**; Misc. Moulded: **823**; also 21 C, 25 B, 25 B′, 29 A, 45 C

upper dumped filling, of late 2nd century B.C.

49 A: **653**

G 15:1 One of two neighboring wells near the southwest corner of the market square, about 10 m. west of the Southwest Fountain House; the rock wall between the two shafts had broken through in antiquity (*Hesperia*, II, 1933, p. 465, bottom); the main dumped filling, late 6th century to *ca.* 500 B.C. or shortly after.

2 B: **13**; 5: **31**, **32**; 14: **85**; 16 Var.: **116**; also 6 Var., 16 B, 19 A

G 15:2 The second of two neighboring wells; see above, G 15:1; use filling, middle to third quarter of 6th century B.C.

2 B: **14**; 2 Var.: **21**

G 16:1 Well on the lower north slope of the Areopagus; late 5th and early 4th centuries B.C.

30 A: **417**; also 21 C, 23 A, 24 A

G 18:1 Well on the northwest slope of the Areopagus (*Hesperia*, IX, 1940, p. 272); filled up in last quarter of 5th century B.C. with three separate dumped fillings, all containing considerable earlier material:

from the bottom filling

22 B: **198**; also 21 B

from the middle filling

18: **130**; 19 A: **135**; 19 Var.: **148**; 24 A: **243**; also 21 B, 21 D, 22 B

G-H 10-11 Investigations to the south of the Metroon, in the passageway between the Metroon and the Tholos; accumulated layers, from the Geometric and earlier periods to the 3rd and 2nd centuries B.C.; see *Hesperia*, VI, 1937, p. 131, fig. 71: the levels numbered as in the section there:

from layer 13, of the mid-6th century B.C.

2 B: **19**

G-H 11-12 Investigations in the area of the Tholos, especially to east and southeast of the building, between it and the Great Drain; see *Hesperia*, Suppl. IV, plan, pl. I and sections, pl. II. Various layers (compare H 12:9):

layer of late 6th century B.C.

17 A: **123**

filling of early 5th century B.C., in the small stone drain serving kitchen of Building F (*Hesperia*, Suppl. IV, pp. 23-24).

22 Var.: **206**

layer of second quarter of 5th century B.C.

22 C: **202**

layer of early 3rd century B.C.

23 D: **237**

H 5-6 Investigations inside the foundations of the Stoa of Zeus, the north part; see *Hesperia*, VI, 1937, p. 9, fig. 2: the levels lettered as in the section there:

(a) from deposits containing much ash and charcoal, probably to be associated with the Persian sack of 480/479 B.C. (*ibid.*, pp. 12-14).

16 B: **103**; 21 D: **179**

H 6:4 Well behind the Stoa of Zeus (*Hesperia*, II, 1933, pp. 453, 519, 525); latter part of 3rd century B.C.

25 Var.: **363**; 32: **428**; 33 A: **434**; 46 A: **592**; 46 B: **598**; also 29 A

H 6:9 Cistern-system west of the Stoa of Zeus (*Hesperia*, II, 1933, pp. 126-128, figs. 13-14 and p. 454; VI, 1937, pp. 207-208); lower dumped filling in the south chamber, and dump from the north chamber; end of 4th century B.C.

25 A: **269**, **281**; also 23 D, 25 B′

H 7:1 Trial pit behind the retaining wall of the Stoa of Zeus (*Hesperia*, VI, 1937, pp. 49-53); latter part of third quarter of 5th century B.C.

22 C: **204**; also 21 B, 23 B

H 7:3 Filling inside the foundations of the Temple of Zeus Phratrios and Athena Phratria (*Hesperia*, VI, 1937, pp. 88-90; XXIV, 1955, p. 186 under no. 28); second quarter of 4th century B.C.

25 A: **268**; also 23 C

H 7:4 Filling removed from lowest foundations of the north room of the Temple of Apollo Patroos; to mid-4th century B.C.

23 A: **219**

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H 8-9-10 Investigations in the porch and interior of the Hellenistic Metroon; see *Hesperia*, VI, 1937, p. 120, fig. 64: the levels numbered as in the section through the porch, there.

I. Layers of early 6th century B.C., with much earlier material.

From the footing trench of the Primitive Bouleuterion (*Hesperia*, Suppl. IV, pp. 8-15, Building C).

2 A: 5

From filling accumulated during the period of use of the Primitive Bouleuterion (*loc. cit.*).

2 A: 6; 8: 58

II. Layers of early to middle 6th century B.C.
6 B: 47

IV. Footing trench of the Hellenistic Metroon, back fill of 2nd century B.C., but with much earlier material.
10: 65; 12 A: 71

H 10:2 Deep pit north of Building D of the Primitive Bouleuterion (*Hesperia*, Suppl. IV, pp. 12-14); second into third quarter of 6th century B.C.

2 B: 12; 4: 28; 6 A: 41

H 10:3 Filling of original floor of Building D of the Primitive Bouleuterion (*Hesperia*, Suppl. IV, pp. 14-15); third quarter of 6th century B.C.

2 B: 18

H 12:1 Filling in west branch of Great Drain, in the course abandoned at the time of the construction of the propylon south of the Tholos (*Hesperia*, Suppl. IV, pp. 119-121); last quarter of 2nd century B.C.

51 A: 685; also 35 A, 45 C

H 12:6 Rubbish dump in the mouth of an abandoned well in the Tholos precinct (*Hesperia*, Suppl. IV, pp. 129-132); last quarter of 5th century B.C.

21 C: 172, 175; 24 A: 249; 24 A′: 252

H 12:9 Accumulated road metal of early north-south road (*Hesperia*, Suppl. IV, p. 106), along west side of market square, in the area east of the propylon of the Tholos:

level of late 7th to early 6th century B.C.

16 A: 93

(For levels in the same road, to north and south, see deposits F-G 12:1 and I 9:1; see also G-H 11-12)

H 12:11 Well about 2 m. to the southeast of the Tholos precinct wall (*Hesperia*, VIII, 1939, p. 275, note 4):

lower use filling, *ca.* 410-390 B.C.

23 B: 226; also 21 C, 23 A, 24 A

upper dumped filling of first quarter of 4th century B.C.

21 C: 173; 23 A: 214

H 12:15 Well near northwest corner of Middle Stoa (*Hesperia*, XXIII, 1954, pp. 51-54, pl. 15); end of 6th century to *ca.* 480 B.C.

16 B, 19 A, 19 B

H 12:18 Packing between floors of Building J, beneath the Tholos (*Hesperia*, Suppl. IV, pp. 37-38); *ca.* 490-480 B.C.

15: 87; 19 A: 132

H 16:3 Cistern-system on the lower north slope of the Areopagus; Hellenistic Group B (*Hesperia*, III, 1934, pp. 330-345; XXVI, 1957, pp. 108-128); dumped filling of *ca.* 290 B.C.

25 A′: 288; 25 B: 311; 25 B′: 329

H 16:4 Pithos at the bottom of the north slope of the Areopagus; Hellenistic Group D (*Hesperia*, III, 1934, pp. 369-392); filling of *ca.* 150 B.C.

27 D: 387, 388; 33 A: 441; 34 B: 460; 48 A: 622; Misc. Moulded: 821; also 43 A

H 17:4 Deposit of pottery and votive objects on the lower north slope of the Areopagus (*Hesperia*, II, 1933, pp. 542-640; for the dating, see p. 640); 7th century B.C., down to the beginning of the last quarter.

1: 2; also 2 B

H 17:5 Deposit lying over a cobbled floor in a building on the lower north slopes of the Areopagus (*Hesperia*, XXIV, 1955, p. 185, under no. 25, and the earlier references there); second and third quarters of the 4th century B.C., but not far down into the third quarter.

25 C′: 262; 25 A′: 285; also 25 A

H-I-J 12-13 Construction filling of the Middle Stoa; before *ca.* 150 B.C.

25 B: 312, 313; 25 B′: 326; 32: 429, 432; 42 B: 533; 43 C: 550; 45 A: 582; 45 C: 585, 588; 46 C: 600; 46 E: 610; Misc. Moulded:

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824; also 25 A′, 25 D′, 27 A, 29 A, 30 B, 33 A, 34 A, 43 A, 43 B, 43 D, 47 A, 47 C, 48 A

I 9:1 Exploration in the area between the east front of the Hellenistic Metroon and the Great Drain:

From accumulated road metal of early north-south road (*Hesperia*, Suppl. IV, p. 106), level of second and third quarters of the 6th century B.C.

6 B: 48

(For levels in the same road further south, see F-G 12:1 and H 12:9.)

I 14:1 Well near the southwest corner of the market square beneath the north part of the Heliaia (?) (cf. *Hesperia*, IV, 1935, p. 365, fig. 22); filling of the 7th century B.C. down to *ca.* 600.

8: 57; 11: 69

I 16:4 Well at the northwest foot of the Areopagus (*Hesperia*, II, 1933, p. 472); mid-6th century B.C.

2 B: 20

I 16:5 Cistern on lower north slope of the Areopagus; filling of 2nd century B.C. with some later intrusions.

43 Var.: 567

I 17:2 Square well at the northwest foot of the Areopagus; 6th century B.C.

12 A: 75

J 14:3 Well under the north part of the Heliaia (?); 6th century B.C. down to second quarter.

2 B

J 18:4 Storage cellar on the north slope of the Areopagus (*Hesperia*, XVII, 1948, pp. 159-160):

lower filling, mid-6th century B.C.

2 B: 15; 6 B: 43

upper filling, last quarter of 6th century B.C.

16 B: 94

J 18:8 Well on the north slope of the Areopagus (*Hesperia*, VII, 1938, pp. 412-428); third quarter of 7th century B.C.

3: 23

M 11:3 Well below the east part of the Odeion cavea (*Hesperia*, XVI, 1947, p. 210); *ca.* 600 B.C.

2 A: 7; 9: 62

M 17:1 Well on the lower northeast slope of the Areopagus; Roman Group M (*Agora, Pottery of the Roman Period*); from Layer I, level of mid-1st century after Christ.

35 B, 54 B, 54 C

M 17:4 Well on the lower northeast slope of the Areopagus (cf. *Hesperia*, VII, 1938, p. 342, figs. 24-25), filled in the second quarter of the 5th century B.C. with material mostly of the late 6th and early 5th centuries.

6 B: 50; 16 Var.: 114; also 15, 16 B, 17 A, 20

M 18:8 Well on the lower northeast slope of the Areopagus; last quarter of 5th century B.C.

21 B: 169; 23 B: 223

M 20:1 Cistern on lower northeast slope of the Areopagus; use filling, early 1st century B.C.

37 B: 498

M 20:3 Well on the lower northeast slope of the Areopagus; lower dumped filling, last quarter of 5th century B.C.

21 C′: 177, 178; 23 A: 209; 23 A′: 222; 24 A: 244; also 21 C

M 21:1 Cistern on the north slope of the Areopagus (*Hesperia*, XVII, 1948, p. 160); dumped filling of late 3rd and possibly into early 2nd century B.C.

28 B: 405; 30 C: 423; 32: 425, 430, 431; 33 A: 436; 43 B: 545; 45 C: 587; 48 A: 621; also 25 B, 43 A

N 7:3 A well near the north side of the market square (*Hesperia*, XXII, 1953, pp. 59-115; pls. 21-41); dumped filling of *ca.* 460-440 B.C.

20, 21 B, 21 D, 21 Var.

N 18:2 Small pocket of undisturbed filling over bedrock, on the lower northeast slope of the Areopagus; middle to third quarter of 6th century B.C.

5: 30

N 18:3 Cistern on lower north slopes of the Areopagus; 3rd century B.C.

33 A: 435; also 46 B

N 18:6 Small pocket in bedrock on the lower northeast slope of the Areopagus; first half of the 5th century B.C.

19 Var.: 147; also 22 A

N 19:1 Cistern on lower northeast slope of the Areopagus: from the time of the construction of

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the cistern and of its period of use, early 3rd century B.C.

30 B: 419; also 25 A, 25 A′, 25 B, 25 B′, 25 D′

from dumped filling of late 2nd century B.C.

50 D: 682

from final dumped filling, *ca.* 75-25 B.C.; Roman Group F (*Agora, Pottery of the Roman Period*)

44 A: 569, 571; 50 A: 668; 52 C: 718; 52 E: 736; 54 A: 762; 57: 804; also 43 C, 48 A

N 19:2 Well on the lower northeast slopes of the Areopagus; use filling, accumulated from mid-1st century into first half of 2nd century after Christ.

44 C: 575

N 20:1 Well on the northeast slope of the Areopagus; use filling, first half of 1st century after Christ.

54 A: 770; 55 B: 789

N 20:4 Cistern on the northeast slope of the Areopagus: use filling, late 2nd to early 1st century B.C.

35 A: 470; 39 Var.: 519

dumped fillings thrown in during second quarter of 1st century B.C., containing mostly debris resulting from Sulla's sack in 86 B.C.

35 A: 471; 37 A: 495; 37 B: 499; 51 D: 695; 51 Var.: 698; also 48 A

N 20:5 Well on the lower north slope of the Areopagus; stratified use filling of 1st to 3rd century after Christ (before A.D. 267):

from level of the second half of the 1st century into the early 2nd century after Christ.

55 C: 795

N 20:6 Cistern on the northeast slope of the Areopagus; lower filling, 3rd century B.C.

42 D: 538; also 43 A, 43 B, 46 B

N 20:7 Cistern on the northeast slope of the Areopagus; mostly second half of 3rd century B.C.

32: 427; 43 C: 553; 47 B: 614; also 33 A, 43 A, 45 C, 46 B, 46 C

N 21:3 Cistern on the north slope of the Areopagus; 1st century B.C.

52 E: 732; also 52 F

N 21:4 Cistern on the north slope of the Areopagus: lower dumped filling, *ca.* 250 B.C., or early in third quarter of 3rd century.

23 C′: 235; 27 A: 380; 37 Var.: 510; 42 C: 534; 43 A: 539, 544; 45 A: 580, 581; 46 A: 591; Misc. Moulded: 817, 818

upper dumped filling, including mouth and upper passages, 2nd and 1st centuries B.C.

27 D: 389; 43 D: 561; 54 A: 771; Signed Bases: 854; also 33 A, 35 D

O 7:9 Pit near the northeast corner of the market square; first half of 6th century B.C.

17 B: 125; also 2 B

O 12:1 Well between the southeast corner of the Odeion and the Panathenaic Way (*Hesperia*, XXII, 1953, p. 39); third quarter of the 7th century B.C.

9: 61; also 1

O 18:2 Well on the north slope of the Areopagus (*Hesperia*, XXIII, 1954, pp. 72-74); *ca.* 350-320 B.C.

26 B: 373; also 23 C, 25 A, 25 B, 25 B′

O 19:3 Small pit on the lower north slope of the Areopagus; *ca.* 480-470 B.C.

21 A: 160

O 20:3 Well associated with a house on the northeast slope of the Areopagus (*Hesperia*, VIII, 1939, p. 216):

from use filling, first quarter of 3rd century B.C.

25 A: 273; 25 B: 310; 25 B′: 333; 25 C′: 346, 348, 349; 25 D′: 354, 355; 28 A: 397, 398; 28 B: 401, 403; 29 A: 410; 30 B: 420; 42 A: 529

from the upper filling, approximately mid-3rd century B.C.

46 D: 606; also 46 B

O-R 7-9 Construction filling of the Square Peristyle underlying the Stoa of Attalos; before *ca.* 300 B.C.

25 B: 305; 25 B′: 327; 27 A: 376; 36 A: 487; also 24 C′, 25 A, 33 A

P 7:2 Well beneath the north colonnade of the Square Peristyle, just west of the north end of the Stoa of Attalos (*Hesperia*, VIII, 1939, p. 212); late 7th century B.C.

3: 24; 4: 25; 9: 60

P 8:2 Filling in a narrow trench cut in bedrock to west of north end of Stoa of Attalos (and con-

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tinuing also beneath the Stoa, Q 8:1); third to last quarter of 5th century B.C.

19 Var., 21 C, 23 A, 23 C, 24 A, 24 A′

P 8:5 Well beneath the west colonnade of the Square Peristyle, west of the Stoa of Attalos (*Hesperia*, VIII, 1939, p. 212); first half of 6th century B.C.

2 B: 10; 5: 34; 11: 70

P 10:1 Cistern near northeast corner of market square, between the Stoa of Attalos and the Panathenaic Way, opposite Stoa Shop IX; second half of 4th century B.C.

25 B: 306; 25 B′: 324

P-R 6-12 Construction filling of the Stoa of Attalos; before *ca.* 150 B.C.

25 B: 314; 27 D: 390; 33 A: 437, 439; 34 A: 448, 451; 34 B: 458; 38: 514; 43 D: 554; 46 D: 607; 47 C: 615; Misc. Moulded: 819; also 21 Var., 23 C, 25 B′, 28 B, 32, 42 B, 43 B, 45 C, 46 A, 46 C, 46 E

Q 13:1 Shaft serving as access to an underground water channel south of the Stoa of Attalos; dumped filling of early 1st century after Christ.

49 A: 662; 52 B: 705; 52 E: 734; 52 H: 745; 53: 759

Q 18:1 Well on the lower northeast slope of the Areopagus (*Hesperia*, VIII, 1939, pp. 247-266); third quarter of 6th century B.C.

13: 83

R 8:2 Well to east of Stoa of Attalos Shop XVIII, 7th century B.C., third quarter.

9

R 9:1 Well to east of Stoa of Attalos Shop XIV; 1st century after Christ.

52 F: 741

R 10:1 Well to east of Stoa of Attalos Shop XI; dumped filling of 1st century after Christ (Augustan).

35 B: 480; 44 C: 576; 50 B: 672, 676; 52 C: 714; 52 G: 742; 52 Var.: 756; 54 A: 765, 768; 55 B: 793; also 51 D

R 11:2 Well to east of Stoa of Attalos Shop VI (*Hesperia*, XX, 1951, pp. 50, 61); first half of 6th century B.C.

5: 36; also 2 B

R 12:1 Well to east of Stoa of Attalos Shop II (*Hesperia*, XX, 1951, pp. 50-51 and cf. pl. 25 a); filled up *ca.* 480/479 B.C. with debris accumulated over a generaiton or so earlier.

6 B: 49; 21 Var.: 189; also 16 B, 19 A

R 13:1 Well southeast of the Stoa of Attalos: lower filling, last quarter of 5th century B.C.

23 B: 225; also 24 A, 24 A′

upper dumped filling of early 1st century after Christ (Augustan)

52 B: 712; 52 Var.: 753; 54 A: 764; 54 B: 774; also 44 A, 52 E

R 13:2 Well in street leading to Roman Agora; filling of late 1st century B.C. into early 1st century after Christ.

54 C

R 13:3 Well near the southeast corner of the market square; mid-6th century B.C., with some later disturbance.

2 B, 16 B

R 13:4 Well beneath the Library of Pantainos (*Hesperia*, IV, 1935, pp. 477-523); *ca.* 430-420 B.C.

21 B: 168; 24 A: 245

R 18:2 Cistern outside the southeast corner of the market square, slightly west of the Panathenaic Way; second quarter of 4th century B.C.

24 A′: 253

R 21:2 Cistern on the lower Acropolis slopes, west of the Panathenaic Way; dumped filling of 1st century B.C.

51 B: 688; Misc. Moulded: 822; also 29 A, 34 A, 42 D, 48 D

S 19:3 Coroplast's dump in a disused cistern outside the market square to the southeast, west of the Panathenaic Way (*Hesperia*, XXI, 1952, pp. 120-164); dumped filling, accumulated *ca.* 350-320 B.C.

6 Var.: 51; 12 Var.: 81; also 25 A, 25 B′

S 21:1 Well outside the market square to the southeast, about 20 m. west of the Panathenaic Way; late 1st century B.C. and early 1st century after Christ.

54 B: 773; Misc. Moulded: 827; also 44 A

S 21:2 A well outside the market square to the

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southeast, west of the Panathenaic Way; first half of 6th century B.C.

5

S 21:3 Well outside the market square to the southeast, west of the Panathenaic Way; accumulated use filling, from first half of 1st century after Christ to early 3rd century:

from the lowest use filling, first half of 1st century after Christ.

49 B: **666**; *53*: **757**

S 22:1 Well on the lower Acropolis slopes, west of the Panathenaic Way (*Hesperia*, IX, 1940, p. 269, cf. fig. 5); first half of 6th century B.C.

10: **63**

T 18:1 Well about 6 m. north of the north terrace wall of the Eleusinion (cf. *Hesperia*, VIII, 1939, pp. 265-266, fig. 20); second half of 6th century B.C.

12 A: **74**; 16 B: **95**; also 2 B

T 19:3 Well in the area of the archaic building in the Eleusinion; dumped filling of first quarter of 7th century B.C.

1: **1, 3**

T 24:3 Well on the northwest slope of the Acropolis; dumped filling of end of 6th or early 5th century B.C.

8: **56**; 19 B: **136**

T 24:5 Well on the northeast slope of the Acropolis; dumped filling of end of 6th century B.C.

15

T-U 19:1 Undisturbed filling to east of the archaic building in the Eleusinion (cf. *Hesperia*, VI, 1937, p. 359); from filling below working chips of building, late 6th century B.C. and earlier.

12 Var.: **79**

U 23:2 Well on the northwest slope of the Acropolis, below the Klepsydra; dumped fillings of the end of the 6th century B.C.

6 B: **45**; 7: **55**; also 16 B

U 25:2 Well on the northwest slope of the Acropolis, below the Klepsydra; dumped fillings of the end of the 6th century B.C.

5: **37**; 12 B: **76**, **78**; 15: **90**, **91**; 21 A: **156**; also 2 B, 6 B, 12 A, 13, 19 A

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CONCORDANCE OF BRONEER AND AGORA TYPES

Broneer Types	*Agora Types*
I	10, 11, 41
II	12 A, 12 B, 12 Var, 14, 16 A, 16 B, 16 Var
III	19 A, 19 B, 19 Var
IV	21 A, 21 B, 21 C, 21 D, 22 A, 22 B
V	20, 22 C, 24 A, 24 A′
VI	23 A, 23 C, 23 C′, 23 D
VII	24 C, 24 C′, 25 A, 25 A′, 25 B, 25 B′, 25 D′
IX	28 B, 29 A, 47 A
XII	32, 33 A, 34 A, 35 A, 35 B
XIII	28 A, 40 A
XIV	37 A, 39
XV	37 A, 37 C
XVI	
2	35 C
3	35 C′, 35 D
XVIII	46 C, 48 A, 48 C, 50 B, 52 B, 52 C, 52 E, 52 H, 54 A, 54 B, 55 B
XIX	44 D, 49 A

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GENERAL INDEX

The numbers refer to pages

ABECEDARIUM: 4, 69, 150; *see also* Index of Inscriptions
Academy, shrine of Artemis near: 160
Acanthus: 153
Acropolis, lamps from: 9[8, 9], 14[13], 30, 47, *55*, 128 and [110], 244, 245; shrines on: *55*, 160
Acropolis Museum: 9[8, 9], 36, 37, 47
Adaptation: *see* Imitation
Adrianos: 184, 185
Aegean lamp sources: 87, 98, 123 and [103]
Aegina: 10, 123[104]
Aeolic regions: 144
Africa, lamps from: 123 and [104]; shipwreck off coast of: 126, 154[133]; *see also* North Africa
Agasikrates: 33
Aineias: 161, 173, 184, 187, 190, 191, 192, 196, 214
Aineios: *see* Aineias
Akratos: 220
Alexander: 163
Alexandria: 88, 144, 155, 157[141], 165 and [147]; Benachi Collection: 79[74], 122, 144, 145 and [126], 155, 165[147], 168, 201
Alexipharmaka, Scholiast on: *52*
Alpha: 143, 161, 173, 187, 191, 192, 194, 195, 200, 203, 204, 209, 210, 212; *see also* 220 and Index of Inscriptions
Amnion?: 215
Amphion?: 215
Anthropomorphic lamps: 156, 157, 158
Anticythera: 166[150]
Antioch: 165
Aphrodisias: 180-181
Aphrodite, dolphin of: 181
Apollo Patroos, Temple of: 128, 240
Apollonides: 143, 161, 173, 179 and [159], 180, 181, 184, 185, 187, 192, 196, 215, 216
Apollonios: 173, 187, 188, 192, 196, 197, 215, 216
Arabic globular lamps: 115-116
Archetimos: 168
Areopagus: 3[2], 107, 178, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244
Argive-Corinthian lamps: 22-23
Argive Heraion: 22 and [22]
"Argive Monochrome Ware": 22
Argos, lamps: 22
Ariston: 143, 161, 163, 173, 176 and [158], 177, 196, 214, 216
Artemis, bust of: 157, 158; lamp dedicated to: 160; shrines of: 160
Asia, Roman province of: 166
Asia Minor, exported to: 126; lamps from: 21, 88, 144, 166, 212
Asia Minor Gray Ware: 91, 102, 144
Asklepiades: 173, 184, 185, 216
Askoid lamps: 84-85
Astragal: 146, 147
Athena, priestess of: *57*; statue of: *57*; Phratria, Temple of: 240
Athenaeus: 159[143]
Athens, domination of Delos: 166; Sullan invasion: 1, 176, 179; trade with east: 166, 174; *see also* Exportation, Importation, and names of individual buildings and sites
Athens, National Museum: 7[7], 9[8, 9], 14[13], 30[41], 129[111]
Attalos, Stoa of: 2, 166[150], 243, 244

BADGE, boukranion of Diokles: 4, 68; dolphin of Aphrodisias: 180-181
Bars: 209
Basket, as decoration: 145
Batrachomyomachia: 25[32], 79[73]
Bead and reel: 168, 206
Berezanj, lamp from: 25[33]
Berries: 150-151, 195, 197, 198, 199, 200, 201
Birds: 19
Black-figured pottery, glaze on: 17
Blister ware lamps: 91-94
Boss: 174
Boukranion, as badge: 4, 68; as moulded decoration: 206
Bouleuterion, New: 239; Plateia: 239; Primitive: 241
Branch: 96
Broneer, classification of Corinthian lamps: 1-2; *see also* Concordance of Broneer and Agora Types, 246
Bud: 172, 200
Bull's head lamp: 156, 157
Bust, female: 146-147, 150, 151, 157, 158
Byzantine globular lamps: 115-116, 121

CABLE PATTERN: 146, 165, 169, 194
Caduceus: 168
Capital: 153, 154
Carthage, Punic burials in: 102[90]
Central cone: 25 and [32], [34], 26, 27; *see also* 42
Central rod: *see* Central tube
Central tube: 23-24, 39-41, 52-56, 82-83, 84, 85-91
Circle: 22, 51, 126, 147, 148, 163, 186, 187, 190, 191, 192, 193, 194, 197, 198, 201, 204, 209, 210
Circlet: 149, 157, 158, 159, 160, 161, 163, 178, 195
Cocked hat lamps: 7-8, 12-13
Coin, Roman: 157 and [140]

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Columnar lamps: 72, 104 and [94], 153-154
Corinth: 22-23, 26 and [36], 27, 28, 29 and [38], 30, 31, 52, 63, 91, 92, 114, 123[104], 126, 128, 166[150], 167; North Cemetery: 52
Corinthian lamps: 29, 30, 31; Concordance of Broneer and Agora Types: 246
Corinthian-Attic lamps: 23-24, 28, 29
Cornucopia lug: 133, 153, 158, 161, 176, 177, 179, 180, 181, 182, 183, 184, 186, 212, 213
Corona lamps: 24, 39, 107, 128
Cover: 79 and [72], 80, 81, 82; *see also* 114
Cross: 205, 210
Cross-strokes: 18
Cyprus, lamps: 7[4], 38, 95[84], 123[104], 155

Dashes: 14, 36
Dating, system of: 2-3
Decoration: *see* acanthus; astragal; bars; basket; bead and reel; berries; birds; boss; boukranion; branch; bud; bust; cable; caduceus; circle; circlet; cornucopia lug; cross; cross-strokes; dashes; delphiniform lug; diamond; disc; dots; double palmette; egg-and-dart; fasces; fillet; flame; flower; garland; globule; gore; grape; head; herringbone; ivy; label; laurel; leaf; lines; lion's head; lobe; loop; lotus; meander; mouse; nodule; olive; palmette; panel; pellet; pendant; petals; pyxis; rays; ribbing; ribs; ridge; ring; rope; rosette; satyr; scale; scroll; semicircle; shell; sistrum; snail-shell; spiral; strokes; tassel; tendril; thunderbolt; tongue; torch; triangle; vase; vine; volute; wings; wreath
Delos, Athenian domination of: 166; lamps: 37, 87, 98, 122-123, 144, 145[126], 165; trade with: 88, 144, 166, 174
Delos Museum: 98 [87]
Delphiniform lug: 119, 120, 133, 134, 158, 163, 177, 178, 179, 180, 182, 183-184, 185
Demeter, lamp for: 52
Demetrios: 172, 217
Diamond: 148, 194, 202, 203
Die: see *Poinçon*
Diokles: 4, 68
Dionysios: 187, 199, 200, 201, 202, 206, 207, 209, 217; *see also* 60, 212, 217
Dionysos, face of: 156-157, 158
Diphilos: 69
Dipinto: 4, 35, 108
Disc: 119, 120, 126, 127, 152, 172, 173
Dolphin: 151 and [129], 163, 174; badge of Aphrodisias: 180-181
Dots: 9, 14, 15, 36, 51, 64, 75, 76, 147, 158, 160, 161, 163, 167, 168, 169, 171, 173, 178, 179, 181, 182, 184, 185, 188, 189, 194, 197, 200, 202, 203, 204, 205, 210
Double-decker lamps: 35-39
Double palmette: 146, 150, 152

East, lamps from: 115, 139, 158, 171, 174, 200; lamps of: 7; trade with: 166, 174
Echinus, Doric: 104, 139
Egg-and-dart: 164
Egypt, lamps: 122, 155, 201; "pitcher" lamps: 115; "toad lamps": 157[141]; *see also* Alexandria
Eleusinian deities, kernoi of: 52
Eleusinion: 128[112]
Eleusis: 7
Ephesos lamps: 111, 144, 164, 166-169; imitations of: 169-170, 173, 174
Erechtheion, golden lamp in: 154
Esquiline Cemetery, lamps in: 102-103 and [93], 105,[96], 123
Euphronios: 33
Exportation, of clay: 123; of lamps: 1, 31, 41, 49, 67, 87, 102, 105, 126

Fabricants: 3-4; *see also* Adrianos, Aineias, Akratos, Alexander, Aphrodisias, Apollonides, Apollonios, Archetimos, Ariston, Asklepiades, Demetrios, Diokles, Dionysios, Glaukias, Hephaistion, Heras, Ion, Isidotos, Lykias, Paramonos, Philomousos, Poplios, Proteas, Sopatros. For signatures *see* Index of Inscriptions; for relation to potters *see* Potters
Face, bearded: 156-157; winged: 153-154
Fasces: 168
Fayûm, the: 123[104]
Fillet: 156-157, 158, 206
Flame: 175, 176, 182, 183
Flower: 144, 157, 158, 163; *see also* Bud, Lotus, Petal
Flutes, of column shaft: 153, 154

Garland: 145, 147, 150-151, 154, 156, 162, 163, 174, 195, 197-198, 199, 201, 206; *see also* Wreath
Geometric pottery, change to Protoattic: 7
Glaukias: 217
Globule: 173
Gore: 144
Gorgoneion: 154
Grafitto: 4, 10, 22, 33, 34, 45, 46, 49, 54, 57, 60, 66, 68, 69, 71, 73, 74, 76, 78, 82, 84, 95, 101, 105, 106, 131, 136, 138, 150, 160, 177; *see also* Index of Inscriptions
Grape: 157, 162[144], 184, 185
Gray ware: 91, 102, 144
Great Drain: 237, 238, 241
Groove: 149, 150, 175, 185, 186, 188, 191, 192, 195, 196, 202, 203

Hadra: 145[126]
Head, of bull: 156, 157; of Dionysos: 156-157, 158; female: 146-147, 150, 151, 157, 158, 164; of lion: 139; of negro: 156, 157; of Pan: 211; of Pan-Silenos: 157 and [140]; of Silenos: 156-157, 158
Hekate, bust of: 157, 158
Heliaia: 242
Hellenistic Building: 237, 239

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Hephaistion: 162-163 and [144, 145], 217, 218
Hephaistos, statue of: 57; Temple of: 57, 128
Heras: 163, 196, 197, 218
Hermes, face of: 153-154
Herringbone: 94, 96, 109, 146, 175
Hill of the Nymphs: 234

Ilissos, shrine of Artemis near: 160
Imitation: 22, 23, 24, 28, 31, 34, 41, 87, 105, 110, 116, 127, 130, 145, 164, 165, 169-170, 171-173, 174, 195
Importation: 21, 23, 27, 30, 31, 40, 41, 87, 88, 90, 98, 105, 110, 111, 114, 115-116, 121, 122-123, 126-127, 139, 143-145, 149, 156, 158, 161, 164, 165, 166-169, 170-171, 173-174, 177, 196, 197, 200, 201, 211, 212, 214
"Inkwell" lamps: 61-62
Inscription: 4; *see also* Dipinto, Grafitto, Index of Inscriptions
Ion: 180, 181, 199, 214, 218
Isidotos: 182, 183, 184, 187, 188, 218
Isis, cult of: 200; symbol of: *see* Sistrum
Italian craftsman in Athens: 182
Italian lamps: 142, 145, 182, 199
Ivy: 147, 151, 168, 170, 197-198, 199, 200, 212

Kallimachos, golden lamp of: 154
Kallixenos Aristonymou, ostrakon against: 46
Kerameikos: 30, 38, 62; Cemetery: 7, Excavation Storerooms: 30[41], 38[48]
Kernos: 52
"Kitchen lamps": 98-99
Kite-shaped lamps: 154-155
Knidos lamps: 90, 94, 119, 121, 126-127, 144, 156, 170-171, 174, 207; imitations of: 127, 171-173
Kolonos Agoraios: 178, 234, 235, 236, 237, 238, 239
Komos: 101
Kore, lamp for: 52

Label: 210
Lagynos lamps: 94-97, 130-131
Lamp-cover: 79 and [72], 80, 81, 82; *see also* 114
Lamp-holder: 78 and [70], 133 and [118], 134, 149, 150
Lampmaker: *see* Fabricant
Lamp-stand: 113, 128, 129, 153, 154 and [133]; *see also* Columnar lamps
Laurel: 198, 199
Leaf: 126, 127, 145, 146, 147, 148, 149, 150, 151, 153, 157, 158, 159, 160, 161, 162, 163, 167, 168, 169, 170, 171, 172, 173, 174, 176, 177, 178, 180, 195, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207
Leningrad, Hermitage Museum: 40[52]
Library of Pantainos: 244
Ligature: 66, 69, 184, 185, 209, 212, 214
Lindos: 39, 40
Lines: 9, 24, 158, 160, 165, 173, 180, 212
Lion's head: 139
Lobe: 153
London, British Museum: 155, 166
Loop: 168
Lotus: 174
Lug: *see* Cornucopia lug, Delphiniform lug
Lykias: *see* Lysias
Lysias: 184, 190, 214, 218
Lysios: *see* Lysias

Mahdia, shipwreck at: 126, 154[133]
Meander: 164
Medeios of Piraeus, daughter of: 57
Mediterranean, eastern: 7; lamps of: 144, 145, 155
Megarian bowls, lampmaker's signature on: 162 and [144], 176 and [158], 179 and [159]; relationship to lamps: 129 and [116], 130, 162, 176[158]; similar decoration on: 5, 147, 148, 151[129], 152 and [130], 155 and [136], 159 and [142], 160, 162, 165 and [149], 204, 206
Menon: 84
Mesomphalos: *see* Central Cone
Metal lamps, clay prototype for: 83; imitation of: 25[34], 126, 144, 145, 146, 155, 156, 165, 166, 167, 194, 195, 213; metal standard: 154, 155, 156
Metroon, Hellenistic: 241
Middle Stoa: 162[144], 166[150], 241
Miniature lamps: 65, 68, 69, 77, 98, 113, 131, 188
Monogram: 105, 161, 220
Mouse: 79 and [73, 74], 82, 84; *see also* 25[32]
Mt. Hymettos: 7, 12[12]
Multiple nozzle lamps: 34, 36, 39, 40, 41, 47, 52, 54, 55, 56, 57, 59, 83, 84, 90, 91, 106-108, 111, 112, 128, 129, 138-139

Negro's head lamp: 156, 157
Nikander, Scholiast on: 52
Nike, bust of: 151
Nodule: 165, 194, 195, 205, 209
North Africa, lamps: 7[4], 21[18], 121

Odeion: 242
Oil, use of: 7, 8, 119
Olive: 195, 197, 198, 199, 200, 201
Olynthos: 59, 61, 67, 70, 72, 74, 78[70], 82, 83, 89
Omicron: 21, 22
Ostracism: 46
Ostrakon: 4; against Kallixenos Aristonymou: 46; against Themistokles: 34, 45
Ovule: 147, 148, 151, 157, 158, 159, 161, 162, 163, 168

Palestine: 7
Palmette: 144, 145, 146, 147, 149, 150, 152, 161, 162, 163, 165, 169, 174, 175, 176, 177, 186, 188, 212
Pan, head of: 211
Panel: 145, 204, 205, 206
Pan-Silenos, head of: 157 and [140]
Paramonos: 166[154], 168, 169, 170, 187, 214, 220; *see also* 197
Pellet: 195, 197, 208, 209, 210
Peloponnesos, lamps: 23, 27
Pendant: 153, 154
Periclean period: 50, 53

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Petal: 144, 146, 148, 163, 167, 189, 191, 192, 194
Phaleron Cemetery: 22 and [24]
Phallus, drawing of: 49
Phillipe: 57
Philomousos: 219, 220
Phoenicia: 123[104]
"Pitcher" lamps, Egyptian: 115
Pits, incised: 10
Plastic lamps: 155-158
Pnyx: 48, 56, 63, 74 and [68], 77, 79, 85, 88, 94, 128[110]
Poinçon: 167, 168, 200
Poplios: 182; *see also* 213
Poros Building: 235, 236, 237
Potters, relation to lampmakers: 3-4, 13, 14, 16-17, 19, 20, 26, 35, 46, 84, 85, 94, 95, 104, 147, 156, 159, 162 and [144], 167, 176, 179 and [159], 206; *see also* Megarian bowls
Pottery: Geometric, change to Protoattic: 7; Protoattic: 7, 20, 23; Protocorinthian: 20; Protogeometric, designs on: 165 [149]; *see also* Potters, Megarian bowls
Priene: 87
Proteas: 182, 183, 184, 185, 214, 219
Publius: *see* Poplios
Punic burials: 102[90]
Pyxis, incised: 138

Ray: 147, 148, 149, 153, 158, 159, 160, 161, 162, 163, 175, 176, 178, 180, 181, 183, 186, 188, 189, 191, 192, 193, 212, 215
Rhodes, lamps: 40, 176
Ribbing: 41, 153
Ribs: 179, 194
Ridge: 149, 159, 163, 175, 182, 184, 186, 187, 188, 189, 190, 191, 192, 193, 195, 197, 198, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209
Ring, of dots: 161; of leaves: 148, 212; of rosettes: 209
Roman lamps: 112-115, 118-121, 140-143, 169-170, 171-173, 180-210
Rome, Esquiline Cemetery: 102 and [93], 103, 105[96]
Rope motif: 165, 168
Rosette: 145, 146, 148, 149, 150, 151, 152, 153, 163, 167, 168, 169, 170, 174, 176, 177, 178, 179, 180, 181, 183, 185, 191, 192, 193, 207, 208, 209, 210, 212

Samos, lamps: 88; Samian ware: 196, 197
Sanctuary lamps: 19, 24, 55, 57, 107, 119, 128, 129, 154, 178, 190; *see also* 37[47], 160
Sardis: 166[150]
Satyr: 155 and [136]; mask: 152 and [130], 193
Scale pattern: 168
Scholiast on Nikander: 52
Scroll: 144, 145, 146, 147, 168, 175, 206
Seleucia: 144[124]
Selinus: 38
Semicircle: 165
Shaft, of columnar lamps: 153, 154
Shell: 146, 147, 162
Shipwreck, at Anticythera: 166[150]; at Mahdia: 126, 154[133]
Signature: *see* Fabricants and Index of Inscriptions
Silenos, head of: 156, 157, 158
Sistrum: 168, 169, 200
Smyrna lamps: 20-23 and [20]
Snail-shell: 178, 179
Sopatros: 140, 176, 177, 182 and [161], 183, 187, 188, 196, 197, 214, 219
South Russia, lamps: 7, 40 and [52], 155
Spiral: 161, 169, 180, 194, 195
Square Peristyle: 243, 244
Stacking trivet: 213
Standing lamps: 83, 154; *see also* Columnar lamps
Strainer: 136, 157; on vase: 176[158]
String groove: 160, 177, 185, 192, 213
Strokes: 168
Submycenean period: 7
Sulla: 154[133]; *see also* Athens, invasion of
Syria, development of lamps: 7, 21[18]

Tarsus: 143
Tassel: 156, 157, 158, 206
Tendril: 144, 160, 163, 168
Themistokles, ostrakon against: 34, 45
Thera: 123[104]
Tholos: 238, 239, 241
Thunderbolt: 146, 147, 150, 151, 152, 153, 155, 181, 183, 184
Thymiaterion: 52; *see also* 85
Thyrbaios: 218
"Toad lamps": 144, 157[141]
Tongue pattern: 162, 163, 168, 178, 179, 180, 181, 185, 188, 191, 192, 194, 197, 202, 204, 205, 206
Torch: 157, 158; lug: 180, 181, 183, 185
Trade: 166, 174: *see also* Exportation, Importation
Triangle: 148, 149, 210
Troy: 123[104]
Tunis, Musée Alaoui: 102[90], 126, 154[133]
Tunisia: 123[104]

Vase motif: 145, 168
Vienna Museum: 166
Vine: 151, 163
Volute: 153, 162, 163, 178, 179, 182, 184, 188, 201, 202, 204, 206

West Slope pottery, decoration on: 95 and [84], 104, 147
Wings: 153, 154, 158
Wreath: 95, 96, 147, 150, 151, 153, 158, 163, 195, 197, 198, 199, 200, 201

Zeus, Stoa of: 240; Phratrios, Temple of: 240
Zoömorphic lamp: 156, 157

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INDEX OF INSCRIPTIONS

The numbers refer to the Catalogue except where preceded by p.

NAMES AND INITIALS

Α: 14, 279, 578, 579, 635, 637, 677, 749, 761, 781, 782, 796, 808, 809, 816, 826, 830; pp. 143, 161, 173, 187, 191, 194, 203, 209, 210; *see also* Πα and 888

Αγ: 104

Αδρι (ligature): 723; p. 184

Αε: 835; *see also* Αι, Αἰνείας

Αι: 743, 751, 836, 837; p. 190; *see also* Αε, Αἰνείας, Ει; p. 187

Αἰνείας: Αἰνείου: 717, 765; Αἰν⟨ε⟩ίου: 729; *see also* Αε, Αι. For Aineias *see* General Index

Αἴνειος: *see* Αἰνείας

Ἄκρατος: 888

Ακρτ (monogram): 888

Αλ: 838; *see also* Αλε, Λε, [.]λε

Αλε: 641; [Α]λε: 839; p. 163; *see also* Αλ, Λε

Αμ....: 841

Ἀπ: 748, 842; p. 192; *see also* Ἀπολ, Ἀπολλωνίδης, Ἀπολλώνιος

Απε: 105 on Plate 22

Ἀπολ: 767; p. 196; *see also* Ἀπ, Ἀπολλωνίδης, Ἀπολλώνιος

Ἀπολλωνίδης: Ἀπολλωνίδου: 698, 702, 719, 846, 847; Ἀπολλωνί[δου]: 699; Ἀπ[ολλ]ωνίδου: 843; Ἀπολ[λω]νίδου: 844; [Ἀπολ]λωνίδου: 845; see also Ἀπ, Ἀπολ, [.]πολ. For Apollonides *see* General Index

Ἀπολλώνιος: Ἀπολλωνίου: 735; [Ἀπολλ]ωνίου: 849; *see also* Ἀπ, Ἀπολ, [.]πολ. For Apollonios *see* General Index

Ἀρίστων: Ἀρίστωνος: 686, 688, 689; Ἀρ[ίστωνο]ς: 687; Ἀρίστων: 850; [Ἀρίστω]νος: 851. For Ariston *see* General Index

Ἀσ: 854; Ασ: 853; *see also* Ἀσκληπιάδης

Ἀσκληπιάδης: Ἀσκληπιάδου: 852; *see also* Ἀσ. For Asklepiades *see* General Index

Ἀφροδίσιος: Ἀφρ[ο]δισί[ου]: 704

Β: 364

Γλαυκίας: [Γ]λα[υ]κίο: 855

Δ: 281

Δε: 317

Δη: 858; *see also* Δημήτριος

Δημήτριος: Δημητρίου: 673; Δημητρ[ίου]: 856; [Δη-μ]ητρ[ίου]: 857; *see also* Δη. For Demetrios *see* General Index

Δι: 232, 778; (ligature): 810, 811, 828, 829; *see also* Διονύσιος

Διοκλῆς: Διοκλέους: 267

Διονύσιος: 733, 791, 804, 859; Διονυσί[ου]: 860; Δ[ι]ονυσίου: 787; *see also* Δι. For Dionysios *see* General Index

Δίφιλος: Διφίλου: 283; Διφί: 283

Ει: 730; p. 187

Ζ...αδ: 861

Ἡ: 639, 692, 865; p. 163; *see also* Ἡφ, Ἡφαι, Ἡφαισ, [.]φα

Ἡρᾶς: Ἡράδος: 766; p. 163; *see also* 865. For Heras *see* General Index

Ἡφ: 863; *see also* Ἡ, Ἡφαι, Ἡφαισ, [.]φα

Ἡφαι: 638, 862; p. 163; *see also* Ἡ, Ἡφ, Ἡφαισ, [.]φα. For Hephaistion *see* General Index

Ἡφαισ: p. 162 [144]; *see also* Ἡ, Ἡφ, Ἡφαι, [.]φα

Θεμιστοκλῆς Νεοκλέους: [Θεμισ]θοκλ[ε͂]ς [Νεο]κλέος: 108; *see also* 158

Θεόδοτος: [Θεο]δότου: 868

Θυρ: 866

Ιν: 757

Ἰσι: 714, 732, 870; *see also* Ἰσίδοτος

Ἰσίδοτος: Ἰσιδότου: 709, 711, 867; [Ἰσι]δότου: 868; Ἰσιδ[ότου]: 869; *see also* Ἰσι. For Isidotos *see* General Index

Ἰσίδωρος: Ἰσιδ[ώρου]: 869, 870

Ἴων: Ἴωνος: 700, 701, 777; [Ἴ]ωνο[ς]: 871. For Ion *see* General Index

Κ: 330, 634

Καλλίας (monogram): 445

Καλλίξενος Ἀριστωνύμου: 162

Κα[– – – –] Φιλίππης: Κα[– – – –] Φιλίπης: 215

Κῶμος: Κώμου: 430

Λ: 278, 453

Λα: 744; p. 191

Λε: 748, 840; p. 192; *see also* Αλ, Αλε

[.]λε: 839; *see also* Αλ, Αλε, Λε

Λλ: 633, 721

Λυ: 872, 873; *see also* Λυσίας

Λυσίας: Λυ[σ]ίου: 742; Λυ..ου: 716, *see also* Λυ. For Lysias *see* General Index

Λύσιος: *see* Λυσίας

Μ: 233, 372

Μένων: Μένωνος: 372; Μένω: 372; Μ: 372; p. 84

Μπ (ligature): 284

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Νε: 748
Νι: 757

Ο: 62; p. 21
[– – –]ου: 887

Π: 213, 282, 408, 832
Πα: 727, 728, 768, 874, 875, 876; pp. 187, 196; *see also* 842
Παρ (monogram): 889; *see also* Παράμονος
Παράμονος: Παραμόνο: 644; Παραμόνου: 665; Π[α]ραμ: 667; *see also* 832
[.]πολ[– –]: 848; *see also* Ἀπολλωνίδης, Ἀπολλώνιος
Πόπλιος: Ποπλίου: 706; p. 182; *see also* 832
Πρ: 878; *see also* Πρω, Πρωτέας
Πρω: 720; *see also* Πρ, Πρωτέας
Πρωτέας: Πρωτέου: 707, 708, 877; *see also* Πρ, Πρω. For Proteas *see* General Index
Πωσ: 886; p. 182[161]

Σ: 233
Σα: 724; p. 184
Σαζ: 276
Σατύρα: Σατύρας: 220
Σω: 690; p. 176; *see also* Σωπ, Σωπα, Σώπατρος
Σωπ: 710; p. 182[161]; *see also* Σω, Σωπα, Σώπατρος
Σωπα: 880; *see also* Σω, Σωπ, Σώπατρος
Σώπατρος: Σωπάτρου: 572, 731, 771; 881; Σωπά[τρ]ου: 879; *see also* Σω, Σωπ, Σωπα. For Sopatros *see* General Index

Φ: 885; *see also* Φι, Φιλόμουσος
[.]φα: 864; *see also* Ἥφαι
Φι: 316, 883, 884; *see also* Φ, Φιλόμουσος
Φιλόμουσος: Φιλομόσου: 882; *see also* Φ, Φι

Χ: 289, 302
Χα (ligature): 199
Χαι: 627; p. 159
Χαιρέστρατος: Χαι: 627; p. 159
ΧΣΑ: 103

See also 670, 738 on Plate 27, 790

OTHER INSCRIPTIONS

Abecedaria: 277; ΑΒΓΔ: 599
Β: 689
D: 689
ΔΗ: 280
ΔΓIII: 280
Διοκλέους εἰμί: 267
Δραπέτης: 175
Εμ: 267
Ευ: 409
ΗΓΔΔΔ: 219
ἱερὸς Ἀρτέμιδος: 162
Κα[– – – –] Φιλίπης ἀν: 215
κοκκαλ: 176
ΓΗΓΔΔΔΔΓ: 300
Ρ: 531, 689
Ρρ: 560
Υα: 409
Φιλι: 464
Ψ: 676

See also 115, 159, 258, 291, 296, 314, 315, 553

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PLATES

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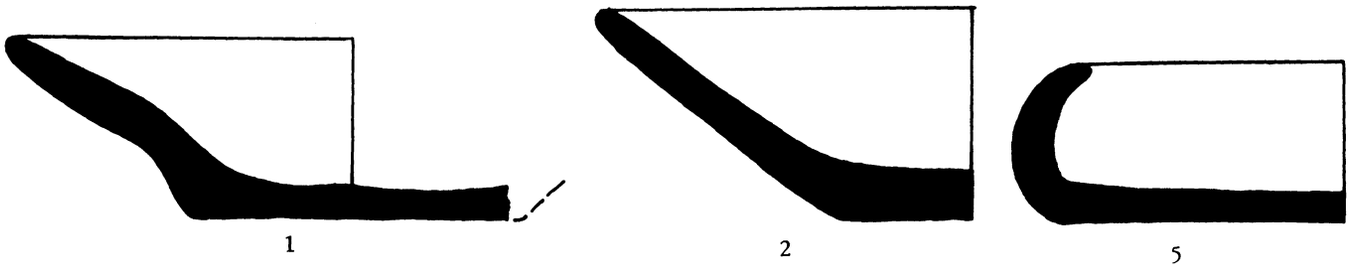

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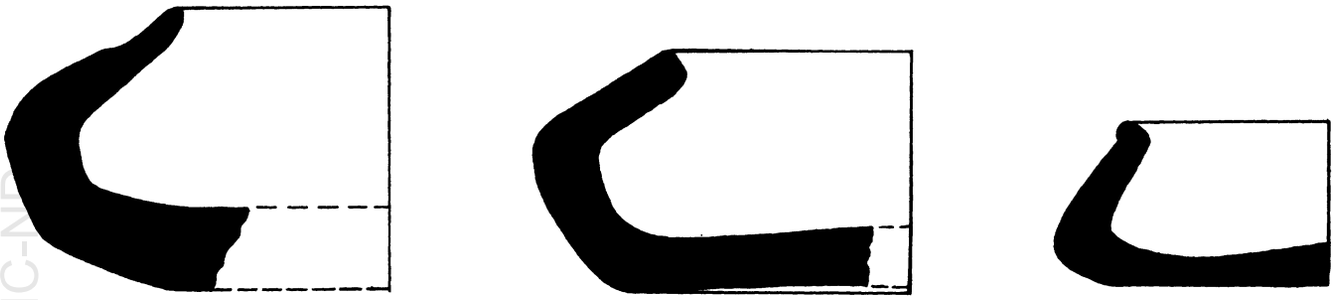

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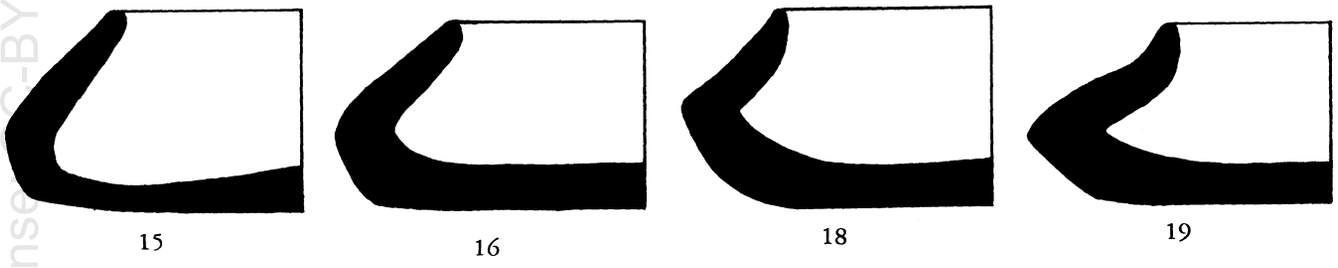

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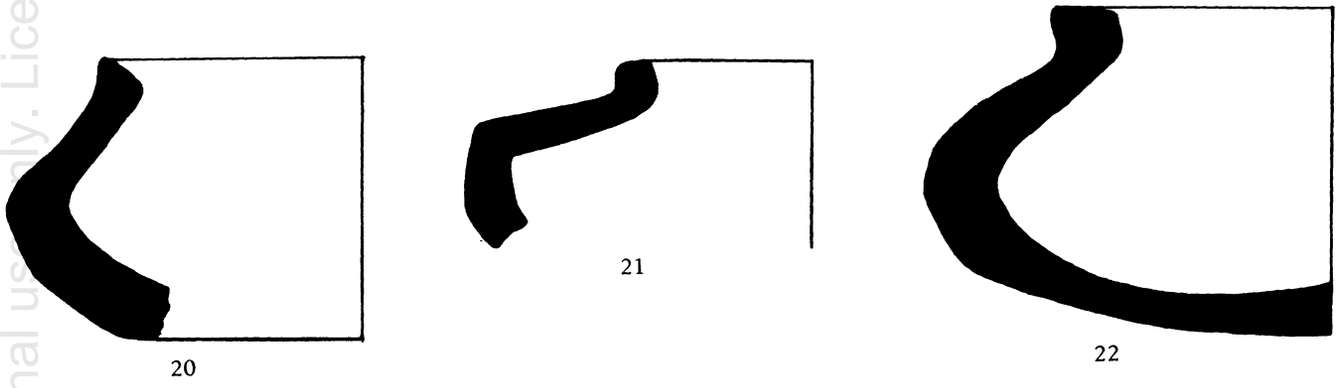

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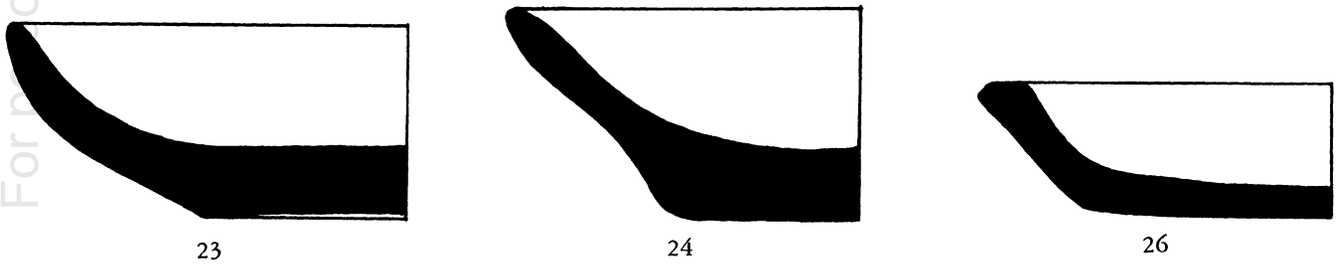
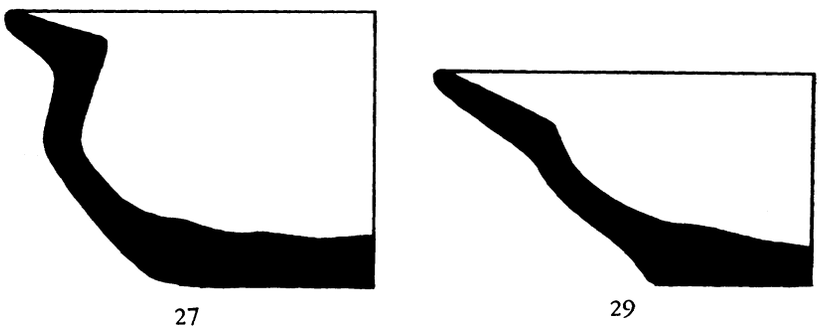


23 24 26



27 29

Types 1: 1-2; 2 A: 5; 2 B: 8-20; 2 Variants: 21-22; 3: 23-24; 4: 26-29

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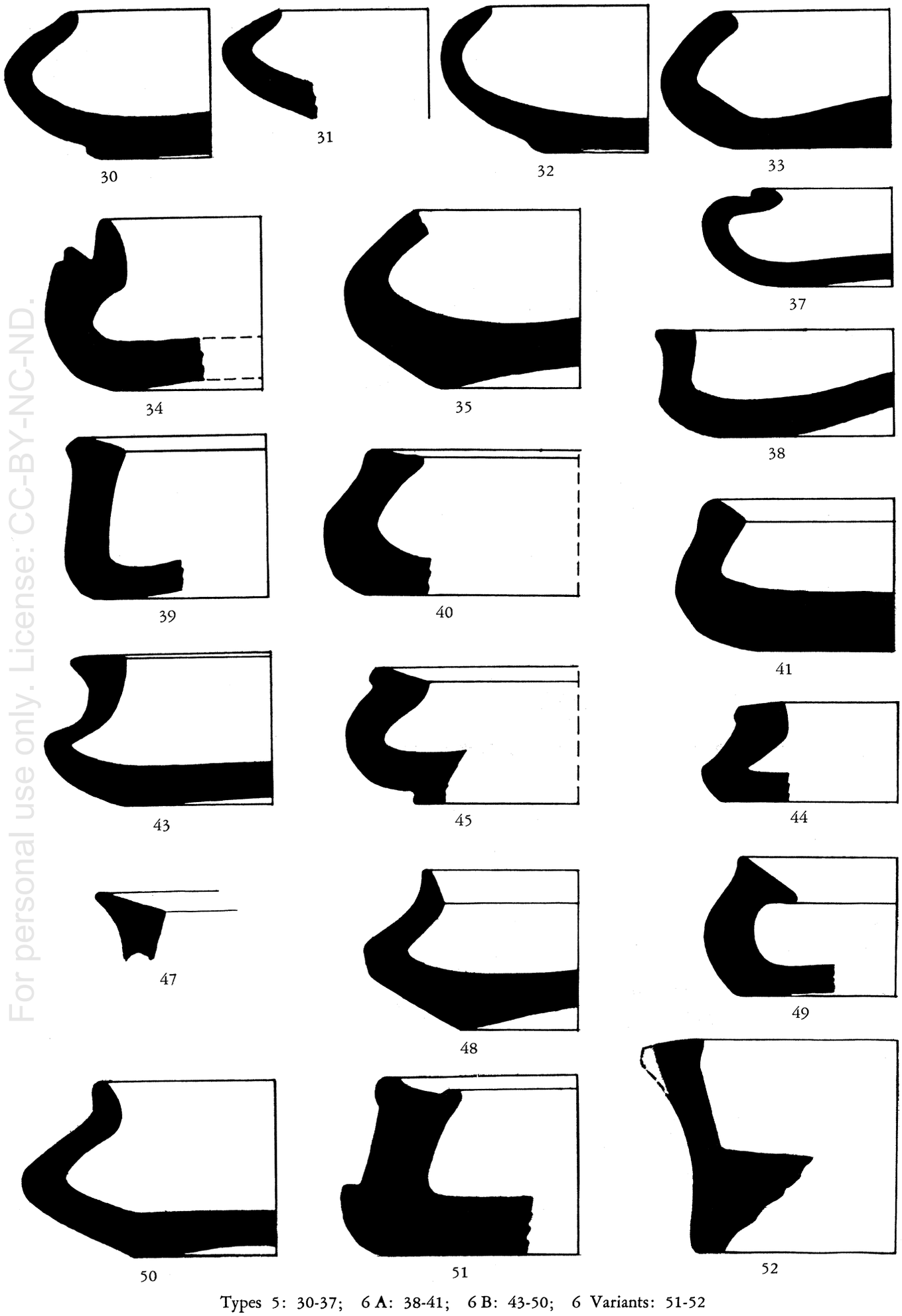
PLATE 2



Types 5: 30-37; 6 A: 38-41; 6 B: 43-50; 6 Variants: 51-52

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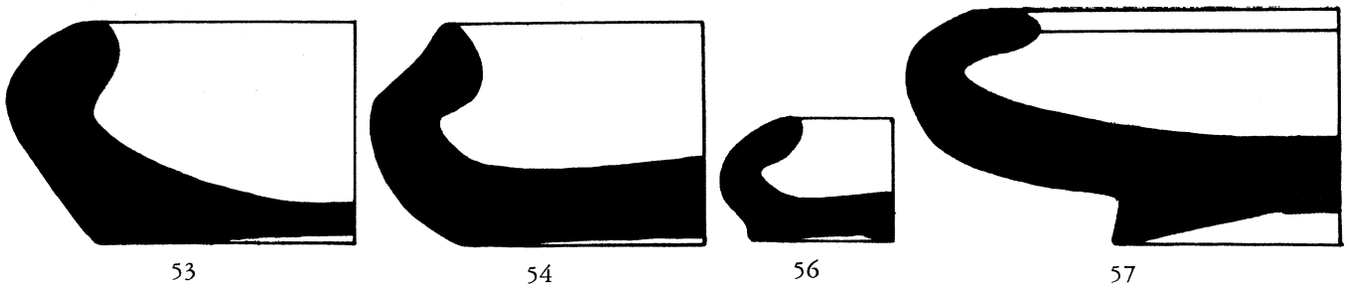
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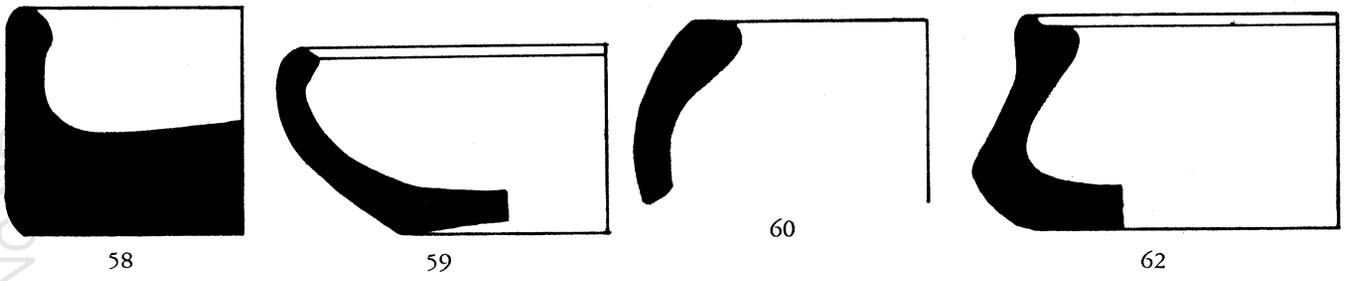
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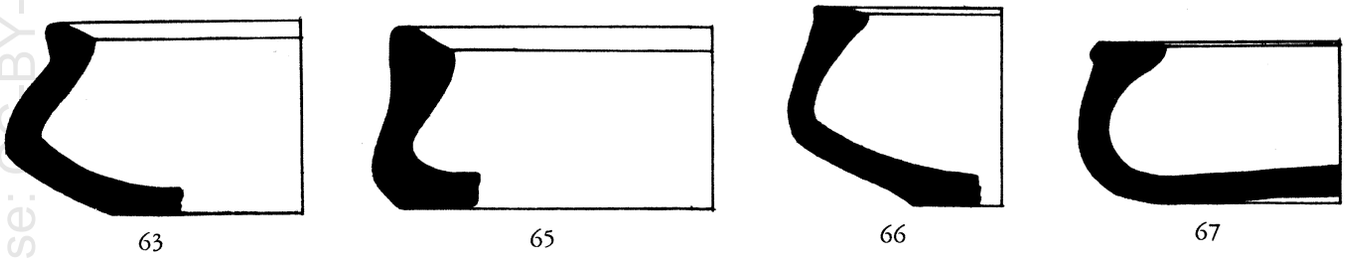
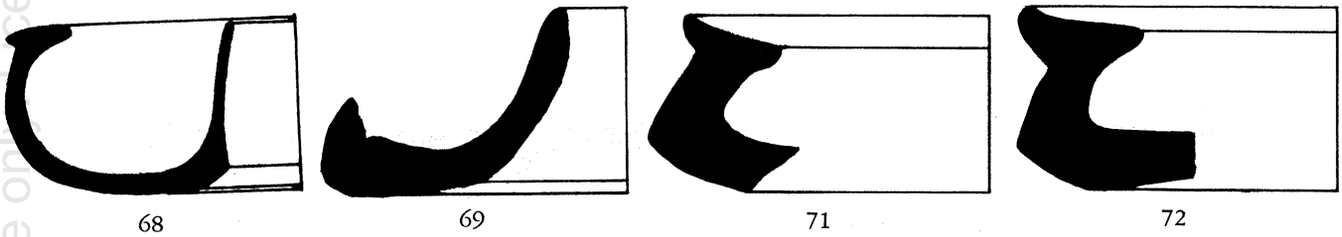

63 65 66 67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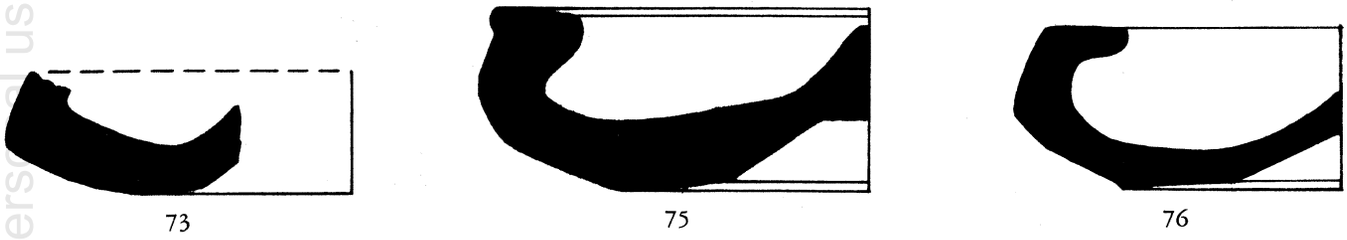
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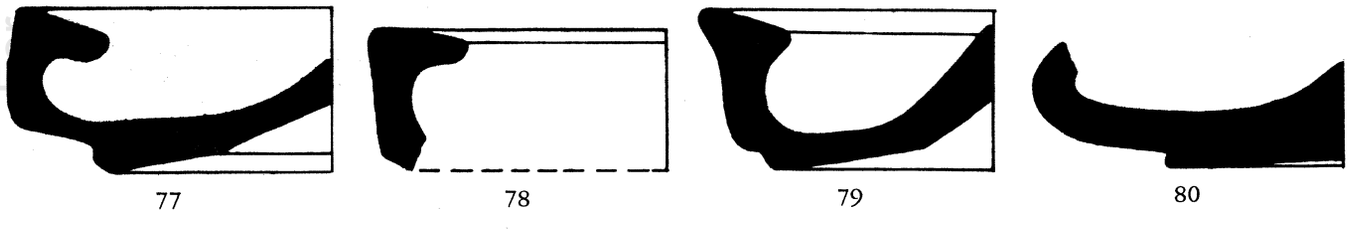
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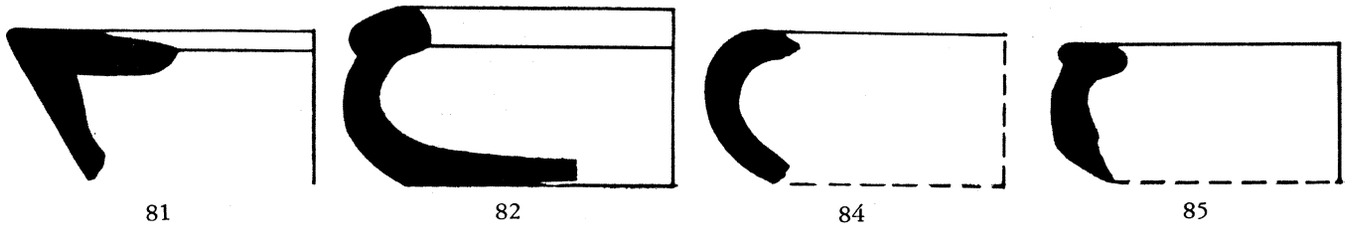
81 82 84 85

Types 7: 53-54; 8: 56-59; 9: 60-62; 10: 63-67; 11: 68-69; 12 A: 71-75; 12 B: 76-78; 12 Variants: 79-81; 13: 82; 14: 84-85

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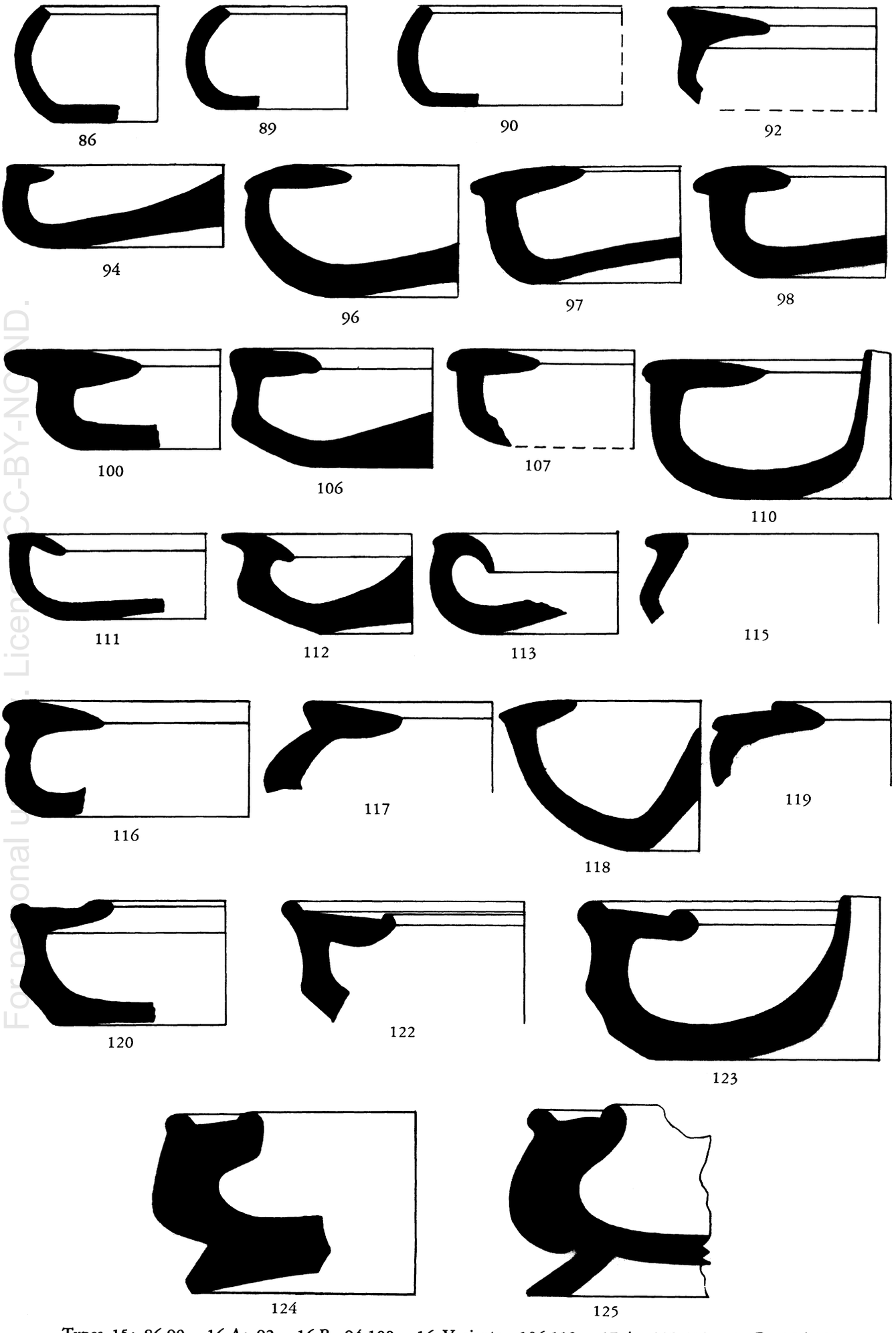
PLATE 4



Types 15: 86-90; 16 A: 92; 16 B: 94-100; 16 Variants: 106-119; 17 A: 120-123; 17 B: 124-125

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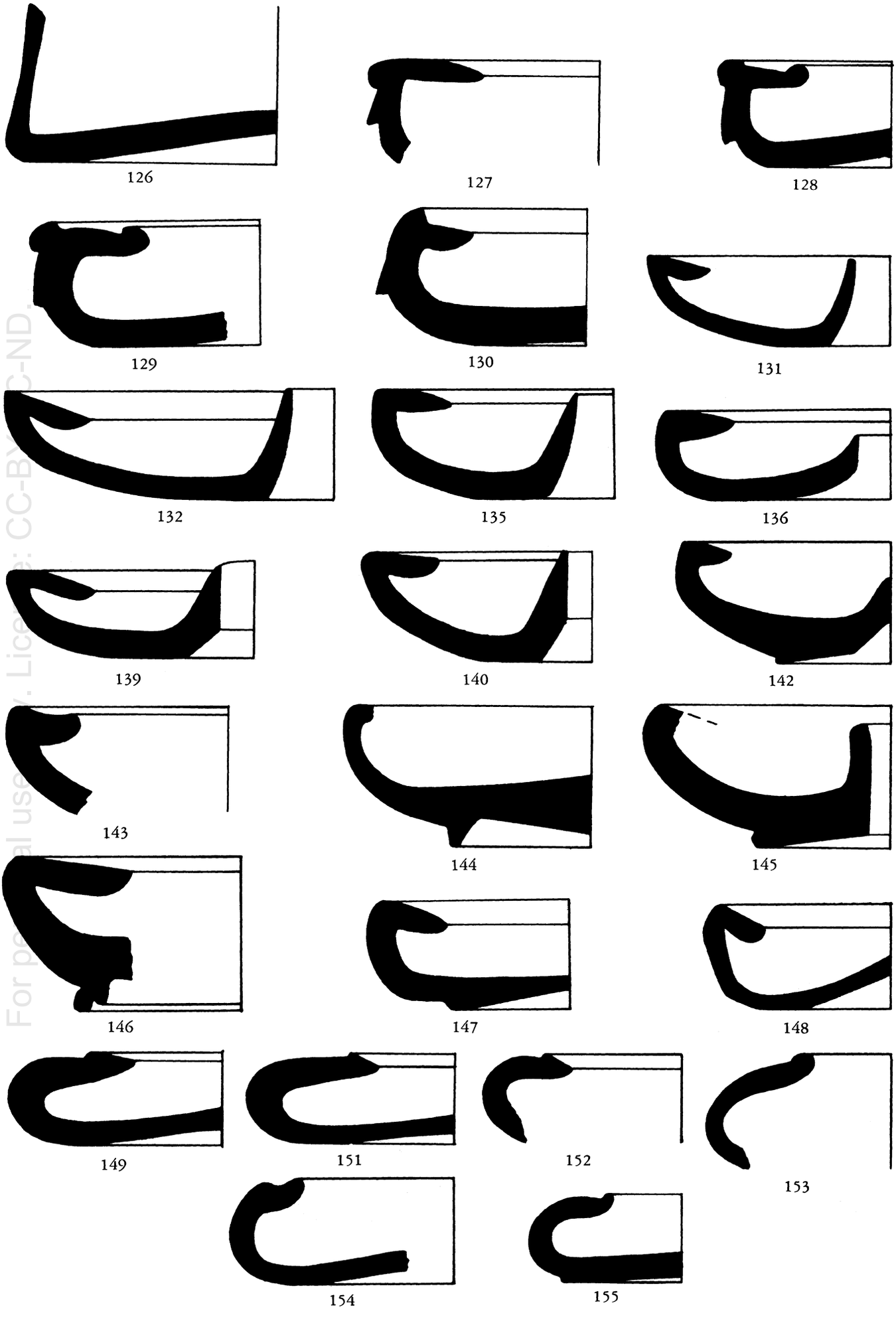

Types 18: 126-130; 19 A: 131-135; 19 B: 136-140; 19 Variants: 142-148; 20: 149-155

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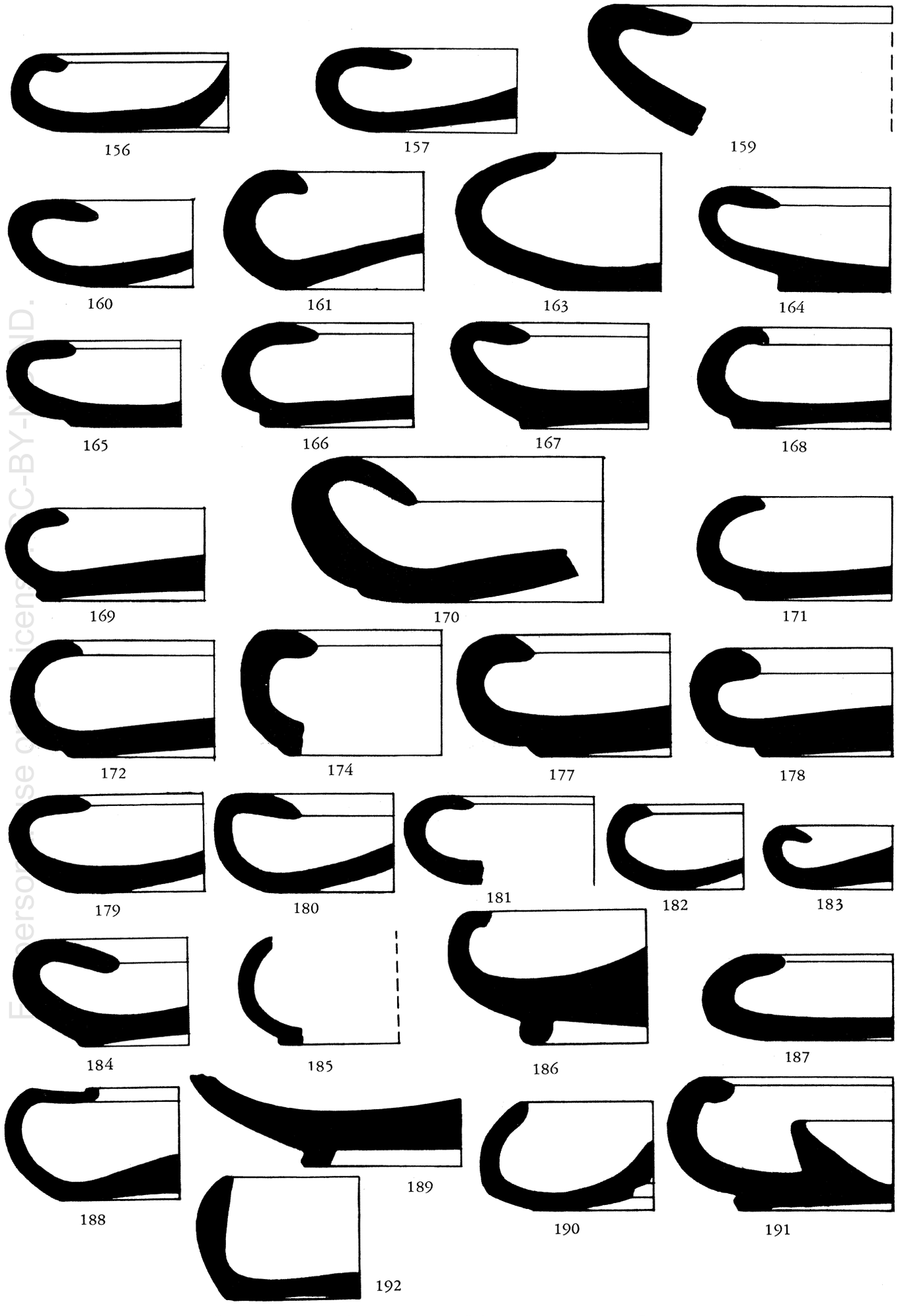
PLATE 6



Types 21 A: 156-163; 21 B: 164-170; 21 C: 171-174; 21 C Prime: 177-178; 21 D: 179-183; 21 Variants: 184-192

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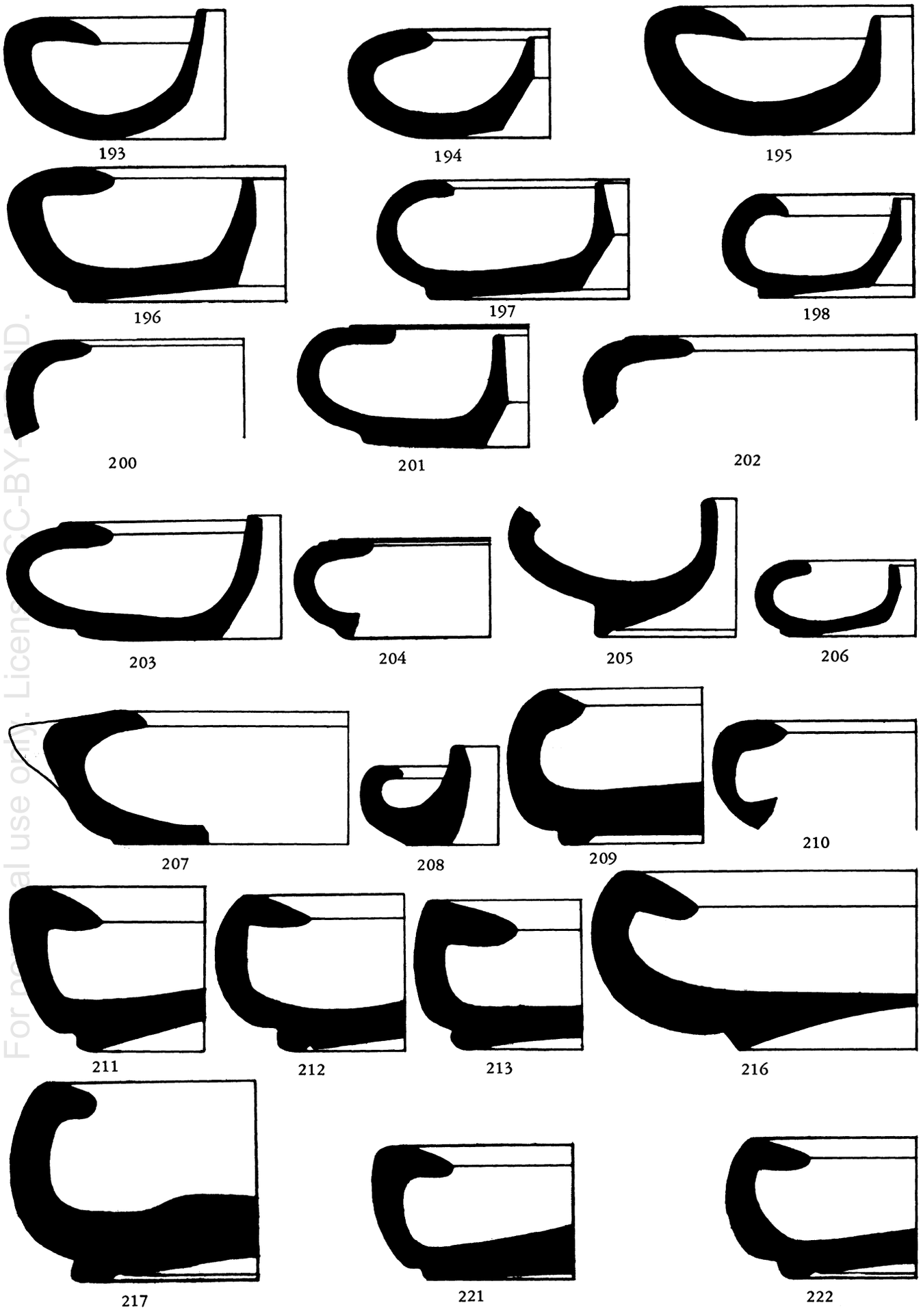

Types 22 A: 193-195; 22 B: 196-200; 22 C: 201-204; 22 Variants: 205-208; 23 A: 209-217; 23 A Prime: 221-222

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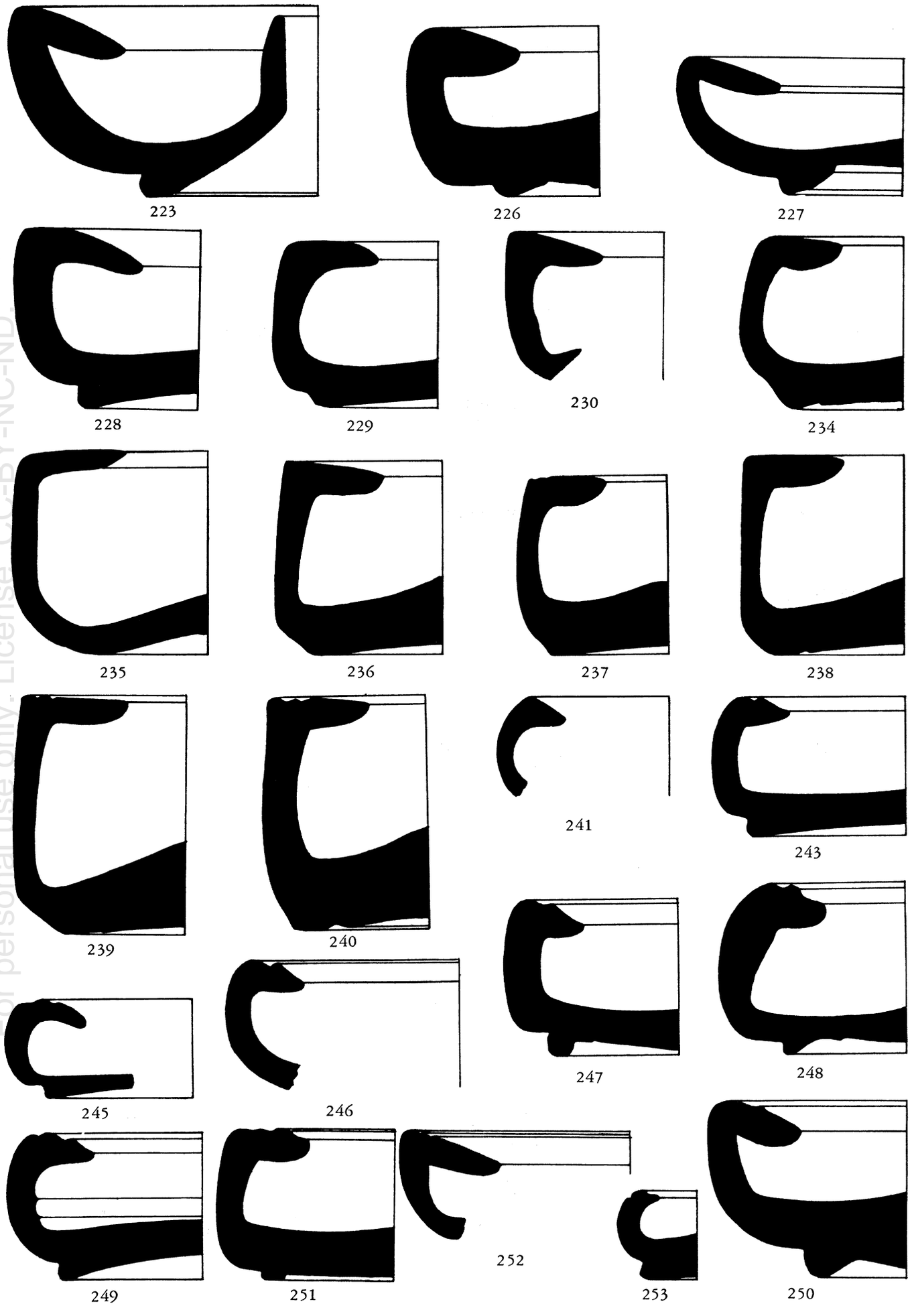
PLATE 8



Types 23 B: 223-227; 23 C: 228-230; 23 C Prime: 234-235; 23 D: 236-240; 23 E: 241; 24 A: 243-249; 24 A Prime: 250-253

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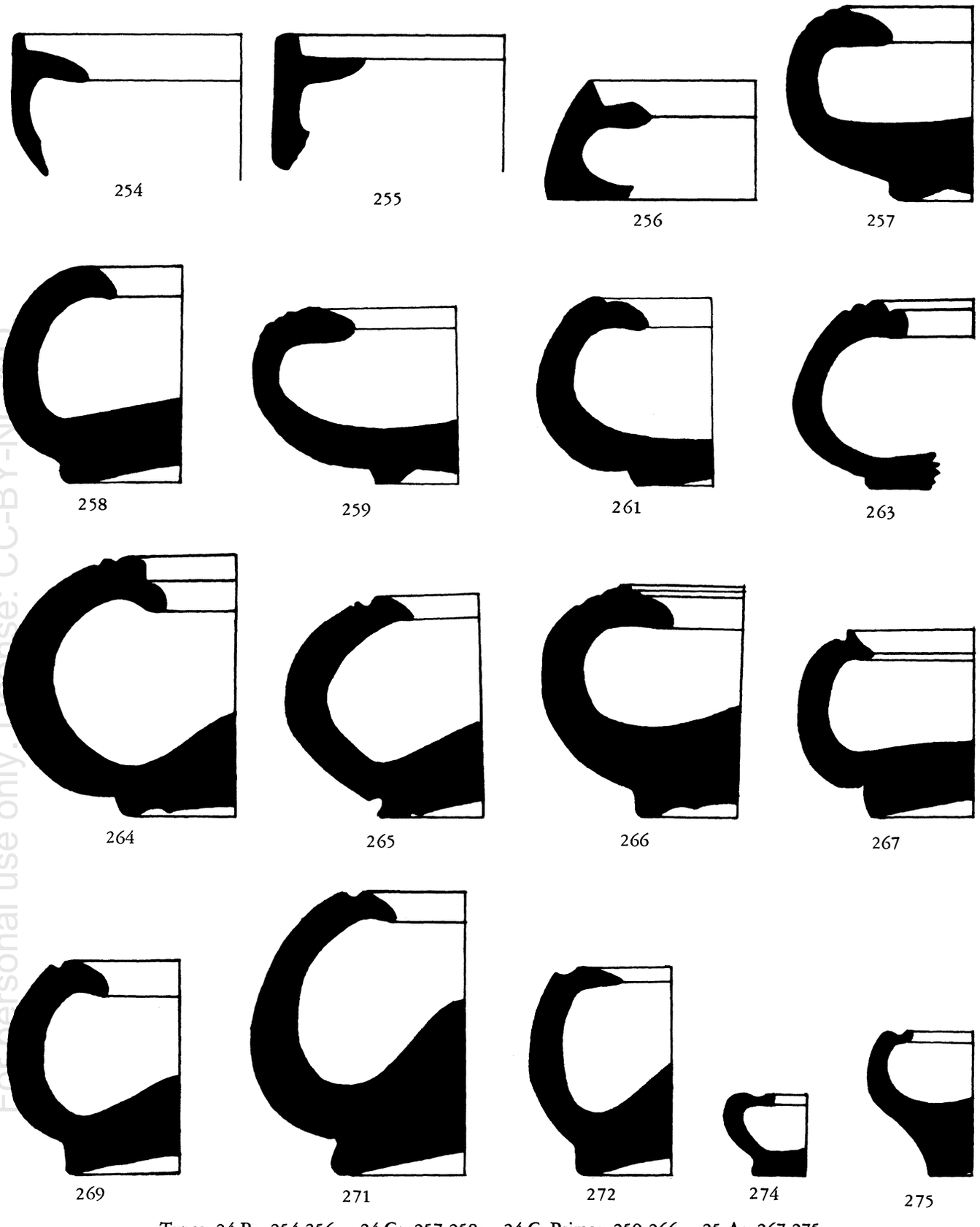

Types 24 B: 254-256; 24 C: 257-258; 24 C Prime: 259-266; 25 A: 267-275

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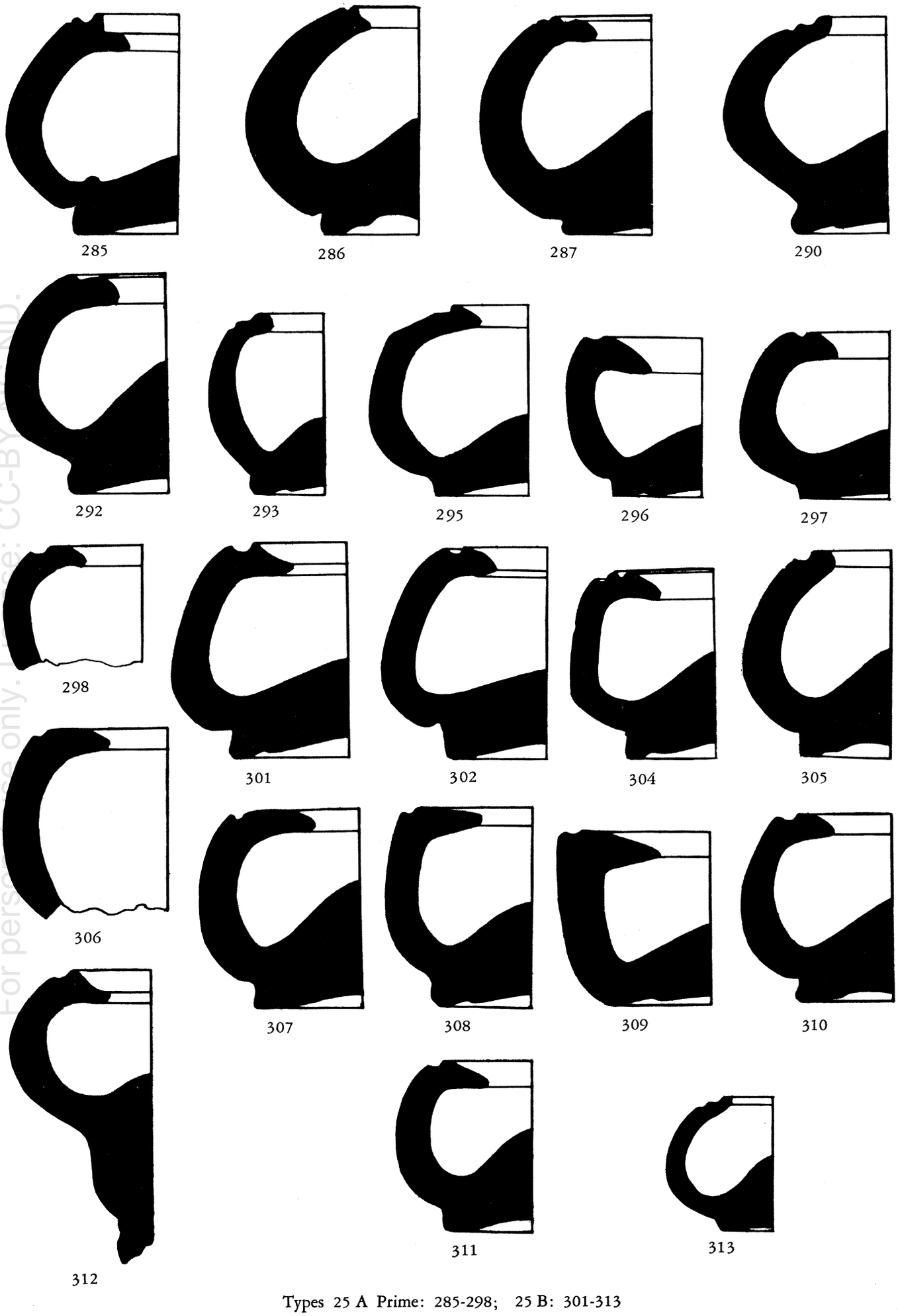
PLATE 10



Types 25 A Prime: 285-298; 25 B: 301-313

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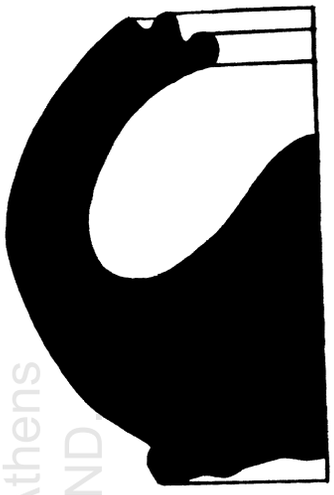
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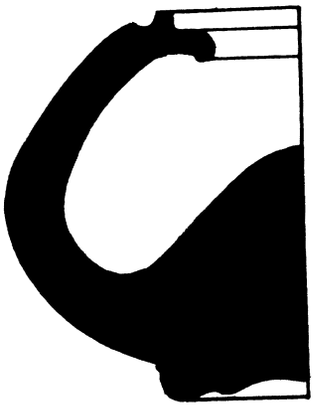
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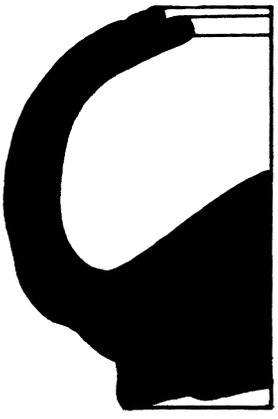
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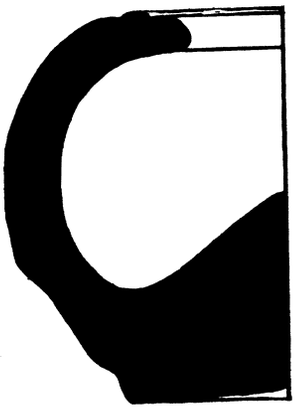
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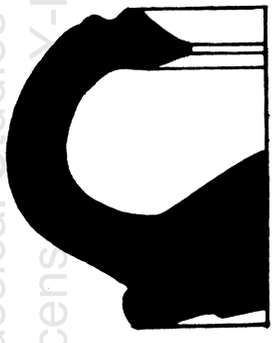
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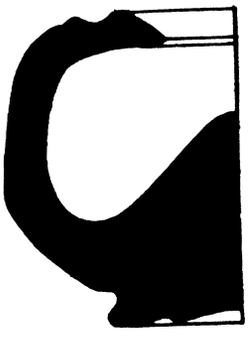
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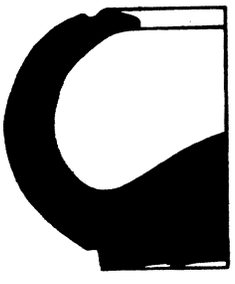
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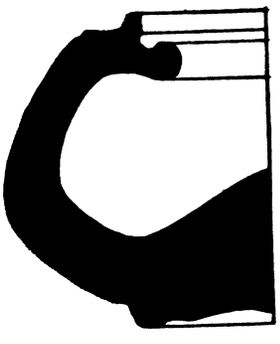
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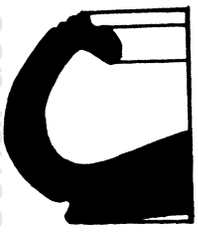
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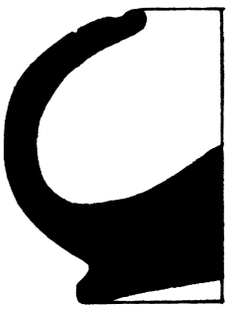
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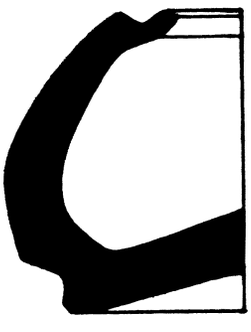
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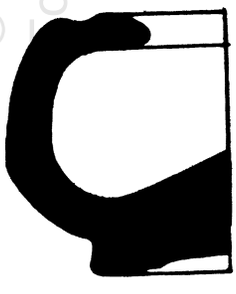
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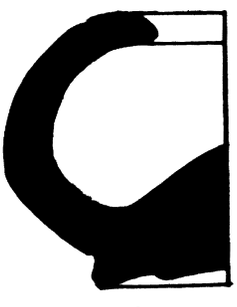
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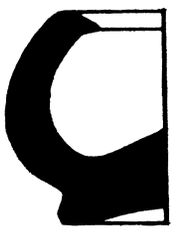
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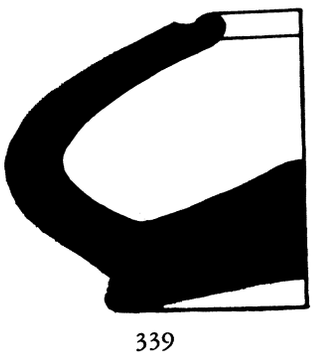
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Type 25 B Prime: 318-339

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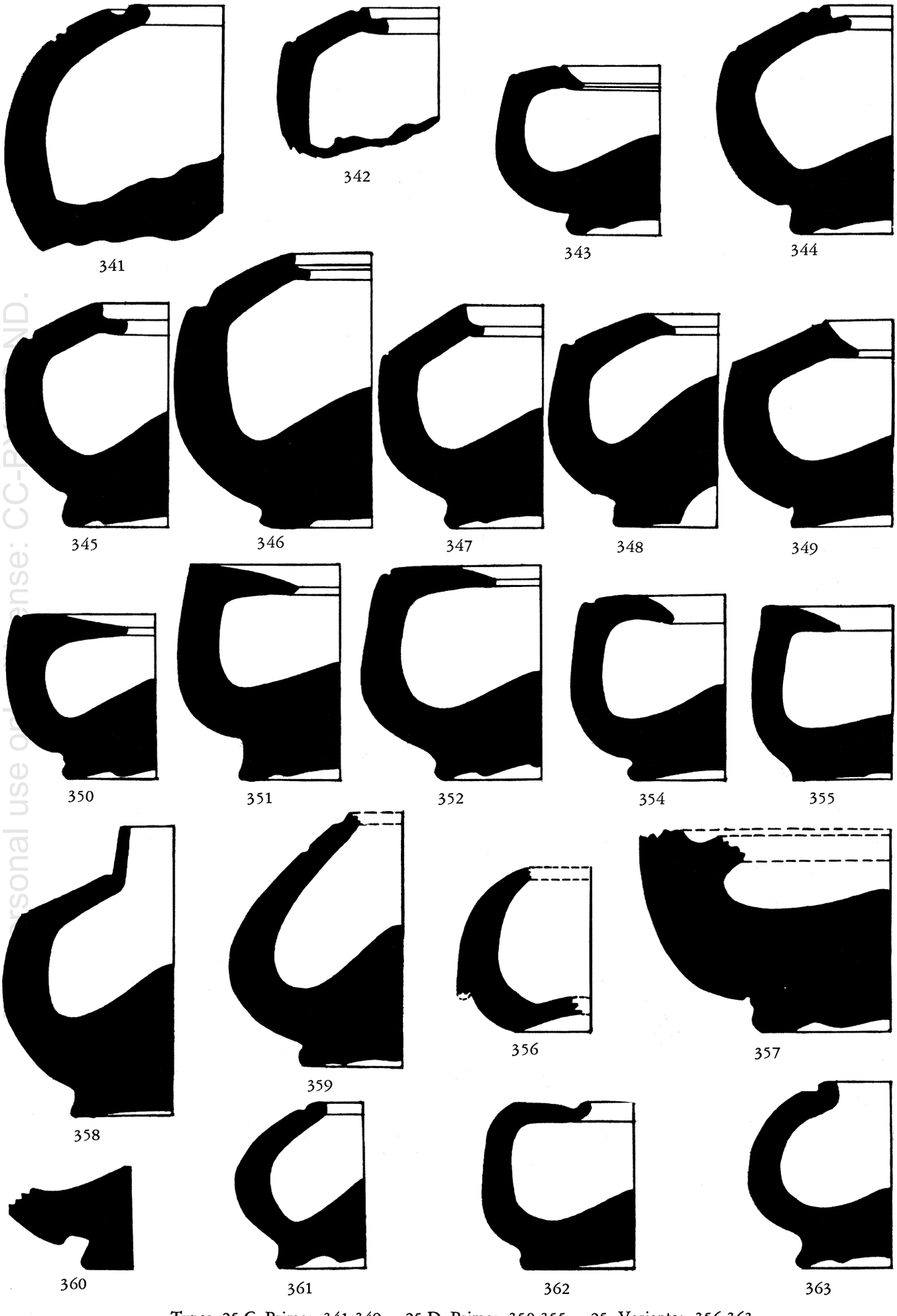
PLATE 12



Types 25 C Prime: 341-349; 25 D Prime: 350-355; 25 Variants: 356-363

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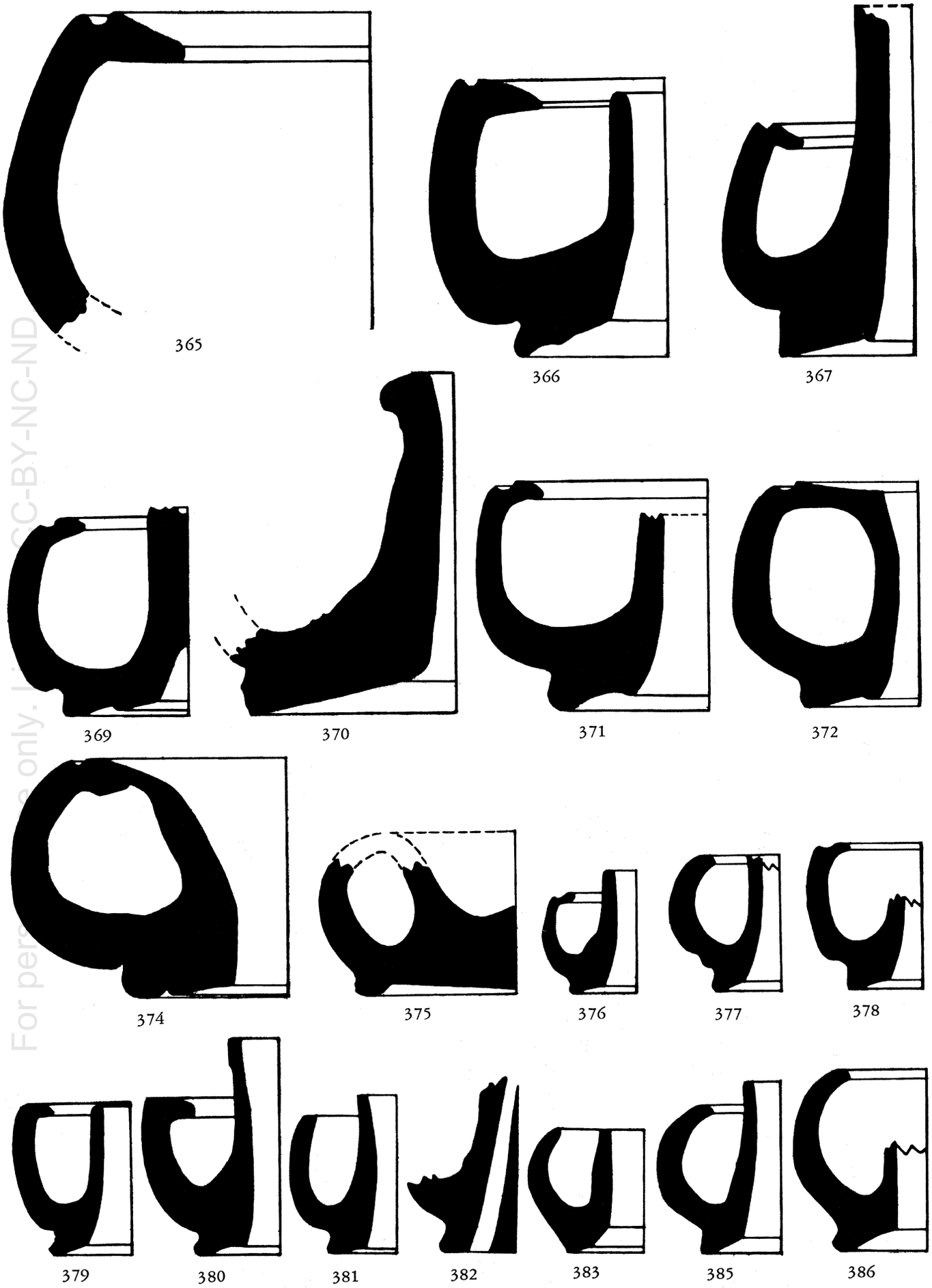

Types 26 A: 365-371; 26 B: 372-374; 26 Variants: 375; 27 A: 376-380; 27 A Prime: 381-382; 27 B: 383; 27 C: 385-386

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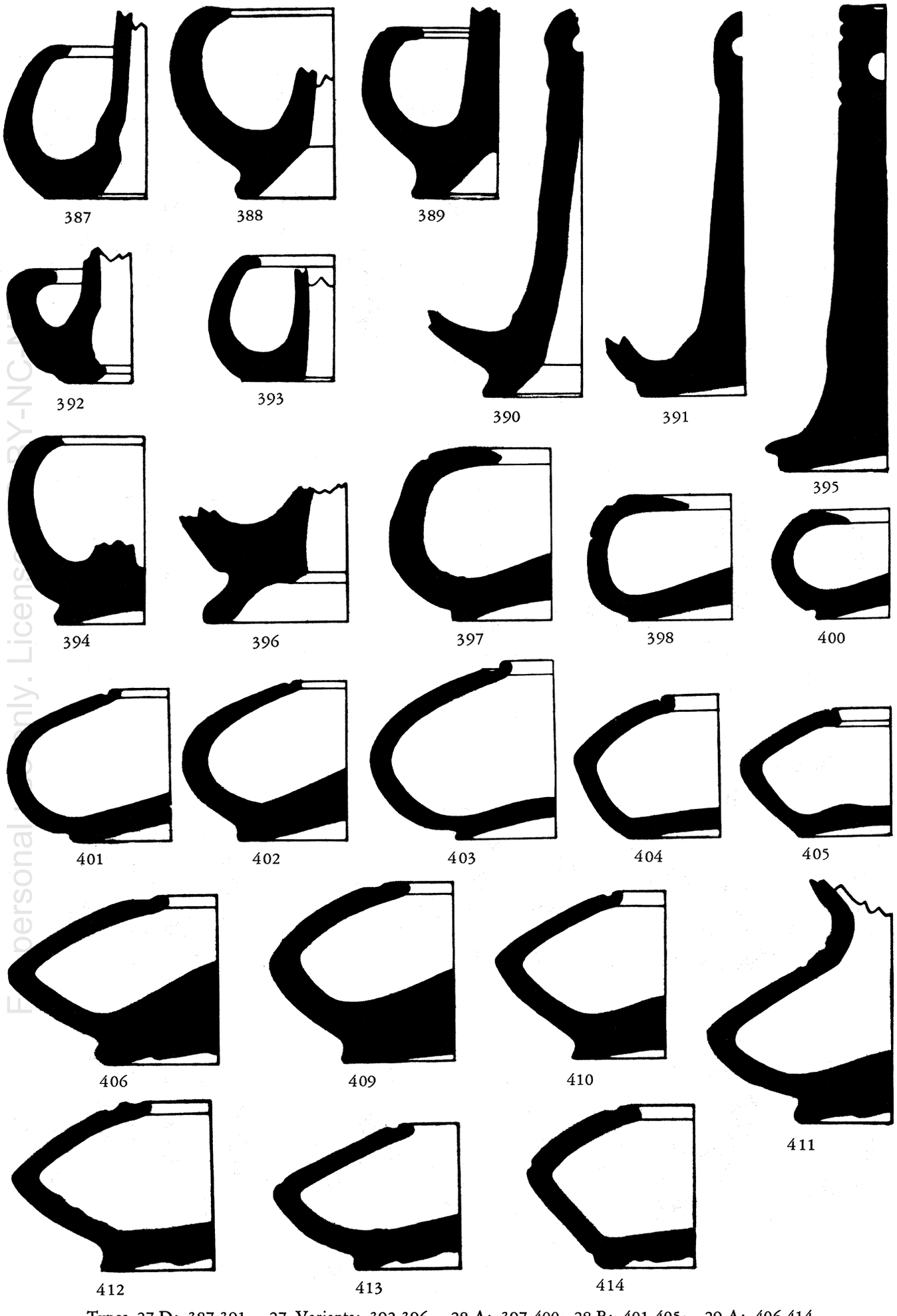
PLATE 14



Types 27 D: 387-391; 27 Variants: 392-396; 28 A: 397-400; 28 B: 401-405; 29 A: 406-414

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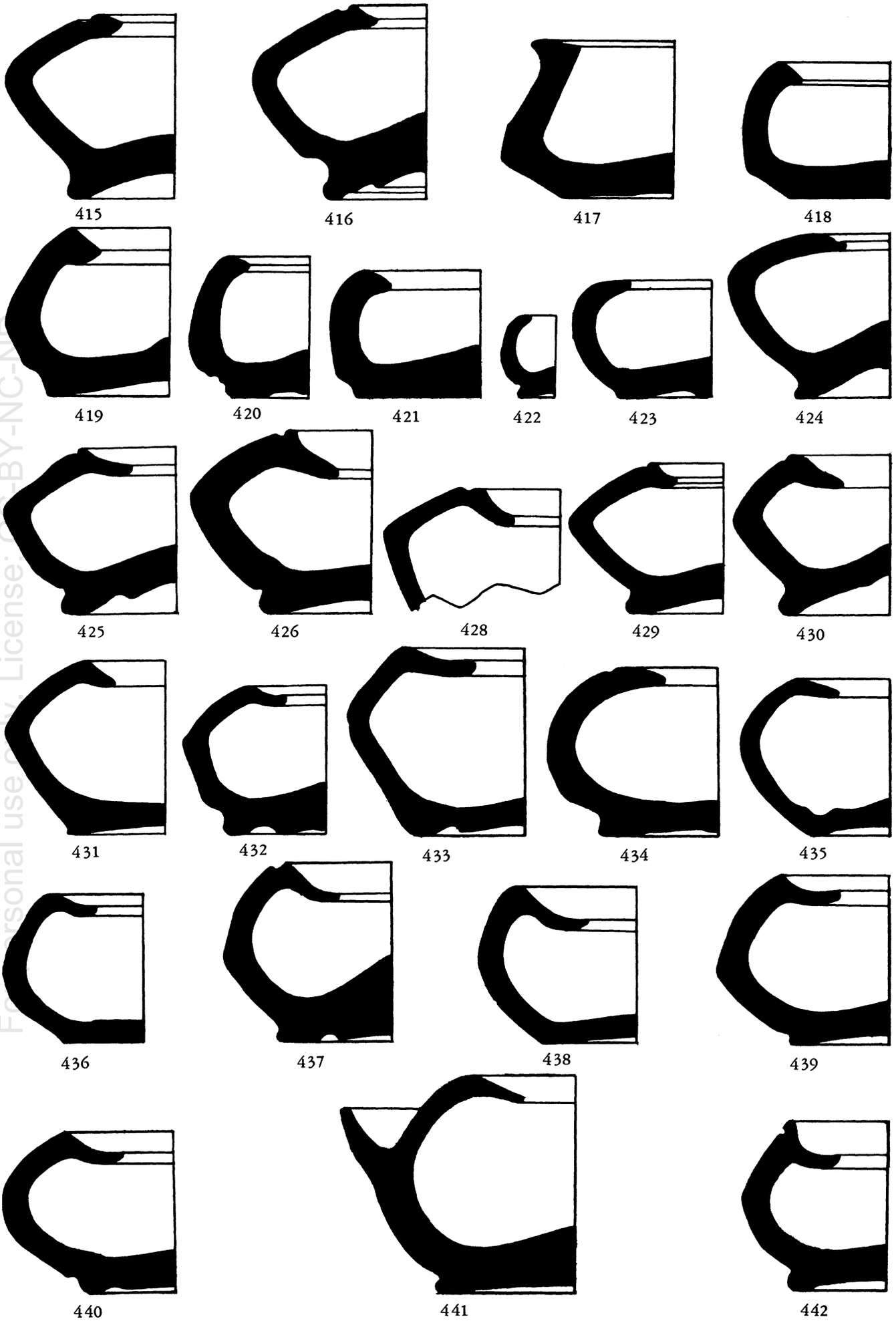

Types 29 B: 415-416; 30 A: 417-418; 30 B: 419-422; 30 C: 423; 31: 424; 32: 425-432; 33 A: 433-442

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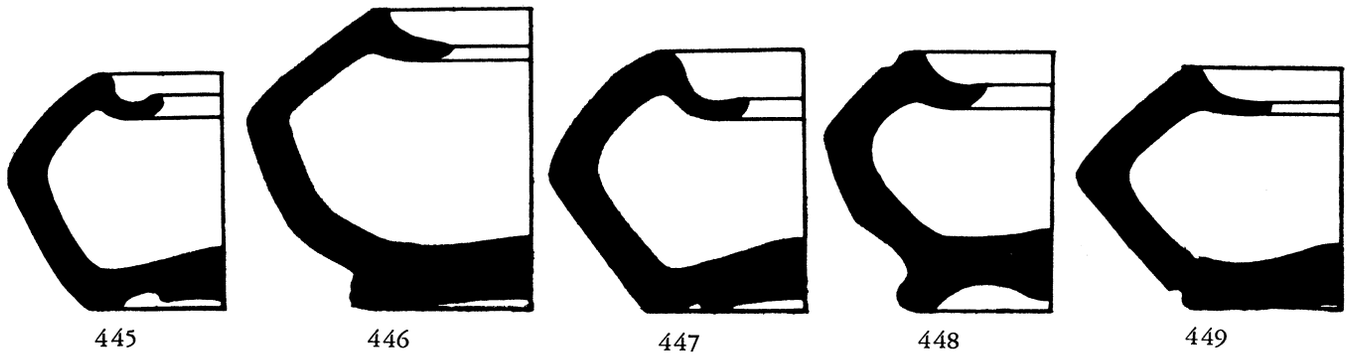
PLATE 16



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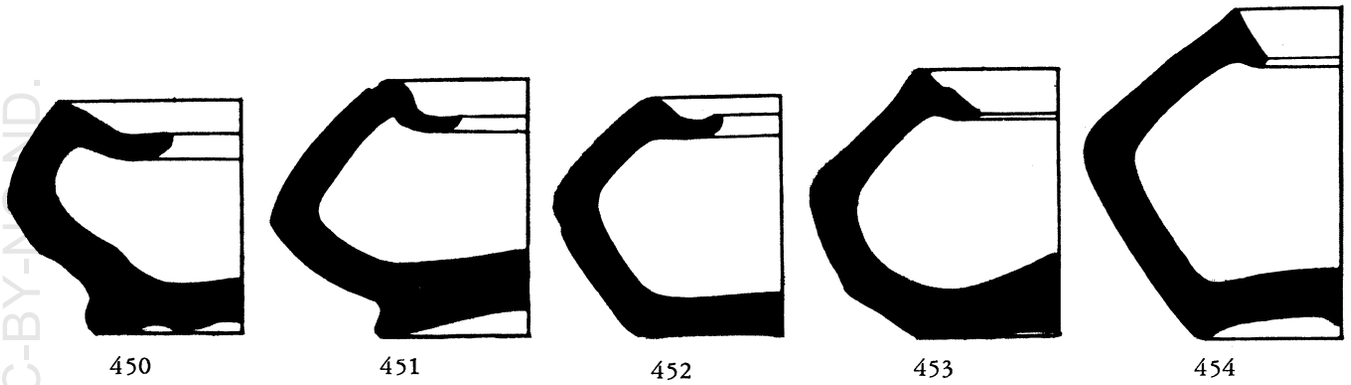

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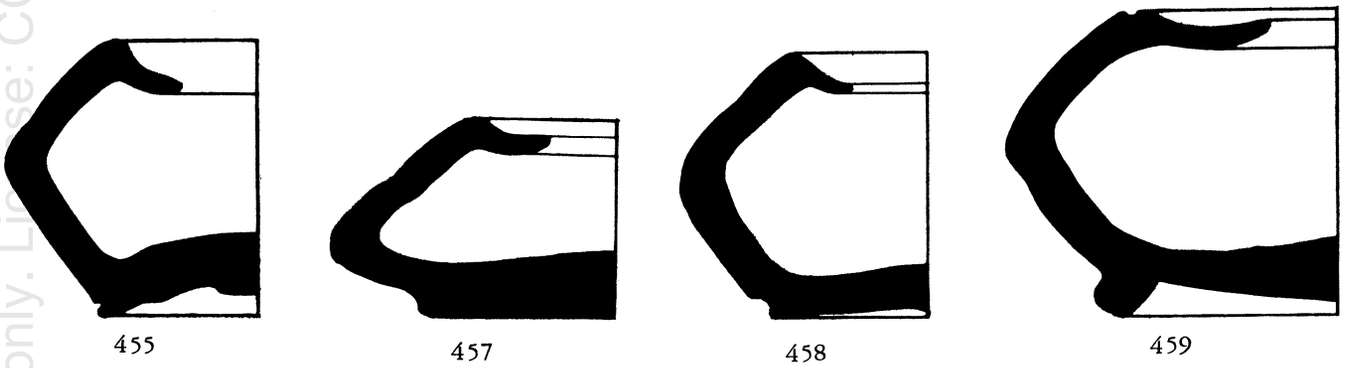

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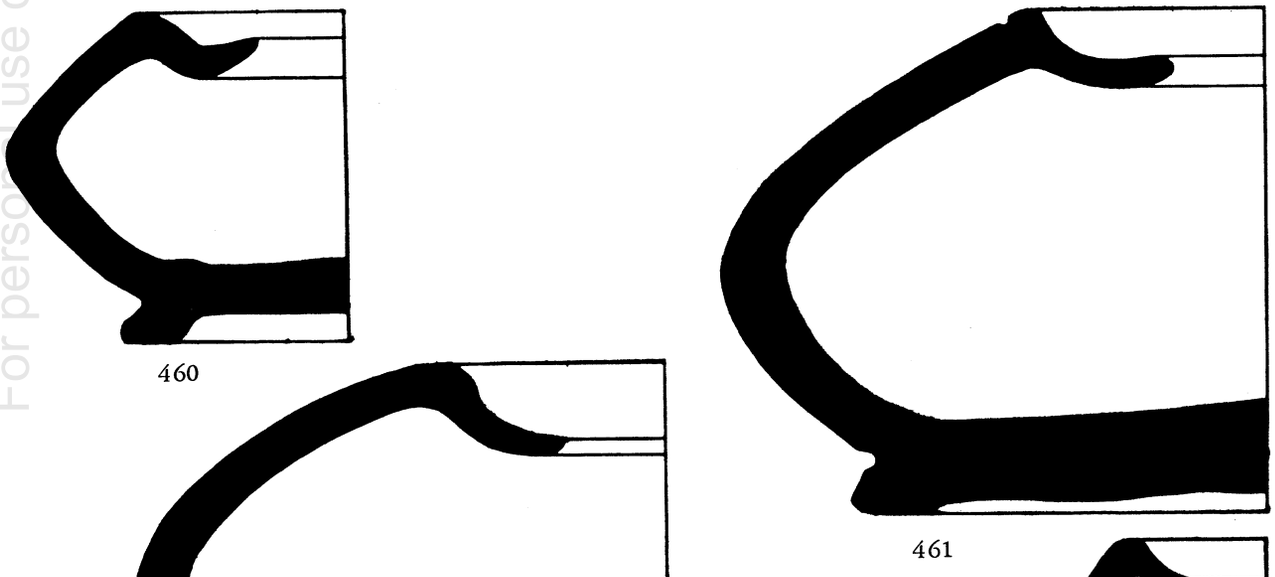

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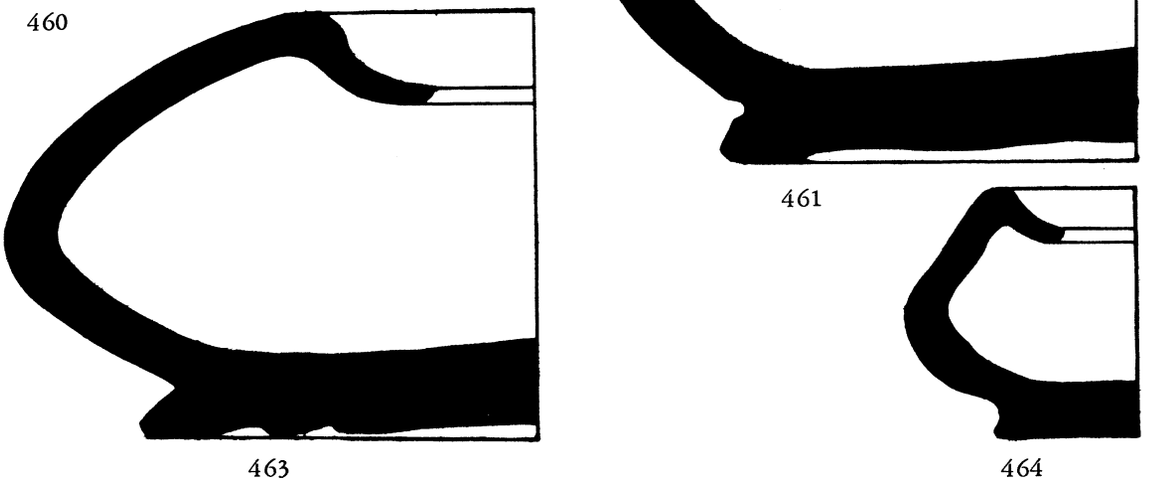

463 464

Types 34 A: 445-455; 34 B: 457-463; 34 Variants: 464

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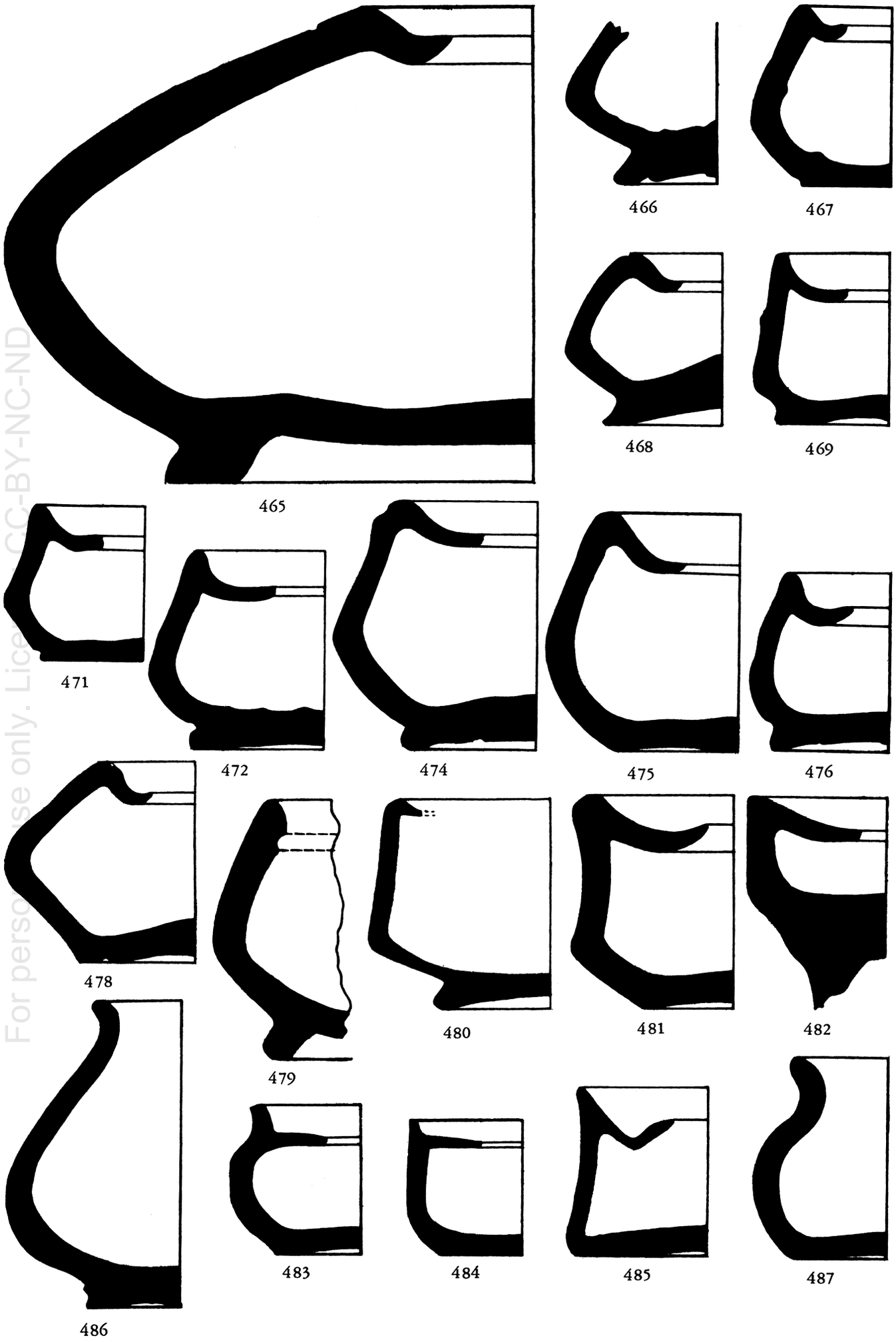

Types 35 A: 465-471; 35 A Prime: 472; 35 B: 474-480; 35 C: 481; 35 C Prime: 482; 35 D: 483-484; 35 Variants: 485; 36 A: 486-487

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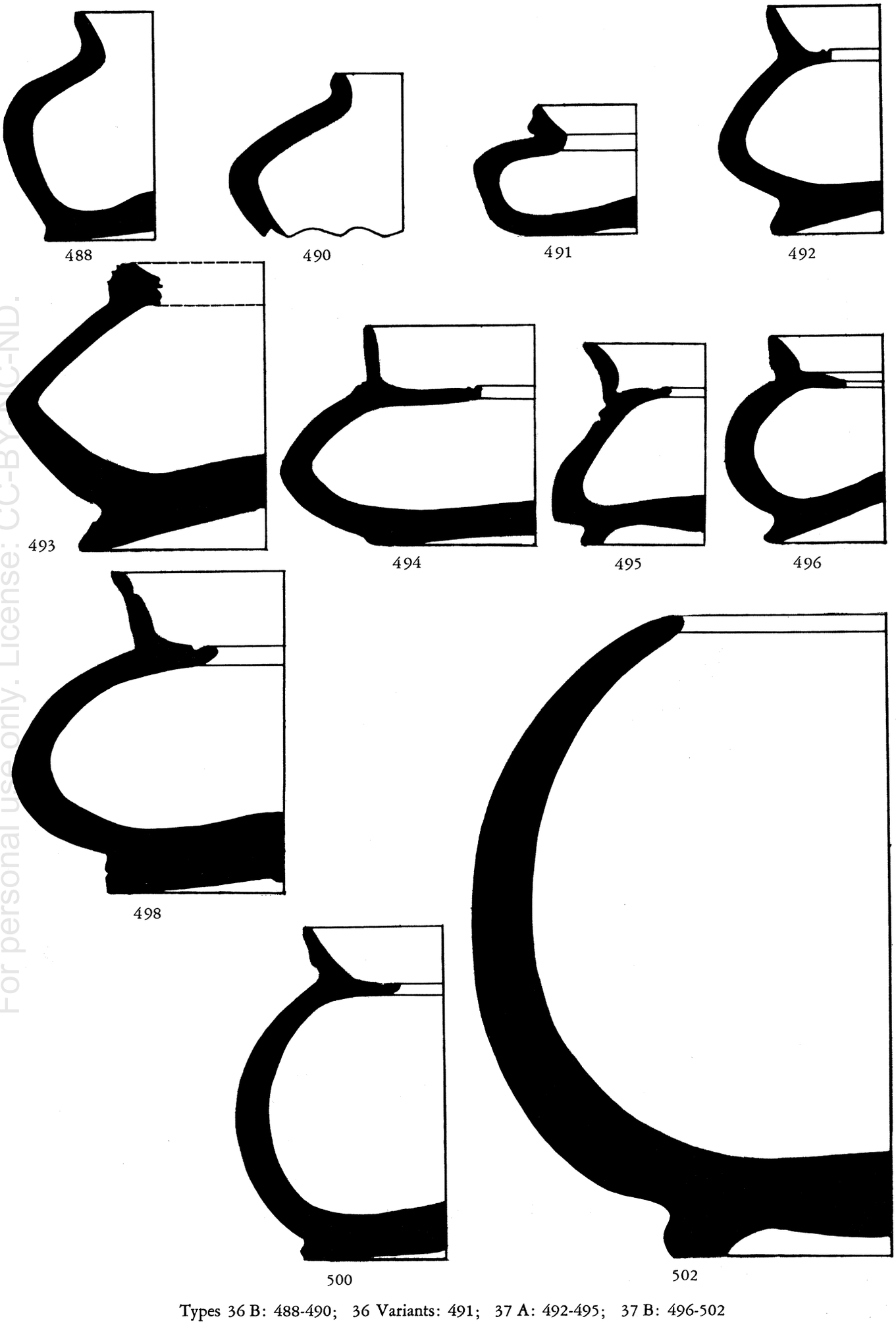
PLATE 18



Types 36 B: 488-490; 36 Variants: 491; 37 A: 492-495; 37 B: 496-502

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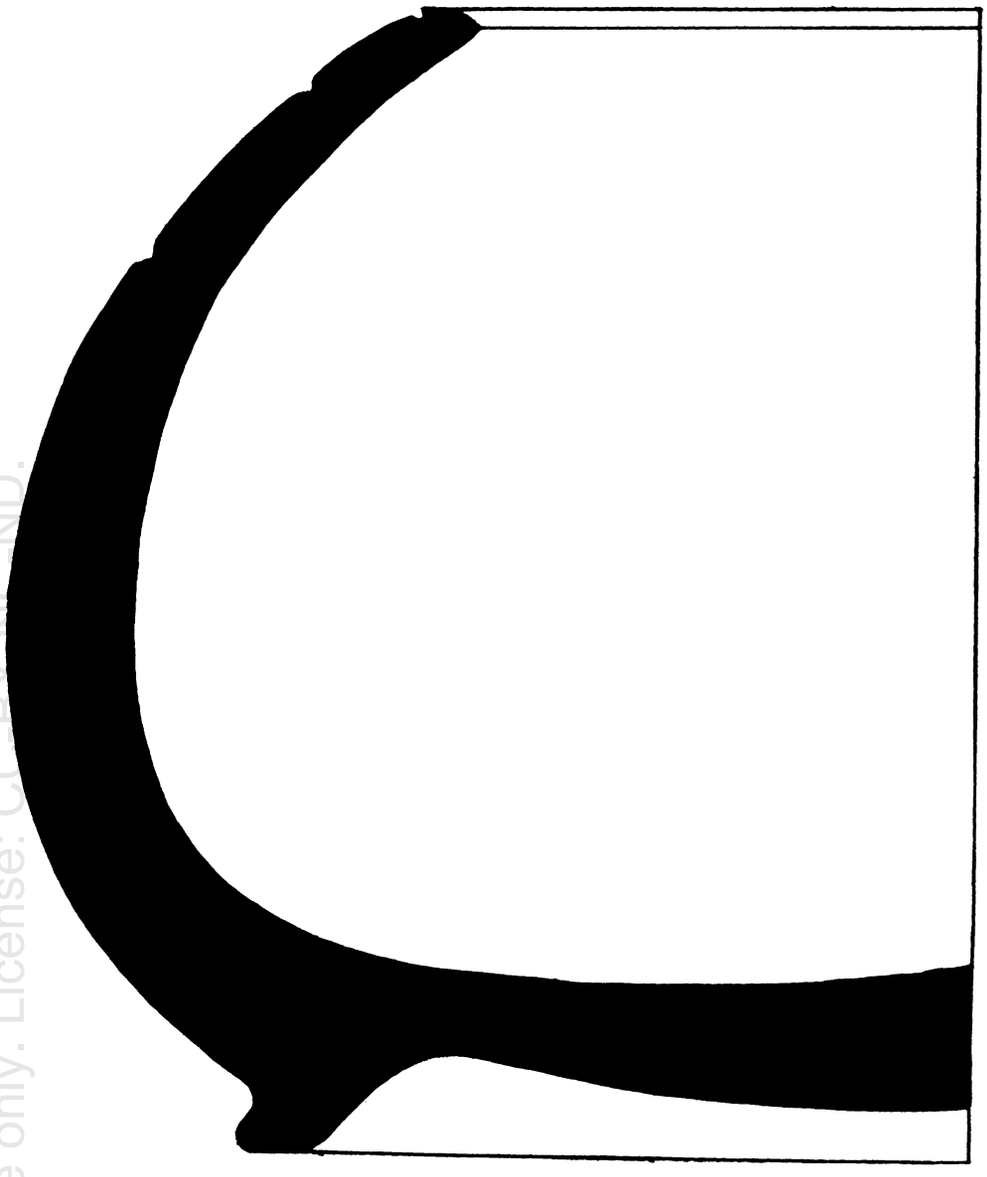

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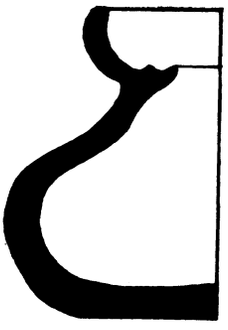

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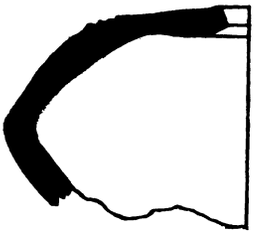

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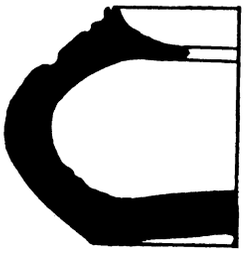

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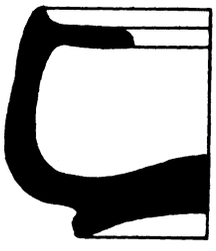

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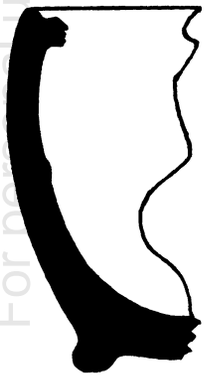

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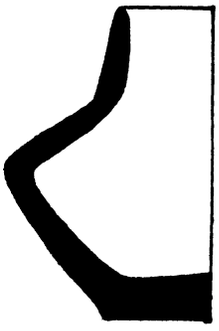

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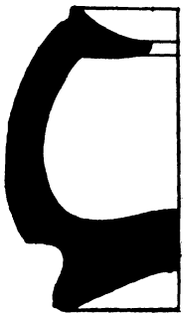

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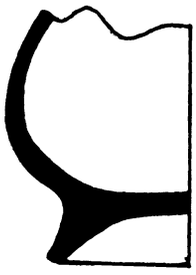

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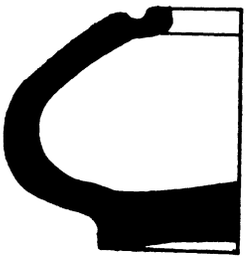

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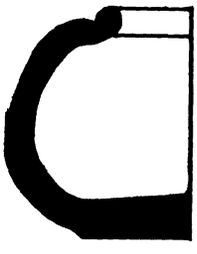

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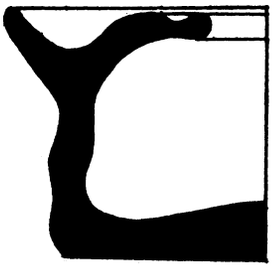

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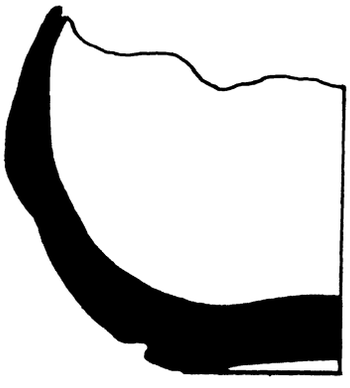

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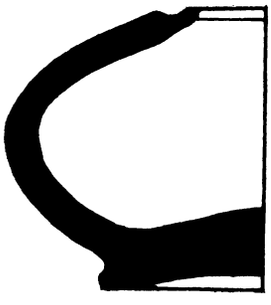

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Types 37 B: 503; 37 C: 504; 37 Variants: 505-511; 38: 512-513; 39: 515-517; 39 Prime: 518; 39 Variants: 519

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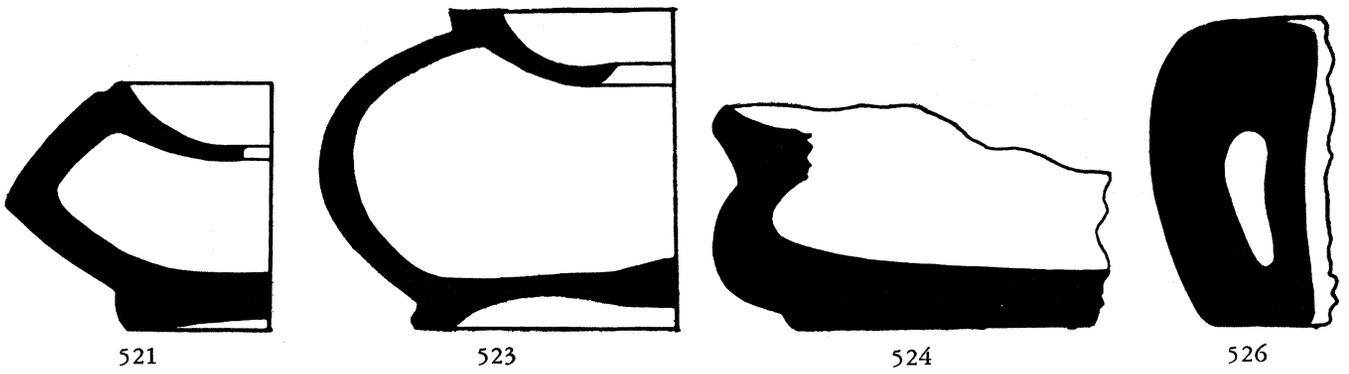
PLATE 20



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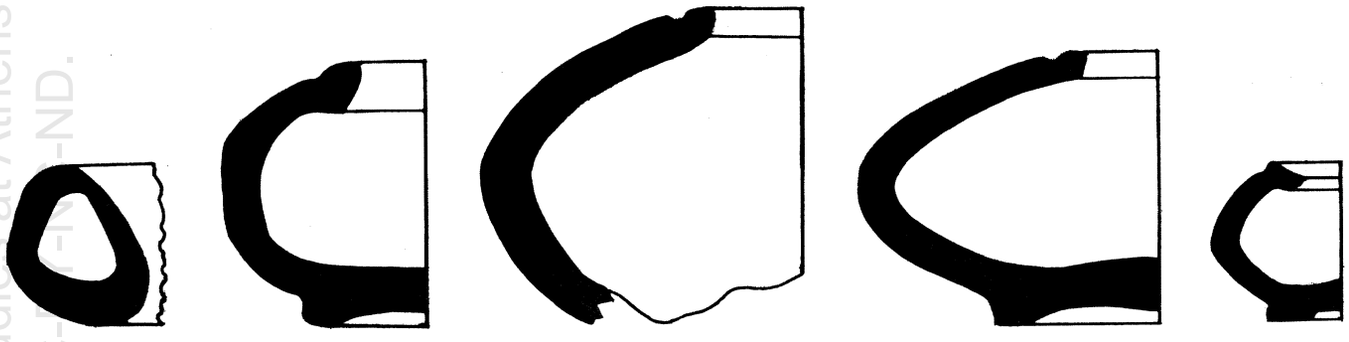

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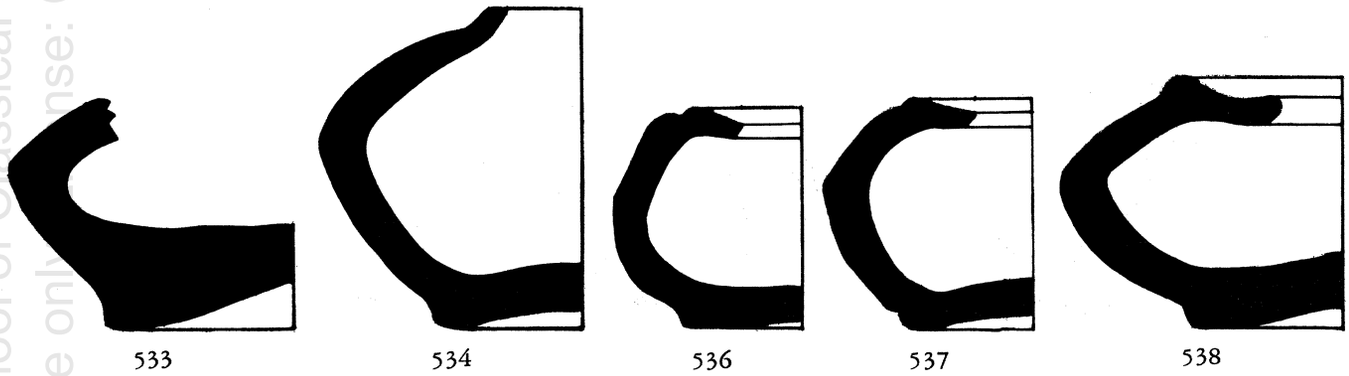

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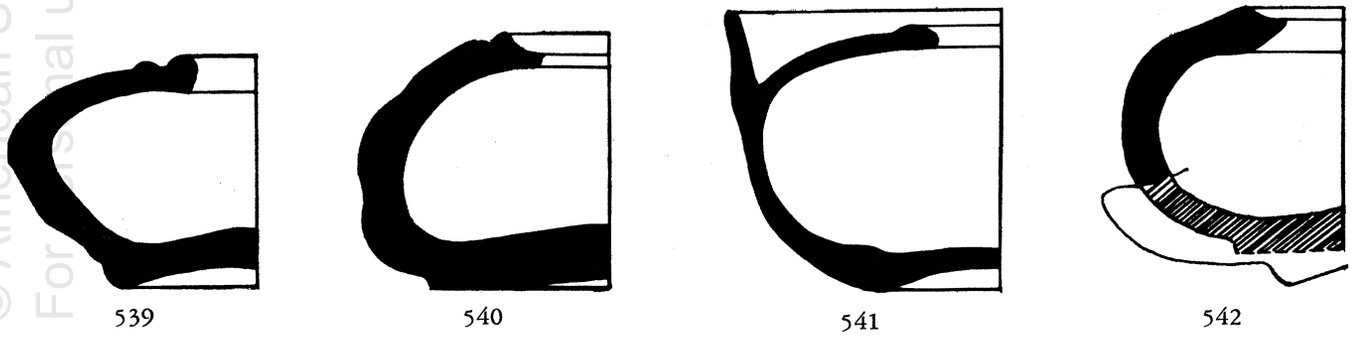

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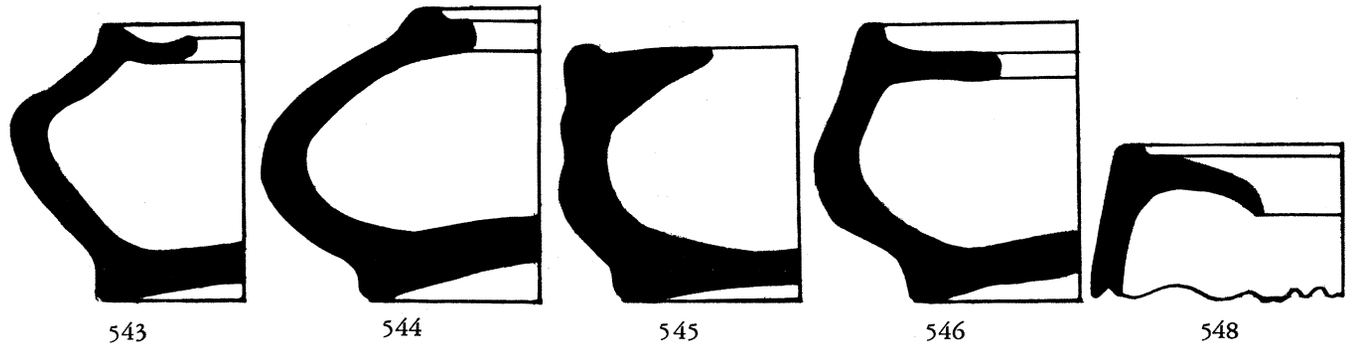

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Types 40A: 521; 40 B: 523; 41: 524-527; 42 A: 529-530; 42 B: 531-533; 42 C: 534; 42 D: 536-538; 43 A: 539-544; 43 B: 545-548

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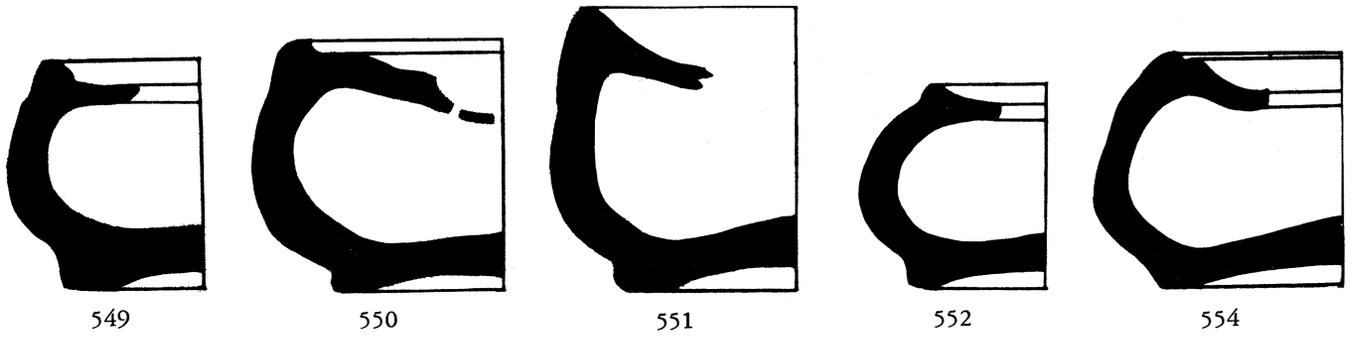

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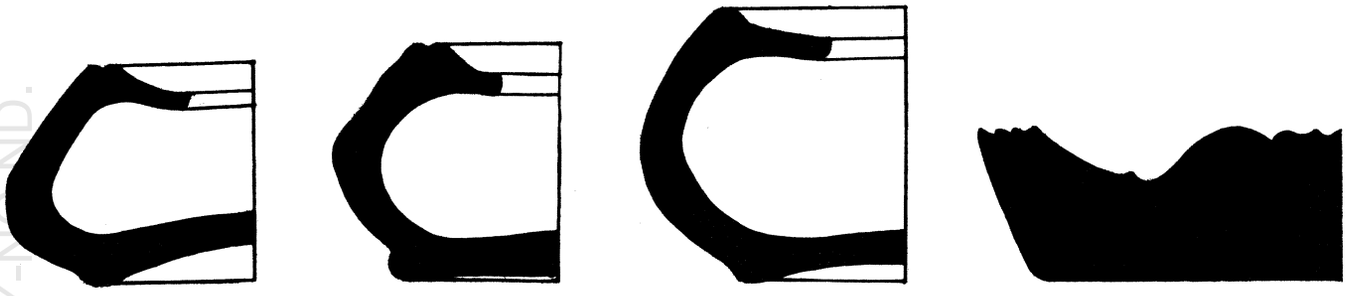

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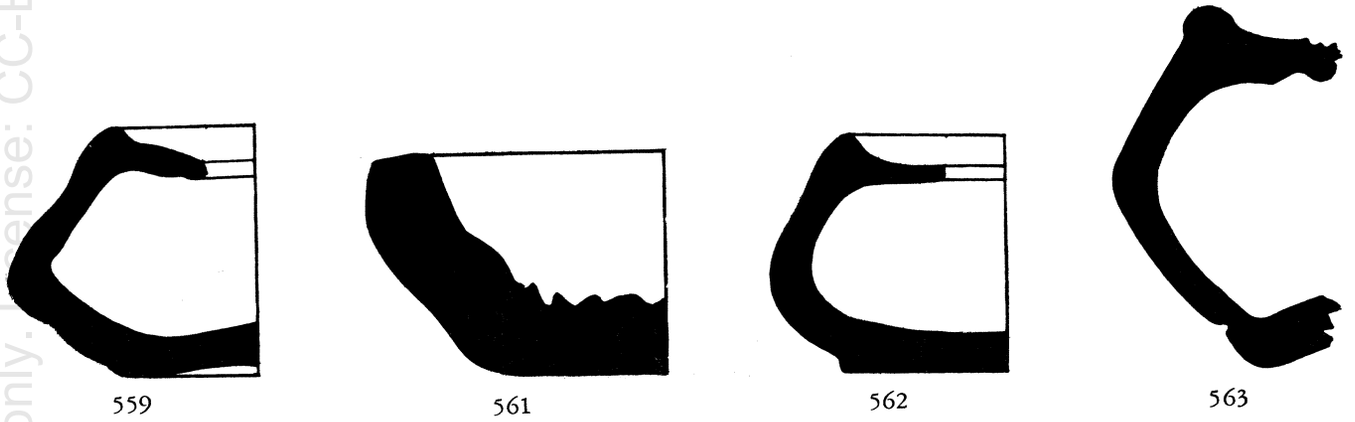

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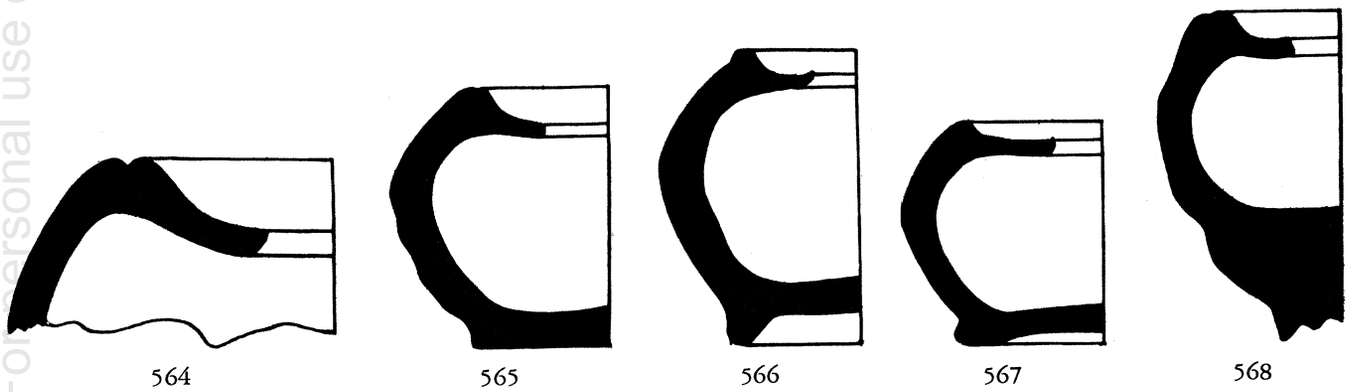

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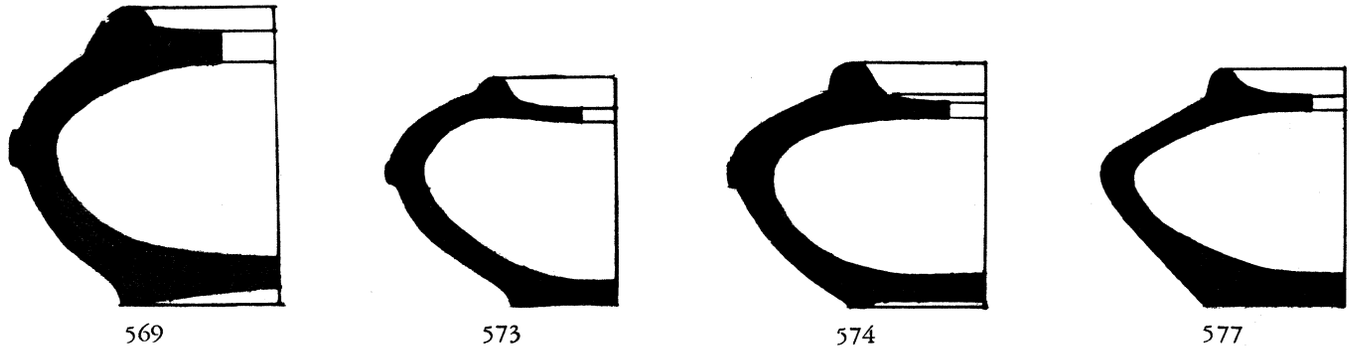

569 573 574 577

Types 43 C: 549-552; 43 D: 554-561; 43 D Prime: 562; 43 E: 563-566; 43 Variants: 567-568; 44 A: 569; 44 B: 573; 44 C: 574; 44 D: 577

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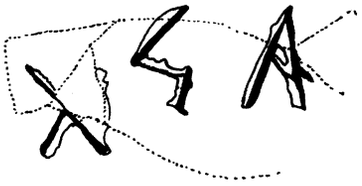
PLATE 22



14



62



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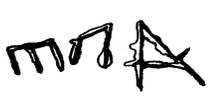

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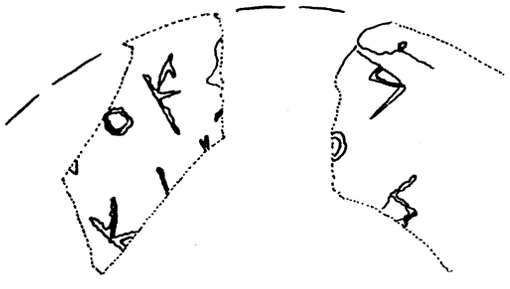

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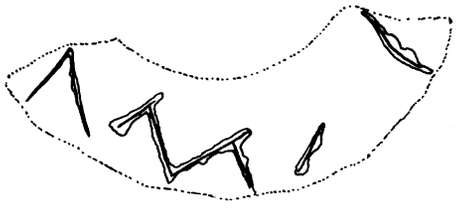

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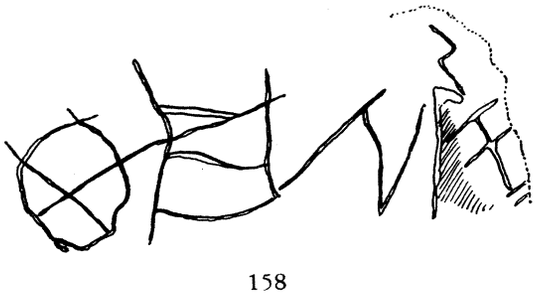

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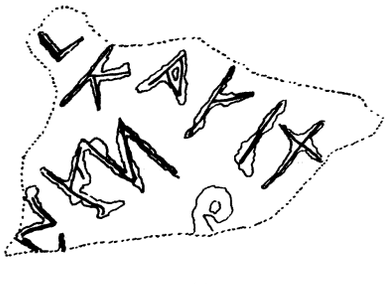

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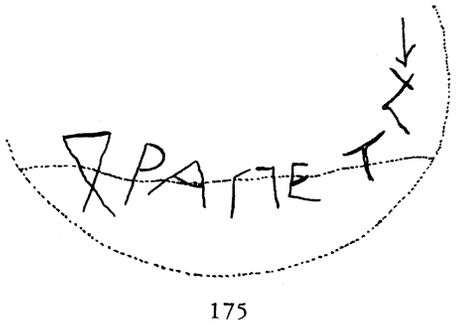

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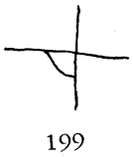

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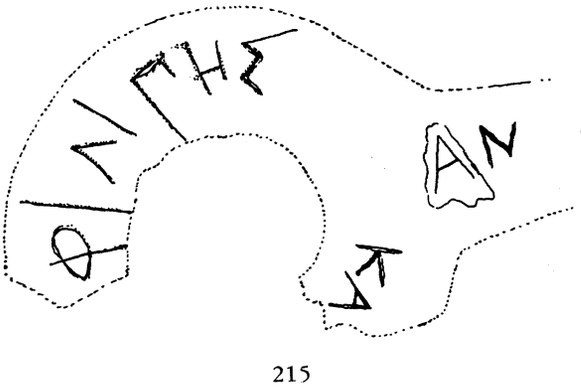

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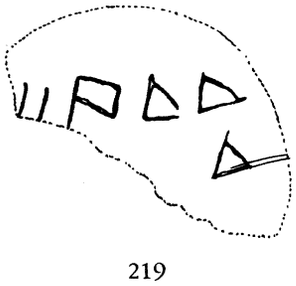

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231



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233



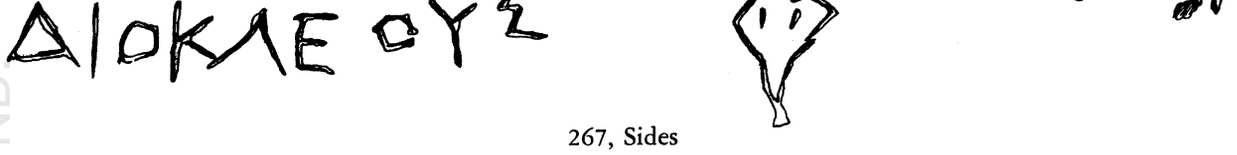
258



267, Top



267, Bottom



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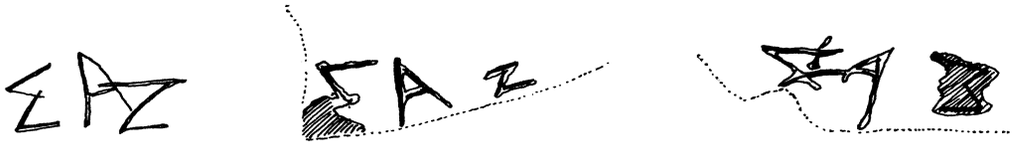

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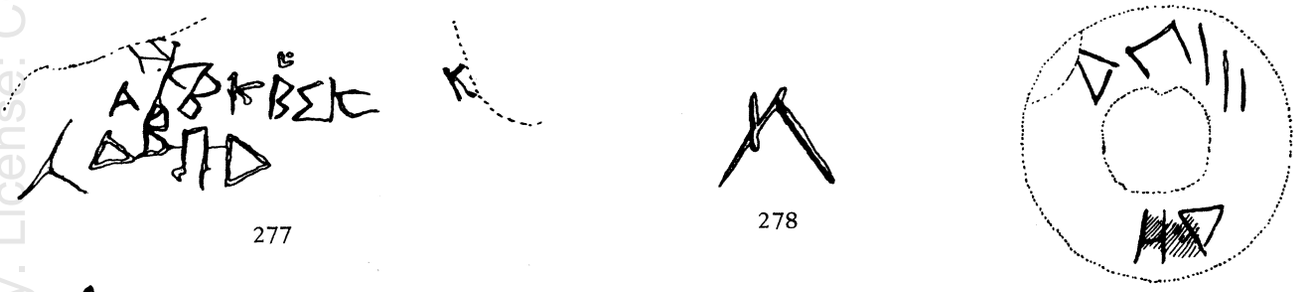

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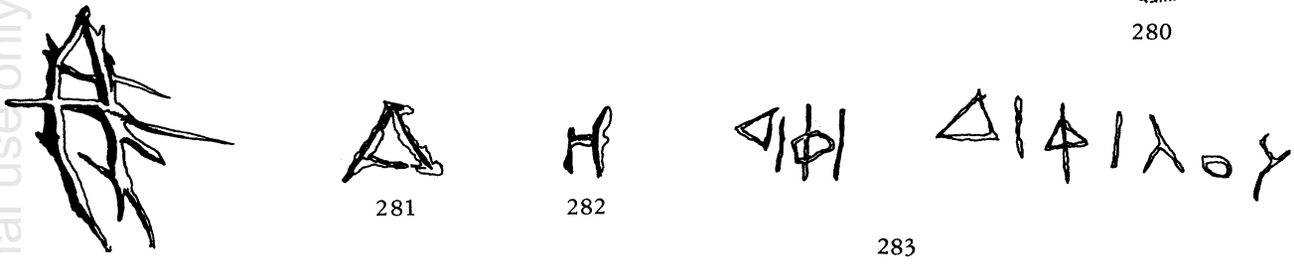

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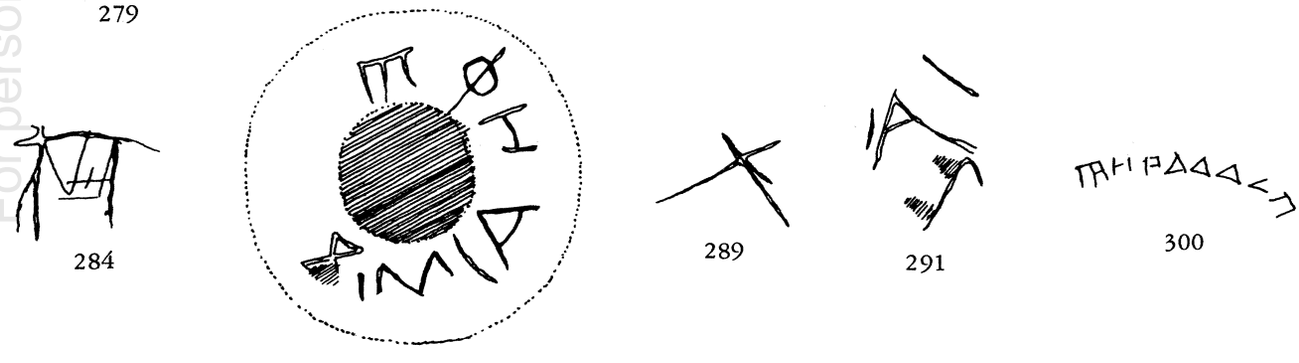

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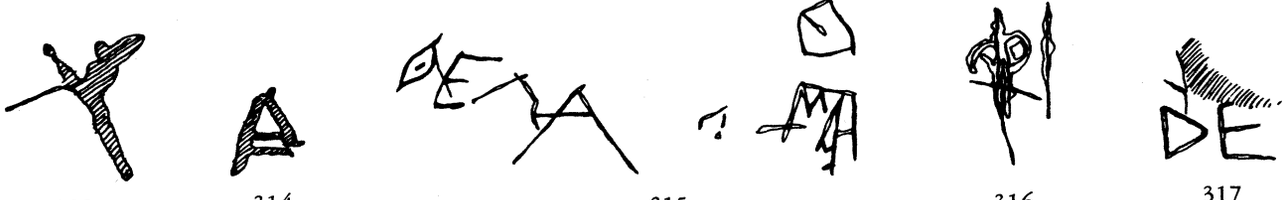

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PLATE 24


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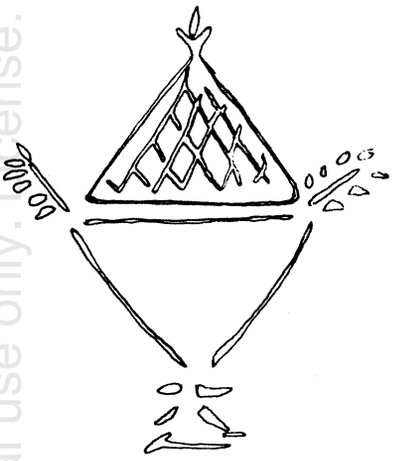
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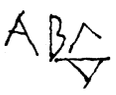
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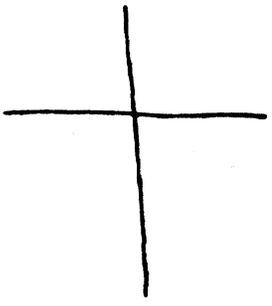
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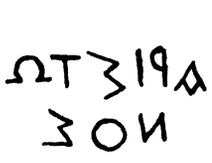
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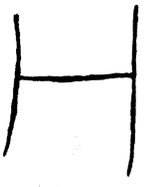
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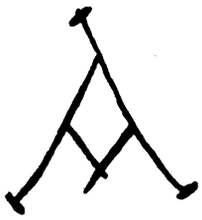
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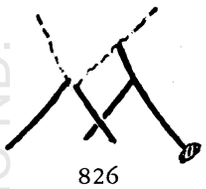
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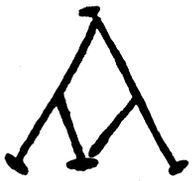
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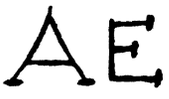
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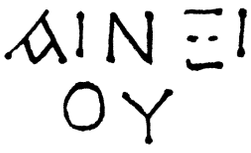
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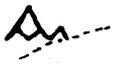
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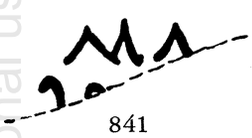
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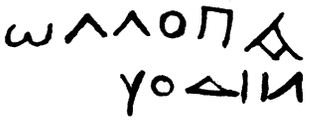
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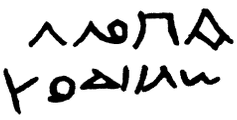
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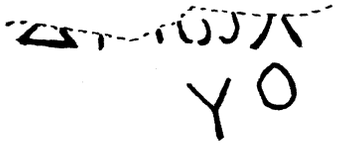
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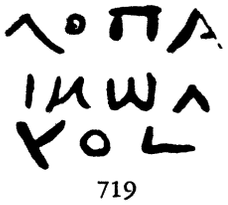
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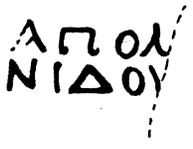
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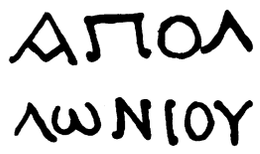
PLATE 26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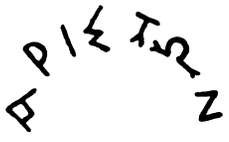
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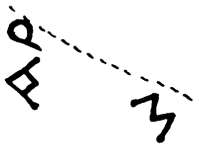
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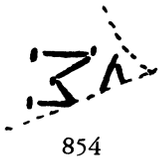
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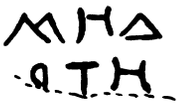
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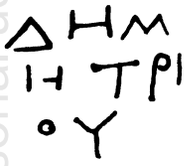
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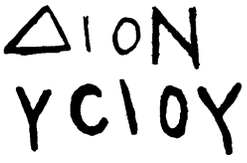
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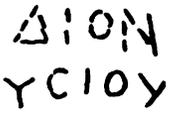
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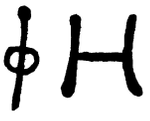
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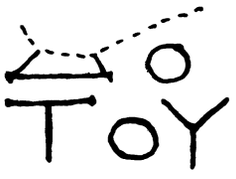

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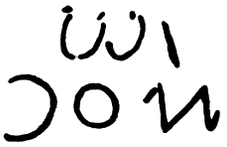

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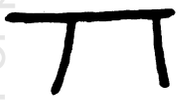

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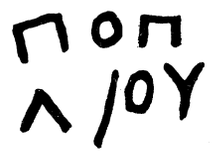
PLATE 28



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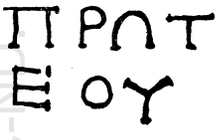

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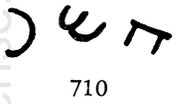

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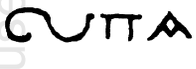

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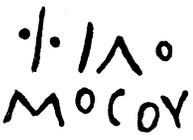

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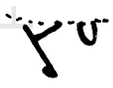

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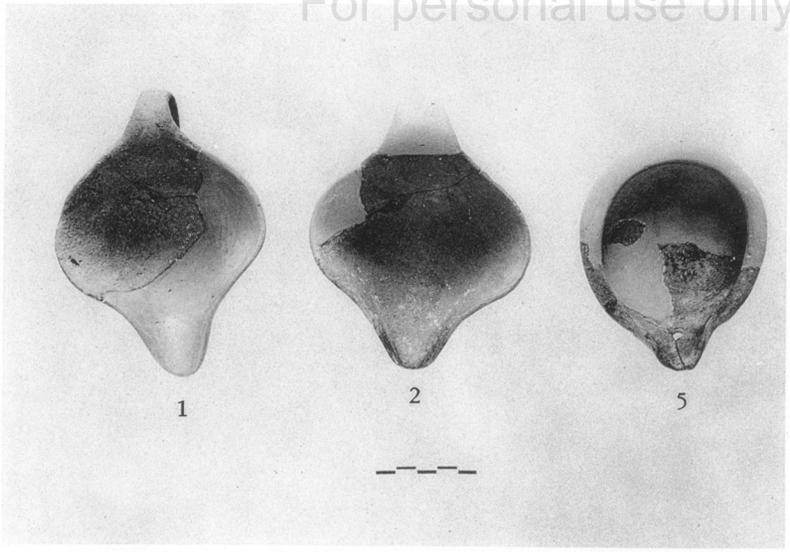

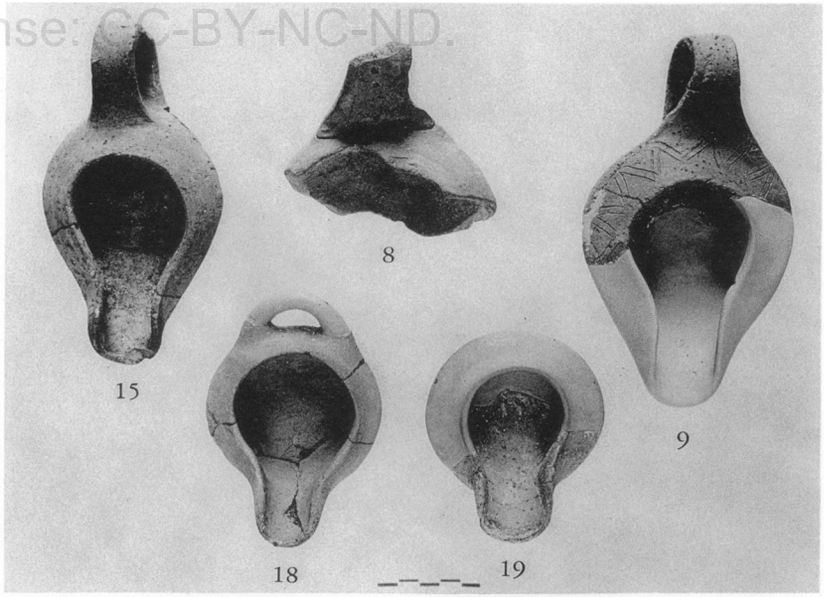

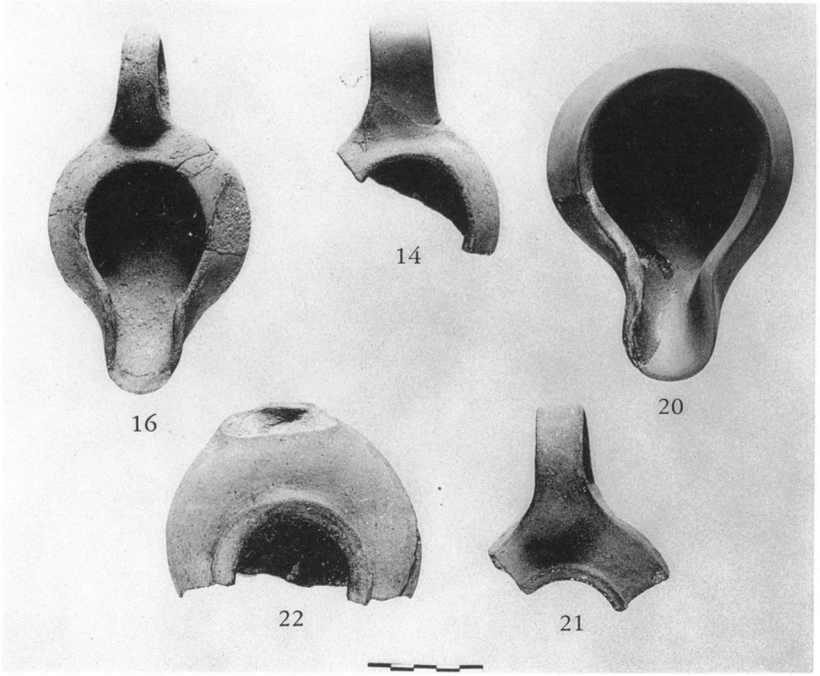

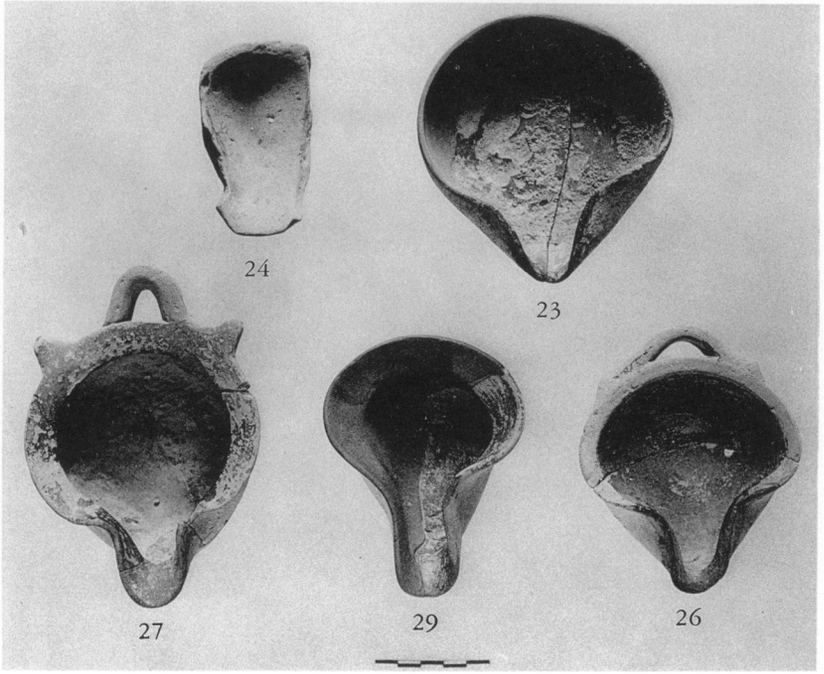

Type 1: 1-2; 2 A: 5; 2 B: 8-20; 2 Variants: 21-22; 3: 23-24; 4: 26-29

PLATE 29

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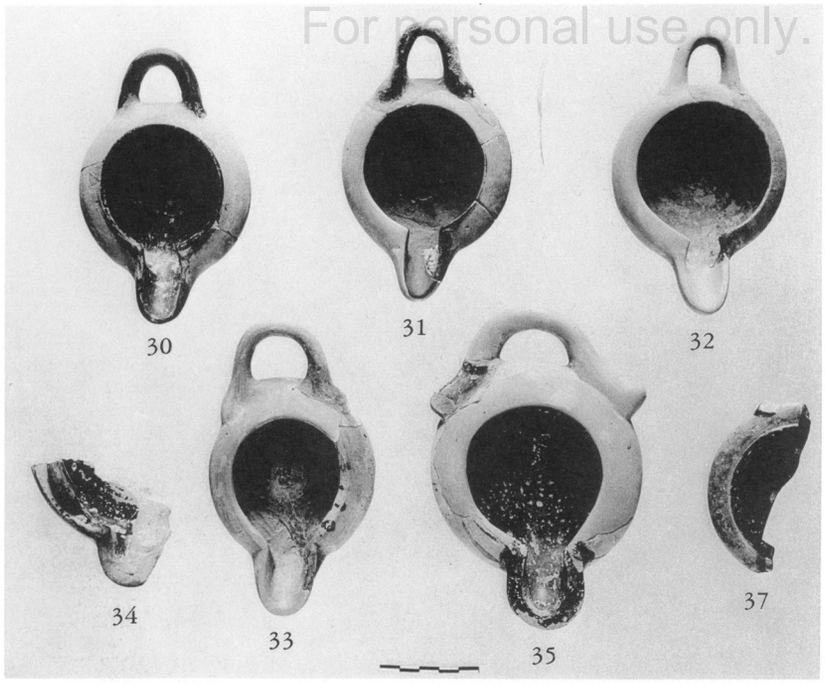

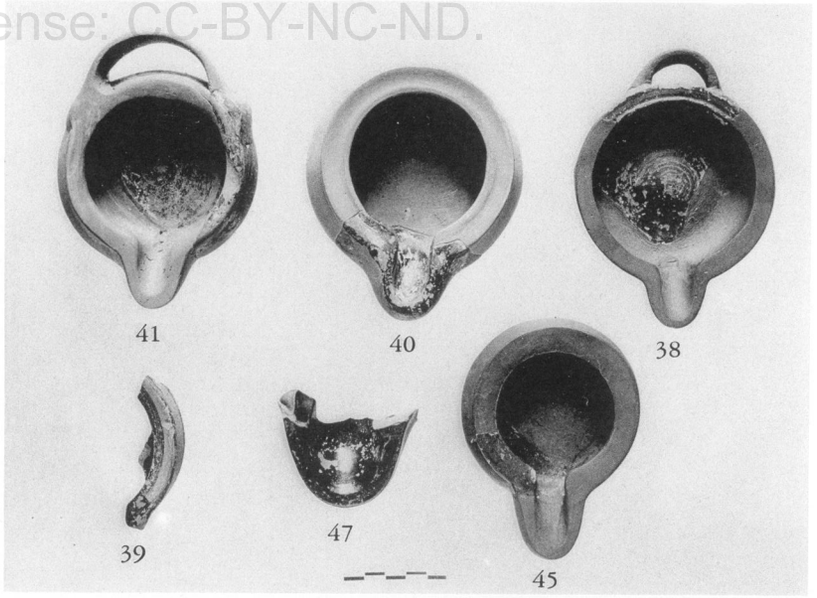

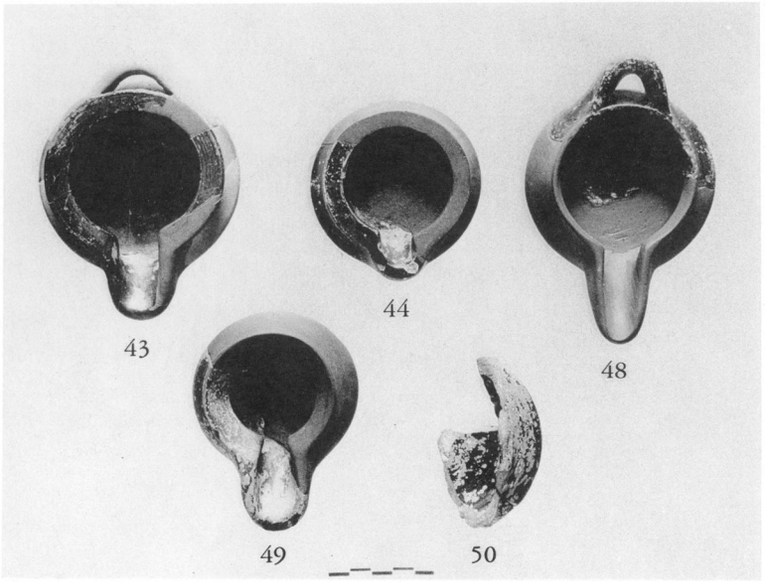

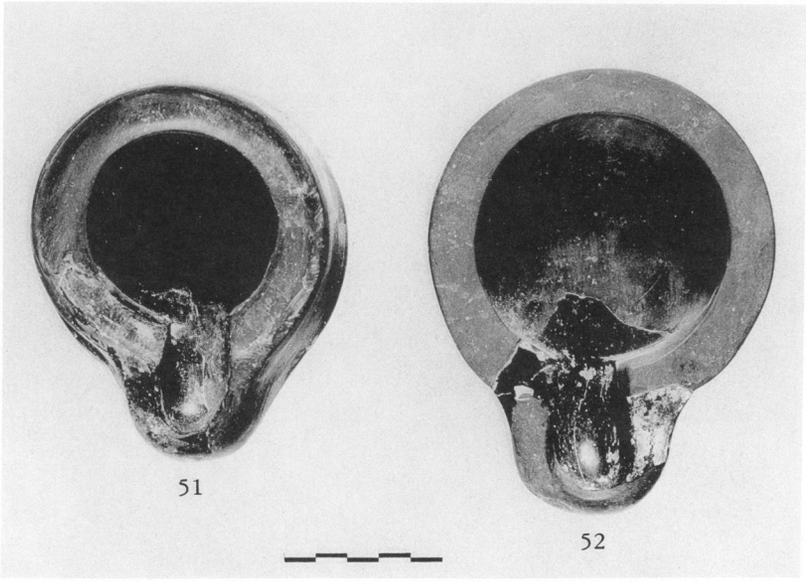

Type 5: 30-37; 6 A: 38-41; 6 B: 43-50; 6 Variants: 51-52

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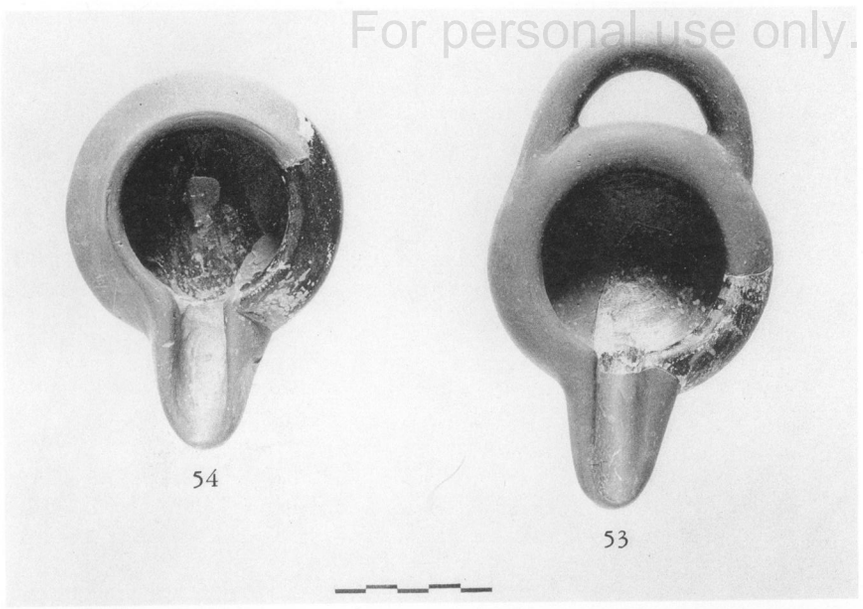

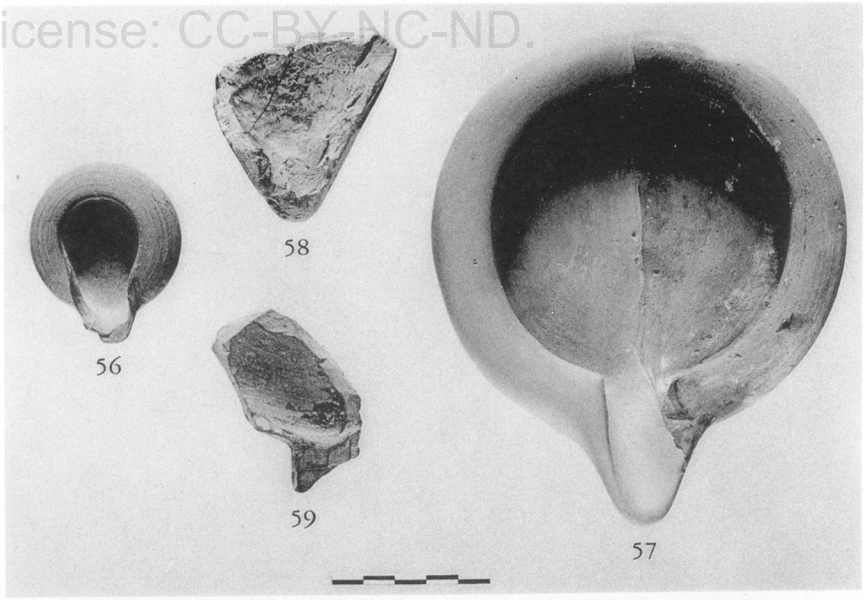

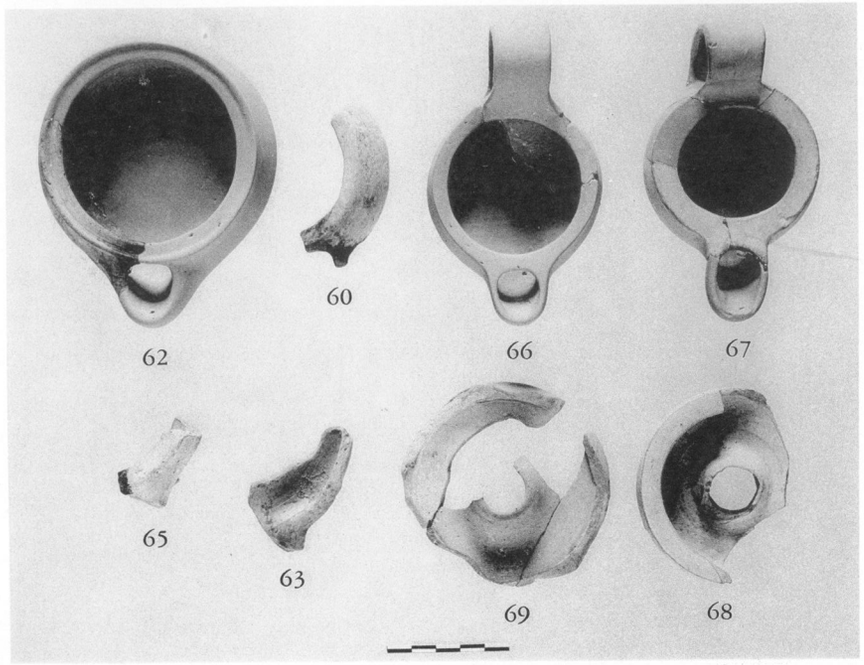

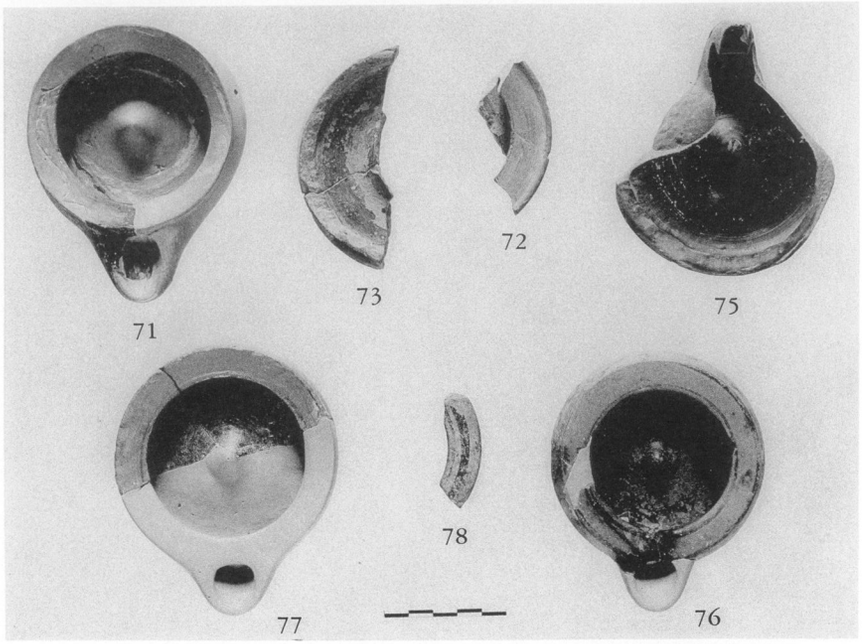

Type 7: 53-54; 8: 56-59; 9: 60-62; 10: 63-67; 11: 68-69; 12 A: 71-75; 12 B: 76-78

PLATE 31

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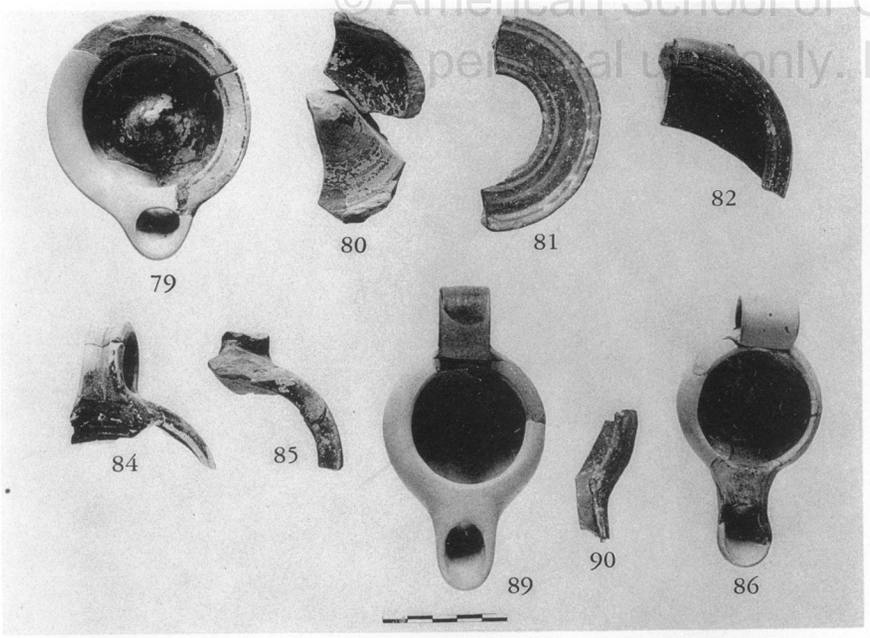

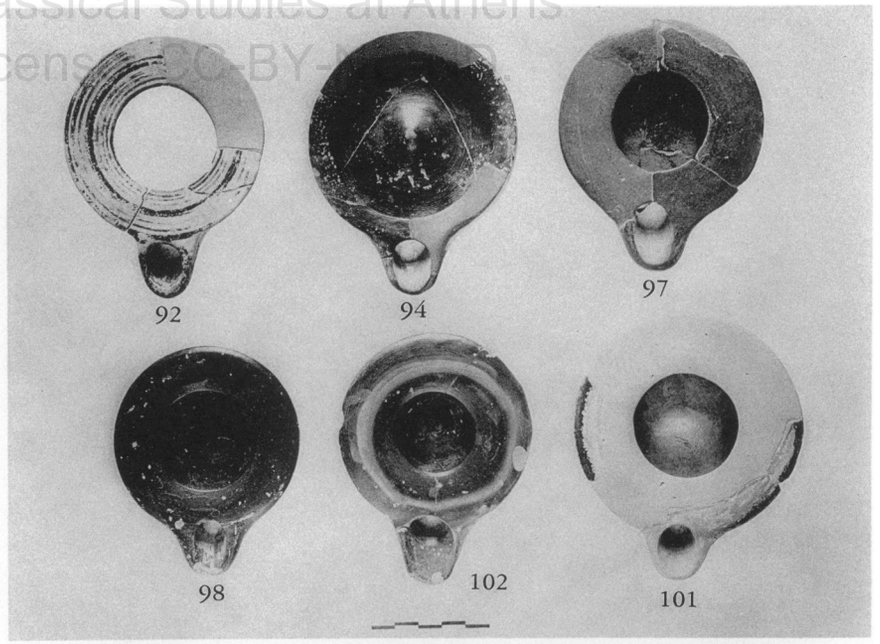

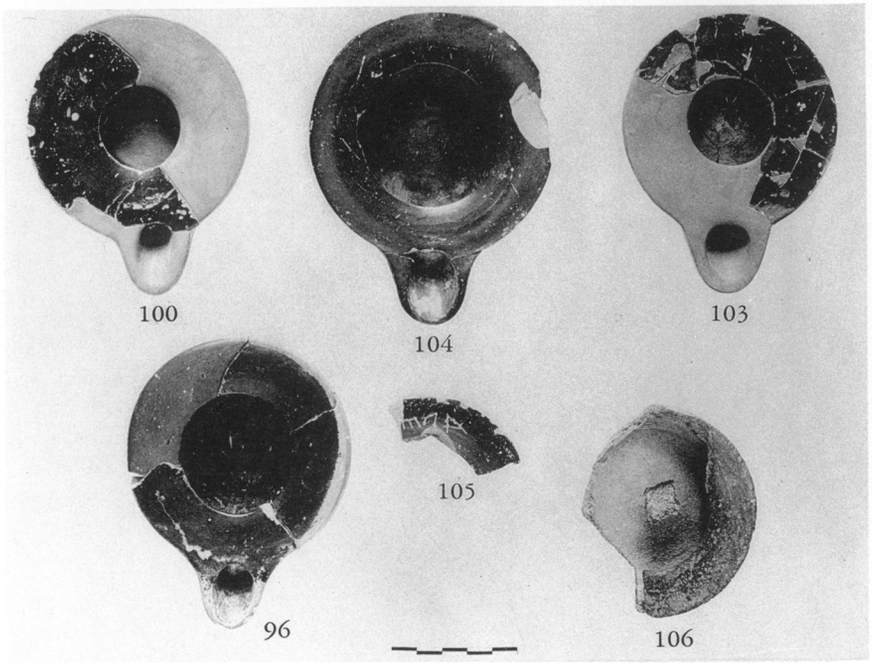

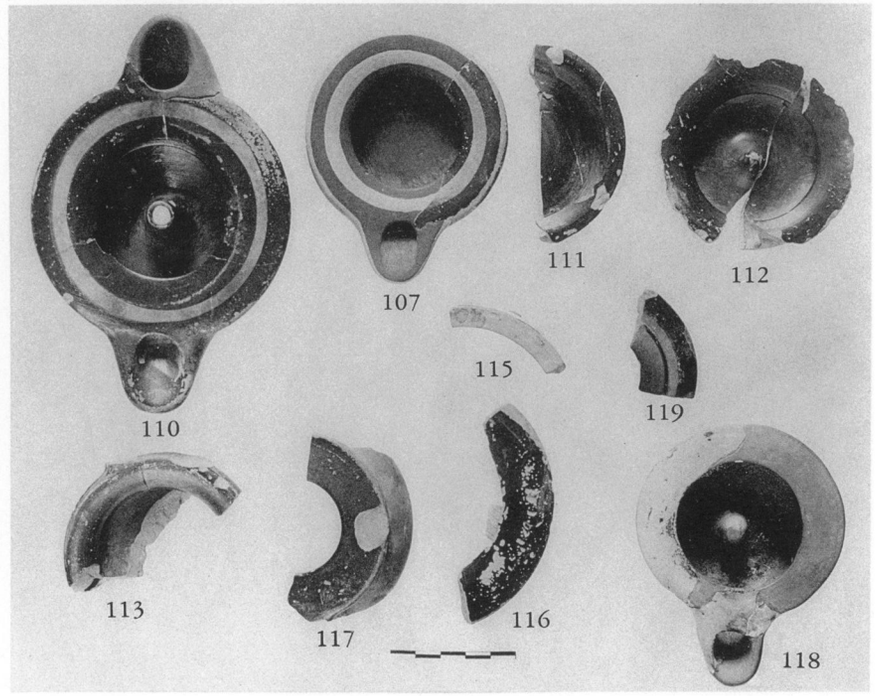

Type 12 Variants: 79-81; 13: 82; 14: 84-85; 15: 86-90; 16 A: 92; 16 B: 94-105;
16 Variants: 106-119

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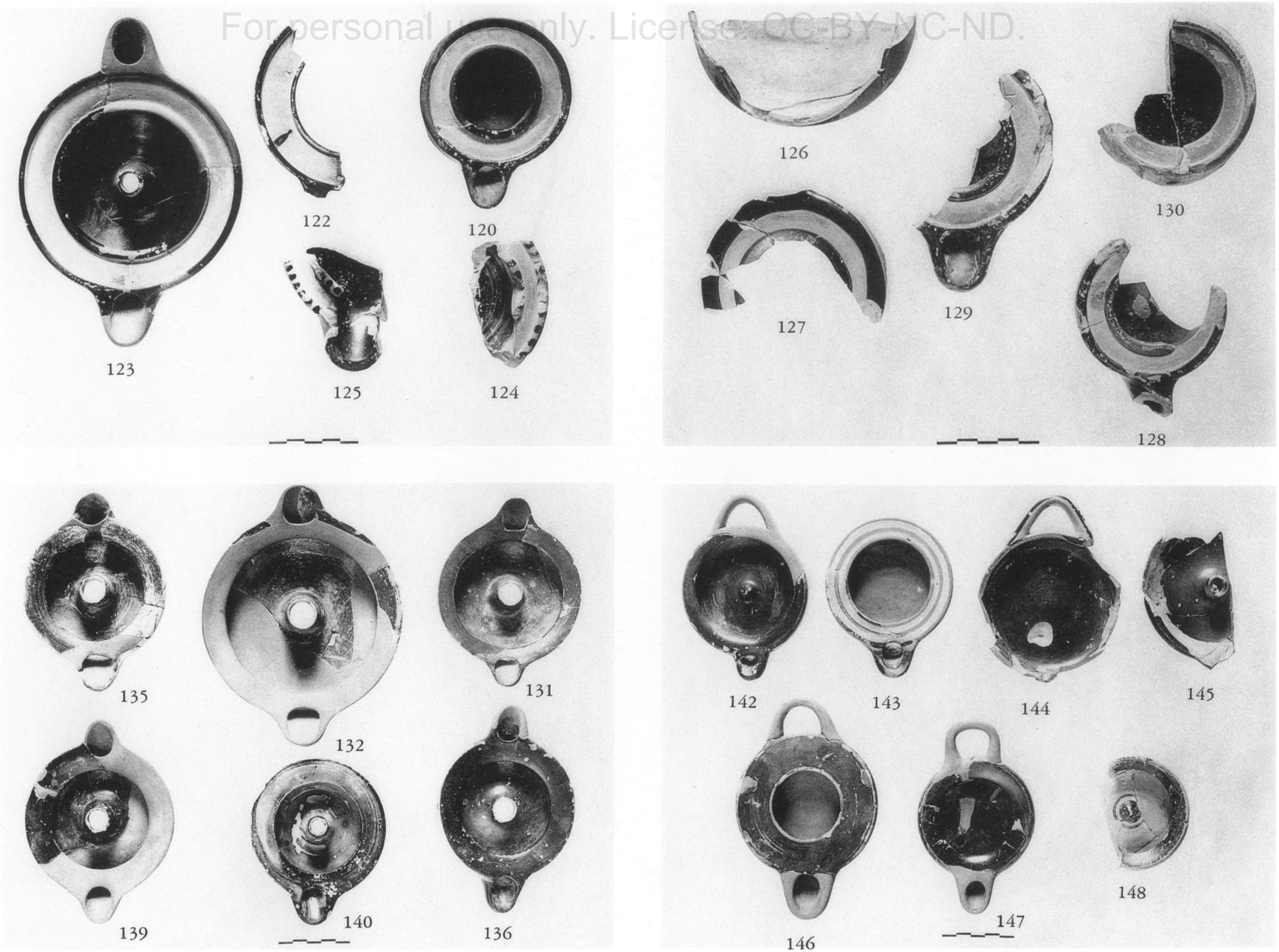

Type 17 A: 120-123; 17 B: 124-125; 18: 126-130; 19 A: 131-135; 19 B: 136-140;
19 Variants: 142-148

PLATE 33

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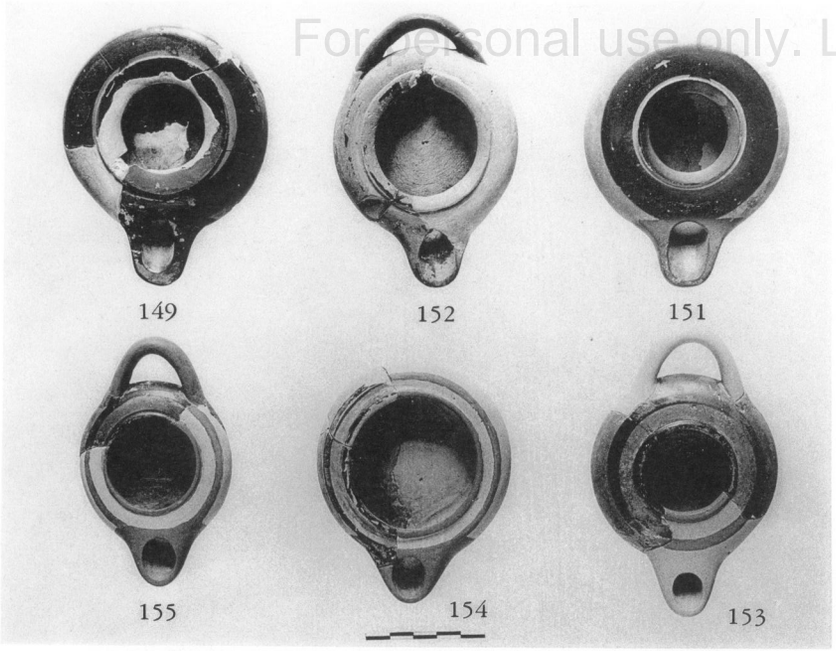

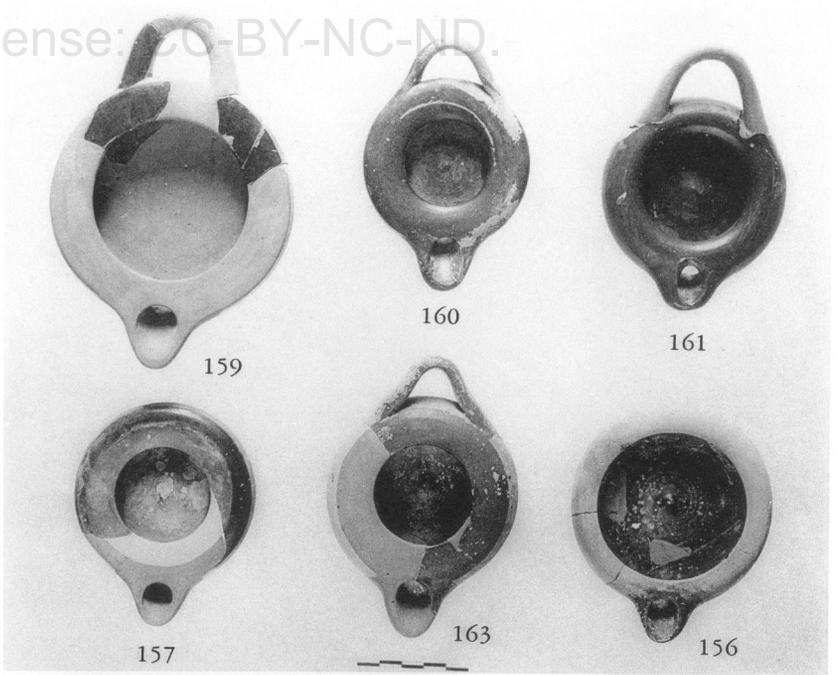

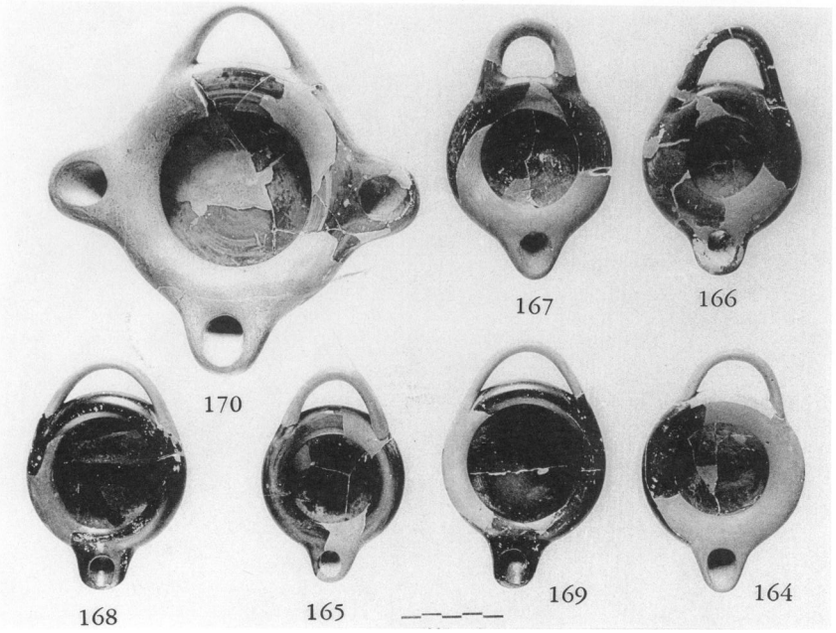

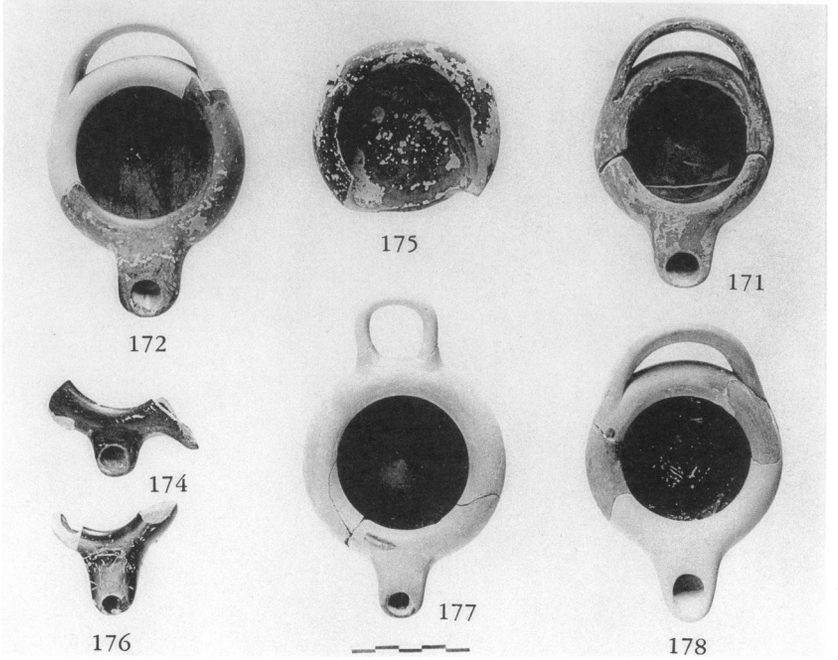

Type 20: 149-155; 21 A: 156-163; 21 B: 164-170; 21 C: 171-176; 21 C Prime: 177-178

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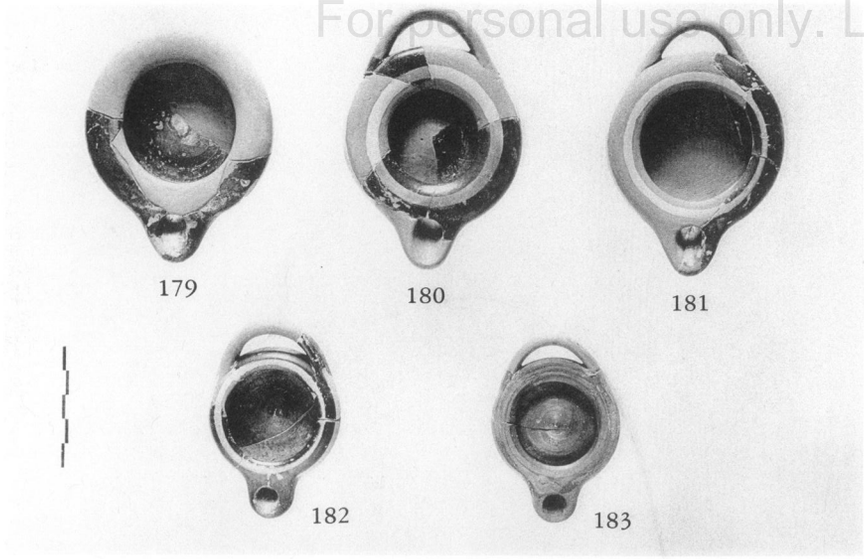

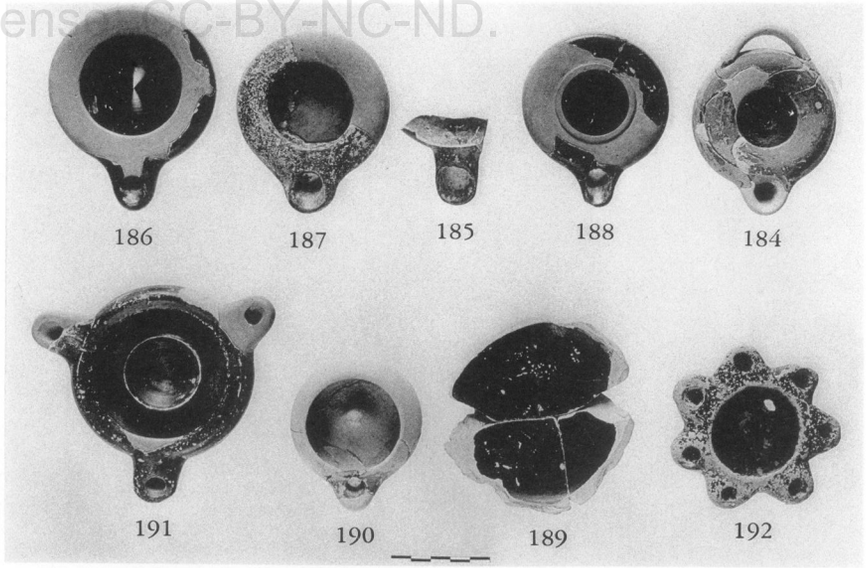

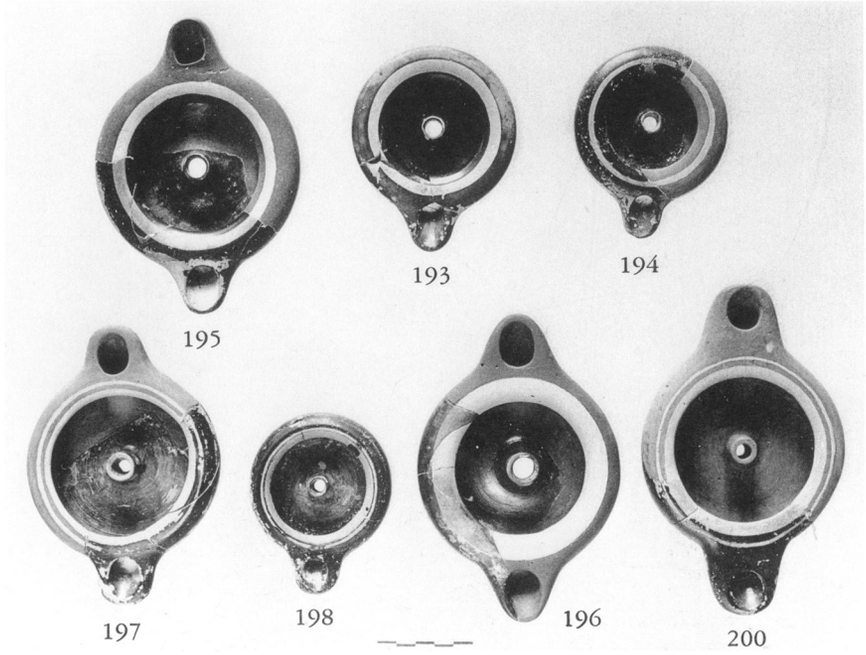

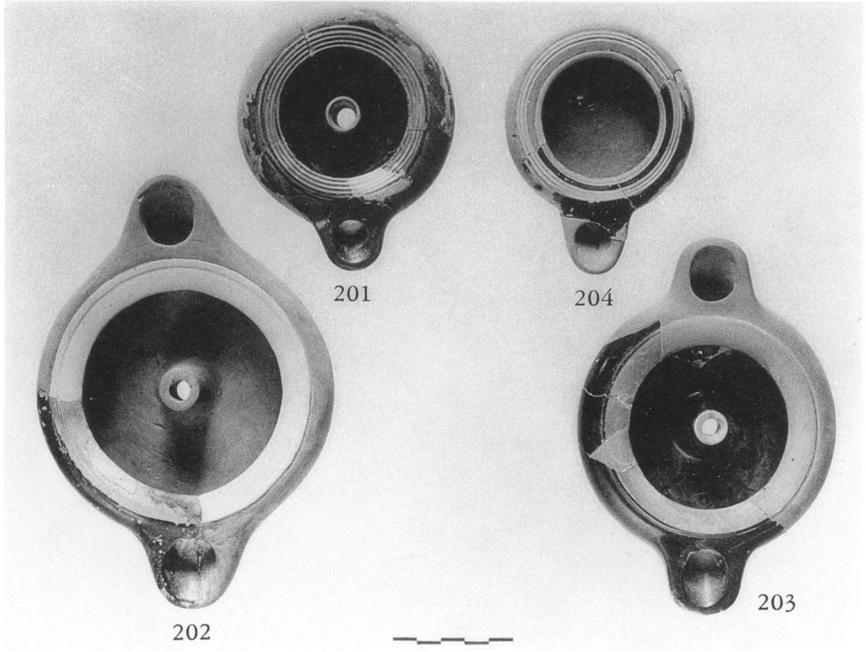

Type 21 D: 179-183; 21 Variants: 184-192; 22 A: 193-195; 22 B: 196-200; 22 C: 201-204

PLATE 35

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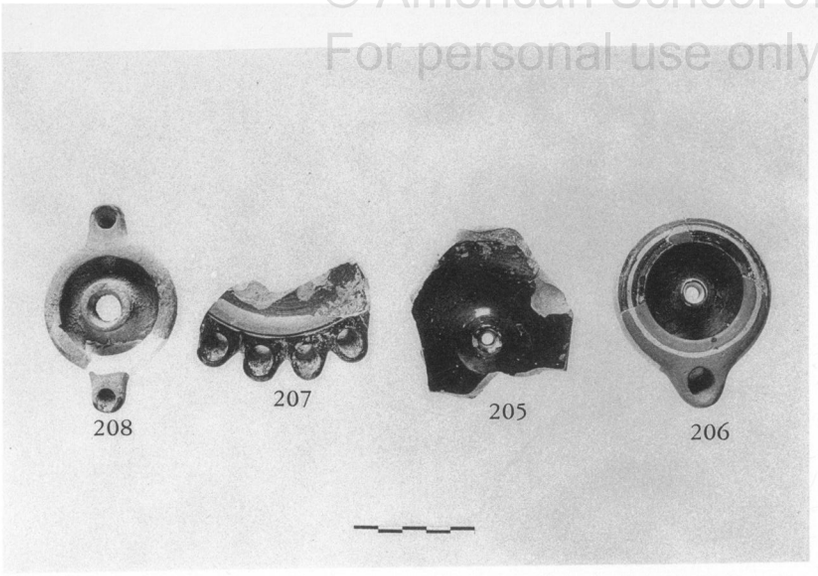

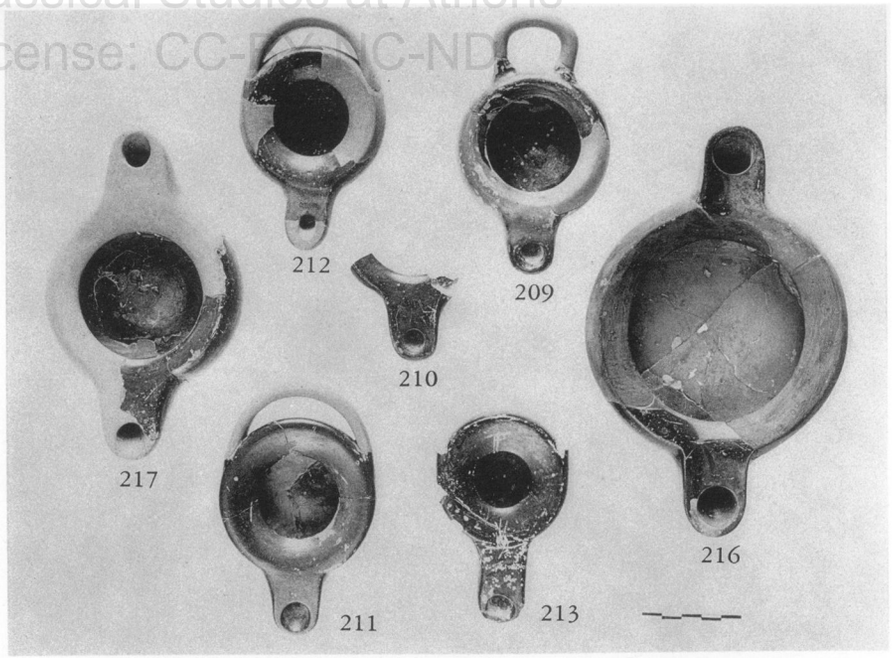

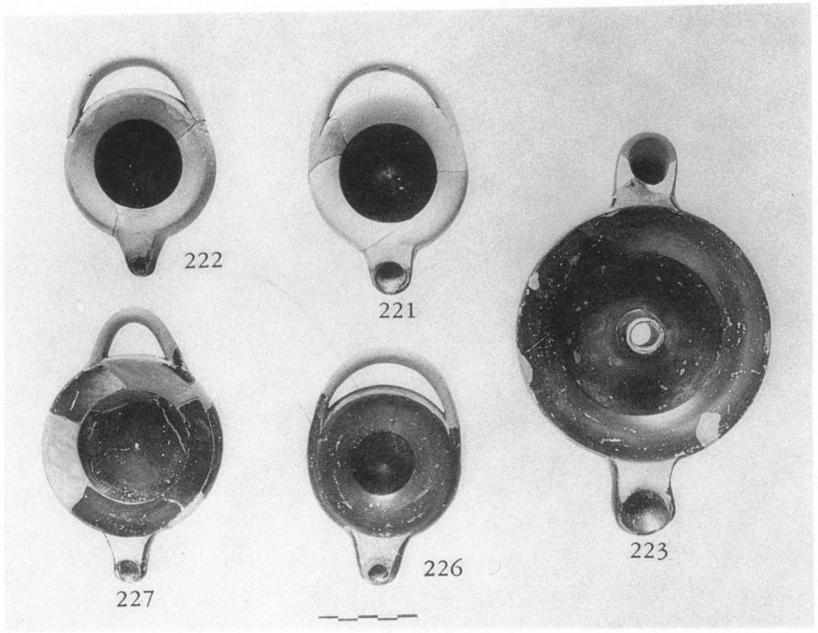

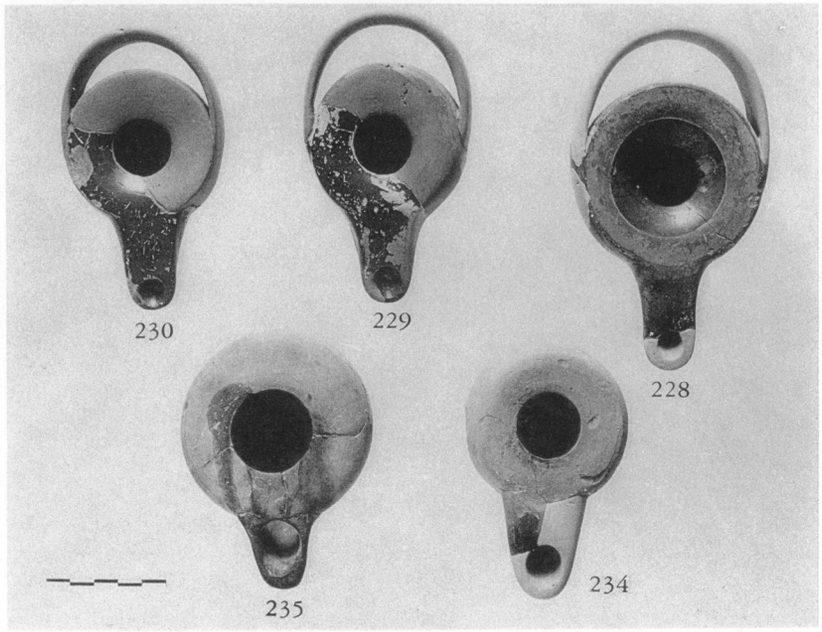

Type 22 Variants: 205-208; 23 A: 209-217; 23 A Prime: 221-222; 23 B: 223-227;
23 C: 228-230; 23 C Prime: 234-235

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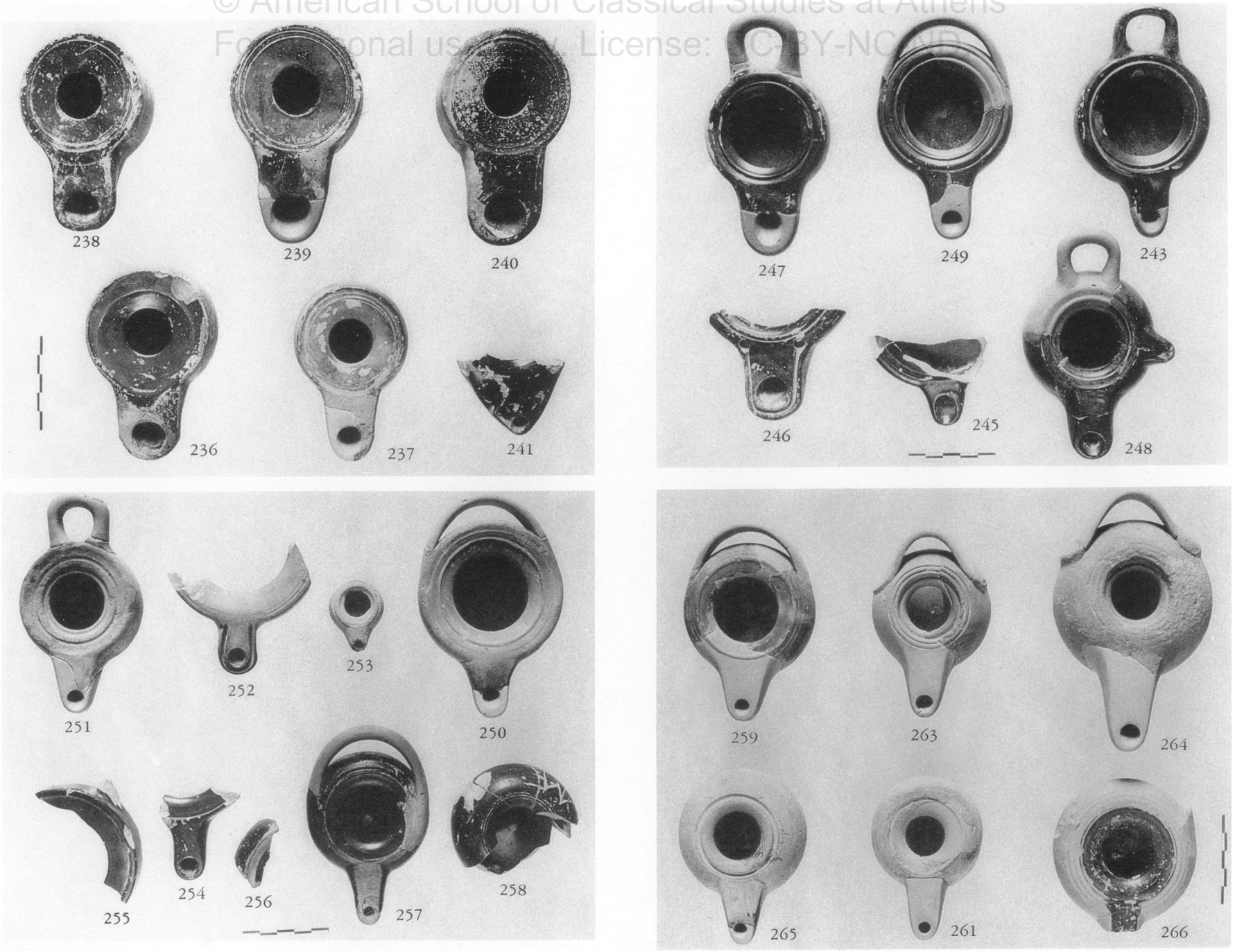

Type 23 D: 236-240; 23 E: 241; 24 A: 243-249; 24 A Prime: 250-253; 24 B: 254-256;
24 C: 257-258; 24 C Prime: 259-266

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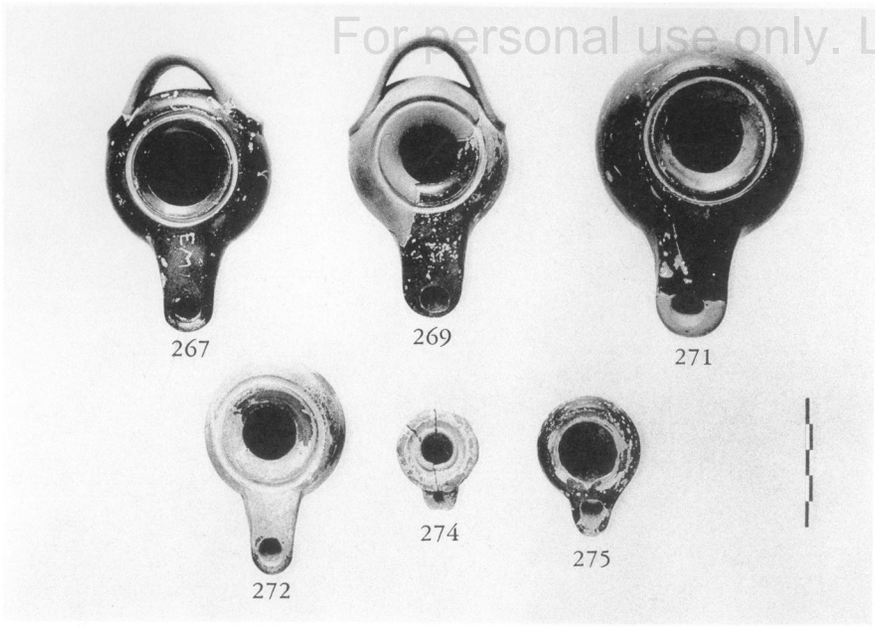

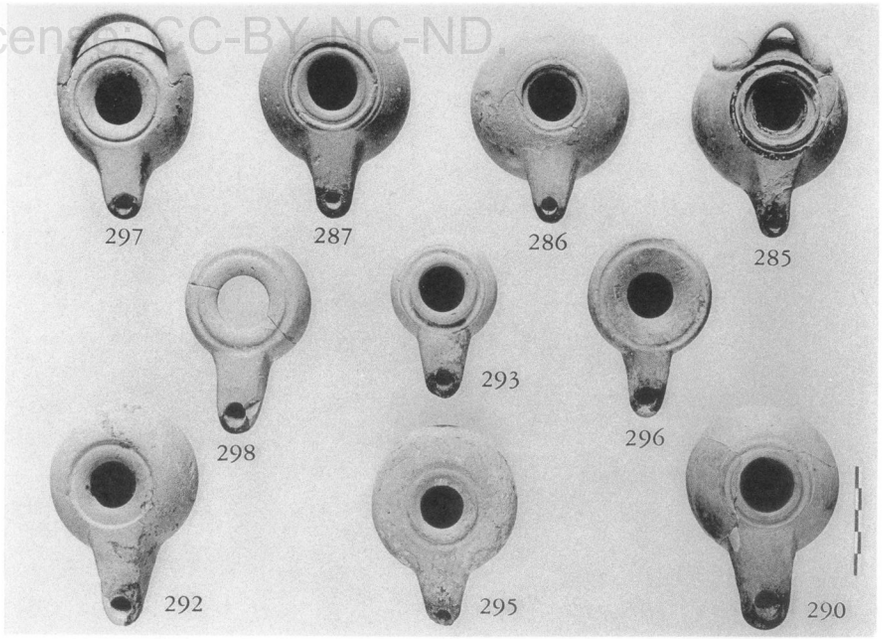

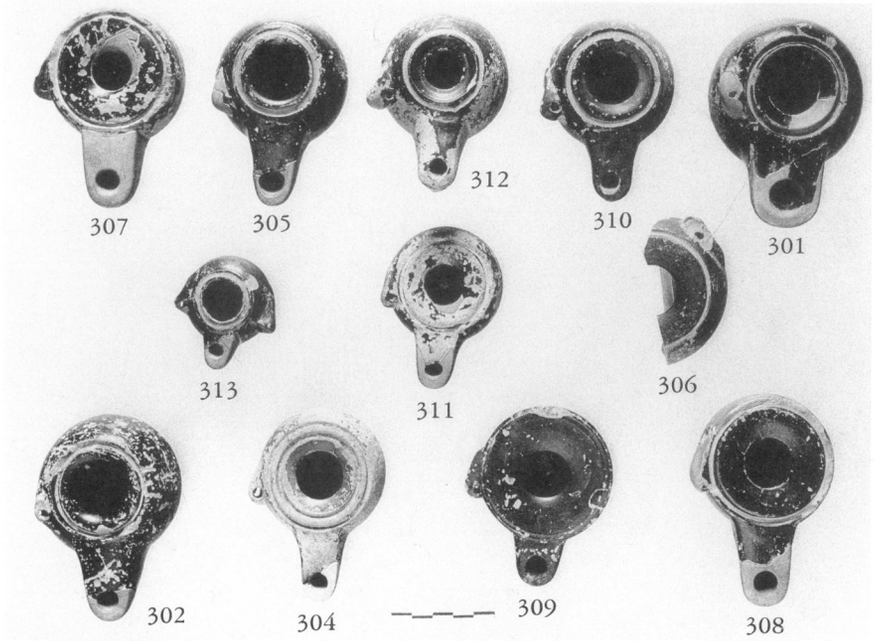

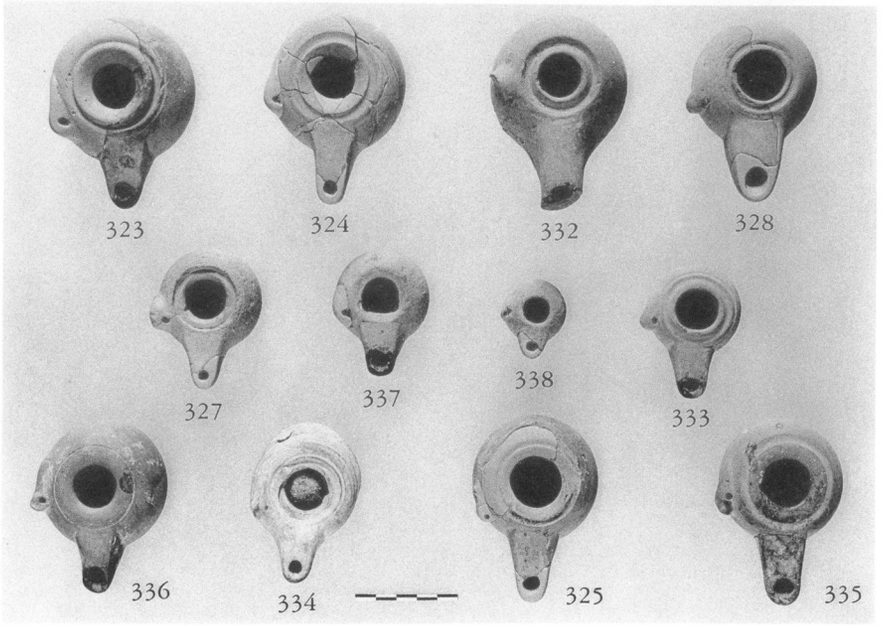

Type 25 A: 267-275; 25 A Prime: 285-298; 25 B: 301-313; 25 B Prime: 323-338

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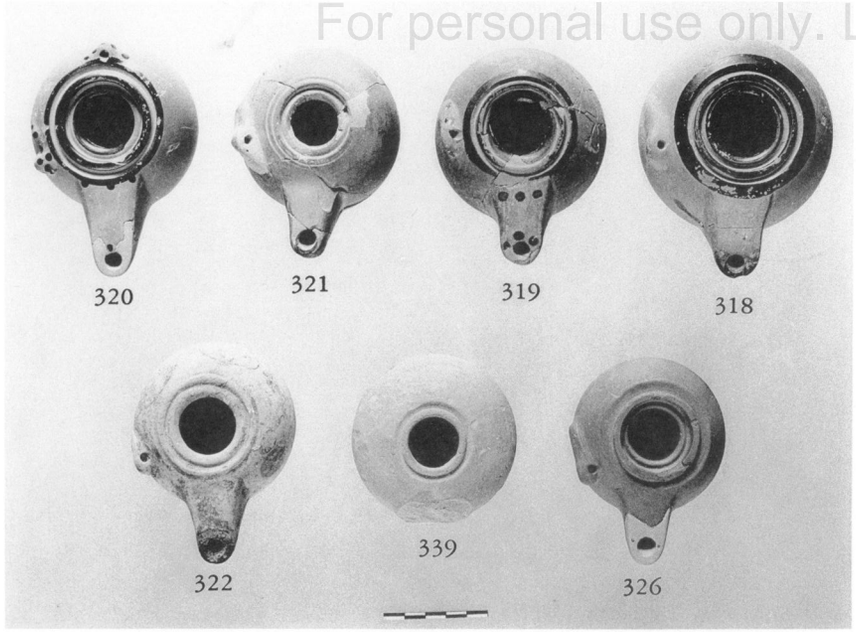

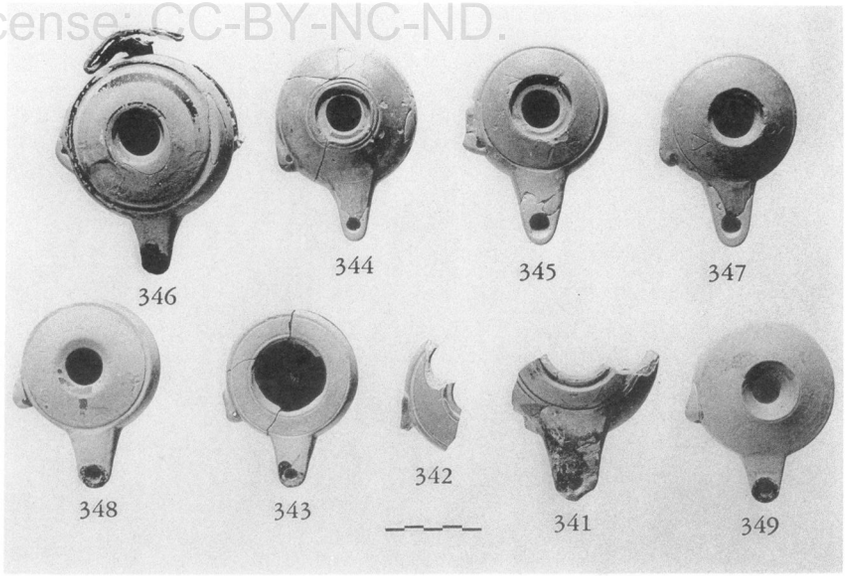

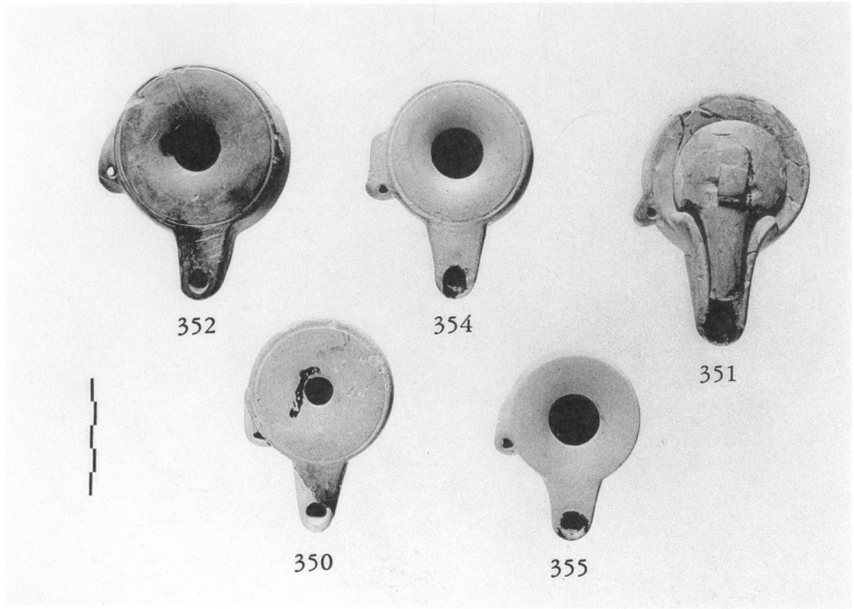

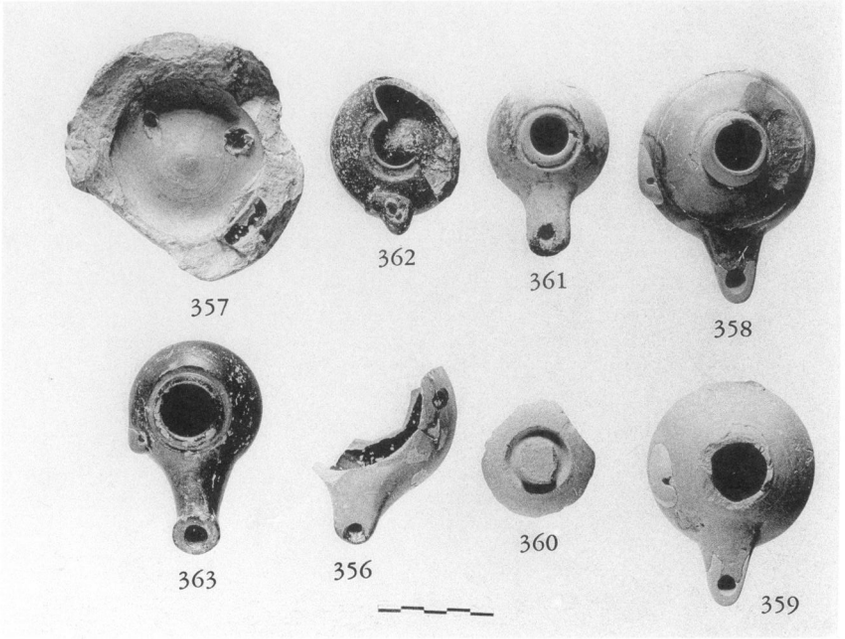

Type 25 B Prime: 318-339; 25 C Prime: 341-349; 25 D Prime: 350-355;
25 Variants: 356-363

PLATE 39

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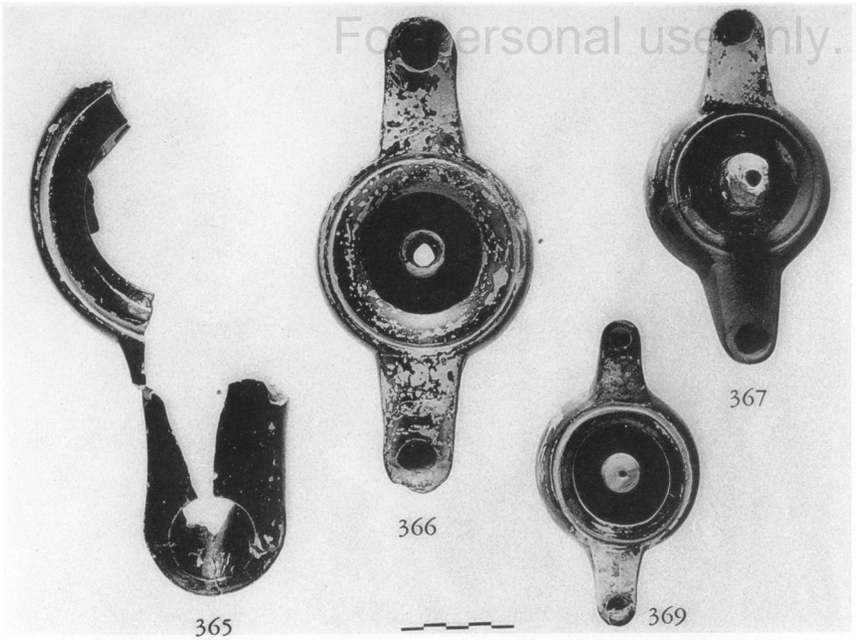

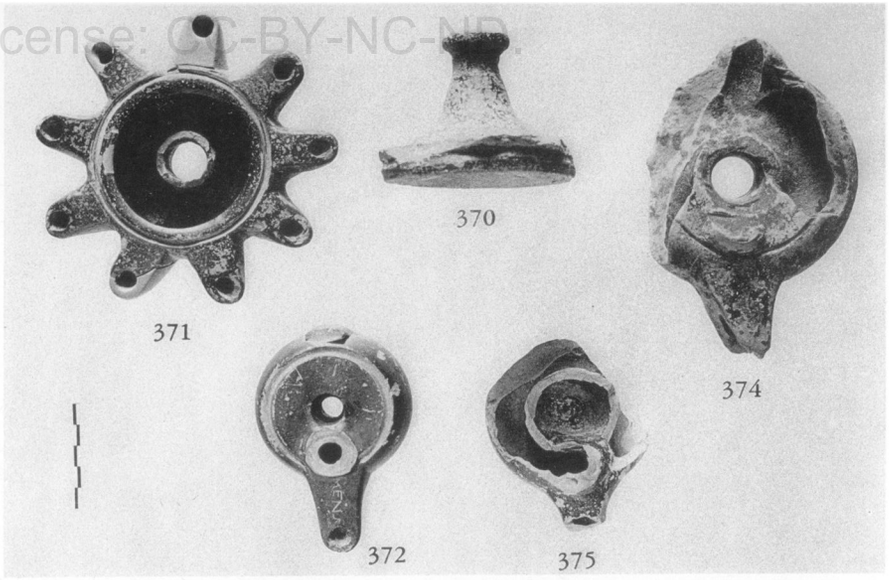

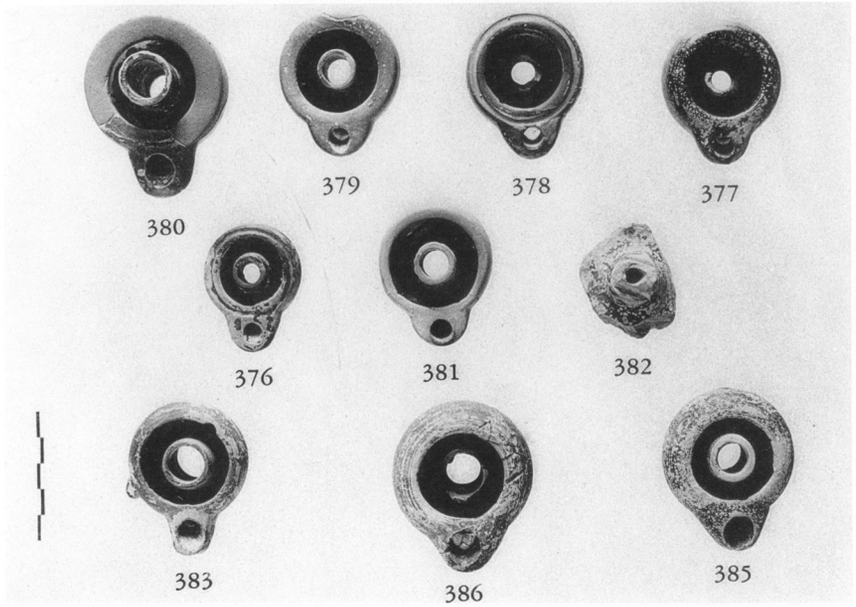

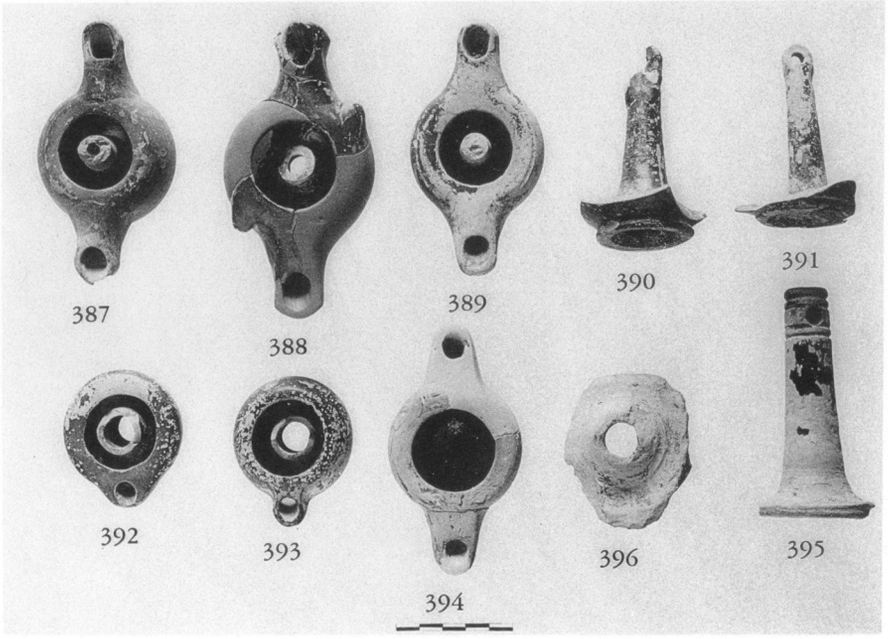

Type 26 A: 365-371; 26 B: 372-374; 26 Variants: 375; 27 A: 376-380; 27 A Prime: 381-382;
27 B: 383; 27 C: 385-386; 27 D: 387-391; 27 Variants: 392-396

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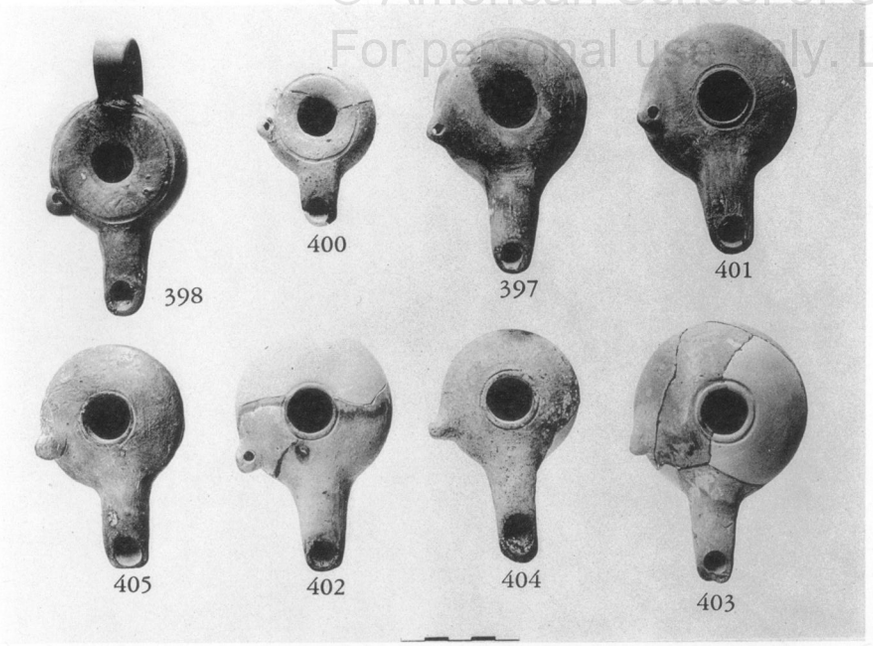

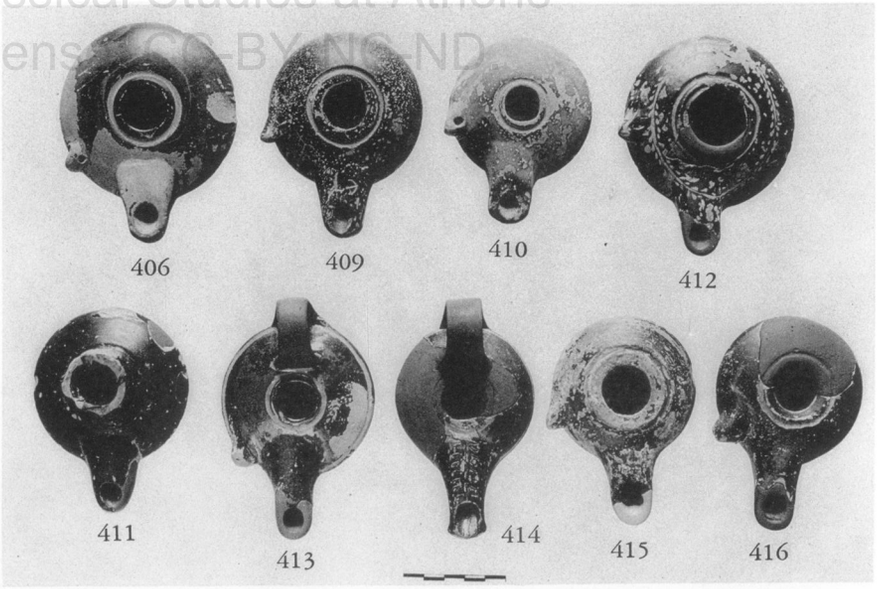

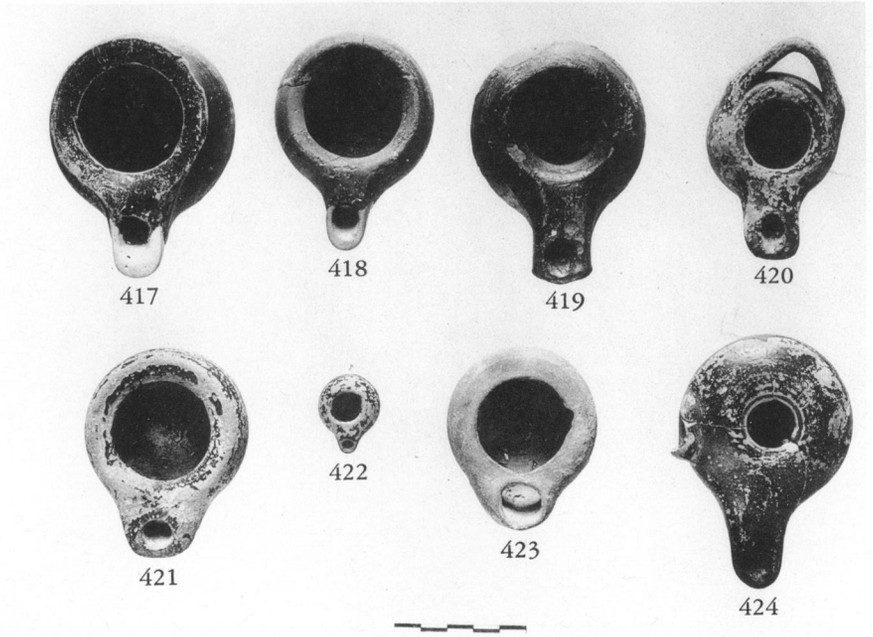

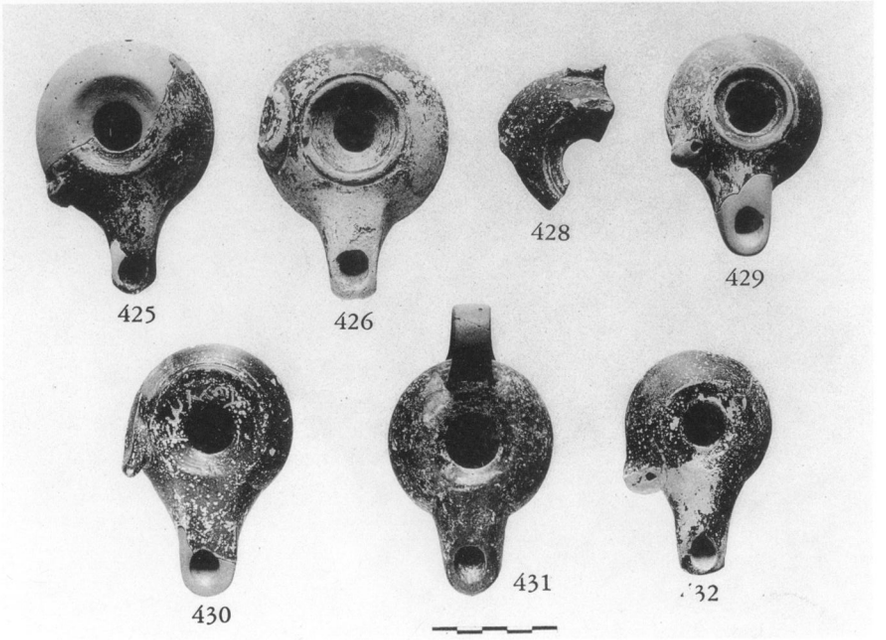

Type 28 A: 397-400; 28 B: 401-405; 29 A: 406-414; 29 B: 415-416; 30 A: 417-418;
30 B: 419-422; 30 C: 423; 31: 424; 32: 425-432

PLATE 41

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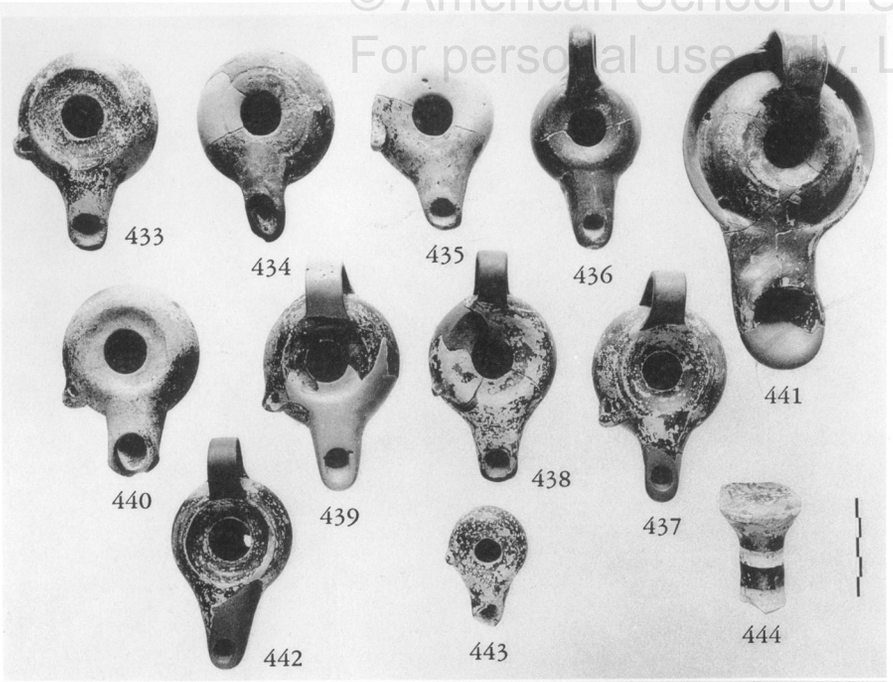

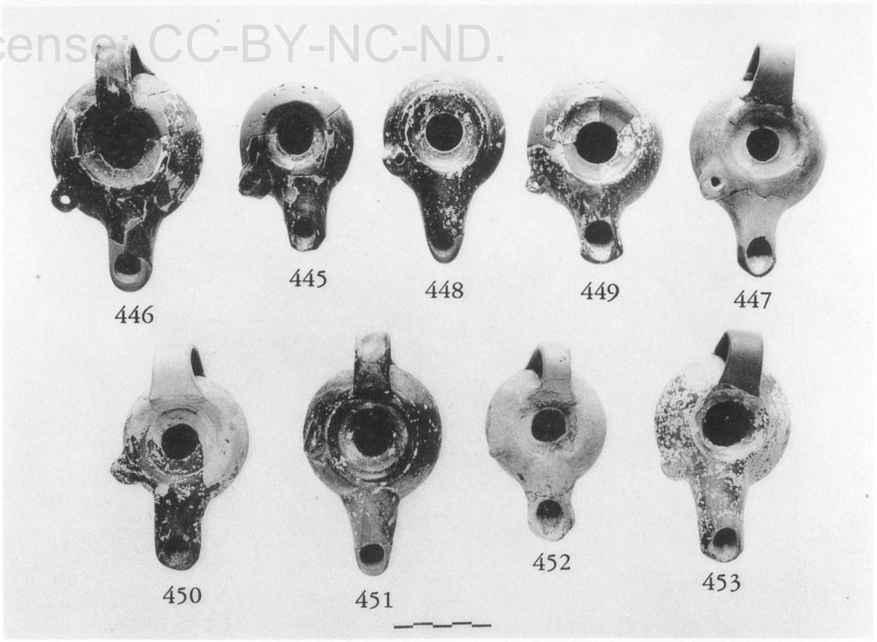

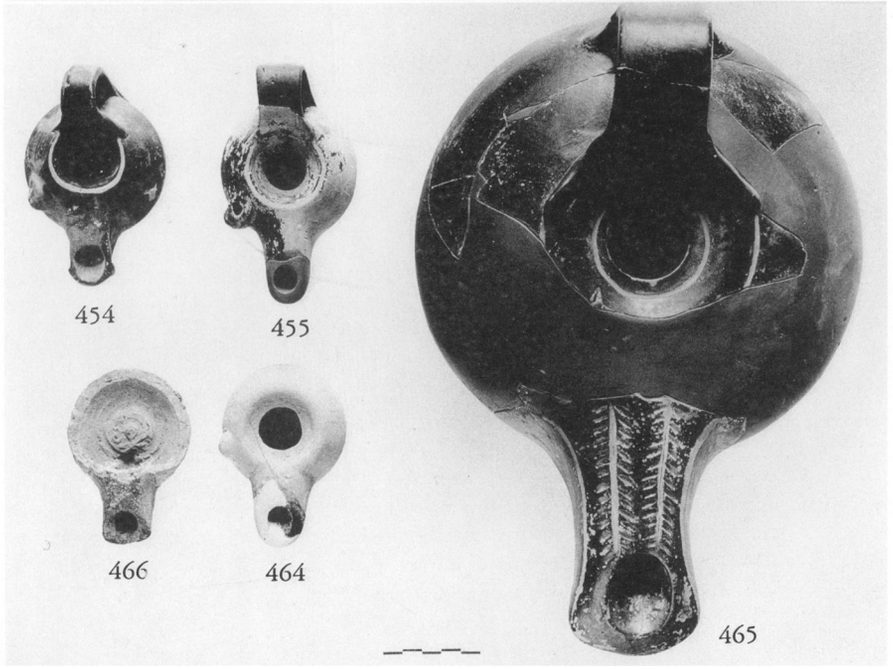

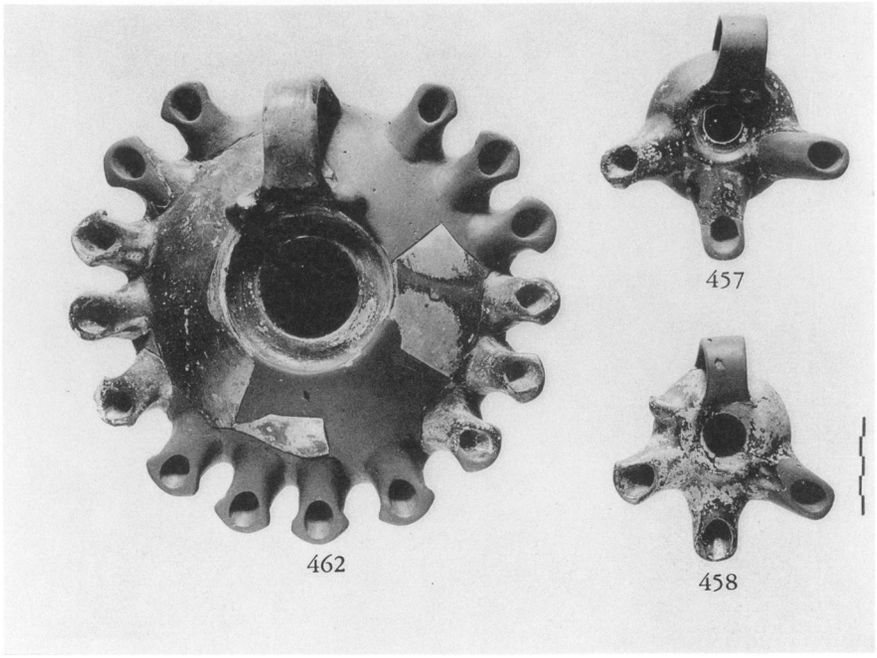

Type 33 A: 433-442; 33 B: 443-444; 34 A: 445-455; 34 B: 457-462; 34 Variants: 464-466

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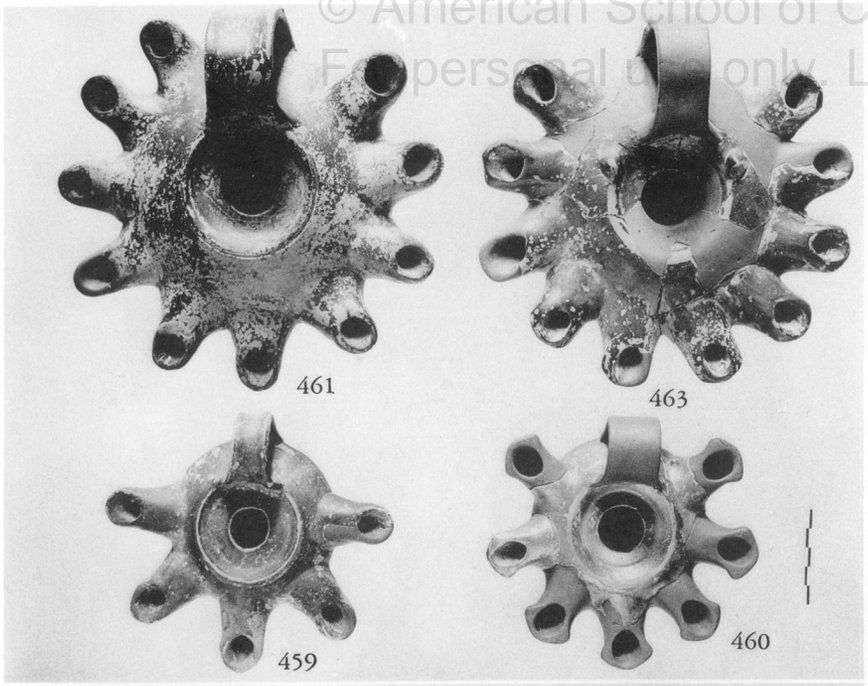

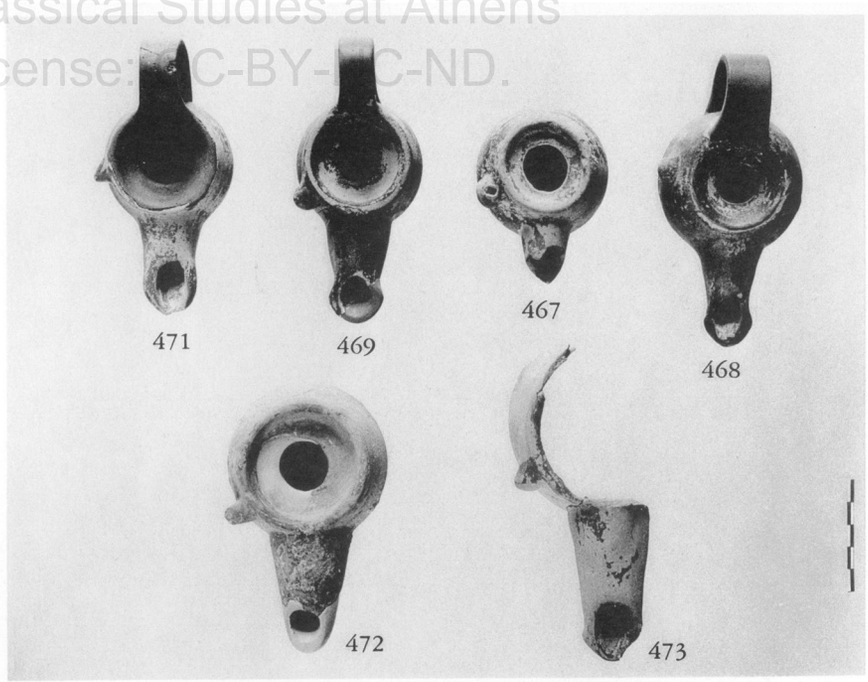

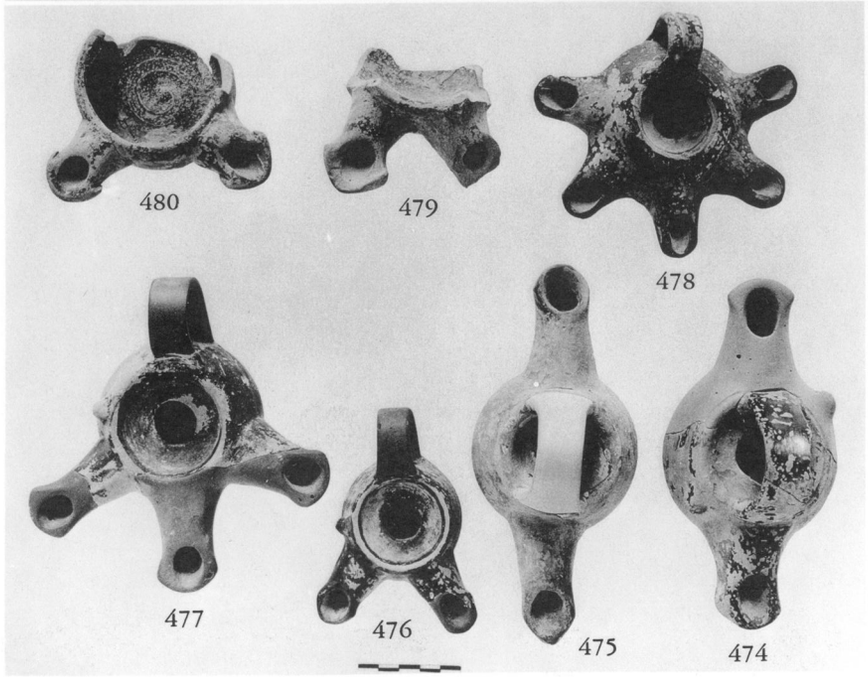

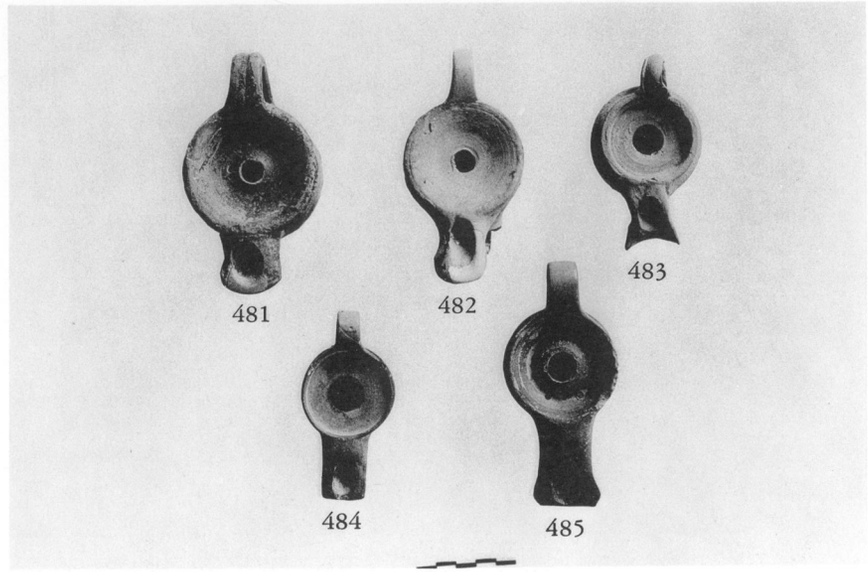

Type 34 B: 459-463; 35 A: 467-471; 35 A Prime: 472-473; 35 B: 474-480; 35 C: 481;
35 C Prime: 482; 35 D: 483-484; 35 Variants: 485

PLATE 43

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Type 36 A: 486-487; 36 B: 488-490; 36 Variants: 491; 37 A: 492-495; 37 B: 496-503

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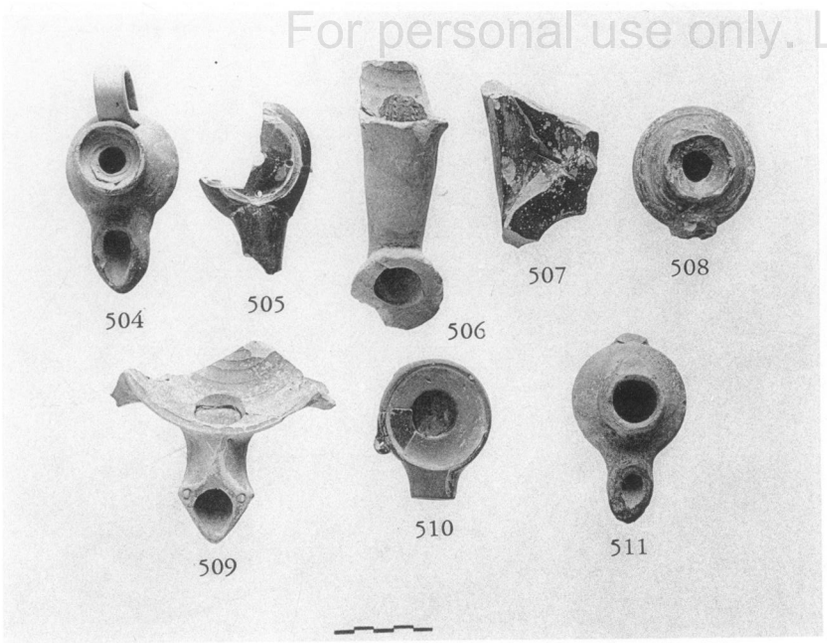

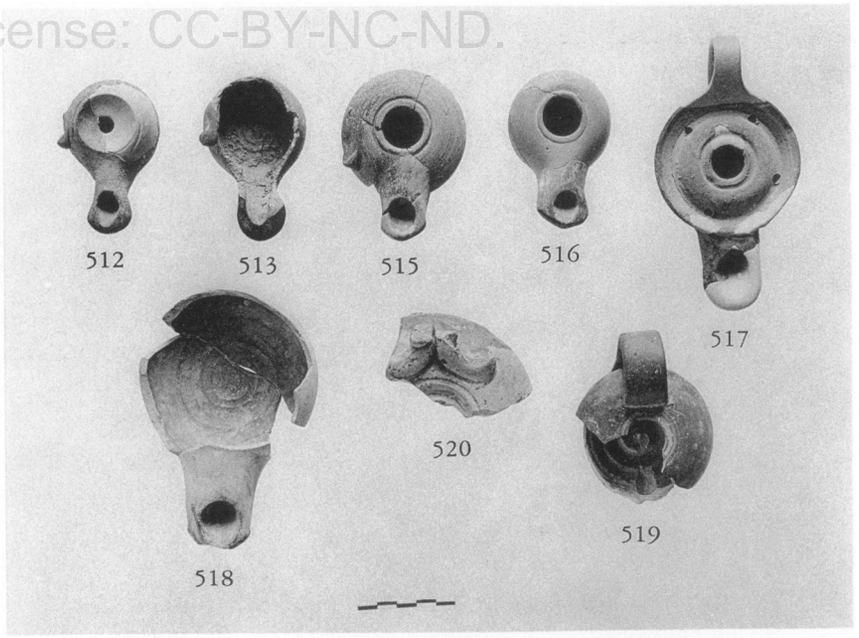

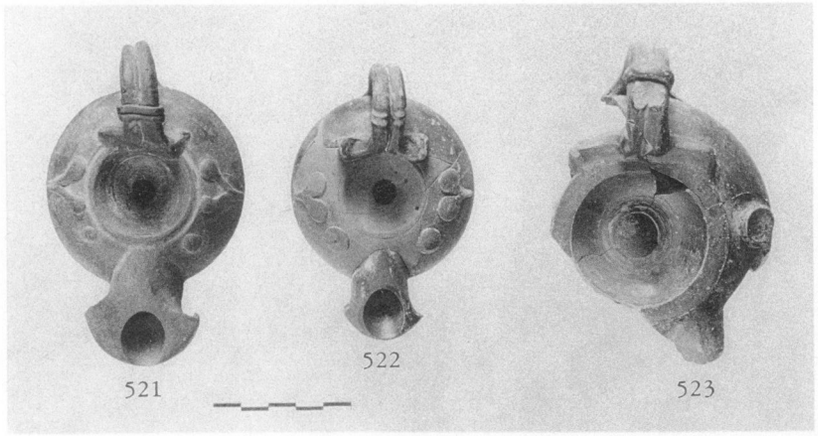

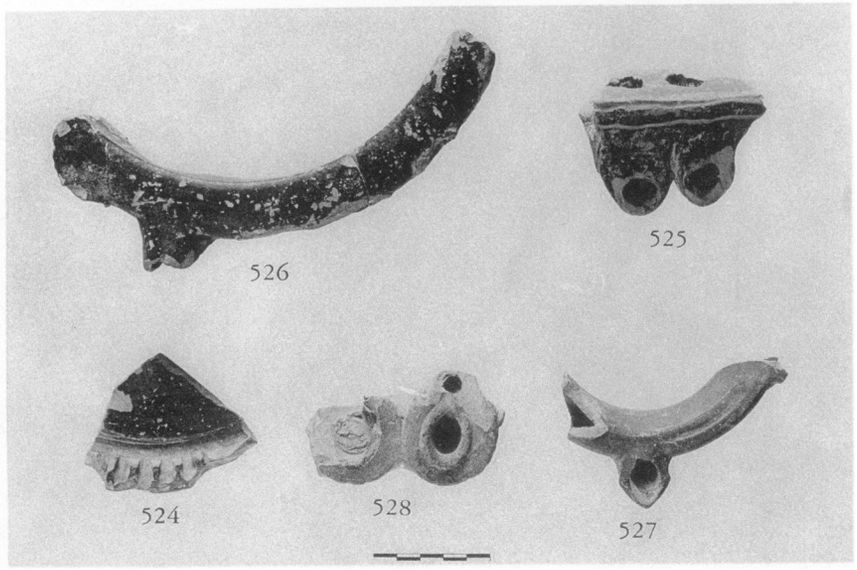

Type 37 C: 504; 37 Variants: 505-511; 38: 512-513; 39: 515-517; 39 Prime: 518;
39 Variants: 519-520; 40 A: 521-522: 40 B: 523; 41: 524-528

PLATE 45

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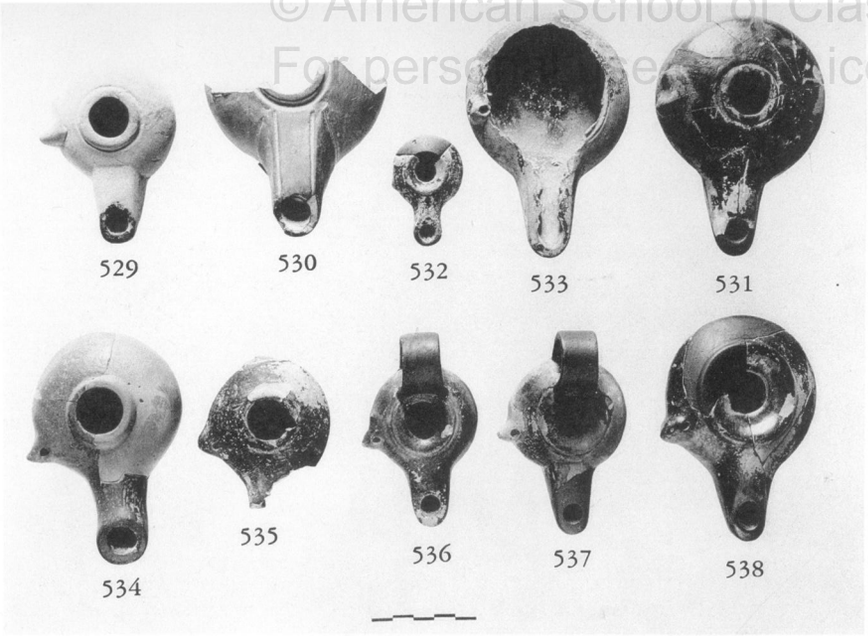

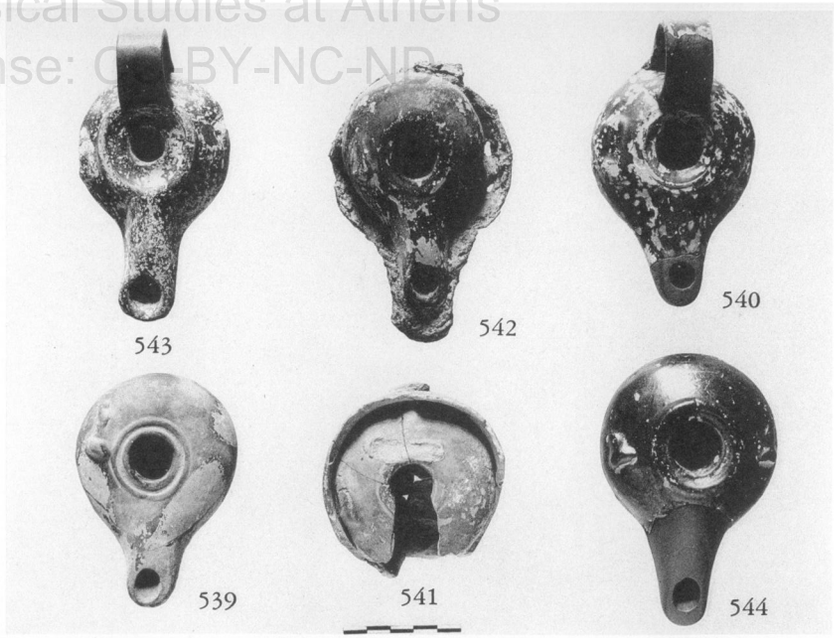

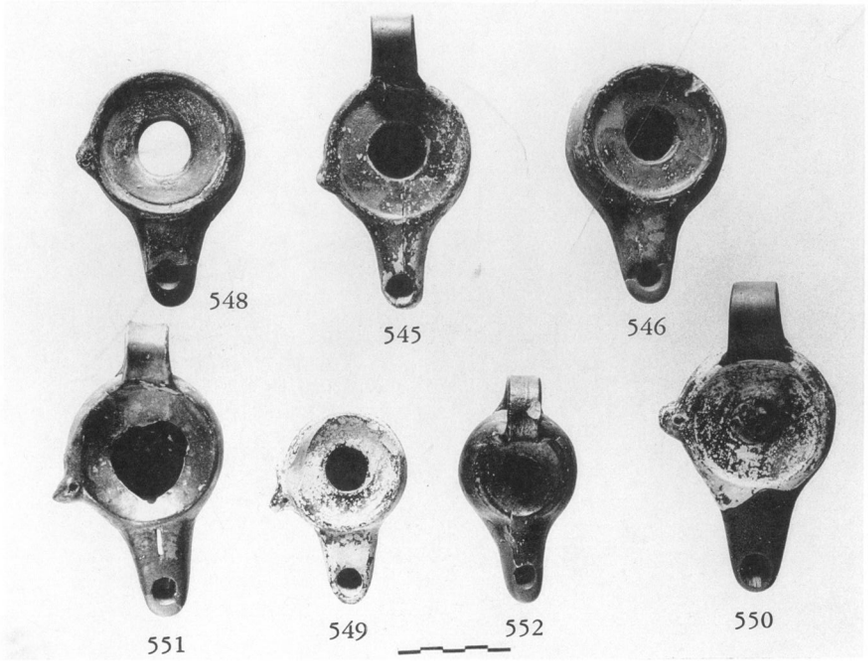

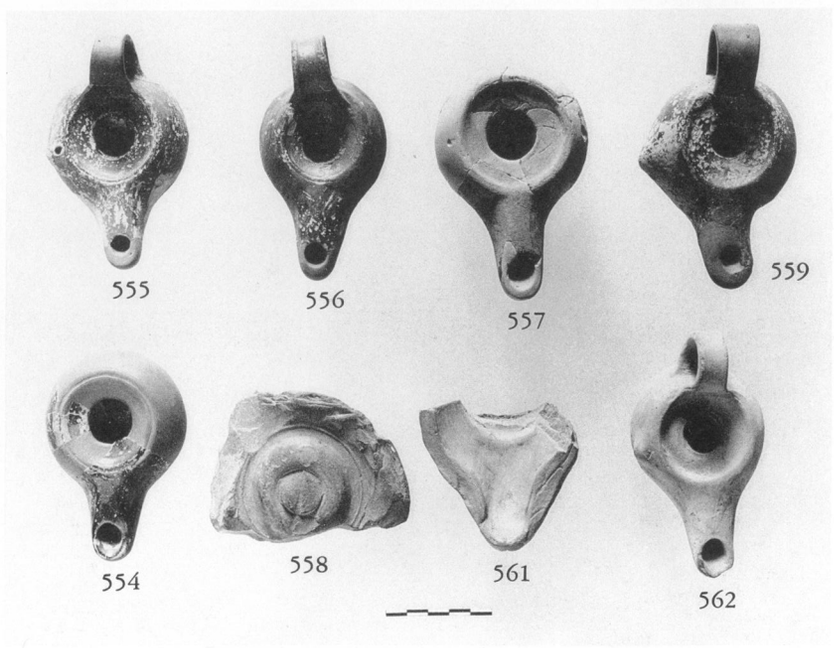

Type 42 A: 529-530; 42 B: 531-533; 42 C: 534-535; 42 D: 536-538; 43 A: 539-544;
43 B: 545-548; 43 C: 549-552; 43 D: 554-561; 43 D Prime: 562

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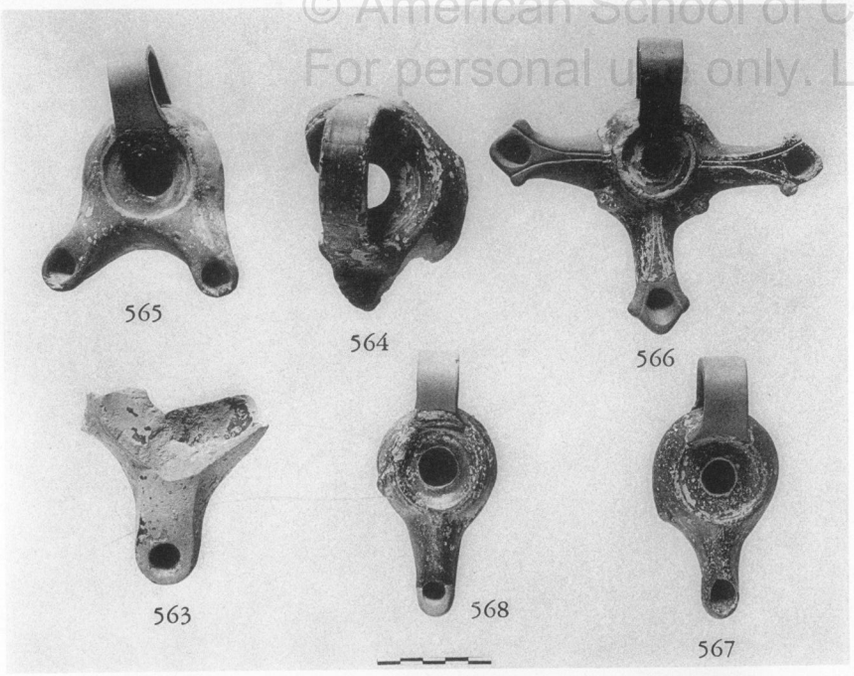

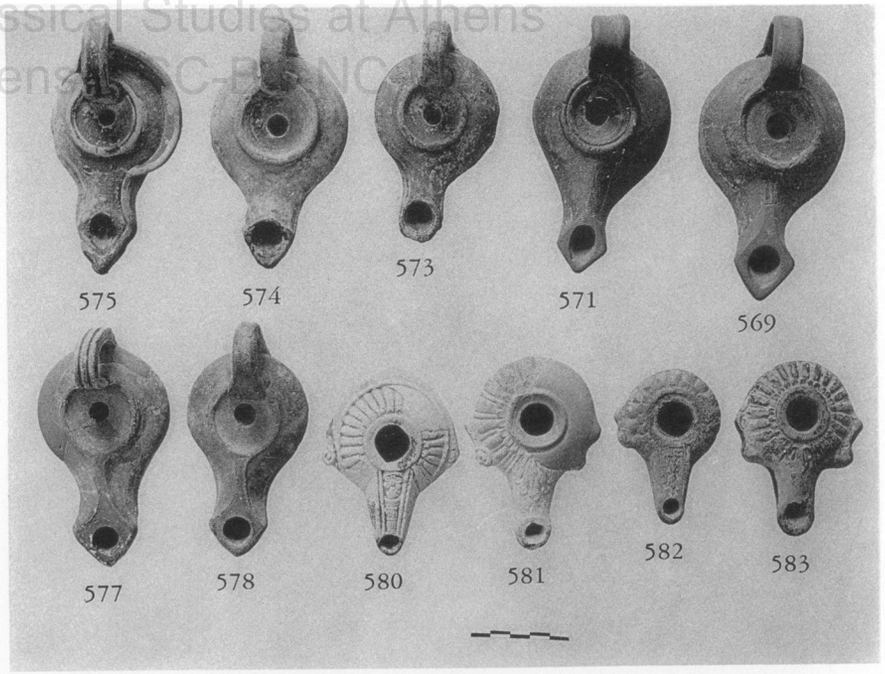

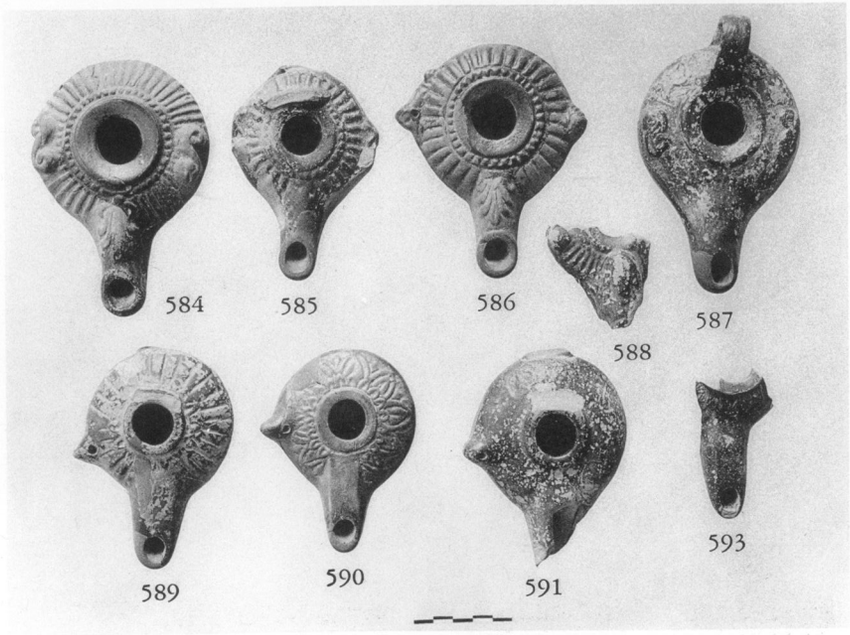

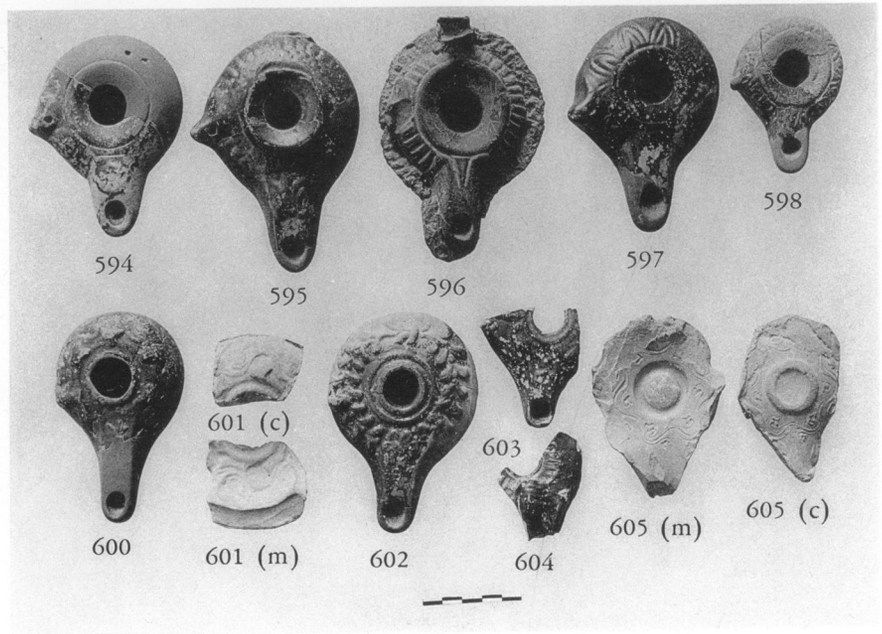

Type 43 E: 563-566; 43 Variants: 567-568; 44 A: 569-571; 44 B: 573; 44 C: 574-575;
44 D: 577-578; 45 A: 580-582; 45 B: 583; 45 C: 584-588; 46 A: 589-593;
46 B: 594-598; 46 C: 600-605

PLATE 47

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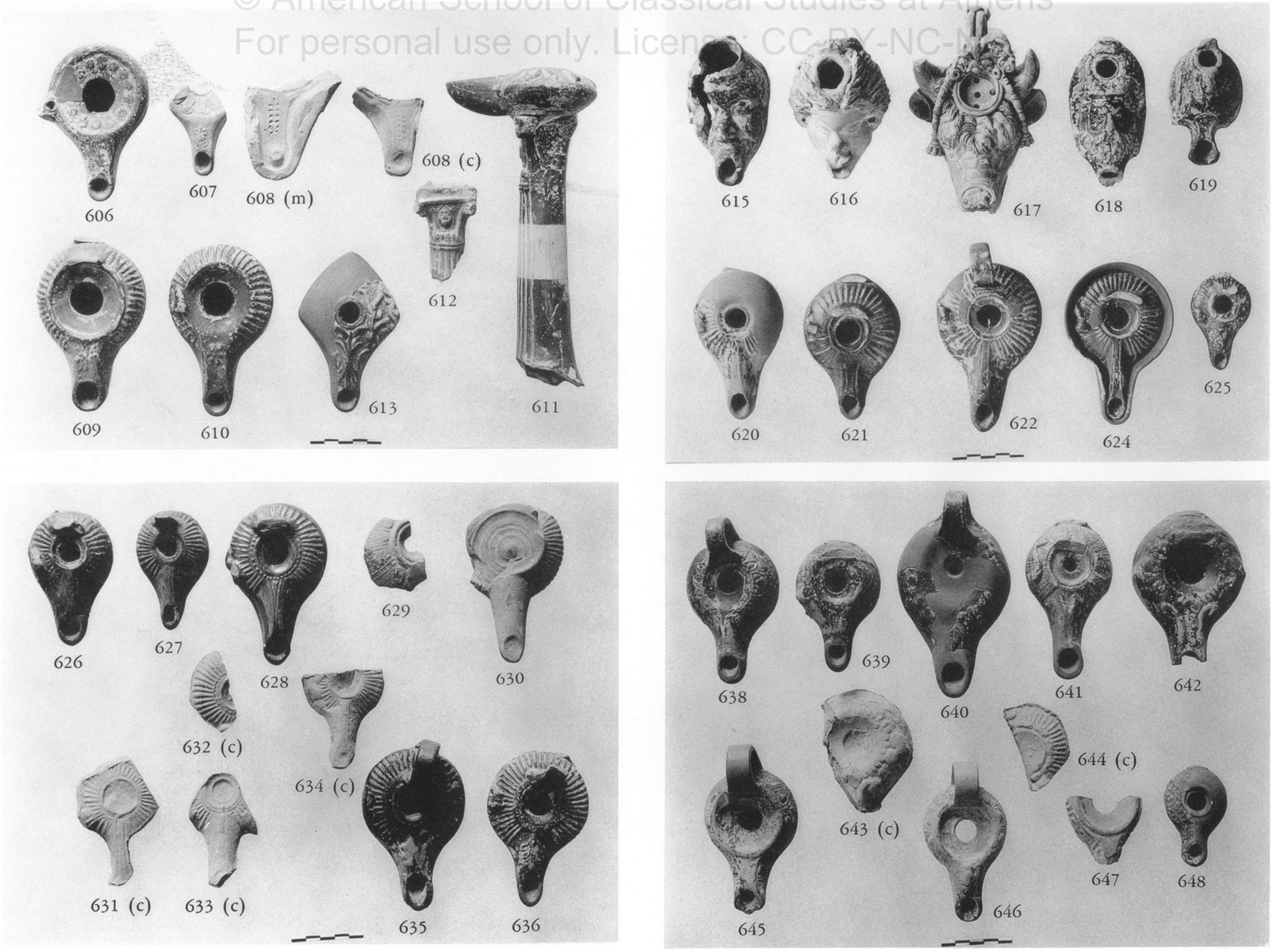
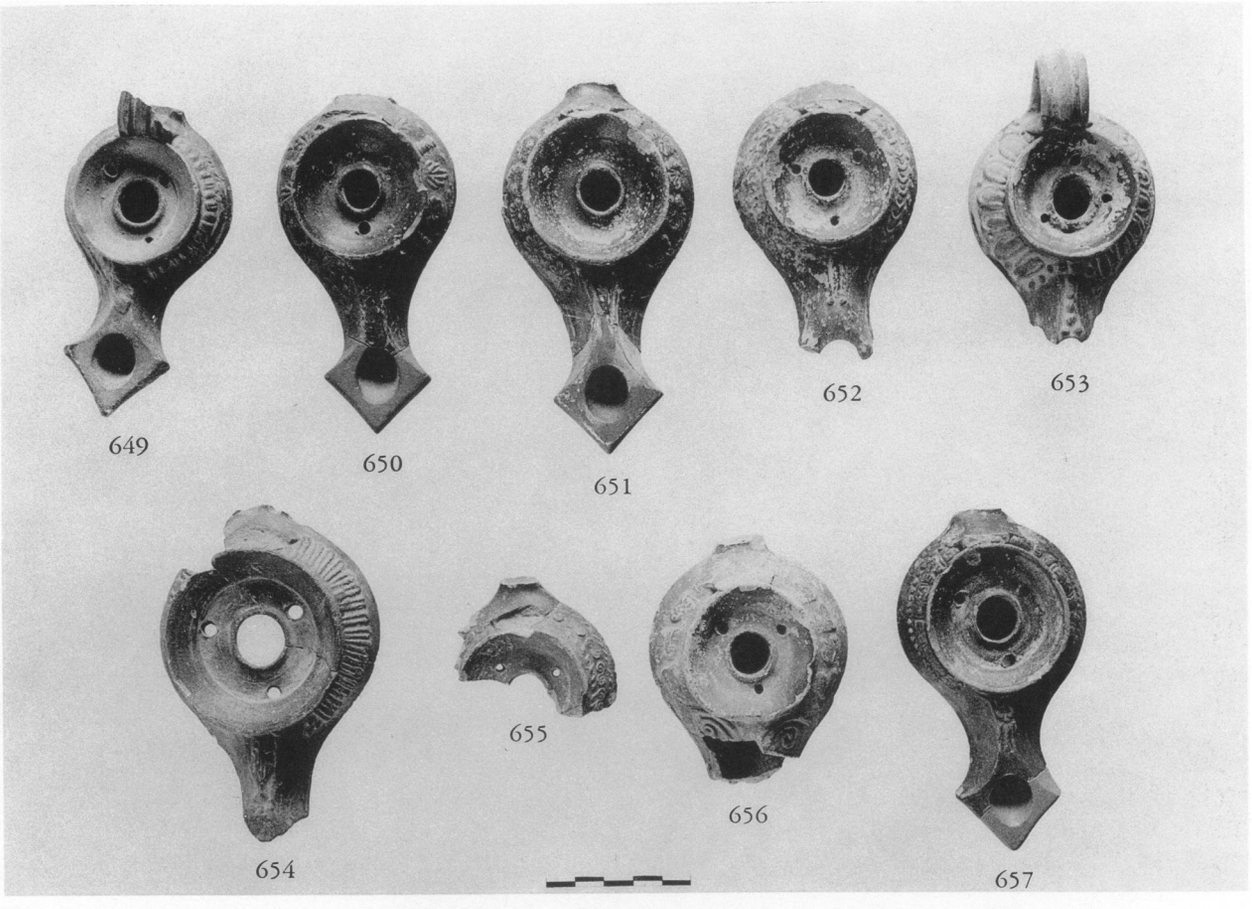
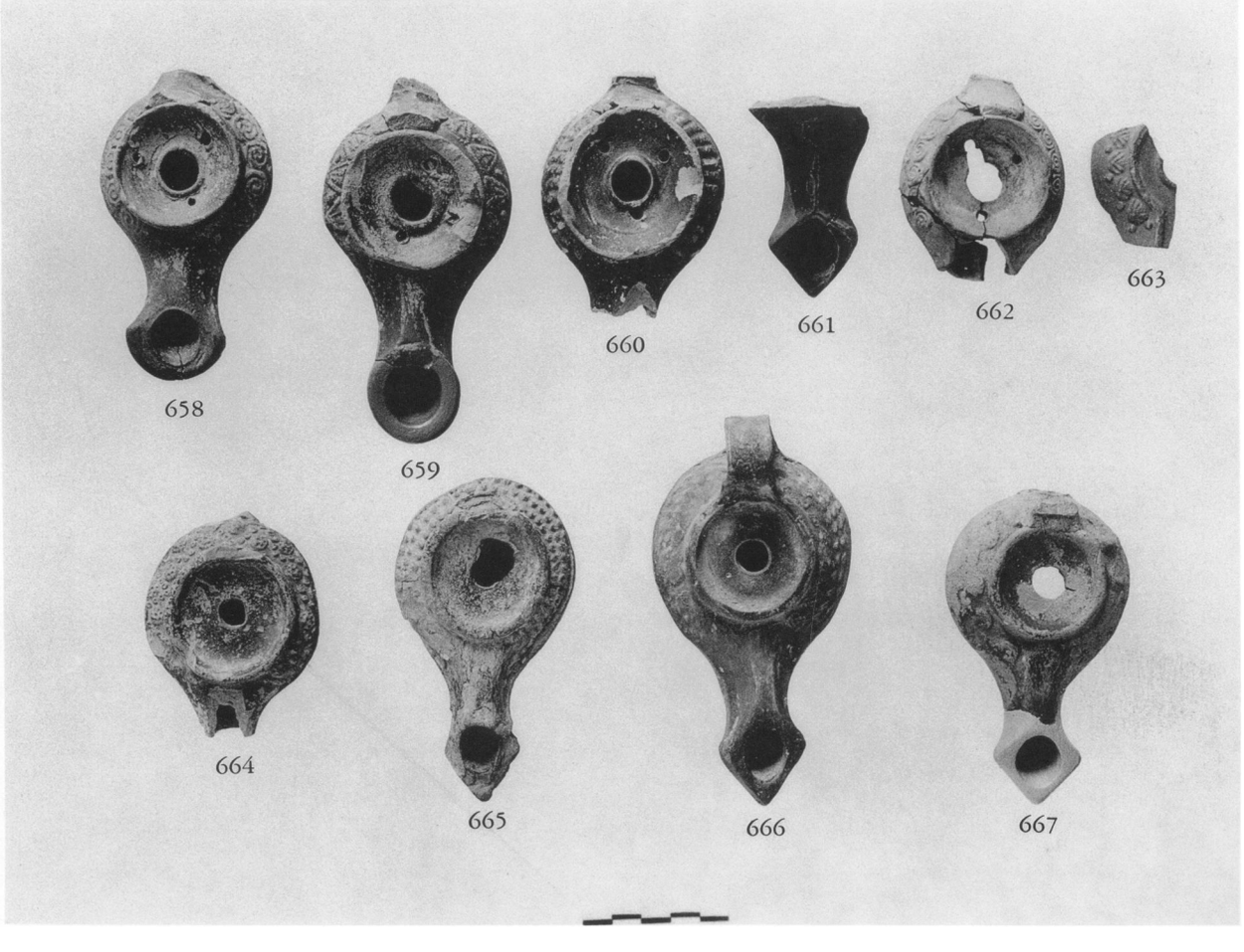


Type 46 D: 606-608; 46 E: 609-610; 47 A: 611-612; 47 B: 613; 47 C: 615-619;
48 A: 620-634; 48 B: 635-636; 48 C: 638-644; 48 D: 645-647; 48 E: 648





Type 49 A: 649-664; 49 B: 665-667

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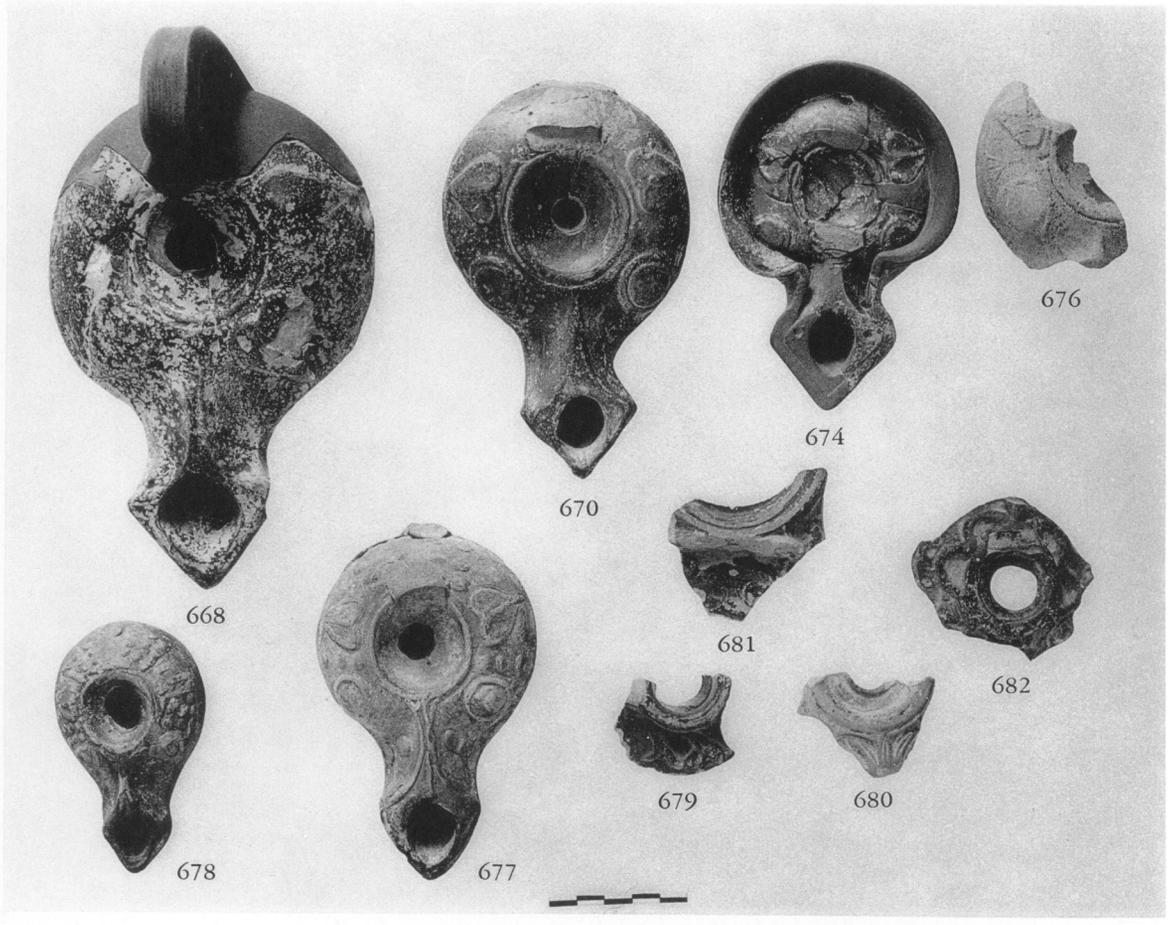
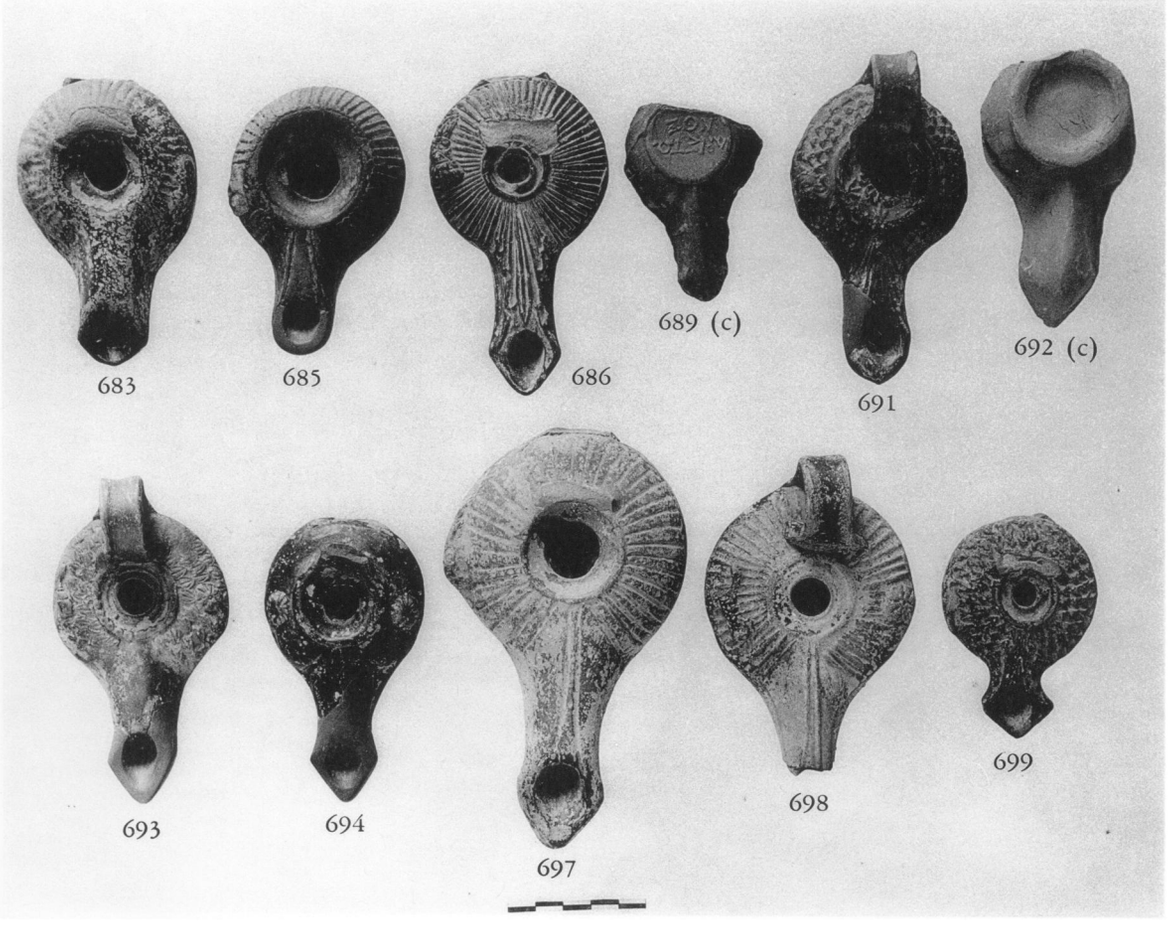
PLATE 50





Type 50 A: 668; 50 B: 670-676; 50 C: 677-678; 50 D: 679-682; 51 A: 683-685; 51 B: 686-692; 51 C: 693-694; 51 Variants: 697-699

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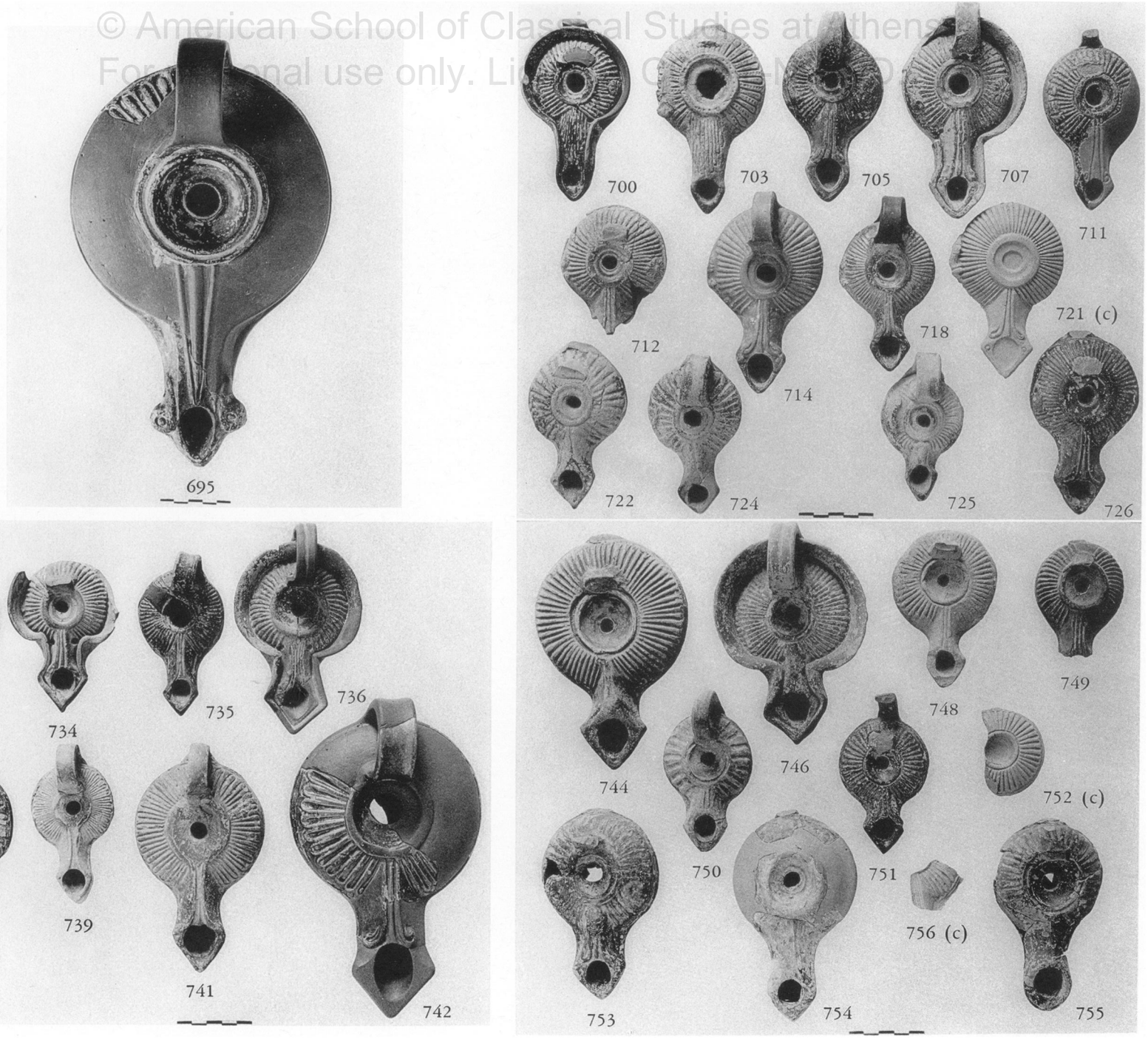
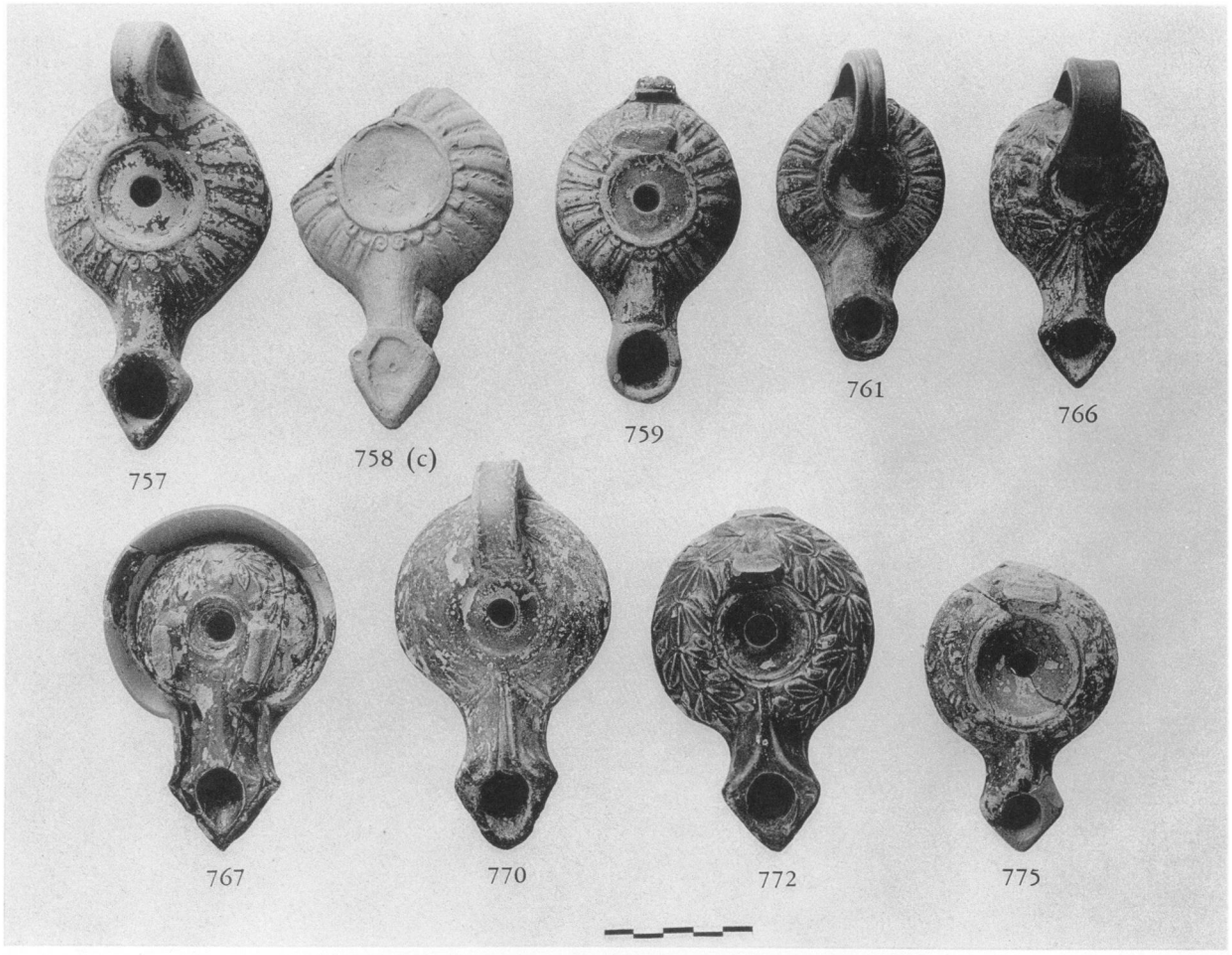
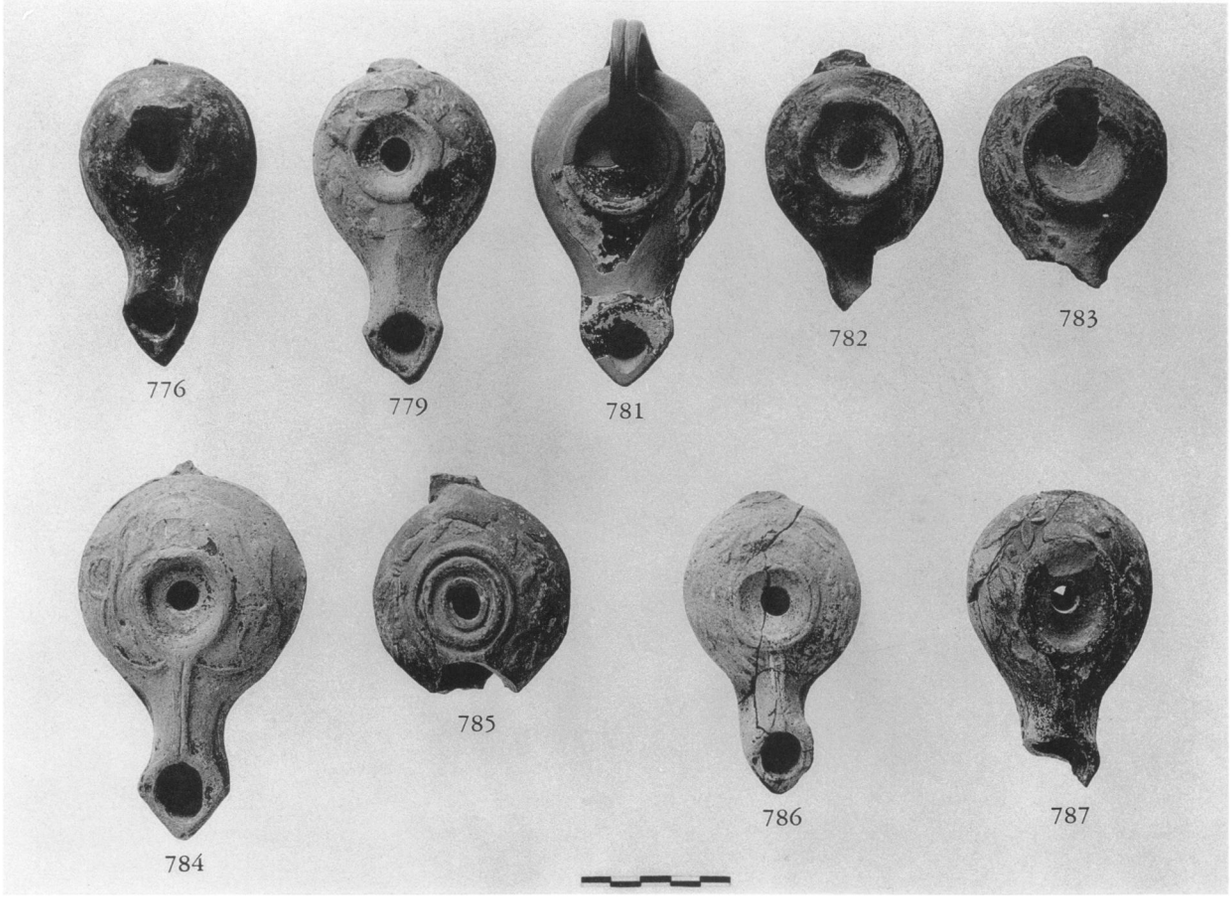


Type 51 D: 695; 52 A: 700-703; 52 B: 705-712; 52 C: 714-725; 52 D: 726; 52 E: 727-737; 52 F: 739-741; 52 G: 742; 52 H: 744-752; 52 Variants: 753-756

PLATE 52





Type 53: 757-761; 54 A: 766-770; 54 B: 772-775; 54 C: 776-779; 54 D: 781-783; 54 Variants: 784-787

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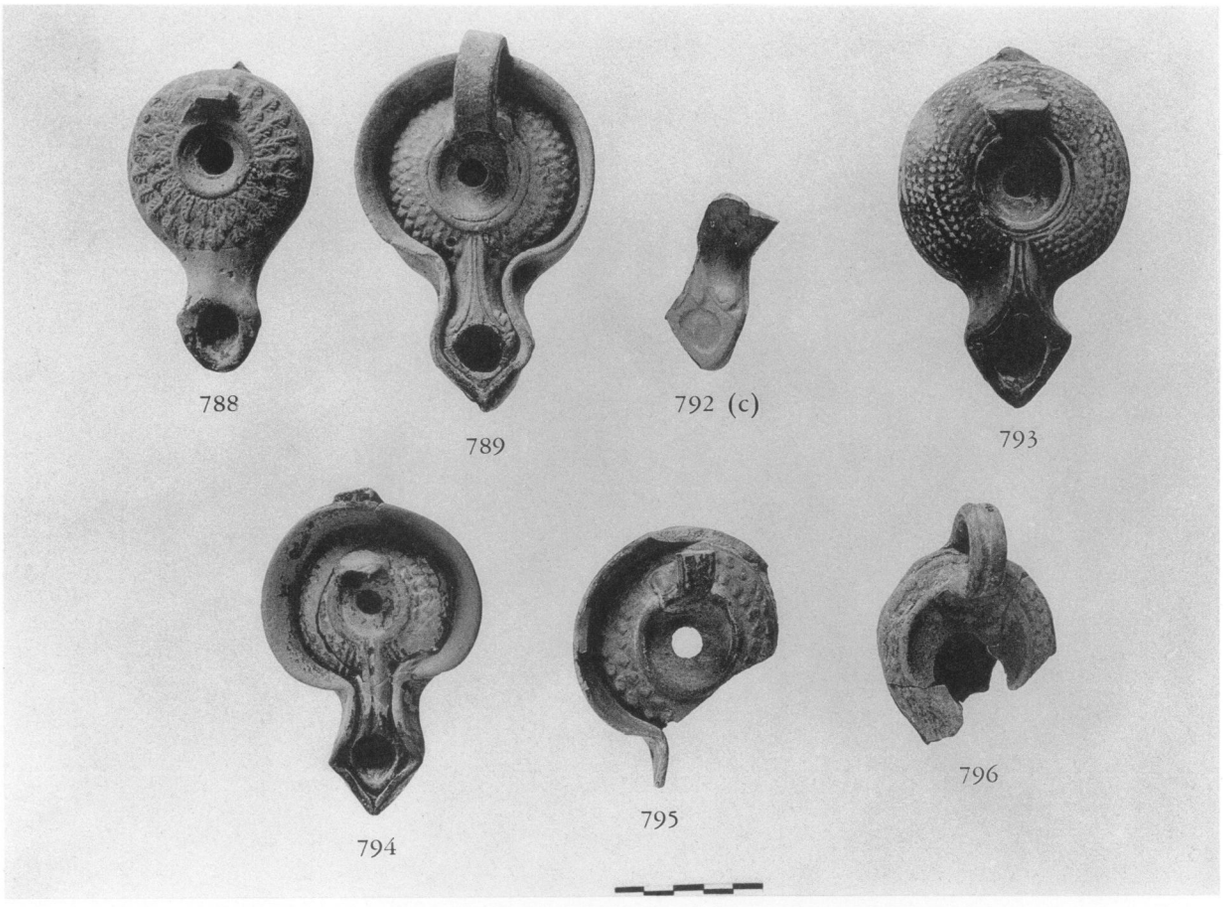

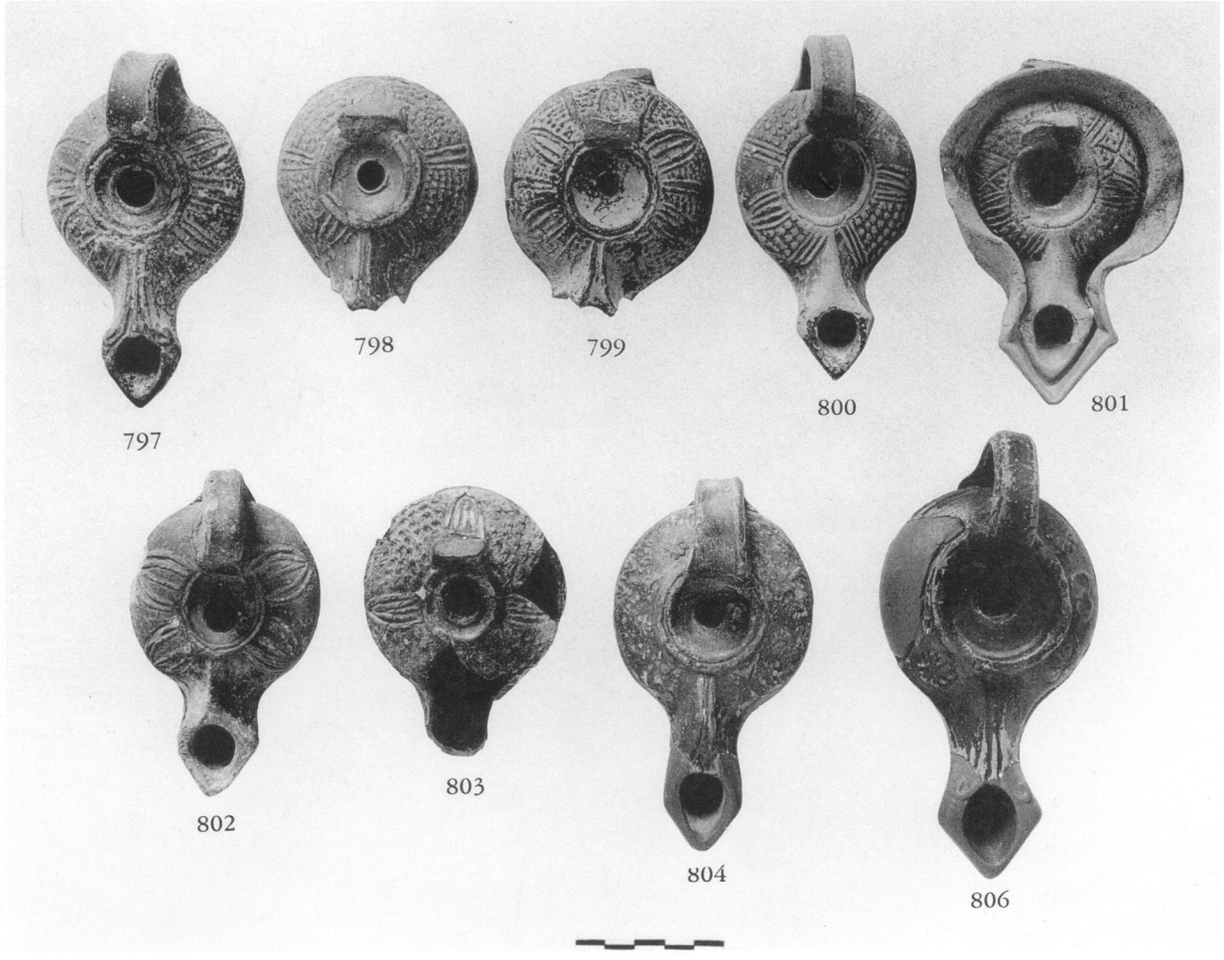

Type 55 A: 788; 55 B: 789-793; 55 C: 794-796; 56 A: 797-799; 56 B: 800-801;
56 Variants: 802-803; 57: 804; 58 A: 806

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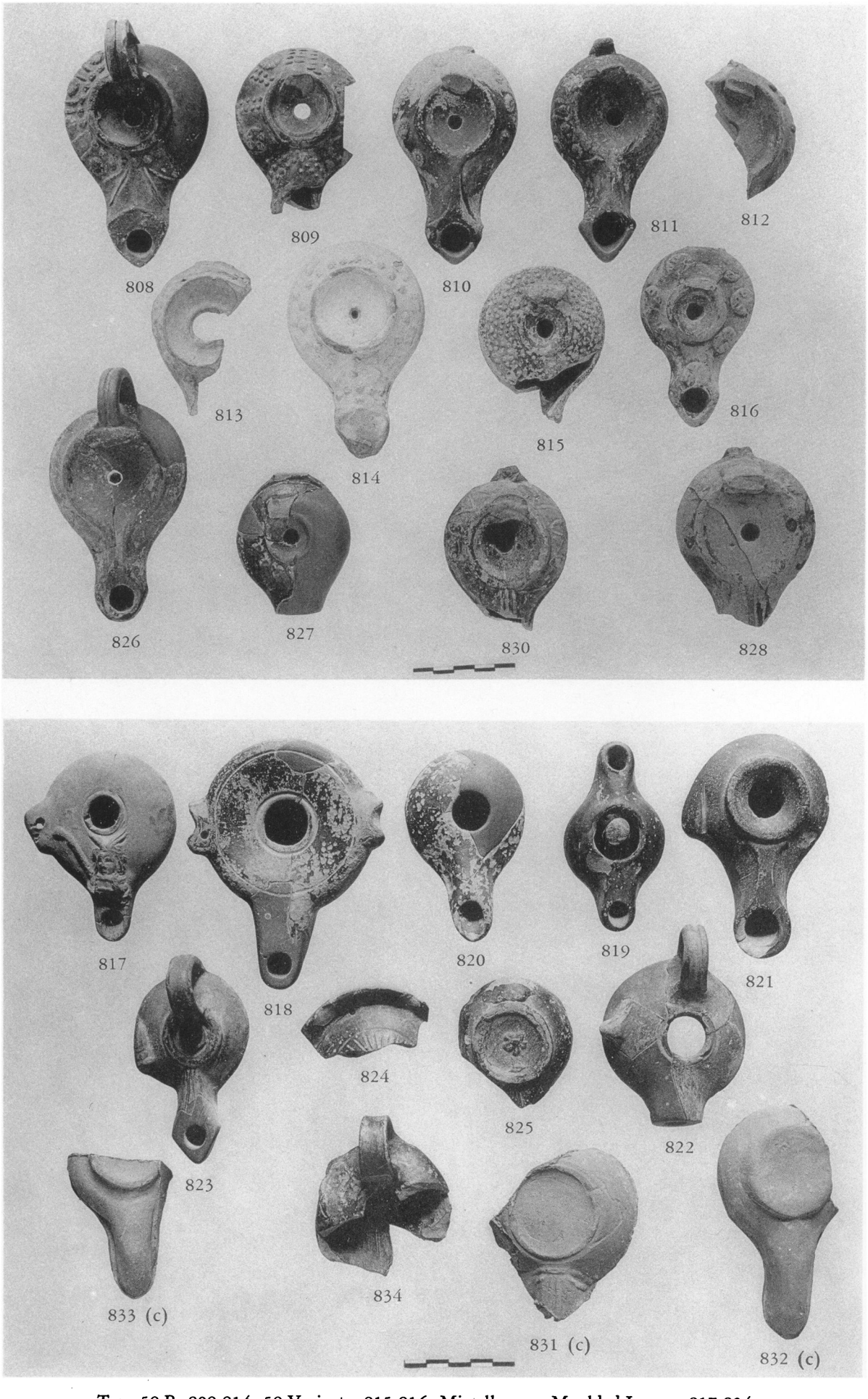
PLATE 54



Type 58 B: 808-814; 58 Variants: 815-816; Miscellaneous Moulded Lamps: 817-834

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Benachi 1 (Type 45 A)



Benachi 2 (Type 45 A)



Benachi 3 (cf. Type 45 B)



Benachi 4 (Type 47 B)



Benachi 5 (Type 48 E)



Benachi 6 (Type 48 E)



Benachi 7 (Type 49 A)



Benachi 8 (Type 49 A)

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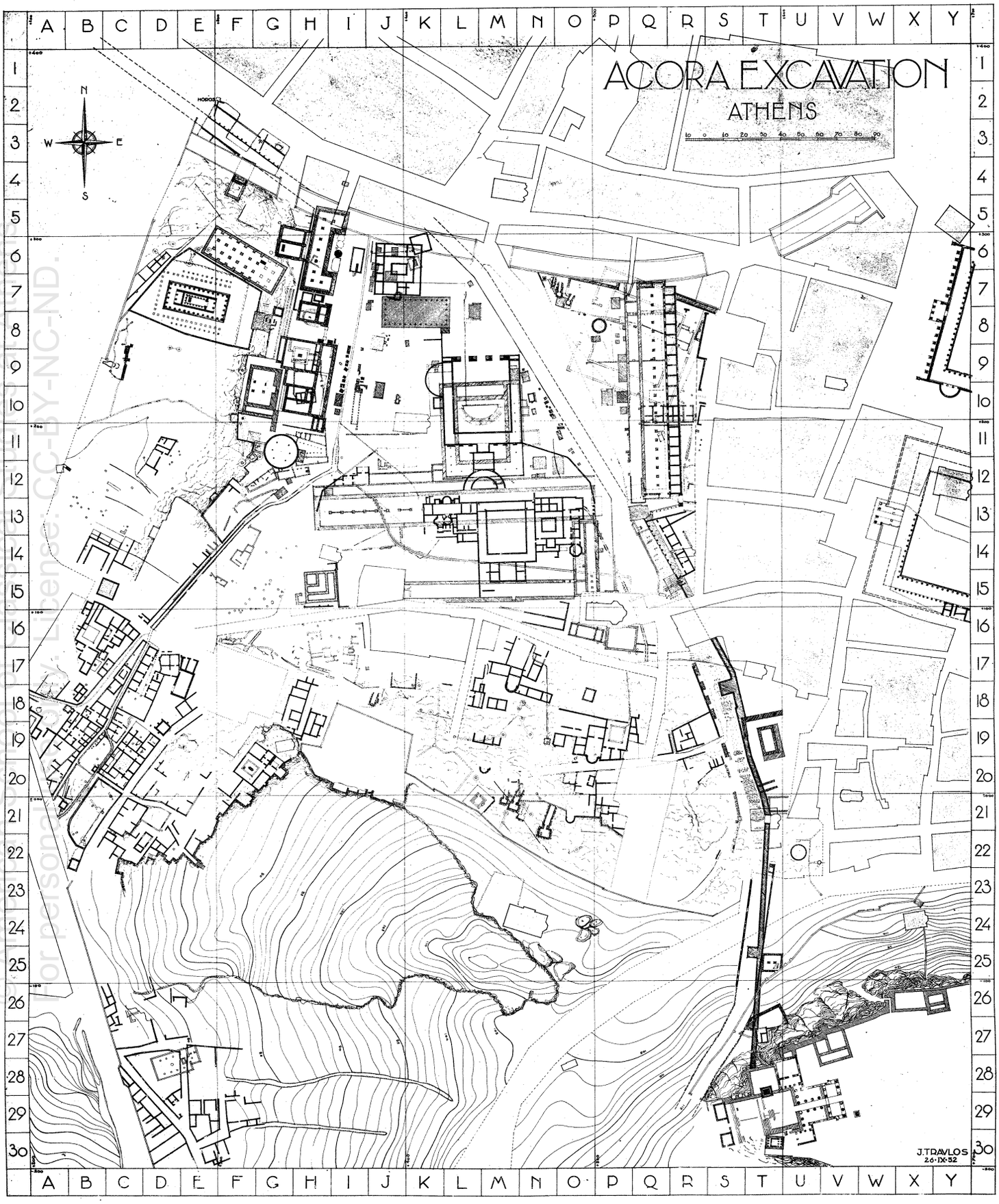
PLATE 56



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Actual State Plan of the Athenian Agora



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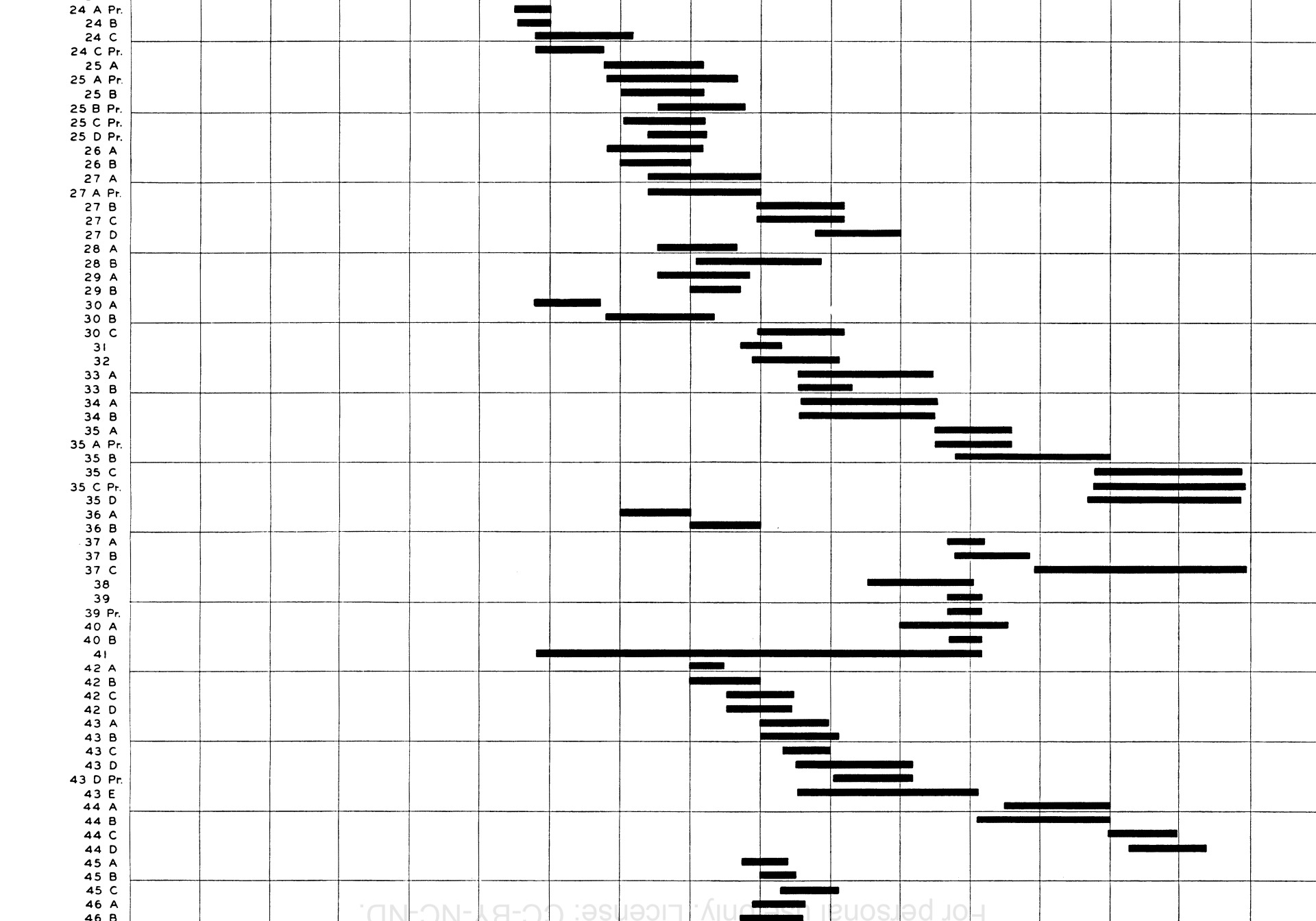

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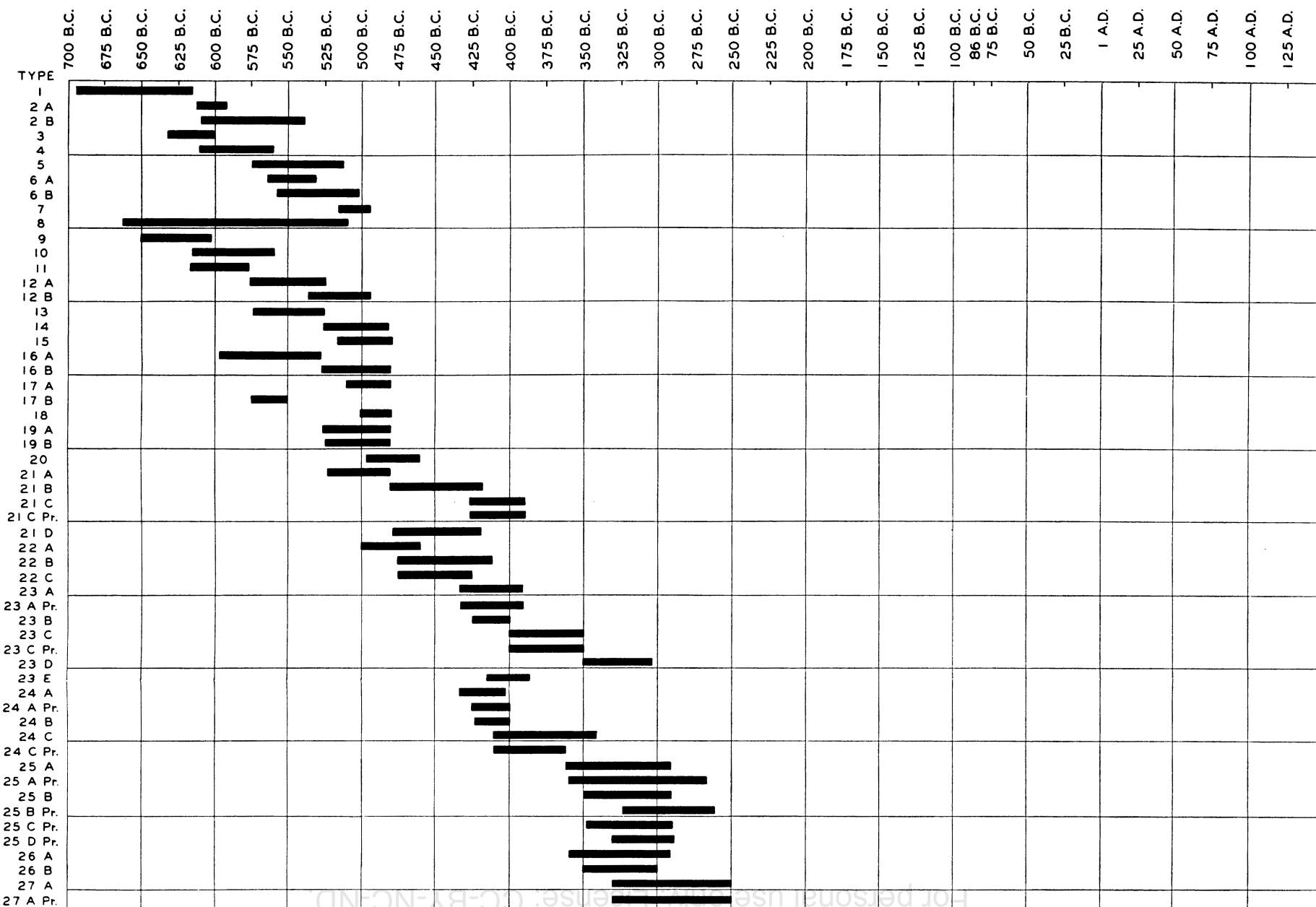

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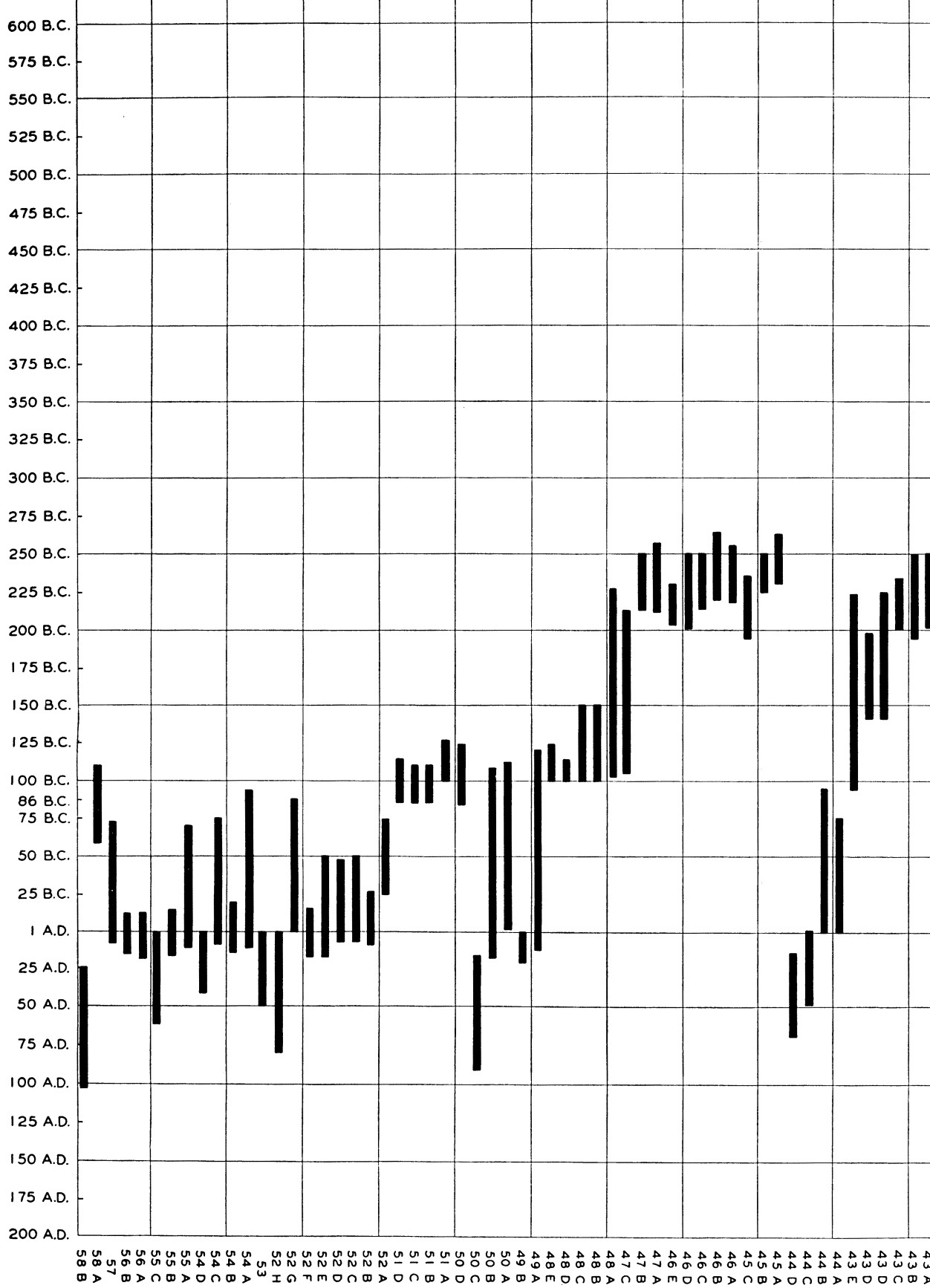

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