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Core-Formed Glass From Dated Contexts (Classical, Mediterranean)

Abstract

This work presents a new typology and chronology of core-formed glass perfume containers produced in the Mediterranean from the late sixth century B.C. to the end of the first century B.C. This study catalogues over two thousand vessels, separated into eighty-eight types, and represents a refinement of the studies of Poul Fossing and Donald Harden.

The new chronology of core-formed glass vessels presented in this work is based on the dates supplied by the archaeological contexts of the examples of the various types. In most cases the types can be dated to a range of twenty-five to fifty years.

A subsidiary goal of this work is the identification of the centers of production of core-formed glass vessels during the second half of the first millennium B.C. Through an analysis of the distribution patterns of vessels with a known provenance it would seem that the main center of production of core-formed vessels in the late sixth and fifth centuries B.C. was on Rhodes. It appears that core-formed glass was produced at a number of centers during the fourth through second centuries B.C. and that Cyprus was the main center during the final period of production in the first century B.C. The production of core-formed glass vessels ceased soon after the invention of glass-blowing.

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CORE-FORMED GLASS FROM DATED CONTEXTS

Murray C McClellan

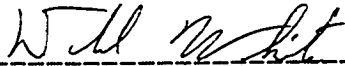
A DISSERTATION

in

CLASSICAL ARCHAEOLOGY

Presented to the faculties of the University of Pennsylvania
in Partial Fulfillment of the Requirements for the Degree of
Doctor of Philosophy.

1984



Supervisor of Dissertation



Graduate Group Chairperson

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MURRAY C MCCLELLAN

1984

TO MY FATHER

iii

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ABBREVIATIONS

The following list of abbreviations are used in the catalogue. Note that all measurements given are in centimeters.

D. base	Diameter of the base.
D. body	Diameter of the body.
D. foot	Diameter of the foot.
D. mouth	Diameter of the mouth.
D. neck	Diameter of the neck.
D. rim	Diameter of the rim.
Est.	Estimated.
H.	Height.
M.D. body	Maximum diameter of the body.
P.H.	Preserved height.
Th.	Thickness.
W.	Width.

PREFACE

Core-formed glass containers of perfumed oils first appeared in Mesopotamia around the middle of the second millennium B.C. From Mesopotamia the core-formed technique quickly spread to Egypt, where core-formed glass vessels reached a vogue in the latter part of the Eighteenth Dynasty. At the end of the Bronze Age the technique seems to have been no longer employed in the production of glass vessels until the eighth century B.C., when core-formed glass vessels reappear once again in Mesopotamia. Core-formed glass vessels began to be produced in the Mediterranean world, both in the eastern Aegean and in Italy, shortly after the middle of the sixth century B.C. By the end of the fourth century B.C., there seems to have been a number of glass workshops that produced core-formed vessels throughout the central and eastern Mediterranean. By the first century B.C. Cyprus has emerged as one of the most important centers in the production of core-formed glass. Shortly after the invention of glass-blowing, around the middle of the first century B.C., the more time-consuming and expensive technique of core-forming ceased.

The delicate and beautiful core-formed vessel has long been a favorite of the connoisseur and collector of Classical antiquities. Core-formed glass can be found in almost every important museum and private collection of antiquities in Europe and North America. Core-formed glass vessels

regularly fetch prices in the thousands of dollars in the major art markets.

The present study, however, is directed to the archaeologists and historians working in the Mediterranean and adjacent areas, rather than to the collectors of antiquities. This work seeks to establish a new, precise chronology of the various types of core-formed glass vessels produced in the Mediterranean during the first millennium B.C. It is hoped that this refined chronology will enable the archaeologist better to date the excavated contexts that contain core-formed glass, and thus to assist the historian in the interpretation of those contexts. For no matter how great the intrinsic beauty of core-formed glass may be, its greatest value is the knowledge that it can shed on human history.

GLOSSARY OF TERMS

In the following pages, some terms involved in a discussion of core-formed glass production are defined. For other terms of glassmaking in general, cf. Harden, 1981, 27-29; and Goldstein, 1979, 24-41.

Bases

A base is an element added to the bottom of a core-formed vessel. Even with this addition, many shapes were unstable and undoubtedly were placed on small stands, pottery, metal and glass examples of which have survived. The earlier amphoriskoi have small base-knobs and the oinochoai have stable pad-feet. Later amphoriskoi can have butt-end, end-knob or flat base-disc additions. The fourth century B.C. aryballos shape can have a stand-roll made of two twists. The fourth century B.C. and Hellenistic unguentaria shapes can have a tall foot-stand or a small base-knob.

Colors

Core-formed glass was produced in a variety of colors. Since weathering has altered the colors of most examples of core-formed glass, and given the fact that the appearance of glass is greatly affected by its viewing conditions, it would be useless to attempt to use a standardized color chart to give numerical approximations of these colors. Further,

while the colors tend to exhibit a remarkable degree of homogeneity, there is nonetheless a range within the main color categories. Describing these variable colors with inexact terms derived from nature (turquoise, olive-green, sky-blue) is to be avoided; rather, combinations of terms (blue-green, dark green, light blue) should be used. While Harden is correct in pointing out that most of what is usually described as yellow is in fact closer to orange, in this work the term yellow will be retained in conformity with standard practice. There are no cases of core-formed glass vessels having both orange and yellow glass.

In general, core-formed vessels were composed of either a translucent glass (usually blue, but also blue-green, green and brown) with opaque glass (yellow, light blue and white) decoration, or were composed of an opaque glass (usually white, though there is a red glass streaked with dark green that borders on being opaque) decorated with a translucent purple, or rarely, blue glass. In this work, it can be assumed that blue, blue-green, green, brown and purple glass is translucent and that white, yellow and light blue glass is opaque, unless otherwise stated.

Core-formed

Core-formed is now the preferred term for the method of manufacture of the vessels that are described in this work. The term sand-core should be abandoned since the study of Bimson and Werner (1968) has indicated that, for the second

millennium industry at least, the core might be composed of mostly clay and organic matter. Examination of the interiors of the first millennium vessels, however, shows that sand was a large ingredient of the core.

In brief, the core-formed process was as follows: a friable core was fashioned around a metal rod, usually .8 cm. to 1.4 cm. in diameter, and heated; a gob of colored glass was then applied to cover the entire core; other, differently colored, glass trails were often added and pulled into various patterns (q.v.); final decorative touches such as rims and handles were then applied, usually composed of the same color of glass as the body of the vessel; the vessel was then set aside, with the core and rod in place; the core and the metal rod supplied sufficient residual heat to allow the vessel to anneal (cool down) naturally, without having the vessel crack from too rapid cooling; the metal rod was then removed and the core was scraped out. All core-formed vessels have a roughened interior, sometimes with traces of the original core adhering to it. For modern attempts to replicate the core-formed technique, cf. Labino, 1966.

Fluting

The pulling of the colored threads into a decorative pattern often left gouges in the body of the vessel. On most vessels this fluting was removed by marvering.

Glass

Ancient glass was a mixture of silica, soda and lime together with certain metallic colorants or decolorants. The related, partly vitreous substances, faience and Egyptian blue, are generally quite easily distinguishable from true glass (for a definition of these cf. Webb, 1978, 1-6; Foster, 1979, 1-9). The term glass paste (pâte de verre) is a misnomer and should be abandoned. Core-formed glass vessels are made of both opaque and translucent glass of various colors (q.v. colors); at the end of the core-forming tradition a truly transparent (though tinted) glass is also used.

Handles

Core-formed vessels are often decorated with miniature handles. On alabastra, the most common handle is a ring handle formed by dropping a thread on the body and pulling it up and around to create the ring. Often the initial point of contact of the thread has a protruding end-knob, alias duck-tail, etc. These handles degenerate into knobs and later simple lug handles. Amphoriskoi generally have handles that go from the shoulder to the neck or rim, occasionally continued around and flattened against the neck; the Hellenistic amphoriskoi generally have tall handles of a tinted glass. Aryballoi have the same ring handles as the alabastra, placed flat against their necks. Dinochōai have handles swung from their shoulders to their rims. Some

hydriskai and unguentaria have short horizontal handles.

Marvering

During the core-forming process, vessels often were rolled against a hard surface, or marver (from the French marbre), while they were still in a malleable state. Marvering would help to create a vessel with walls of an even thickness and would make any applied decorative threads flush with the walls of the vessel.

Patterns

Core-formed vessels were often decorated in a variety of patterns that can be defined by how the pulling tool was manipulated or combed. Closely set alternating up and down strokes result in herringbone (long stroke) or zigzag (short stroke) patterns. More widely spaced strokes can produce festoon (upward stroke), inverted festoon (downward stroke) or feather (alternating up and down stroke) patterns.

Rims

On almost every example of core-formed glass, some type of rim was added to smooth out the naturally irregular surface at the top of the core. These rims can take the form of a simple added trail ("roll"-rim) or a more elaborate flattened rim-disc. The tool marks resulting from the attachment of the rim-discs to the necks are often visible on both surfaces of the rim-discs. The oinichoai have added rim-discs which are tooled into a trefoil shape.

Shapes

Core-formed glass vessels were produced in a number of shapes that developed over time. The earliest shapes were juglets and alabastra. Next came the typically Greek shapes of the amphoriskos, aryballos and oinochoe. An Eastern vessel of this period is the kohl tube, which was used as a container of lead-based eye shadow. In the fourth century B.C., the hydricke shape replaces the oinochoe. In the Hellenistic period, the unguentarium replaces the developed aryballos shape. Also at this time, there develops one alabastra shape that imitates a Punic type of jar, and the amphoriskoi imitate tall transport amphoras.

In spite of a remarkable consistency of form among the examples of any given shape of core-formed vessels of the same period, core-formed vessels were not mass-produced. During the core-formed (q.v.) process, each core was destroyed. Minor idiosyncrasies observable among the examples of a given shape of core-formed vessels indicate that the cores themselves had not been formed in a mold.

Scum

During the initial melting of the glass used to create core-formed vessels, various impurities would come to the surface of the batch. Unless these impurities are carefully removed before the glass is used, the resulting vessel will have speckles of scum of varying sizes, usually white, scattered throughout the body.

CHAPTER 1.

THE HISTORIOGRAPHY OF ANCIENT GLASS

While there are a few late nineteenth century publications of some private collections of ancient glass, the real beginning of the study of ancient glass belongs almost entirely within the twentieth century. 1908 saw the publication of Anton Kisa's Das Glas im Altertum, a monumental three volume compilation of glass from over two thousand years. The beginning of the present century also witnessed a vast increase in scientific excavations, and with them, the publication of glass from known archaeological contexts.

It was not until the middle of this century, however, that glass began to receive the same sort of concentrated attention that had been paid to pottery for more than one hundred years. This increase in interest in glass studies is best attested by the creation of the Association Internationale pour l'Histoire du Verre in 1958 and by the establishment of Corning Museum's Journal of Glass Studies in the following year.

The result of this new scholarly work is that the broad outlines of the development of ancient glass are now widely agreed upon, and a number of specialized studies have illuminated various periods in that development. Each year

sees the unearthing of many new pieces of glass from controlled excavations, often published quickly and knowledgeably. In the area of museum collections, the rapid pace of scholarship is illustrated by the frequent appearance of yet another catalogue of an American or European collection.

The discussion of the origins of glass is still dominated by H.C. Beck's article of 1934.¹ Beck was one of the first to note the importance of Mesopotamia in the production of glass in the second millennium B.C. The evidence for earlier glass, in the form of beads, is still today quite limited. Two recent major publications, one by Birgit Nolte² and the other by Leo Oppenheim, Dan Barag and Axel von Saldern,³ clearly document the two earliest glass-vessel producing traditions, those of Egypt and Mesopotamia. Especially important for the present study is Dan Barag's article in the above mentioned collection by Oppenheim, Barag and von Saldern, which traces the re-establishment of core-formed glass production in Mesopotamia in the first millennium B.C. and investigates its relationship to vessels found in the Mediterranean at the end of the dark ages.

The first, and still the most thorough treatment of pre-Roman glass is Poul Fossing's Glass Vessels Before Glass-Blowing, published in 1940. The present work is an attempt to update and refine Fossing's typology and chronology,

taking advantage of the large amount of documented evidence now available on core-formed glass. The most important presentation of this new information is Donald Harden's very thorough publication of the pre-Roman glass in the British Museum, which includes 55 pieces of core-formed glass excavated by Biliotti in the 1860's at the Rhodian cemeteries at Camiros.⁴ Indeed, the present study is best read with a copy of this publication of the rich British Museum collection close at hand. Other important datable collections of core-formed glass include those of the Spanish excavations at Ampurias, the Italian excavations on Rhodes, and the American excavations at Cyrene, among others.

The reproductions made by Dominick Labino have greatly enhanced our knowledge of the core-forming process, allowing us to reject many of Frederic Schuler's earlier theories.⁵ The work of Monique Seefried and Giammellaro Spano on core-formed glass pendants also furthers our understanding of this technique.⁶ E. M. Aleksejeva's monumental classification of ancient beads, including several core-formed types, helps to bring order to this large body of evidence.⁷

There are not many synthetic studies of non-core-formed pre-Roman glass, though some of the recent work of Dan Barag, Donald Harden, Andrew Oliver and Marianne Stern has gone a long way to clarify the Classical and Hellenistic production of clear and millefiori luxury glass.⁸ It is

important to note that until the invention of the blow-pipe, around 50 to 25 B.C., all glass, including core-formed vessels, was time-consuming to manufacture and hence highly prized. There is no proof that any pre-Roman glass producing workshop utilized all three of the main manufacturing techniques of the period: core-forming, casting and grinding, and millefiori. However, the evidence from the Hellenistic glass factory on Rhodes might indicate that some glass workshops did indeed use a number of different techniques.⁹

Recent studies of the earliest blown vessels in both Israel and Italy now give a firm date in the third quarter of the first century B.C. for the invention of that revolutionary technique.¹⁰ The related method of mold-blowing now seems to have originated in the period of the early Roman Empire.¹¹ The ubiquity of Roman glass presents methodological problems fundamentally different from those that exist for the study of pre-Roman glass. Since Roman glass often rivals pottery as the everyday utilitarian ware, it is not surprising that the most profitable avenue of investigation of Roman glass should be the same as that for ancient pottery, namely careful regional studies. One of the best example of such a study is the early work of Donald Harden on the glass from the University of Michigan's excavation in Karanis, Egypt.¹² Other important studies include the work of Gladys D. Weinberg in Greece and Israel, David Grose in Italy, Jennifer Price in Spain and Fritz

Fremersdorf, Thea Elizabeth Haevernick, Karin Goethert-Polaschek and Barbara Czurda-Ruth in Germany and Eastern Europe.¹³ Clasina Isings's handbook of the forms of Roman glass is still indispensable, though somewhat out of date.¹⁴

The study of late antique and Byzantine glass is also proceeding mainly with regional studies, such as that of G.D. Weinberg's on the Byzantine glass factory at Corinth and A.H.S. Megaw's on the glass from Cyprus.¹⁵ Joseph Philippe has produced a very useful work on Byzantine glass.¹⁶ A recent trend of the last decade has been the concentration on modern copies and forgeries of all types of early glass vessels.¹⁷

The modern scientific analysis of ancient glass has also blossomed in post-WW II studies. Indeed, it is a clearly recognized division of glass studies, as its separate status in the Corning Museum's annual comprehensive bibliography of glass studies attests. E. R. Caley presented a useful summary of pre-1960 investigations.¹⁸ More recent major work has been performed by Edward Sayre at the Brookhaven National Laboratory, by Robert Brill at Corning and by Victor Hanson at the Winterthur Museum.¹⁹ Abroad, Marvis Bimson continues the excellent research on ancient glass at the British Museum Laboratory started by W.E.S. Turner.²⁰ The work of M. A. Bezborodov been made more accessible through a recent publication in German.²¹

The main thrust of the scientific studies has always been elemental studies aimed at isolating chemical distinctions among groups of ancient glass. Advances have been made in separating glasses decolorized with antimony from those decolorized with manganese, in dividing those with a high magnesium concentration from those with a low, and in identifying intentional colorants. An attempt to count weathering crusts as a dating method has now been abandoned.²²

Several studies of ancient glass-making formulas that have been preserved on Babylonian and Hittite cuneiform tablets now exist.²³ The scattered Greek and Latin references to glass and glass production have been collected by M. L. Trowbridge.²⁴

THE ORGANIZATION OF THIS STUDY

The present study, following the pattern established by Fossing and continued by Harden, divides core-formed glass vessels of the first millennium B.C. into four large chronological units: I. the eighth through mid-sixth centuries B.C.; II. the mid-sixth through fifth centuries B.C.; III. the fourth through early third centuries B.C.; and IV. the third through first centuries B.C. Fossing had originally selected these chronological divisions since they represent periods of significant changes in the forms of core-formed glass vessels. We shall argue that these significant changes reflect changes in the centers of production of core-formed glass vessels.

Within each of these large chronological units, the core-formed vessels are arranged according to shape, each shape being designated by a capital letter. Each shape is further subdivided into a number of types. A type is defined as a collection of core-formed glass vessels that share a certain number of general characteristics which differentiates that collection from others of the same shape. Types are designated by small Roman numerals. Individual examples of a given type are noted with an Arabic numeral. In the notation III.C.vi.1, for instance, the "III" refers to the fourth to early third century B.C., the "C" to the aryballos shape, the "vi" to the type having a small lentoid

body with ring handles and stand rolls and the "1" to the first example of this type.

Since the core-formed vessels of Mesopotamian types produced in the eighth through sixth centuries B.C. have already been extensively studied by Barag, only those vessels not presented in Barag's work will be included in the present study. The first part of Chapter Two summarizes Barag's conclusions and presents a brief account of the Italian types of first millennium B.C. core-formed glass vessels.

The second, third and fourth parts of Chapter Two contain a detailed discussion of the types of core-formed vessels produced in the Mediterranean from the mid-sixth century B.C. to the first century B.C. Within the discussion of each type various groups are isolated. A group is defined as a collection of core-formed glass vessels of a given type that share enough specific details of form and/or decoration to warrant assigning that collection to the production of a single workshop. A group is not synonymous with a workshop, however, since several groups of different types of core-formed glass vessels can be the products of a single workshop.

In addition to detailing the characteristics of the various groups of each type of core-formed glass vessel, Chapter Two also provides a suggested dating for each type,

notes the geographical distribution of the examples of each type, and points out any relationship of the groups of a given type to groups of other types. A summary of the types of core-formed vessels presented in parts two, three and four of Chapter Two is listed in Appendix 3, together with the suggested dating of each type.

The catalogue, Chapter Three, contains only those core-formed glass vessels that have at least a general provenance, with the exception of vessels that are of groups not represented by any vessels with a known provenance. Appendix 2 provides a list of core-formed glass vessels without a provenance from major public and private collections. Chapter Three is organized in the same way as Chapter Two, according to the various types of core-formed vessels within the four large chronological units. The catalogued examples of each type are arranged in a roughly geographical order, starting in the Eastern Aegean and sweeping roughly counter-clockwise through the Greek Mainland, the Black Sea area, Italy, Spain, North Africa, the Levant and Central Turkey. The vessels in Appendix 2 are presented according to types, with Asian and European collections being listed before those of North America.

Chapter Four briefly summarizes our knowledge of the use of core-formed glass vessels in antiquity, and makes some suggestions for the identification of the centers of

production of the types of core-formed glass vessels discussed in Chapter Two. These suggestions are supported by Appendix 4, which summarizes the distribution pattern of each type of core-formed glass vessel. Appendix 4 is organized according to the the following large geographical divisions: Eastern Aegean, Greek Mainland, Black Sea area, Northern and Central Italy, Southern Italy and Sicily, Spain and the Balearic Islands, North Africa, the Levant, Cyprus, and Central Turkey.

Appendix 1 presents detailed accounts of the archaeological contexts of core-formed glass vessels from the Italian excavations on Rhodes and from American excavations in the Athenian Agora, in the Sanctuary of Demeter at Cyrene, in the cemetery of Ayios Ermoyenis at Kourion, Cyprus, and in Gordion, Turkey. Other archaeological contexts that have produced core-formed glass are discussed in the notes to Chapter Three. Appendix 5 presents a brief account of the uses of core-formed glass vessels in antiquity.

METHODOLOGY

The purpose of this dissertation is to present a new chronology of core-formed glass vessels based on a typological study of examples from dated contexts. The basic methodology of this work is simple: stylistically determined types are dated by the chronological range of the archaeological contexts of the individual pieces. This is the same principle used by Fossing: "The first fundamental of the work are reports of excavations which have unearthed glass capable of being dated by the aid of other objects discovered at the same site."²⁵

The application of the above principle is, however, fraught with several problems. A major difficulty concerns the determination of the date of the archaeological contexts of the glass vessels. While great strides have been made in refining the chronologies of many objects that are often found in association with core-formed glass, especially of such objects as Greek pottery and coins, most archaeological contexts that yield core-formed glass can be assigned to only a broad range of dates. In addition, the exactitude of the reporting of archaeological contexts that contain core-formed glass must be closely examined. If the context is a tomb, care must be taken to determine whether the burial group was deposited over an extended period of time. If the context is an archaeological stratum, its relationship to the

history of the site must be worked out. In all cases, current research on the chronology of objects found with the core-formed glass must be consulted.

Once a date can be confidently assigned to the archaeological context of a given core-formed glass vessel, the application of that date to the typology of core-formed glass poses other problems. On the one hand, given the intrinsic value of core-formed glass, it is quite possible that one would find a vessel that had been preserved as a prized possession or as an heirloom in a context significantly later than the actual date of its manufacture. It is also possible that the glass vessel is significantly later than the other datable objects from the same context.

In practice, however, the dates of the examples of a given type of core-formed glass vessel tend to fall within a fairly short span of time, with only a few examples coming from contexts as much as twenty-five or fifty years later than those of the majority. In most instances, the internal consistency of the specifics of the form and/or decoration of a given type would indicate that the actual dates of manufacture of that type correspond to the clustered range of dated examples and that the few examples of later date are to be explained as treasured heirlooms. In no case where there are more than two dated examples of a given type of core-formed vessel is there a single example that comes from a

context that is significantly earlier than the contexts of the majority.

The typological divisions used in this study are based on the distinctions that are used in Harden's catalogue of the core-formed glass in the collection of the British Museum. Since, however, Harden's typology, especially that of the core-formed vessels of his Mediterranean Group 1 (sixth and fifth centuries B.C.) is admittedly devoid of chronological implications, certain modifications have been made in his schema.²⁶

The first step of the present study, once the primary collection of data had been completed, was the isolation of the various types of core-formed vessels. This was accomplished through a preliminary sorting according to Harden's classification. Each of Harden's classes was then examined to see if further sub-classes, i.e. types, could be separated. For example, among the sixth and fifth centuries B.C. amphoriskoi Harden had recognized two basic divisions: i) those with an obtuse-angled junction between neck and shoulder and ii) those with an almost right-angled junction between neck and shoulder. He then further subdivided his first division into vessels with dark trails on a light ground (i.e. amphoriskoi made of white glass and having purple glass decoration) and vessels with lighter trails on a dark ground (i.e. amphoriskoi made of dark blue glass and

having decoration of light blue, yellow or white glass). A closer examination of the larger collection of glass treated in the present study reveals that the second subdivision of Harden's division i amphoriskoi can be further broken down into three types: II.C.iii Amphoriskos with tall handles, sloping shoulders (i.e. with an obtuse junction between neck and shoulder) and wavy zigzag decoration; II.C.iv Amphoriskos with sloping shoulders, angular bodies and zigzag decoration from neck to mid-body; and II.C.v Amphoriskos with sloping shoulder, angular bodies and no decoration on neck. The dates of those examples of each of these three types that come from archaeological contexts reveals that this refined typology does have chronological implications. Type II.C.iii amphoriskoi date to 525-500 B.C., type II.C.iv vessels date to 500-475 B.C. and type II.C.v pieces belong to 500-450 B.C.

Once each type of core-formed glass had been isolated and defined, the next undertaking of the present study was to reexamine closely the examples of each type to isolate any groups present. While the determination of any given group is ultimately a subjective act ("does this piece look similar enough to this other piece to say that both were made by the same person?"), care has been taken to state the criteria used to assign individual pieces to a single group. The nature of the core-forming process, in which colored glass is manipulated in a hot, viscous state, insures that, unlike clay vessels, each piece of core-formed glass will have

certain unique features. Nonetheless, in many instances there are collections of core-formed vessels of a given type that, certain unique features notwithstanding, share many features of form and/or decoration in common, features not shared by other members of the same type. For example, among the examples of type III.F.i vessels (large oinochoai with ovoid bodies of the fourth and early third centuries B.C.), there are two pieces, III.F.i.1 and III.F.i.5, that both have an unusual inverted festoon pattern on their shoulders, in addition to their other decorative features that are also shared by the other examples of the type. On the basis of this shared decorative trait, these two vessels have been assigned to a single group.

A related, secondary focus of this work has been the noting of collections of groups of different types of core-formed glass vessels that share enough specific details of form and/or decoration to suggest that those collections had been produced in a single workshop. The above described group of type III.F.i oinochoai, for example, can be linked to the first group of type III.D.i two-handled jars and to the first group of type III.E.ii hydriskai, all of which groups are characterized by inverted festoon patterns on their shoulders. It is reasonable to assume that a workshop producing core-formed vessels would not have limited itself to a single shape.

However, given the unavoidable subjective quality of the determinations of groups, no attempt has been made to organize the presentation of the core-formed glass vessels treated in the present study by groups. The type remains the basic category, both for the organization of the catalogue and the discussion and for the determination of dates. The scholar who uses this work to assign a date to a core-formed vessel not treated in the present work should do so on the basis of the dates assigned to the appropriate type.

The final major undertaking of the present work has been to suggest the centers of production of the various types of core-formed glass that had been isolated. Since no concrete evidence for the production of core-formed glass, such as kilns or wasters, has yet been unearthed from any site of the first millennium B.C., the distribution patterns of the various types of core-formed glass vessels have been used to suggest areas in which the workshops that produced those type may have been located. The use of distribution patterns, of course, runs the risk of identifying patterns of modern excavation and exploration as opposed to revealing the true distribution of a given type in the ancient world. For example, until the recent American excavations at the rich Sanctuary of Demeter at Cyrene, only a handful of core-formed vessels with a known provenance came from North Africa. That number has now been increased by at least five hundred specimens. To help alleviate any skewing of the distribution

patterns that are created by such finds from single sites, the distribution tables note both the numbers of examples of each type found in a given area, and note the number of sites from which those examples had been found. From these tables, radiating patterns of distribution are sought. It is assumed that within the area in which a given type had been produced the greatest number of examples of that type will be found, and the the number of known examples will decrease with increasing distance from that center. It is, however, frankly admitted that all conclusions based on this procedure are tentative and subject to revision with future discoveries.

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CHAPTER TWO

Part One: Eighth to Mid-Sixth Centuries B.C.

As mentioned above, the class of first millennium B.C. glass vessels produced in Mesopotamia has received a thorough treatment by Dan Barag.¹ Here we need only to discuss Barag's main conclusion concerning the relationship between the Mesopotamian and the Mediterranean glass industries and to note a few new pieces.

Barag listed twelve vessels from Rhodes, Carthage, Crete and Etruria which are related to the Mesopotamian types.² Eight of these are wide-bodied alabastra (Barag's shape no. 8) and can be closely paralleled by examples from Mesopotamia. The other four are juglets (Barag's shape no.16), a type unknown in Mesopotamia.

Of the alabastra, Barag cautiously concludes that, while they may indeed be true Mesopotamian exports, they equally may have been made by Eastern craftsmen who had established workshops in the West, perhaps in Rhodes. Barag notes that such a transplantation of Eastern artisans has been hypothesized for the related production of seventh century glazed pottery vessels,³ as well as for certain metal and ivory industries.

Barag assumed that the four juglets were Western products, although they are related to the later Mesopotamian series. He refrains, however, from assigning that production center to Rhodes, since only one example certainly comes from that island, the others coming from Crete and Etruria.⁴ Barag knew of one other juglet, from the Greau collection, which possibly came from Rhodes. A sixth juglet, recently sold from the Wheaton College collection, is of unknown provenance.⁵

In his most recent work, Donald Harden agrees with Barag's conclusions concerning these seventh century vessels found in the Mediterranean.⁶ Harden stresses the fact that all but one of the wide-bodied alabastra were found on Rhodes, and that exception, from Carthage, could easily have been imported from Rhodes, being from a tomb containing a Rhodian anthropomorphic faience vessel.

Harden recognized another type of alabastron (here I.A.ii), narrow bodied with coiled knob-handles.⁷ Although Barag does not mention the type, Harden assigned it to the Mesopotamian milieu. We will see, however, that the single example of this type known to Harden is not unique, and that the class is probably Mediterranean.

Before proceeding with further discussion of the first millennium Mesopotamian and related vessels, brief mention must be made of core-formed vessels produced in Etruria. In

1959, Thea Elizabeth Haevernick made an exhaustive study of a class of vessels, mainly oinochoai, decorated with irregular rows of pinched knobs.⁸ Donald Harden has updated the list of known examples of this type, of which all pieces with findspots come from Central Italy.⁹ The earliest piece, with flame-rounded protrusions, belong to the late seventh and early sixth centuries B.C., while later examples, with untreated knobs or scales apparently continue into the late fourth century B.C.

Harden has also noted a rare second class of core-formed vessels with independent zigzag trails (as opposed to a continuous spiral that is pulled into a zigzag pattern).¹⁰ Though only two examples of this second class are known, both without provenance, Harden probably correctly postulated an Italian origin for them.

This second class of core-formed "Italian" vessels can be related to a group of cast ribbed glass vessels with similar decoration from S. Lucia di Tolmino in Yugoslavia, from the Late Hallstatt period (sixth century B.C.).¹¹ Other cast ribbed vessels, without decoration, come from S. Lucia and from Hallstatt itself. These were all presumably made in the Adriatic region.

While the question of the origins of the Etruscan core-formed and the Hallstatt cast vessels is beyond the scope of this study, two points need to be made here. First, it is

now known that glass, in the form of beads and fibulae ornaments, was produced in the Adriatic region as early as the eighth century B.C., and that such glass frequently turns up in Etruria.¹² Thus it is possible that both the Hallstatt and Etruscan glass vessels industries develop from this earlier bead industry. On the other hand, however, it has already been noted that seventh century Mesopotamian-style vessels do occur in Etruscan contexts, and that it is therefore possible that these, and not the earlier Adriatic glass bead industry, influenced the Etruscan production. In any case, it should be pointed out that neither the Etruscan nor the Hallstatt glass industries had any influence on the later Mediterranean core-formed production.

Here we present only those vessels, twelve in number, not recorded in Barag's catalogue. Eight come from known findspots, while the other four are of unknown provenance (see Appendix 2).

Two of the wide-bodied alabastera (type I.A.i) not in Barag's catalogue are unpublished. The first, from Eretria, is very similar to the Rhodian examples, and may be an import from there. On the other hand, the recent Swiss, British and Greek excavations on Euboea have shown that that island was very important in the reestablishment of Greek commercial contacts with the materially advanced Levantine cultures as early as the tenth century B.C., and thus it is equally

possible that the hypothesized resettlement of Eastern glass workers in the Mediterranean may have included Euboea as well as Rhodes.

The other unpublished wide-bodied alabastron, I.A. i.2, comes from a disturbed context at Gordion. This piece, however, cannot be precisely paralleled by any vessel, Mesopotamian or Mediterranean. Its general shape, simple decoration and deep fluting clearly relate it to the Mesopotamian industry. Its lack of a distinct tall neck and its degenerate handles, however, clearly set it apart from the products of that industry. While this Gordion example may be a direct import of an heretofore unknown Mesopotamian type or the product of an as yet unknown western Anatolian glass industry, it perhaps more likely represents an early East Greek attempt to imitate the products of our hypothesized transplanted Eastern workshops.

The first three examples of the narrow alabastra, from Cyprus, Sicily and Etruria, are similar in both shape and date. The two Italian pieces, I.A. ii.2-3, are so close in all details that they most likely represent the output of a single workshop. It is also likely that all three of these pieces were made within a short time span, probably more towards the middle of the sixth century than the beginning. The example from Carthage, illustrated only in a nineteenth century drawing, shares the irregular decoration of the

Cypriot piece, though it differs in its more pronounced rim.

The three examples of type I.A.ii without provenances (see Appendix 2) had been dated by Harden to the fourth century B.C.¹³ They are clearly related to the Italian examples, however, and the high placement of their handles and their inverted festoon decoration are only superficially related to the fourth century types.

These type I.A.ii alabastra, wherever they may have been produced, are certainly the forerunners of a later type of alabastron with inverted festoon decoration, type II.A.iv. These earlier alabastra, however, are clearly distinguished by their elongated shape and by their almost nonexistent rims.

While it is intriguing that three examples of type I.A.ii alabastra were found in the central Mediterranean area, it would be rash to assume that they were produced there. Rather, taking the distribution of all the above discussed alabastra and juglets into account, a consistent pattern emerges: just as with other oriental exotica of the period, these glass vessels spread from the Levant to emerging economic centers of the Mediterranean.

The final three pieces of glass to be discussed in this section do not belong to the Mesopotamian-inspired earliest Mediterranean glass producing tradition. Instead, they seem

to be true Mesopotamian exports. The two baggy vessels from Vani in Northern Caucasia, I.B.i. 1-2, come from a tomb group with a second quarter of the sixth century B.C. Attic Siana cup.¹⁴ While they cannot be paralleled by any other known first millennium piece of glass, they do resemble some second millennium Mesopotamian jars.¹⁵ It should be noted that another site, Karmir Blur (the Urartian town Teishebaini), has produced a more typical Mesopotamian glass bottle.¹⁶

The final piece, I.B.ii.1, a fragment from a late seventh-early sixth century B.C. context at Tel Masos in Israel, also cannot be precisely paralleled by a known Mesopotamian example. It too, however, is most probably a Mesopotamian export as opposed to a Mediterranean or a local Syro-Palestinian product, and might be placed before the conquest of the area by the Neo-Babylonian king Nebuchadrezzar in the early sixth century B.C.

Part Two: Mid-Sixth to Fifth Centuries B.C.

In the following pages, 505 pieces of glass from dated contexts or with known provenances are divided into thirty-six types. These types encompass five basic shapes (alabastron, kohl tube, amphoriskos, aryballos and oinochoe) and the variations in decoration present in each shape. Appendix 3 gives a brief summary of the types and their chronological range.

With the exception of the kohl tubes, all of these types, as well as the types to be discussed in Parts Three and Four of this chapter, are Mediterranean products. No example of any of these types was found in Mesopotamia or Egypt, and the examples from the Levant form only a small fraction of the total.

In Part One of this chapter, we suggested that at least some of the seventh and early sixth centuries B.C. Mesopotamian types of core-formed glass that had been found in Mediterranean contexts were made by Eastern craftsmen who had settled in Rhodes and perhaps Euboea. We further identified one piece, I.A.i.2, that seems to represent the earliest attempt by a Greek, again perhaps a Rhodian, artisan to imitate the products of these transplanted Eastern craftsmen.

It should come as no surprise, therefore, that the

Eastern Aegean should predominate over other areas of the Mediterranean and Black Sea in containing sites that have yielded core-formed glass types of the subsequent later sixth and fifth centuries B.C. We shall argue in Chapter Four that these types were all the products of Eastern Aegean workshops. We can only speculate about the exact circumstances that caused such a flowering of core-formed glass production in this area during the century and a half following c. 550 B.C. The second half of the sixth century B.C. was a period when East Greece was greatly influential in the intellectual and artistic life of Greece. It also was a period when both Greeks, in their ancestral homes and in their colonies, and their neighbors were experiencing a great increase in material prosperity. This increased prosperity certainly had much to do with the establishment of such a prolific core-form glass-producing tradition at this time.

Type II. A. Alabastra.

The alabastra are divided into fourteen separate types, ranging in date from 525-500 B.C. to 420-375 B.C. There are 192 examples from known provenances. Harden noted that all alabastra of this period can be separated into two divisions: one with horizontal rim-discs and one with inward sloping rim-discs, and that these two divisions can each be further sub-divided into three variant forms.¹⁷ Harden's divisions,

however, are admittedly typological and not chronological. It is only when further subdivisions, based in the main on differing decorative schemes, are made that closely dated types emerge, in the cases of II.A.i-iii, vi, vii, ix and x, within a quarter century.

Type II. A. i. Alabastron of white glass, with horizontal rim-disc and rounded body, with zigzag or festoon decoration of purple glass. {Chapter Three, p. 173}

The first six examples of this type are all remarkably similar and certainly belong to a single group. They have broad rim-discs, mouths slightly larger than later types, narrow necks, and bodies so rounded they approach being oval. They each have a distinctive decoration of three or four sets of tall wavy zigzags, and each is deeply fluted.

Nos. 1 to 6 come from contexts in Rhodes, Phocis, South Russia and Italy. Nos. 1, 2, 4 and 5 are from two graves, one in Olbia and one at Camiros, both dated 525-500 B.C. No. 3 is a small fragment from the sanctuary at Kalapodi, in a destruction deposit from the Persian sack of 480 B.C. No. 6, from Cumae, most likely came from a 6th-5th century cemetery.

The example, no. 7, recently sold from the Constable-Maxwell collection, is unusual in having a festoon pattern decoration; it is paralleled by pieces in the Hermitage and in Copenhagen (see App. 2). In shape it is very close to

type, II.A.x, and is not unrelated to type II.A.x.

Though the distribution of the examples of II.A.i is wide, there is no reason to believe that the first six pieces were not made at a single workshop, over a quite restricted period of time. Indeed, the similarities among these examples makes it probable that they are the products of a single craftsman.

Type II. A. ii. Alabastron of white glass, with horizontal rim-disc and rounded body, decorated with inverted festoon pattern. {Chapter Three, p. 174}

While the two pieces of this type have the inverted festoon pattern decoration of type II.A.vii vessels, they are more closely related to type II.A.i alabastra in having wide, rounded bodies and prominent handles, and in being composed of white glass with purple decoration. These two alabastra are very similar to each other, differing only in their heights, and could easily have been made by in a single workshop. The fact that both come from non-Greek contexts in Etruria and Sicily does not necessarily imply that they were not made by Greeks; indeed, the simplest explanation of their ultimate deposition would be to assume that they came from a single merchant, perhaps one from East Greece, who traded with both Etruscans and Sicels.¹⁸

Type II. A. iii. Alabastron of white glass, with horizontal rim-disc and rounded body, with plain trail decoration.
{Chapter Three, p. 174}

This rare type of alabastron, having white glass with simple thread decoration, is represented by one specimen from Megara and two from the Milesian colony of Panticapaeum. In shape these vessels are clearly related to type II.A.i, though they are more developed and probably date to 475-450 B.C. Voščinina has shown that this type was also produced in dark blue glass, here type II.A.xii.¹⁹ Once again, the distribution pattern suggests a common, perhaps East Greek, source for these alabastra.

Type II. A. iv. Alabastron of white glass, with horizontal rim-disc and cylindrical body, decorated with zigzag pattern of purple glass. {Chapter Three, pp. 174-177}

This class of white glass alabastra is much more common than those with a rounded body, types II.A.i-iii, there being twenty-three examples with known findspots and at least eighteen without provenance.²⁰ Furthermore, those examples of type II.A.iv alabastra that can be closely dated clearly show that this type began after type II.A.i, their dates ranging from 500-475 B.C. to 440-425 B.C. Given the internal coherence of this type, however, it is doubtful that they were continually produced over a 75 year period. Rather, it is more likely that these pieces represent the output of

perhaps two generations of glass workers active during the second and early third quarters of the fifth century.

Although the vessels of this type are superficially similar to each other, they can be separated into two chronological divisions, based on the size of their rim-discs and the shape of their bodies. The earlier pieces tend to have rims significantly larger than the maximum diameter of their bodies, and to have slightly rounded or baggy shapes. The later examples of this type, on the other hand, tend to have more narrow rims and nearly cylindrical bodies.

Within the earlier division, three distinct groups can be recognized. The first, including no. 1, and nos. 7-10,²¹ range from 10.0 to 11.2 cm. in height and have rims with a diameter of 3.3 to 3.9 cm. They have narrow, constricted necks, rounded bodies, and neat, carefully made zigzag pattern decorations. A second group within the earlier division, including nos. 4, 16, 22 and 23,²² have more elongated, slightly baggy bodies (from 10.5 to 14.1 cm. high), slightly smaller rims (from 3.0 to 3.6 cm in diameter) and tend to have a wider band of horizontal threads above their zigzag patterns.. The third group is represented by no. 14 and a piece in the Carnegie Museum of Natural History (no. 24058/2; see Appendix 2); these vessels have the large rims of the first group, from 3.5 to 3.7 cm. in diameter, but are significantly more narrow and much less carefully

decorated.

Whereas the examples of the earlier division of type II.A.iv alabaster probably represent the production of three different workshops, or at least three different artisans, those of the later division are sufficiently similar to have been made in a single workshop. To this later group belong nos. 6, 12, 15, 17, and 19-21.²³ As mentioned above, they have nearly cylindrical bodies, from 9.1 to 10.3 cm. in height, and narrow rims, from 2.8 to 3.3 cm. in diameter. Their necks are wider and less set off from their bodies than the earlier groups, and they tend to have slightly taller zigzag patterns.

The examples of the first three groups range in date from 500-475 to 475-450 B.C., with the exception of nos. 16, which must be considered an heirloom in its late fifth century B.C. burial context. The dated examples of the last group range from 460-440 to 440-425 B.C. As stated above, the internal coherence of the groups would suggest a restricted rather than prolonged period of production. We should thus see the earlier groups dating to c. 475, give or take ten years, and the later group to c. 450. Although the findspots of type II.A.iv alabaster include sites from South Russia to Libya, and from Cyprus to Italy, it is probably significant that more than half of the pieces with a known provenance come from Rhodes and Pitane.

A unique piece, no. 24, of unknown provenance, has proportions which would place it within the earlier division of this type. This piece, however, is decorated with a single, uncombed, thread spiralling down the length of the body, a decoration which links it with the preceding type of alabastron.

Type II. A. v. Alabastron of white glass, with horizontal rim-disc and cylindrical body, with decoration of blue glass.
{Chapter Three, p. 177}

The use of blue or green-blue decoration on a white glass alabastron is extremely rare. The five examples in the catalogue are all fragments, and the exact shapes of the original bodies cannot be reconstructed. The one complete example, in the British Museum (see Appendix 2), is without provenance. It has the straight-sided cylindrical body of the previous type. It is interesting to note that the few fragments with a known findspot come from Sardis and Cyrene; surely they come from a common source, perhaps one in Ionia or the Dodecanese.

Type II. A. vi. Alabastron of dark glass, with inward sloping rim-disc and rounded body, decorated with herringbone pattern. {Chapter Three, pp. 178-179}

Two elements which distinguish this class of alabastron, the herringbone pattern all over the body and the pronounced

fluting, harken back to the earlier style alabastra, type I.A.i. These alabastra are, however of a later date, as the consistently 525-500 B.C. date of the eight dated examples attests.

Nos. 1, 2, 4, 7 and 8 are closely related. They range in height from 10.5 to 12 cm., and are from 3.0 to 3.5 cm. wide. These examples come from rich tomb groups of approximately the same date, scattered over a region from Jordan to Italy to Carthage. Other members of this group include pieces in Warsaw (no. 198966), Newark (no. 50.1311) and Larnaca (Pierides Coll.); see Appendix 2.

Nos. 5 and 6 form a second group, each being tricolored and deeply fluted. No. 5 is set off by having a flat disc foot, a feature seen on a similar tricolored piece in the Newark Museum (no. 50.1261; see Appendix 2). Although these two pieces with known provenance come from the West, we cannot conclude that the group was produced there since the sample is so small. A fourth example of this group, without a findspot, is in Warsaw (no. 147551; see Appendix 2).

A third group is represented by a piece from Trebenische, no. 3. The offset neck and the very deep fluting of this piece makes it most like the previous Mesopotamian-inspired types.

Two final examples in this type, nos. 9 and 10, both of

unknown provenance, have horizontal lines on the necks, and a herringbone pattern over the rest of the body. In this, these two anticipate type II. A. viii, where the herringbone decoration gives way to a band of zigzag decoration on the middle of the body. These two vessels should be somewhat later than the other three groups.

These pieces of type II. A. vi most likely came from at least four different workshops. The wide geographical distribution of the eight examples with known findspots makes it difficult to pinpoint the home of these workshops, though there is no reason to presume that they were not produced in the Eastern Mediterranean.

Type II. A. vii. Alabastron of dark glass, with inward sloping rim-discs and rounded body, decorated with inverted festoon pattern. {Chapter Three, pp. 179-181}

With two exceptions, the sixteen vessels with known findspots of this category are remarkably similar in shape, decoration and date. One exception, no. 15, from Caere, has no neck and its ring handles lack the end-knobs conspicuous on the other examples. These features relate no. 15 to the earlier alabastron type I.A.ii. No. 15 cannot be dated precisely since it came from a tomb used from c. 575 to 450 B.C.; it probably belongs to the third quarter of the sixth century, or a generation before the other examples of

II.A.vii. It is paralleled by one other piece, in Warsaw (no. 198998; see Appendix 2).

The other unusual piece, no. 10, from a tomb in Eretria, has been dated by Harden to the fourth century on the basis of its decoration.²⁴ We have already shown that some of the alabaster with inverted festoon decoration which Harden assigns to the fourth century in fact belong to the earlier type I.A.ii. Since the Eretria tomb also produced II.C.vii.34, II.D.iv.9, II.E.ii.2 and II.E.iv.34, all of which belong to the middle of the fifth century B.C., we have no reason not to date no. 10 to the fifth century B.C.

The other fourteen catalogued examples of II.A.vii form a secure group. The inverted festoon decoration was always made with white opaque glass, while the rim could be decorated either in white or yellow glass. Most of the examples are quite small, from 7.3 cm. to 9.8; three examples (nos. 1, 4, and 10) are significantly larger, from 11.2 to 13.0 cm. That these larger vessels are nearly exactly one and a half times the size of the smaller ones may indicate that some sort of standardized quantities were employed by the manufacturer.

Although the findspots of type II.A.vii alabaster range from the Aegean to South Russia and Italy, they are concentrated on Rhodes, with more than half of the examples

coming from that island. Considering that there is evidence for core-formed production on Rhodes later in the fifth century, we may hypothesize that the type II.A.vii alabastra were also made there.

Type II. A. viii. Alabastron of dark glass, with inward sloping rim-disc and rounded body, decorated with zig-zag pattern. {Chapter Three, pp. 182-188}

This is a very broad category incorporating at least three groups that date to the years 525-450 B.C. As the numbers of surviving examples would indicate, it was a most popular type, there being forty-six examples with at least a general provenance and more than twenty of unknown provenance in public and private collections.

The earliest group as exemplified by no. 30, from Tarento, is at least partially contemporary with the alabastra with herringbone decoration, type II.A.vi. They share with type II.A.vi. the same shape and the same technique of decoration with one long single thread that goes from the top to the bottom of the vessel. While no. 30 has virtually no neck, later members of this first generation group have narrow necks often decorated with a particularly thick thread. Included in this group are nos. 3-4, 6-9, 11-14, 16-18, 21-23, 25-26, 28-30, 36-39, and 43. Nos. 45-46 which Cesnola says are from Cyprus and illustrates with poor

drawings may also belong to this group.²⁵ This early group tends to be tall (10.5 to 14.7 in height) and have smallish rims (2.5 to 3.5 in diameter).

By contrast, the main group of later alabastra are characterized by shorter bodies (8.5 to 10.1 high), again having narrow rim-discs (2.4 to 2.7 in diameter). They have a rounded body and tapering neck which links them to the small alabastra with inverted festoon decoration, type II.A.vii, as well as to the following type. The eight vessels of this group from recorded excavations, nos. 5, 15, 19, 20, 24, 31-34 and 42, have findspots ranging from Cyprus to Spain.²⁶ The three Ampurias examples give us a clear date of 500-475 B.C. for this group.

A third group is exemplified by nos. 1, 2, 27 and 35.²⁷ Now the decoration is confined in the main to the middle of the body, with a final thread or two final threads added at the bottom after the zigzag decoration had been applied and the vessel marvered. The virtuoso decorative technique of using a single continuous thread which we saw in the earliest group of this type is now being utilized in type ii.A.xiii and II.A.xiv vessels. This third group is related by shape to both the white glass type II.A.iii and to the dark blue glass alabastra with simple line decoration (II.A.xii).

This third group seems to be slightly later than the second group, and may be thought of as the products of a

third generation of craftsmen working in the second quarter of the fifth century B.C. It should be noted that this final group continues the inward sloping rim-disc found on the earlier forms, and is thus not related to the contemporary type with broad flat rim-discs and cylindrical bodies, II.A.xi, even though they have similar decoration.²⁸

When the distribution of all of the vessels of this type are considered, we again see a wide spread through the Mediterranean and the Black Sea. While the earliest group especially is well represented in sites in Magna Graecia, it is significant that all three groups are found on Rhodes. Once again, the most likely hypothesis would be that each of the three groups were produced at and distributed from a single, presumably Dodecanesian, center. The three groups of type II.A.viii alabastra could have been made in a single or closely related group of workshops over a period of fifty or more years.

Type II. A. ix. Alabastron of dark glass, with inward sloping rim-disc and rounded body, with plain trail decoration. {Chapter Three, p. 188}

As Donald Harden has pointed out, this type is closely allied by shape to the alabastra with inverted festoon decoration, type II.A.vii and to the second group of the

above type II.A.viii alabastra. Harden also notes that these vessels and the related type II.A.viii pieces have white scum--impurities that should have been removed after the initial fritting of the glass. While Harden postulates that the present of white scum in fourth century vessels is an indication of Italian manufacture, he does not believe that to be the case with these earlier alabastra.²⁹

Nos. 1-3 and 5 form a close group and were probably made by a single hand. No. 4 is distinguished by its greenish-blue glass and its dumpier shape, both of which features appear to be related to type II.A.x vessels.

The dating evidence for this type is unfortunately weak, the only help being the piece from Ampurias (no. 5), which belongs to the first half of the fifth century B.C. There is no reason, however, not to assume that this type, as type II.A.vii, belongs to the first generation after type II.A.i, i.e. to 500-475 B.C.

Type II. A. x. Alabastron of dark glass, with horizontal rim-disc and rounded body, without decoration. (Chapter Three, p. 189)

This closely related group of five glass vessels are distinguished by their color, transparent green or blue-green, and by their lack of decoration. Their shape relates them to type II.A.i.

They are tall vessels, the examples with preserved heights ranging from 13.5 to 14.5 cm., with broad rim-discs, ranging from 3.0 to 3.5 cm. They have been found in contexts from the Aegean and Italy. Only one example, no. 1, from Ialysos, can be closely dated, to 525-500 B.C. Since, however, the related type II.A.i also dates to the last quarter of the sixth century, we can be safe in assigning this date to the whole group.

Type II. A. xi. Alabastron of dark glass, with horizontal rim-disc and cylindrical body, decorated with zigzag pattern at mid-body. {Chapter Three, pp. 189-191}

Just as with the similar vessels of white glass, type II.A.iv, the numerous examples of type II.A.xi alabastra can be divided into two chronological periods of the second and third quarters of the fifth century B.C., respectively. The forty-five pieces listed in the catalogue and Appendix 2 testify to the popularity of this type during this period.

Type II.A.xi alabastra can be divided into three distinct groups based on the shape of their bodies. The earliest group, including nos. 1 and 7,³⁰ have rounded bodies that link them to the earlier group of type II.A.iv as well as to types II.A.iii, II.A.vii and II.A.xiii. Unlike the white glass alabastra group of type II.A.iv, however, this group does not have large rim-discs, the diameters of the

rims here being 3.4 cm. or smaller. The second group of II.A.xi alabastra, nos. 5, 6 and 14,³¹ have the same angular, baggy bodies as the second group of type II.A.iv. No. 14 is anomalous in having a very irregular body, probably the sign of an inexperienced artisan.³²

The cylindrical bodies of the third group of type II.A.xi are equivalent to those of the examples of the later chronological division of type II.A.iv. The members of this third group have either slightly rounded cylindrical bodies (nos. 2-4, 11, 12, 15 and 17)³³ or absolutely straight-sided cylindrical bodies (nos. 8-10, 13, 16 and 18-22).³⁴ This third group, then, shows a development from the truly rounded bodies of the first group to the straight-sided bodies typical of types II.A.xiii and II.A.xiv. It is interesting to note that no. 22, without provenance, is made in an opaque reddish brown glass that is common in types II.A.xiii and II.A.xiv.

The dating evidence for all three groups of type II.A.xi alabastra is regrettably ambiguous. All of the datable examples of the first and second groups belong within the second quarter of the fifth century. The examples of the third group which are dated 475-450 B.C. probably belong to last decade of that period, based on the dates of the analogous cylindrical bodied alabastra of types II.A.iv, II.A.xiii and II.A.xiv.

The distribution pattern of type II.A.xi vessels is the same as we have observed elsewhere: a scattering from Jordan to Spain, with a concentration on Rhodes. Once again, the simplest explanation of this phenomenon would be that these vessels were produced in a number of related East Greek workshops, from whence they were distributed to the wealthy classes of the Mediterranean.

Type II. A. xii. Alabastron of dark glass, with horizontal rim-disc and rounded or cylindrical body, with plain trail decoration. {Chapter Three, pp. 192-193}

This rare type of alabastron can also be divided into two groups, based on the shape of the body. The simple decoration of both groups is not a sign of careless workmanship, however. Both the slightly rounded bodies of the first group, and the cylindrical bodies of the second are well formed.

The members of the first group, nos. 1-3, 5 and 8, are all very similar to each other and probably were made in a single workshop. We have pointed out above that the rounded-bodied dark blue alabastra are related to the white glass type, II.A.iii and to the latest group of II.A.viii.

In addition to their cylindrical bodies, the examples of the second group, nos. 4, 6, 7 and 9, can be distinguished

by the marvering of the added threads. No. 9 is unique in being made of a dark purple glass. Here also the similarity of the examples suggests that they were all products of a single workshop.

The dating evidence for the two groups of type II.A.xii alabastra is not as clear as it had been for the corresponding groups in type II.A.iii and II.A.ix. We might suspect that no. 1, from the Fikellura cemetery of Rhodes, may be an heirloom since it is related to type II.A.iv and II.A.xi vessels that belong to the first half of the fifth century. No. 7, from Certosa, likewise poses a problem in that it would suggest an earlier date for the cylindrical shape than we have seen before.

While type II.A.xii alabastra are represented by only eight examples, the limited sample produces the by now familiar distribution pattern. Again, it should be pointed out that nearly half of the samples come from East Greece.

Type II. A. xiii. Alabastron of dark glass, with horizontal rim-disc and cylindrical body, decorated with zizag pattern all over body. {Chapter Three, pp. 193-196}

This large and important category of cylindrical-bodied alabastra can be dated from the second half of the fifth century B.C. to the early fourth century B.C. As noted above in types II.A.iv and II.A.xi, the straight-sided shape

originates perhaps a little before the middle of the century. A few type II.A.xiii alabastra come from contexts of 475-450 B.C., notably, nos. 14, 22 and 31. However, the majority (nos. 1-8, 15, 19, 24-26, and 29-31) come from contexts of the mid-fifth century into the early fourth century.

Most of the vessels of this type are composed of the technically difficult red glass, which at this time makes its first appearance. That this red glass was created by the intentional addition of iron has been demonstrated by W.E.S. Turner.³⁵ The degree to which the added iron is oxidized determines the various colors, ranging from an opaque bright red ("brick") to brown to a semitransparent green. Almost all examples of this glass have red or green streaks. A few later examples are composed of the normal transparent blue glass or of a translucent light brown ("honey") glass.

Type II.A.xiii can be divided into three groups. The first and second groups belong exclusively to the fifth century, while the third group goes into the fourth century. The first group (nos. 1-5, 10-12, 15-17, 22-28, 30, 31, 34) is distinguished by its zigzag pattern which begins high on the body, while the second group (nos. 7-8, 14, 18, 19, 21) has a spiralling thread on the upper body, the zigzag pattern beginning below the handles. No. 6 is unusual in its tall zigzag pattern. The two pieces from Ampurias, nos. 32 and 33, illustrate a third group, clearly a degeneration of the

earlier groups.

The thirty-seven catalogued vessels of this type come from the same wide range of findspots we have seen earlier. Here too, a large number have been uncovered in East Greece. We should note, however, the popularity of this type in the Greek colonies of the Black Sea (see no. 20). While it is not impossible that some of type II.A.xiii vessels were produced in the Black Sea Ionian cities of Olbia or Panticapaeum, it would be hard to explain their distribution to Sardis or Ibiza from the Black Sea.

Type II. A. xiv. Alabastron of dark glass, with horizontal rim-disc and cylindrical body, with spiralling trail decoration all over body.. {Chapter Three, p. 197}

The small number of surviving examples of this type, eight in the catalogue and Appendix 2, is an indication of its relative rarity. The shape and decoration of this type are closely related to the preceding type. The decoration of a single thread spirally wound over the entire body is, in fact, a stage in the decorative technique of type II.A.xiii. The only difference between the two types is the fact that the thread of II.A.xiv vessels is not pulled into a zigzag pattern.

Five examples of type II.A.xiv alabastra, nos. 1-4 and

6, are close enough in details to be assigned to a single group; this group was made by the same workshop that produced a group of type II.C.ix amphoriskos and II.D.iii aryballos. That this group belongs to the second half of the fifth century B.C. is shown by the example from Camiros, no. 1; this date is reinforced by the close relationship between types II.A.xiv and II.A.xiii alabastra.

No. 5, in the Hermitage Museum, has a completely different decorative scheme, related that of type II.A.xii vessels. The cylindrical shape of this example places it, however, with the other examples of type II.A.xiv alabastra.

Type II. B. Rod-formed Kohl Tube. {Chapter Three, p. 198}

As with the earlier first millennium B.C. Mesopotamian glass vessels, Dan Barag has brought order to this class of small glass containers of kohl, or eye-shadow.³⁶ Barag has demonstrated that these rod-formed vessels are to be found exclusively in the East, a fact which supports the hypothesis that ancient Greek women did not wear eye-shadow. The three fragments from Gordion represent, in fact, the westernmost findspot of this type recorded to date.

Barag traces this type back to a Mesopotamian industry of the mid-sixth century B.C., and would place the beginning of its production in the latter fifth century B.C. We must reject Barag's conjecture that these vessels were made on Rhodes for a foreign clientele. They represent, rather, a continuation of the older Mesopotamian tradition, and are completely separate from the Mediterranean glass industry.

Type II.C. Amphoriskoi

Donald Harden has shown that sixth and fifth century core-formed amphoriskoi can be divided into two categories: (1) vessels with obtuse-angled junction between neck and shoulder; (2) vessels with right-angled junction between neck and shoulder.³⁶ These two divisions are also distinguished by their handles: (1) handles that go from shoulder to rim; (2) handles that go from shoulder to neck. Within this larger categorization, nine types of amphoriskoi can be isolated.

II. C. i. Amphoriskos of white glass, with obtuse-angled junction between neck and shoulder, decorated with zigzag pattern. (Chapter Three, pp. 199-201)

Type II.C.i amphoriskoi are characterized by tall, angular bodies and wavy zigzag patterns with deep fluting. They are composed of white and purple glass, and are the counterpoint of type II.A.i alabastra. There are two groups of type II.C.i amphoriskoi. The first, (nos. 2, 3, 8, 10, 20, 22, 24-27), has high, sharply defined shoulders, while the second group (nos. 4, 6, 7, 9, 12-19, 21) is distinguished by rounded, sloping shoulders. The first group also tends to have handles which are formed of a continual loop, one part being pushed up against the neck; the second group has volute handles like type II.C.vii. The distinction

between the groups can be seen in the illustration of the two pieces from Catania (nos. 20 and 21) or in the two pieces in the Oppenländer collection (see Appendix 2).

These two groups both seem to be restricted to the last third of the sixth century B.C. The evidence from Rhodes would suggest that the first group might be dated somewhat earlier, perhaps beginning in the decade 530-520 B.C. Given the fact that of the fifteen dated examples of this type only one, no. 8, does not date to the last third of the sixth century, we may presume that that one piece is an heirloom.

The differences between the two groups are sufficient to indicate that they were made in two workshops, though their similarities point to some relation between those workshops. Type II.A.i alabastra were most probably also made in one of these workshops. Once again, the distribution pattern of this type shows a wide spread among the examples, with the Eastern Aegean, Macedonia and the Black Sea colonies well represented.

Type II. C. ii. Amphoriskos of white glass, with almost right-angled junction between neck and shoulder, decorated with zigzag pattern. (Chapter Three, p. 201)

There are only six examples of this rare type listed in the catalogue and Appendix 2. One comes from Melos and the piece in the National Museum of Athens may be from Greece.

While there are no dated examples of the type, the vessels are of the same shape as type II.C.viii, which is securely placed in the second quarter of the fifth century B.C. The general style of decoration links this type with that of the white glass alabastra with cylindrical bodies, II.A.v.

Type II. C. iii. Amphoriskos of dark glass, with obtuse-angled junction between neck and shoulder, decorated with wavy zigzag pattern. {Chapter Three, pp. 202-203}

This type includes several different groups which are rather loosely linked together by their tall shapes and straight handles that go from shoulder to rim. The fifteen examples recorded in the catalogue and Appendix 2 are decorated in a variety of styles, though they all have close-set zigzag patterns and most are deeply fluted.

There is only one group that is represented by more than one piece: nos. 1, 2, 3 and 13. This group is decorated with a close-set zigzag pattern beginning on the shoulder, a style equivalent to the contemporary type II.C.i.

The date of type II.C.iii can be securely placed before the beginning of the fifth century B.C. by the Rhitsona examples (nos. 7 and 8). No. 12, from Amman, poses a problem in that it was placed at the end of the seventh century B.C. Donald Harden has noted that the tomb group might not represent only a single burial.³⁷ It should also be noted

that, as has been demonstrated with the Meqabelein tomb, local Jordanian pottery does not yet admit of close dating during the sixth century B.C.; the Adoni-nur seal found in this tomb could easily be an heirloom and need not indicate a late seventh century B.C. date for the glass. On the other hand, as Harden recognized, no. 12 is unusual in its spiralling thread decoration and the possibility still exists that it represents a previously unrecognized Mesopotamian type; its closest parallel is a piece in Warsaw (see Appendix 2).

Type II. C. iv. Amphoriskos of dark glass, with obtuse-angled junction between neck and shoulder, decorated with spirals on neck and regular zigzag pattern beginning on shoulder. {Chapter Three, pp. 203-206}

Type II.C.iv represents the continuation of the previous type throughout the first quarter of the fifth century. There are two main divisions of type II.C.iv amphoriskoi that can be distinguished by body shapes. The first division is not sufficiently homogeneous to be called a group, while the examples of the second division bear enough mutual resemblance to warrant the label of group. Forty-one examples of this type are listed in the catalogue and Appendix 2.

The first division, including nos. 1, 3-6, 9, 11 and

13, have rounded bodies. Some examples, such as nos. 20, have handles which form a complete loop. The members of the second division, including nos. 7, 8, 10, 16-18, have narrower bodies. Examples of both divisions have spiralling yellow or white threads on their necks and zigzag patterns that are slightly more wavy than the short, neat zigzag pattern found on types dating to the middle of the century. No. 2 is unusual and belongs to neither of the above divisions; its nearly carinated body and irregular decoration are similar to pieces in Toronto and New Haven (see Appendix 2).

While there are only four examples that provide good dates for this type, there can be little doubt that most of the specimens of this type were made between 500-475 B.C. No. 2, which we have already noted as unusual, comes from a context in the second half of the fifth century B.C. We have already noted that the Delphi context of no. 8 does not go into the middle of the century. The examples of this type are distributed throughout the Mediterranean and the Black Sea.

Type II. C. v. Amphoriskos of dark glass, with obtuse-angled junction between neck and shoulder, without decoration on neck, and with regular zigzag pattern beginning on shoulder. {Chapter Three, p. 206}

The few examples of this type are distinguished from the previous type by the absence of any decoration on the neck. The examples in the catalogue cannot be precisely dated. This type is similar to both the preceding and following types, and thus can be roughly placed in the first half of the fifth century B.C. No groups can be discerned from the limited sample.

Type II. C. vi. Amphoriskos of dark glass with obtuse-angled junction between neck and shoulder, and with handles having a central depression, decorated with regular zigzag pattern. {Chapter Three, pp. 206-207}

This type of vessel is characterized by the small depressions on one side of the top of the handles. These depressions were created by the small pin with which the handles had been attached and are on opposite sides of the vessel.

There are two groups of type II.C.vi vessels corresponding to the above two types: those with decoration on the neck and those without. The first group, including nos. 2, 3 and 6, may be slightly later than the second, which includes nos. 1, 4 and 5. Both groups, however, have nearly carinated bodies and careless zigzags and may in fact

represent the output of a single production center.

Gladys Weinberg³⁸ has observed that no. 5, from Camiros, is a particularly poor piece of workmanship and that it would seem unlikely that it was suitable for export. Once again, the distribution pattern of the admittedly small sample also indicates a Rhodian manufacture of the type. No. 6, from Sardinia, is the only example found outside Rhodes to date.

Type II. C. vii. Amphoriskos of dark glass, with almost right-angled junction between neck and shoulder, decorated with regular zigzag pattern. {Chapter Three, pp. 207-214}

The 145 examples of this type recorded in the catalogue and App. 2 vividly demonstrate the popularity of the amphoriskos shape in the fifth century B.C. To be sure this type spans at least three generations and encompasses several groups. Nonetheless, our sample is large enough for us to be confident that the observed increase in the popularity of the amphoriskos shape after the end of the sixth century B.C. is not due to chance.

The earliest dated examples of this type belong to the end of the first quarter and to the early second quarter of the fifth century B.C.; none need be placed before c. 480 B.C. These earlier examples tend to have slightly larger bodies (5.3 to 5.6 cm. in diameter) than the later

amphoriskoi, and generally have slightly wavy zigzag patterns. The latter feature is a continuation of the decorative tradition common in the archaic period. The flat shoulders and the small handles found on all examples of this type are, however, new features.

Among the pieces belonging to the first generation of this type, a number of groups can be isolated. One group, including nos. 13, 27, 69 and 77, is characterized by wavy zigzag patterns and fluted bodies. Another group, nos. 5, 11, 24, 67, 68 and 70, can be distinguished by its opaque handles.

The second generation of type II.C.vii amphoriskoi are represented by nos. 1, 2, 15, 17-19, 22, 25, 28, 29, 31-34, 47-48, 50, 74, and 82-86. While these pieces were probably made in more than one workshop, they can be separated from the earlier groups by their decoration, which is in the neat short zigzag pattern we have already observed in mid-fifth century B.C. alabaster. This second generation spans the second quarter of the fifth century B.C.

The last generation of type II.C.vii amphoriskoi include nos. 12, 21, 26, 36-37, 39-41, 43, 64-66, 71-72 and 80. These pieces are marked by a narrower body whose greatest diameter is near the shoulder. The neat zigzag pattern of the earlier generation continues, although it is usually applied less carefully. While the dating evidence

from Apollonia (Bulgaria) and from Ampurias might suggest that this last generation was produced throughout the second half of the fifth century B.C., it is more likely that they were made within a more restricted period spanning the third quarter of the fifth century B.C. Once again, these pieces probably represent more than one group.

While the majority of type II.C.vii amphoriskoi with known contexts are from graves, a number were recovered from sanctuaries, including sanctuaries of Pan, Artemis, Demeter and Athena. The geographical distribution of this type shows the familiar pattern of a wide range of findspots from the Levant to Spain, with a concentration in East Greece.

Type II. C. viii. Amphoriskos of dark glass, with almost right-angled junction between neck and shoulder, decorated with irregular zigzag pattern. {Chapter Three, p. 215}

This type of amphoriskos is related to the last generation of type II.C.vii amphoriskos. The five listed examples of this type have zigzag patterns that have degenerated into wide bands around the middle with minimum combing. The type II.C.viii amphoriskos also has a poorly formed body, a feature that it shares with the following type II.C.ix vessels.

The two dated examples type II.C.viii amphoriskoi, from Camiros and Apollonia, suggest that the type was current in

the last quarter of the fifth century B.C., a date that is reinforced by the dates of the related examples of type II.C.vii and type II.C.ix amphoriskoi.

Type II. C. ix. Amphoriskos of dark glass, with almost right-angled junction between neck and shoulder, decorated with plain or spiralling trails. (Chapter Three, pp. 215-216)

There are two groups of type II.C.ix amphoriskoi. One, represented by nos. 1-5, is characterized by its minimal decoration of single trails on the rim, mid-body or base. No. 2, from Eretria, is composed of an unusual translucent yellow-green glass. The second group is defined by its decoration of a single thread spiralling down over the entire body.

The first group can be placed to the last quarter of the fifth century B.C. by the dates of nos. 1 and 3. The example of the second group, no. 6, is paralleled by a piece in the Metropolitan Museum (see App. 2). While neither example of this second group comes from a known context, that this group should also be placed in the latter part of the fifth century B.C. is suggested by its close similarities to type II.A.xiv alabastra and II.D.iii aryballoi.

Type II. D. Aryballoi.

Harden divided the twenty-three fifth century B.C. aryballoi in the British Museum into two divisions: i. obtuse-angled junction between neck and shoulder; ii. almost right-angled junction between neck and shoulder. Harden noted that his division i aryballoi had nearly spherical bodies and that his division ii aryballoi had more pointed bodies. Harden noted further that the division ii aryballoi were decorated with the "normal" zigzag pattern while the division i aryballoi were decorated in a variety of patterns.³⁹

Harden's basic distinction, between aryballoi with sloping shoulders and those with flat shoulders, is kept in this study, though other distinctions in glass and decoration have been used to further subdivide the aryballoi into six types. While the development of the aryballos shape remains difficult to document, the present typology does begin to present a coherent picture of it. The aryballos begins at the same time as the class II alabastron, amphoriskos and oinochoe, by 525 B.C. Aryballoi of type II. D. ii, with obtuse-angled junctions between neck and shoulder, seem to be a little earlier than the earliest groups of type II. D. iv aryballoi with almost right-angled junctions between neck and shoulders. After some time of overlap, aryballoi with sloping shoulders gave way to those with flat shoulders and

very regular zigzag decoration. During the second half of the fifth century B.C. the small-bodied aryballos, type II.D.v, develops. By the end of the century this last type is joined by the footed aryballoi of type II.D.vii.

Type II. D. i. Aryballos of white glass, with obtuse-angled junction between neck and shoulder, decorated with zigzag pattern. {Chapter Three, p. 217}

The single example of this type in the catalogue can be paralleled by only two other pieces. None of the three has a secure provenance. The scarcity of known white glass aryballoi cannot be a matter of chance and must reflect the relative rarity of the type in antiquity.

No. 1 is closely allied to the second group of type II. D. ii aryballoi by its shape. This would suggest that no. 1 should date to the second quarter of the fifth century B.C. In any case, type II. D. i aryballoi should not be dated very far into the second half of the fifth century B.C., when white glass ceased to be used for the bodies of core-formed glass vessels.

Type II. D. ii. Aryballos of dark glass, with obtuse-angled junction between neck and shoulder, decorated with wavy zigzag pattern. {Chapter Three, pp. 217-218}

There are two groups of this type of aryballos. The

first group, including nos. 4, 6 and 7, is characterized by its relatively long neck and by its handles which are formed of crude loops rather than the more normal ring handles. The second group, nos. 1-3, 5, and 8-10, have very short, wide necks and normal ring handles. The examples of the first group are a little taller and have rims larger than the second group. Both groups are decorated with slightly wavy zigzag patterns and both are deeply fluted.

The dates of the two examples from the Macri Langoni cemetery at Camiros, nos. 6 and 7, would suggest that the first group of type II.D.ii were the earliest aryballoi produced. Given the dates of the earliest class II alabastra, amphoriskoi and oinochoai, it would seem more likely that these early aryballoi should be dated closer to the end of the third quarter of the sixth century B.C. rather than towards the beginning of that quarter century.

The second group of type II.D.ii aryballos is certainly later than the first group, and should be dated to the first quarter of the fifth century B.C. and a little later. That this second group of type II.D.ii is contemporary with aryballoi with flat shoulders will be shown below. There is no reason to assign to any type II.D.ii aryballos a date later than the mid-fifth century B.C. on the basis of the examples from dated contexts. In addition, the wavy zigzag decoration and deep fluting characteristic of type II.D.ii

aryballoi are traits that we have already observed belong to the earlier types of alabastra and amphoriskoi.

Although the sample of type II.D.ii aryballoi preserved in the archaeological record is small, it is probably significant that all but three of the examples with known provenances come from Rhodes. The other three examples show that the type was widely distributed.

Type II. D. iii. Aryballos of dark glass, with obtuse-angled junction between neck and shoulder, decorated with spiralling trail pattern. {Chapter Three, p. 218}

The single known example of this type, from Melos, cannot be independently dated. However, as noted, the style of decoration, with a fairly irregular spiralling horizontal thread that is not pulled into any pattern, links this piece to type II.A.xiv alabastra. We should therefore place this vessel to the second half of the fifth century B.C.

Type II. D. iv. Aryballos of dark glass, with almost right-angled junction between neck and shoulder, decorated with zigzag pattern. {Chapter Three, pp. 219-222}

This type of aryballos is the most common one, as the seventy examples in the catalogue and Appendix 2 attest. The type is easily distinguished from type II.D.ii by its shape and size; type II.D.iv has an average height of 6.7 cm.,

an average rim diameter of 2.7 cm. and an average maximum diameter of body of 5.1 cm.

There are at least three groups of type II.D.iv aryballoi. The earliest group, including nos. 20, 21, 31 and 37, has the wavy zigzag pattern and fluting that we have already observed on type II.D.ii aryballoi. This group belongs to the last quarter of the sixth century B.C.

The second group of type II.D.iv aryballoi, of which nos. 2, 3, 6, 8, 11, 25, 30, 32-34, and 38 are members, is characterized by its handles of opaque light blue and/or opaque yellow, and by its oval body. The examples of this group have slightly wavy zigzag decoration, a continuation of the earlier style of decoration. This second group belongs to the first half of the fifth century B.C., with the exception of no. 2, which should be dated in the upper limit of the 450-400 B.C. range of the tomb group.

The third group of type II.D.iv aryballos has the largest number of representatives: nos. 4, 5, 7, 9, 10, 12-19, 22-24, 27, 29, and 40. These vessels have the "normal" style of regular zigzag patterns in light blue and yellow glass. While the dating evidence is not conclusive, it would seem that this third group of type II.D.iv aryballos was produced a generation later than the second group, and belongs to the second and third quarters of the fifth century B.C.

There is no reason to assume that each of these three groups of type II.D.iv aryballos was produced by a single workshop. We can, however, think of each group as reflecting one of three successive generations of glass workers.

Type II. D. v. Aryballos of dark glass, with almost right-angled junction between neck and shoulder, and with small body, decorated with zigzag pattern. {Chapter Three, p. 223}

The seven examples that have been assigned to this type in the catalogue form a somewhat heterogeneous collection. They are generally smaller (average H. 5.6 cm, average D. rim 2.3 cm., average M.D. body 4.1) and more carelessly made than the examples of type II.D.iv aryballoi. They tend to have a thick yellow thread spiralling down from the neck to the small body.

Type II.D.v aryballoi appear in contexts ranging from 475-450 B.C. to 460-425 B.C. It thus appears that this type was current in the third quarter of the fifth century B.C., or a generation after that which produced the third group of type II.D.iv aryballoi.

Type II. D. vi. Aryballos of opaque red glass, with almost right-angled junction between neck and shoulder, decorated with zigzag pattern. {Chapter Three, p. 223}

The single catalogued example of an aryballos made out of an opaque red glass can be paralleled by two pieces without provenance (see App. 2). We have seen that most examples of the common type II.A.xiii alabastron are made of the same opaque red glass. It is not unreasonable to believe that the rare red glass aryballos was produced in the same workshops that made type II.A.xiii alabastra. Type II.D.vi aryballoi would then date to the second half of the fifth century B.C.

Type II. D. vii. Footed aryballos with almost right-angled junction between neck and shoulder, decorated with zigzag pattern. {Chapter Three, p. 224}

The first two examples have the normal aryballos body shape, on which has been added the sort of pad-feet that are usually found on oinochoai. Although there are only two dated examples of this form, the fact that both come from contexts of the end of the fifth century B.C. is probably not a coincidence. These two examples represent a brief and apparently unpopular modification of the aryballos shape at the end of its history.

The third example, of unknown provenance, is placed in

this type by virtue of its pad-foot. The shape of its neck and body is essentially that of a handleless amphoriskos. All three examples of this type serve to remind us that, while the vast majority of core-formed vessels are of a standard shape, glassworkers in antiquity did occasionally create hybrids of these standard shapes.

II. E. Oinochoai.

The classification of oinochoai in this study follows the typology established by Harden, with a few modifications. Harden separated the oinochoai in the British Museum into two divisions, i) those with an obtuse-angled junction between neck and shoulder and ii) those with an almost right-angled junction between neck and shoulder, and recognized that these divisions are the same as those of amphoriskoi and aryballoi.⁴⁰ Harden further subdivided his division ii oinochoai into a) those with smaller bodies and low-slung handles and b) those with large bodies and high-slung handles.

The present study includes two other types of core-formed oinochoai not present in the British Museum collection: type II.E.i, oinochoe of white glass with an obtuse-angled junction between neck and shoulder, and type II.E.vi, oinochoe with almost right-angled junction between neck and shoulder, decorated with plain trail pattern.

Type II. E. i. Oinochoe of white glass, with obtuse-angled junction between neck and shoulder, decorated with wavy zigzag pattern. {Chapter Three, p. 225}

The five known examples of this type all share the high shoulders, large body and tall wavy zigzag pattern that we have already seen characterize the first group of type

II.C.i amphoriskoi. Both this group of amphoriskoi and type II.E.i oinochai could easily have been made in a single workshop. The single datable example of this type, no. 1, from Camiros, belongs to the end of the sixth century, a little later than the 530-520 B.C. date of the first group of type II.C.i. amphoriskoi. We should note that, while the handles of type II.E.i oinochoai, when preserved, tend to be the high-swung variety, some examples do not have handles that go significantly above the rim.

Type II. E. ii. Oinochoe of white glass, with almost right-angled junction between neck and shoulder, decorated with regular zigzag pattern. {Chapter Three, pp. 225-226}

The number of examples of this type that have survived would indicate that this was the most common type of white glass oinochoe in antiquity. Type II.E.ii vessels have the small, rounded ovoid body of Harden's division ii a oinochoai. While Harden observed that most examples have a low-swung handle, it should be noted that some, including nos. 2 and 4, have high-swung handles. No. 3, from Eretria, is unusual in having a small dot of purple glass on the outside of the handle at the junction of handle and body, evidently in imitation of a rivet on a metal prototype; the imitation rivet is a feature common on type II.E.v oinochoai.

Although it is not possible to separate the examples of

type II.E.ii oinochoai into distinct groups, the twenty vessels in the catalogue and Appendix 2 most likely were produced in several workshops. The careful mid-body zigzag pattern of these oinochoai relate them to type II.A.iv alabastra and to type II.C.ii amphoriskoi. Given this relationship, we can confidently assign type II.E.ii oinochoai to the second and third quarters of the fifth century B.C., a date consistent with the archaeological contexts of the two datable pieces, nos. 1 and 4.

Type II. E. iii. Oinochoe of dark glass, with obtuse-angled junction between neck and shoulder, decorated with wavy zigzag pattern. {Chapter Three, pp. 226-227}

The eleven examples of this type recorded in the catalogue and Appendix 2 can be divided into two distinct groups. The first group, including nos. 1 and 2, has a decorative pattern of tall wavy zigzags that extends to the junction of the body and the foot. This decorative scheme also characterizes type II.C.iii amphoriskoi. The second group is equivalent to Harden's division i oinochoai and includes nos. 3-7. It is defined by a wavy zigzag pattern that is confined to the mid-body of the vessel.

Both groups of type II.E.iii oinochoai have spiral decoration on their necks and are fluted --two features that we have already noted belong to vessels of the late sixth and

early fifth centuries B.C. We may suspect that the first group is chronologically earlier than the second, given its affinities to type II.C.iii amphoriskoi that are securely placed in the last quarter of the sixth century B.C. We should note, however, that both groups are represented in a single Rhodian tomb (Ialysos tomb 68). With the given archaeological evidence, we should date all examples of type II.E.iii oinochoai to the last quarter of the sixth century and the first decades of the fifth century B.C.

The distribution pattern of the limited sample of type II.E.iii oinochoai again shows the predominance of Rhodian findspots, with other examples occurring in both Greek and Punic contexts.

Type II. E. iv. Oinochoe of dark glass, with almost right-angled junction between neck and shoulder, and with low-swung handle, decorated with regular zigzag pattern. {Chapter Three, pp. 228-230}

This type of oinochoe is the same as Harden's division ii a 2. As Harden had noted, this type is characterized by a low-swung handle and a body that is shorter and more narrow than type II.E.v oinochoai. Harden also noted that many of type II.E.iv oinochoai are made of green or greenish-blue glass, as opposed to the more normal dark blue glass.

While it is not possible to subdivide type II.E.iv

oinochoai into separate groups, it is doubtful that the twenty-nine examples in the catalogue and Appendix 1 were all produced in a single workshop. No. 8, from Lesbos, stands apart from the rest with its high-shouldered shape. No. 21, from the City Mound at Gordion, has a unique handle formed of a double loop of dark blue glass.

The majority of dated examples of type II.E.iv oinochoai, nos. 1, 4, 5, 12, 13 and 15, belong to the second half of the fifth century B.C. Two oinochoai, nos. 6 and 8, seem to come from earlier contexts, though they need not be placed the middle of the century. Given the basic similarity of all the examples of this type of oinochoe, it is likely that they were produced within a restricted time span of 450-425 B.C.

The findspots of type II.E.iv oinochoai once again shows a pattern we have observed with other sixth and fifth century core-formed vessels. One third of the oinochoai with known provenances come from East Greece, and more than half are from the Aegean. The others range from the West Mediterranean to Syria.

Type II. E. v. Oinochoe of dark glass, with almost right-angled junction between neck and shoulder, and with high-swung handle, decorated with regular zigzag pattern. {Chapter Three, pp. 230-233}

This type is equivalent to Harden's division ii b oinochoe, defined by its high-swung handle, mid-neck decoration and large rounded body. With one exception the examples in the catalogue and Appendix 1 are close enough to each other to assign them to a single group. The exception, no. 11 from Brauron, has a high-shouldered body and a wavy zigzag pattern that relates it to the second group of sloping shoulder oinochoai, II.E.iii.

The majority of the rest of the examples of type II.E.v oinochoai are composed of a dark cobalt blue glass and have a opaque yellow dot at the base of the handle. No. 1 has an opaque light blue dot. We have seen that these dots, surely imitations of rivets on metal oinochoai, also occur on some examples of type II.E.ii oinochoai. Thea E. Haevernick believed that the dots were hallmarks of vessels produced in Rhodes.⁴¹

While the catalogued examples of type II.E.v oinochoai, again excepting no. 11, are very close to each other in shape, there is some variation in decoration. The two examples in the National Museum of Athens, nos. 10 and 12, from Vari and Eretria respectively, have no decoration on

their necks. The latter is unique in having opaque light blue decoration spiralling down from its shoulder. On the others, the decoration on the rim-discs, necks and feet are sometimes in opaque light blue glass and sometimes in opaque yellow glass.

Given the internal consistency of the main group of type II.E.v oinochoai, we should expect that they were produced over a limited period of time. The earliest dated examples are the three pieces, nos. 13-15, from the Bulgarian burial mound, Muschovitsa Mogila, perhaps belonging to the first decade of the fifth century.⁴² The other closely dated vessels, nos. 1, and 4-8, all belong to the first half of the fifth century. Given this evidence, we should take exception to Harden's assertion:

Thus the ii b type [Type II.E.v] originated no later than the earliest 5th century, and type ii a [Types II.E.ii and II.E.iv] must have had an equally early beginning. Yet such an early start would by no means prevent type ii b lasting into the final quarter of the 5th, if not into the early 4th century.⁴³

Without firm evidence to the contrary, it is a priori unlikely that such an internally coherent set of core-formed vessels as the main group of type II.E.v oinochoai would have been produced for nearly 100 years.

Type II. E. vi. Oinochoe of dark glass, with almost right-angled junction between neck and shoulder, decorated with plain trail pattern. {Chapter Three, p. 233}

This rare class of oinochoe, represented by only three examples, is decorated with a single spiralling thread on the body that is not pulled into the usual zigzag pattern. This type is thus equivalent to the type II.A.xiv alabastron, the type II.C.ix amphoriskos and the type II.D.iii aryballos.

The two complete examples here catalogued, nos. 1 and 3, form separate groups. The former has four horizontal stripes confined to the middle of the body while the latter has eleven horizontal stripe from the shoulder to the lower body.

Although none of the three examples comes from a context that can be independently dated, we can place this type to the second half of the fifth century B.C. by virtue of its shape. No. 3, of unknown provenance, is composed of the same reddish-brown glass as the majority of type II.A.xiv alabastra, and most probably was made in the same workshop that produced those vessels.

Part Three: Fourth to Early Third Centuries B.C.

The production of core-formed glass vessels seems to decline after the end of the fifth century B.C. There are only 120 examples in the following catalogue of types produced in the fourth and early third centuries B.C., a quarter of the number catalogued for the preceding 125 years. The alabastron continues to be the most popular shape in this later period. On the other hand, the amphoriskos, which had been the second most common shape from 525 to 400 B.C., is rarely found in contexts of 400 to 275 B.C. Its popularity is usurped by a new, coarser version of the oinochoe. Five completely new shapes make their first appearance during this period: the hydriske, the two-handled jar, the thick-walled unguentarium, the thin-walled unguentarium and the lentoid aryballos. The latter replaces the fifth-century style of aryballos, which ceases to occur after the middle of the fourth century B.C.

Before turning to a detailed discussion of the various types of core-formed vessels produced in the fourth and early third centuries B.C., the question of the relationship between the vessels produced from 525 to 400 B.C. (Harden's "Mediterranean Group 1") and these later vessels (Harden's "Mediterranean Group 2") must be raised. Core-formed glass is almost entirely absent from the archaeological record

during the first half of the fourth century B.C. Only one piece, III.F.i.5 comes from a securely dated context of this period. When core-formed vessels do reappear in any quantity, in the second half of the fourth century, they are decorated with new patterns: feather, festoon, and inverted festoon. The regular zigzag pattern (Harden's "normal trail pattern") which is common on core-formed glass vessels of the late sixth and fifth centuries B.C. seldom occurs on later vessels, with a few notable exceptions.

While the above might argue in favor of discontinuity between the core-formed glass traditions of the fifth and the fourth centuries B.C., other factors make it more likely that in fact there was continuity between these traditions. It is improbable that after a hiatus of only fifty years glass workers would have rediscovered the techniques of an earlier generation and begin to produce core-formed vessels in shapes reminiscent of earlier shapes. Further, when core-formed vessels do begin to reappear in any quantity in the archaeological record, after the middle of the fourth century B.C., they commonly occur in shapes that are most closely related to the earlier shapes, namely the alabastron, amphoriskos and the oinochoe. Moreover, it is precisely on these three shapes that the old zigzag pattern continues.

It would seem, therefore, that we must seek an explanation other than complete discontinuity in glass

manufacturing traditions to account for the undeniable differences between core-formed vessels of the sixth and fifth centuries B.C. and those of the fourth and early third centuries B.C. The distribution pattern of the findspots of the glasses recorded in Part Three of the catalogue offers a clue. No longer does East Greece dominate the list of areas that yield core-formed vessels. Apparently other areas began to produce core-formed glass in the fourth century B.C. These new production centers may have been founded by artisans trained in the older centers that had gradually ceased to operate earlier in the fourth century B.C. These points will be taken up in greater detail in Chapter Four below.

III. A. Alabastra.

In his discussion of the core-formed glass vessels in the collection of the British Museum, Donald Harden distinguishes the alabastra of the sixth and fifth centuries B.C. from those of the fourth and early third centuries B.C. on the basis of their handles.⁴⁴ While his observation that the earlier vessels have ring handles with tails and that the later vessels tend to have either simple ring handles or knob handles is essentially correct, Harden's categorization based on this distinction poses several problems. We have already observed that some of the narrow alabastra which Harden placed in his fourth century class in fact belong to the mid-

sixth century B.C. type I.A.ii. Further, we have noted that the unusual alabastron from Eretria, found with several other typical fifth century types of core-formed vessels, more properly belongs to type II.A.iv alabastra rather than to any fourth century B.C. type, in spite of its having bead handles.

Moreover, Harden's use of distinctions in handles to classify alabastra within the fourth and early third centuries B.C. into two divisions, namely those with ring handles (his division i) and those with knob handles (his division ii), should likewise be abandoned since it leads to artificially separating closely related vessels, as, for example, in the case of III.A.i.9 (in Harden's division i.a.1) and III.A.i.10 (in Harden's division ii.b.2), two vessels which were certainly made by a single craftsman. A more fruitful distinction among fourth and early third centuries B.C. alabastra can be made on the basis of their rim-discs and body shapes. By these criteria two basic classes can be observed. The first is characterized by wide horizontal rim-discs and large convex bodies. Within this first large class, further distinctions among shapes of necks and decorative patterns can be utilized to isolate types i through viii. The second major class of fourth and early third centuries B.C. alabastra is characterized by more narrow rim-discs and bodies. Distinctions among the decorative patterns of examples of this second class of

alabastra yields types ix, x and xi.

Type III. A. i. Alabastron with broad horizontal rim-disc, downward tapering neck and wide body, decorated with feather pattern. (Chapter Three, pp. 234-235)

Both type III.A.i and the following type III.A.ii alabastra are characterized by a distinctive neck that dramatically narrows as it approaches the sharp junction with the shoulder. Type III.A. i alabastra have the broad horizontal rim-discs and convex bodies that can also be seen on types ii through viii. This type of alabastron tends to have simple ring handles, though, as noted above, some examples have less carefully made knob handles.

The twenty-five examples of type III.A.i alabastra listed in the Catalogue and Appendix 2 come in two sizes. The most common is the large size, from 16.7 cm. to 20.0 cm. high (average 18.1 cm.), with rim diameters of 4.8 cm. to 5.5 cm. (average 5.2 cm.) and with maximum body diameters of 4.0 cm. to 4.8 cm. (average 4.5 cm.). The smaller size ranges in height from 12.4 cm. to 14.4 cm. (average 13.0 cm.), and have rim diameters of 3.2 cm. to 4.5 cm. (average 3.7 cm.) and maximum body diameters of 4.0 cm. to 4.5 cm. (average 4.2 cm.). It is perhaps not an accident that the larger size of type III.A.i alabastra is nearly exactly one third larger than the smaller size.

Type III.A.i alabastra illustrate a number of innovations that are characteristic of many fourth and early third centuries B.C. core-formed vessels. All examples of this type are decorated with a feather pattern, often having three differently colored opaque trails. However, some examples, such as no. 2 from Homolion, come close to having a tall zigzag pattern, showing that the difference between the two patterns is slight, being determined by the degree to which the upward and downward combing strokes are continued. Another innovation observable in type III.A.i alabastra is the direction in which the decorative threads are applied. In those case in which the direction can be determined, the decorative threads of type III alabastra are always applied in a clockwise direction from the top of the vessel. All core-formed vessels of the late sixth and fifth centuries B.C. have decorative thread applied in a counter-clockwise direction. This distinction implies that either all earlier core-formed glass workers were right-handed and all later workers were left-handed (an unlikely scenario) or that in the earlier period glass workers applied their decoration holding the rod on which the core-formed vessel had been formed with the rim towards them and that after the fifth century B.C. glass workers applied their decoration holding the rod with the base of the vessel towards them.

Donald Harden has noted that many examples of this type

of alabastron, as well as examples of type III.A.ii-viii alabastra, type III.B.iii amphoriskoi, type III.C.v aryballoi, and types III.F.i and ii oinochoai, are composed of glass that has a significant amount of white scum. Since most of the examples of glass vessels with white scum known to Harden have Italian provenances, he postulated that that series of core-formed vessels had been produced in Italy. We might note here that recent finds, especially from Macedonia, indicate that glasses with white scum are by no means confined to Italian provenances. That type III.A.i alabastra were also made in an opaque brown glass, also having white scum, is indicated by an unusual piece in the Cohn collection⁴⁵

The archaeological contexts of nos. 1-4, from Thessaly, Macedonia and Central Italy supply an unequivocal date of the second half of the fourth century B.C. for type III.A.i alabastra. The close similarities of all the examples of this type, in both the large and small sizes, makes it likely that they are all the products of a single workshop, perhaps active in the decades surrounding 330 B.C. We might further postulate that type III.A.ii alabastra, differing from type III.A.i alabastra only in their decoration, were also made in this same workshop.

Type III. A. ii. Alabastron with broad horizontal rim-disc, downward tapering neck and wide body, decorated with festoon pattern. (Chapter Three, pp. 235-236)

As noted above, type III.A.ii alabastra share with the previous type of alabastron a distinctive downward tapering neck that is sharply set off from the shoulder and have the broad horizontal rim-disc and convex body that is characteristic of alabastra types i-viii. The seven examples of type III.A.ii alabastra listed in the catalogue and Appendix 2 also occur in the large and small sizes observed in type III.A.i alabastra.

The festoon pattern decoration that characterizes type III.A.ii alabastra is in fact a variation of the feather pattern of type III.A.i, the difference being created by the absence of an alternating downward combing stroke in the festoon pattern. This festoon pattern should not be confused with the unrelated inverted festoon pattern of the earlier type II.A.iv alabastra.

The single dated example of type III.A.ii alabastra, no. 2, from the newly excavated cemetery outside of Thessaloniki, agrees with the second half of the fourth century B.C. date assigned to the related type III.A.i alabastra. As mentioned above, the close similarities of all the examples of both types III.A.i and III.A.ii make it probable that they were all the product of a single workshop.

The distribution pattern of types III.A.i and III.A.ii alabastra taken together shows a change from the pattern observed with earlier core-formed vessel types. Only a single example came from a Rhodian context, while the majority were found in northern Greece (Thessaly and Macedonia) and Campania.

Type III. A. iii. Alabastron with broad horizontal rim-disc, cylindrical or upward tapering rim and wide body, decorated with feather pattern. {Chapter Three, pp. 236-238}

Unlike the previous two types, type III.A.iii comprises a much more heterogeneous collection of alabastra, the examples of which can be divided into at least four separate groups. The number of type III.A.iii alabastra that can be dated from their contexts is quite large (see nos. 2-11, 13, 16-18 and 21-22). From them we can confidently place this type to the second half of the fourth century B.C., or contemporary with types III.A.i and III.A.ii.

The largest group of type III.A.iii alabastra includes nos. 1, 3-11, 15, 19, 20 and 22 as well as all of the examples listed in Appendix 2. While all of these examples are characterized by wide necks and slightly rounded bodies, features which also can be seen in the previous two types, there is some variation in their decoration and they may

actually have been produced in more than one workshop. The two examples from Delphi, nos. 3 and 4, have rather carelessly made feather patterns that almost approach being zigzags. No. 10, from Varna, has an unusually narrow rim-disc that is characteristic of alabastra of types III.A.ix, III.A.x and III.A.xi.

The second group of type III.A.iii alabastra is illustrated by nos. 12 and 16, from Panticapaeum and Cumae respectively. This group has very tall necks and elongated bodies. The third group consists of the other two examples from Panticapaeum, nos. 13 and 14. Although the shapes of these vessels are clearly related to those of the first group of this type of alabastron, the decoration on them differs drastically, being composed of a short zigzag pattern all over the body. This style of decoration characterizes type III.A.vi alabastra. The final group of type III.A.iii alabastra is represented by a single piece from Sciatbi, no. 21. This vessel is closely related in shape to the other two alabastra from Sciatbi, III.A.v.2 and 3, having virtually no shoulders and a sharply upward tapering body. No. 21 is further anomalous in its decoration, which consists of horizontal stripes on the upper body and combed decoration below the handles, a style reminiscent of some earlier type II alabastra.

The present archaeological record shows type III.A.iii alabastra mainly distributed in three large areas: the Aegean, the North (Macedonia, Romania, Bulgaria and the southern USSR) and Campania. However, there is little to indicate where the workshops that produced this type of alabastron had been located.

Type III. A. iv. Alabastron with broad horizontal rim-disc, cylindrical or upward tapering neck and wide body, decorated with inverted festoon pattern. (Chapter Three, p. 239)

The seven examples of type III.A.iv alabastra recorded in the catalogue and Appendix 2 form a single group. The complete examples that are illustrated, nos. 2, 3 and the piece in the Clercq collection (possibly from Syria) are almost identical in all details. They have wide horizontal rim-discs, wide necks with a slight upward taper and nearly cylindrical, wide bodies. Each has ring handles with vestigial tails, a feature that also occurs on III.A.iii.1, III.A.vi.1, III.A.vii.1 and 2, and III.A.x.5. The unusual inverted festoon pattern decoration on all the examples of type III.A.iv alabastra had been produced by regular long downward strokes that extend the length of the vessel. No. 4, from Motta, is slightly different in having a thicker thread.

The archaeological contexts of nos. 1 and 2 would indicate that this group of core-formed alabastra had been

produced in the final quarter of the fourth century B.C. The limited sample shows that, wherever the workshop that made this type may have been located, these alabastra were widely distributed.

Type III. A. v. Alabastron with broad horizontal rim-disc, cylindrical or upward tapering neck and wide body, decoration with festoon decoration. {Chapter Three, pp. 239-240}

The three catalogued examples of type III.A.v alabastra can be divided into two groups, both of which are closely related to groups of type III.A.iii alabastra. No. 1, from the rich grave 126 at Cumae, has the tall neck and elongated body that is also characteristic of the second group of type III.A.iii alabastra. Nos. 2 and 3, from the Sciatbi cemetery at Alexandria, share the narrow rim-discs and sloping shoulders of the type III.A.iii alabastron from the same cemetery.

All three examples are from datable archaeological contexts. The date of the Cumae vessel, together with the terminus post quem of the Alexandrian pieces indicates that type III.A.v alabastra were also produced in the last quarter of the fourth century B.C.

Type III. A. vi. Alabastron with broad horizontal rim-disc, short neck and wide body, decorated with zigzag or feather pattern. (Chapter Three, pp. 240-241)

This type of alabastron is distinguished from all the other type III alabastra with broad horizontal rim-discs by its absence of a neck, the transition from rim to body being accomplished with a single unbroken concave curve. The decoration on the eight examples of this type listed in the catalogue and Appendix 2, with the exception of no. 1, is composed of a tightly packed zigzag pattern, a style of decoration that we have already encountered in the third group of type III.A.iii alabastra. No. 2, which also differs from the other examples of type III.A.vi alabastra in its large size and tailed ring handles, is decorated with a feather pattern that is more normal for late fourth century B.C. vessels.

The examples of this type of alabastron, again with the exception of no. 1, have uniformly small bodies, ranging in height from 7.5 cm. to 10.2 cm. (average 8.9 cm.) with rim diameters from 3.2 cm. to 4.5 cm. (average 3.7 cm.). All examples of type III.A.vi alabastra have flattened bottoms.

The only datable pieces, nos. 3 and 4, from Bulgaria suggest that this type of alabastron is the earliest of the fourth century B.C. types, being made in the first decades after the middle of the century. While the limited sample

prohibits any meaningful discussion of possible groups or workshops, it may be suggested that the two complete examples from Apollonia, Bulgaria (nos. 3 and 4), at least, were made by the same hand. Again the limited number of recorded examples of this type of alabastron makes it hazardous to draw conclusions from their distribution, though it may be significant that those pieces with a known provenance come from the Aegean (Attica and Eretria) and the North (Bulgaria).

Type III. A. vii. Squat alabastron with broad horizontal rim-disc, decorated with zigzag or feather pattern. {Chapter Three, pp. 241-242}

Type III.A.vii alabastra are related to the above types through their broad rim-discs and wide cylindrical necks, though their wide squat bodies clearly set them apart from the other type III alabastra. Of the ten type III.A.vii vessels recorded in the catalogue and in Appendix 2, only two have even a general provenance, neither of which can be independently dated. Their relationship to types III.A.i-vi alabastra, however, would suggest that this type also belongs to the second half of the fourth century B.C.

Two different groups of type III.A.vii alabastra can be discerned. The first, including nos. 1-3 and the pieces in the Neuburg and Cohn collections, is distinguished by broad

shoulders and a sharp junction between neck and shoulder. The diameter of the mouth of no. 3 shows that the core around which this vessel was formed had been made on an unusually thin metal rod, a fact that is surprising given the large diameter of the body. The other group, represented by no. 4 and the other pieces listed in Appendix 2, has, in contrast, sloping shoulders and a more "sack-like" body. All of the examples of type III.A.vii alabastra, with the exception of the vessel in the Metropolitan Museum, are decorated with a feather pattern; the Metropolitan alabastron has a zigzag pattern decoration. Most of type III.A.vii alabastra have simple knob handles. No. 1 and the example in the Cohn collection have ring handles with pointed tails and the piece in the Newark Museum seems to have had handles made from pre-formed oblate beads.

Type III. A. viii. Miniature alabastron. {Chapter Three, p. 242}

This type of alabastron is characterized by its small size, ranging in height from 5.5 cm. to 6.8 cm. (average 6.2 cm.). In shape and decoration, these small alabastra mimic types III.A.i-v. It is interesting to note that their height is nearly exactly one half the average height of the smaller size of types III.A.i-v, themselves nearly one third smaller than the larger sizes of the same types. The three

catalogued examples of type III.A.viii alabastra show that they could be decorated with either a feather, a festoon or an inverted festoon pattern.

While no example of this type of alabastron has a known provenance, the close relationship of these examples to types III.A.i-v would make it likely that they belong to the last half of the fourth century B.C. They were probably produced in a number of workshops, namely those that made types III.A.i-ii, the first group of type III.A.iii, type III.A.iv and the first group of type III.A.v. Miniature core-formed vessels were also made in other shapes, including an amphoriskos, type III.B.iii, and an oinochoe, type III.F.ii.

The example in the British Museum, no. 1, is unusual in two ways. It is composed of a dark green glass and, apparently, has an intentionally formed small hole in its bottom. Harden believed that the hole, another example of which occurs on a type III.A.ix alabastron in the British Museum, was made to allow some sort of material to be inserted into the vessel from below. This is inherently unlikely, given the perfectly serviceable opening in the top of the vessel. The trace of a red powder that Harden observed on the interior of this vessel is most likely the remains of the core which frequently have a red tinge.

Type III. A. ix. Alabastron with narrow horizontal rim-disc and narrow body, decorated with zigzag pattern. {Chapter Three, pp. 242-244}

As discussed above, the second large class of fourth and early third centuries B.C. alabastra includes types III.A.ix, x and xi, the examples of which can be distinguished from those of the previous types by their more narrow rims, occasionally formed by pulling out the neck rather than through the addition of a separate rim-disc, and by their more straight-sided and more narrow bodies. The dating evidence for types III.A.ix, x and xi would indicate, however, that they are contemporary with the other types.

There are three groups of type III.A.ix alabastra. The first, represented by nos. 1-3, 10 and 12 is characterized by well defined tall necks and broad shoulders, straight-sided bodies that taper downwards at their lower parts and by decorative patterns of closely set zigzags that cover the entire body. This group is closely related to the first group of type III.A.x and to type III.A.xi alabastra, all of which may represent the output of a single workshop. The second group of type III.A.ix alabastra, including nos. 4-6, is distinguished by tall upward tapering necks that are only slightly set off from the sloping shoulders, shorter, rather irregular bodies and by zigzag patterns of a single color that begin well below the shoulders. The examples of the

final group of this type of alabastron have upward tapering necks, elongated, fluted bodies and zigzag patterns of a single color thread that is bunched into two or more zones, separated by spaces in which the thread rapidly spirals down. Nos. 7-9, 11 and 13 belong to this third group. This last group is related to the second group of type III.A.x alabastra, both of which have decorative patterns confined to zones.

The dating evidence for type III.A.ix alabastra, supplied by nos. 1-4, 7-9 and 12, would suggest that this type was contemporary with the previously described types of III.A alabastra, i.e. dating to the second half of the fourth century B.C. Fossing placed the examples from Myrina, nos. 1-3 in his later Hellenistic group, basing his dating on the fact that the earliest finds from the Myrina cemetery come from the third century B.C.⁴⁶ Harden noted that late fourth century B.C. material could easily appear in third century B.C. contexts.⁴⁷ We might point out that the finds from the Myrina cemetery were not listed by individual graves and that the settlement at Myrina certainly existed as early as the fifth century B.C., as witnessed by its appearance on the Athenian Tribute lists.

Type III.A.ix alabastra have been found in the Aegean, the Adriatic, Central Italy and North Africa. It may not be mere coincidence that Campania does not appear in the distribution list of this type.

Type III. A. x. Alabastron with horizontal rim-disc and thin body, decorated with feather pattern. (Chapter Three, pp. 244-245)

The eleven examples of this type listed in the catalogue and App. 1 can be separated into two groups, with at least two vessels that belong to neither group. The first group, as noted above, shares with the first group of type III.A.ix and with type III.A.xi alabastra a straight-sided body and a cylindrical neck that is sharply set off from the shoulder. This first group of type III.A.x alabastra, including the examples from Chania and Cyprus (nos. 1, 2 and 8), has carefully formed feather patterns that covers the entire vessel in several zones of contrasting yellow and white threads. The second group of type III.A.x alabastra, represented by nos. 3 and 6, has, by contrast, more irregular elongated bodies and widely spaced zones of feather pattern decoration in a single color.

No. 4, from Cerveteri, is unique in having a feather pattern decoration that is continued on the neck. The example from Ruvo, no. 5, likewise does not fit in with the above described groups of type III.A.x. Its exceptionally wide body is closely paralleled by a type III.A.ix vessel in Copenhagen (see App.2). These two vessels differ only in the degree to which the upward and downward combing strokes had been continued and are probably the products of the same workshop.

The archaeological contexts of nos. 1-3 and 6 indicate that type III.A.x vessels were also current in the last half of the fourth century B.C. Although the sample of this type is rather small, it shows that type III.A.x vessels had been distributed throughout a wide area.

Type III. A. xi. Alabastron with horizontal rim-disc and thin body, decorated with festoon pattern. {Chapter Three, p. 246}

The single known example of this type, from Amathus Cyprus, is decorated with a festoon pattern similar to the examples of type III.A.v. Its straight-sided body shape, however, clearly relates it to the first groups of the above two types of alabastra. Its lack of handles is paralleled by nos. III.A.ix.10 and III.A.x.1 and 2, the former of which is virtually its twin in all aspects except decoration.

III. B. Amphoriskoi

As mentioned above, the amphoriskos shape, which had been the second most common shape among core-formed glass vessels of the late sixth and fifth centuries B.C., radically decreases in popularity after 400 B.C. The shape did, however, survive and indeed increase in popularity with the tall amphoriskoi of the later Hellenistic period.

As Donald Harden has observed, there are three basic types of amphoriskoi current in the fourth and early third centuries B.C.: i) amphoriskos with sloping shoulders and handles from shoulder to mid-neck, decorated with a feather pattern; ii) amphoriskos with flat shoulder and tall handles, decorated with a zigzag pattern; and iii) miniature amphoriskos. Harden has further noted that the first type is directly derived from fifth century types and that the second type is closely related to the new fourth century B.C. hydricke form.⁴⁸

Poul Fossing has placed the type III.B.ii amphoriskoi into his Hellenistic division on the basis of a degenerate example from Myrina, which he would place in the third and second centuries B.C.⁴⁹ Harden follows Fossing by assigning this type to his Mediterranean Group 3, although he notes that some examples may belong to the earlier period.⁵⁰ While it is true, as will be shown below, that type III.B.ii amphoriskoi have degenerate offshoots that continue in the

later part of the third and second centuries B.C., these later vessels are easily distinguished from the earlier amphoriskoi by their proportions, their necks being significantly taller and their bodies quite a bit smaller. The archaeological contexts of type III.B.ii amphoriskoi from Spina (Valle Trebba), Canosa and Alexandria, as well as the close relationship between this type and type III.E.i hydriskai make it certain that this type was current in the second half of the fourth and early third centuries B.C.

All type III.B amphoriskoi can be distinguished from II.C amphoriskoi by their bases. The carefully made button bases of the earlier types have given way to more cursory end knobs of type III.B vessels, a trend that is anticipated by II.C.viii.3. No example of type III.B amphoriskos is composed of glass with significant amounts of white scum.

Type III. B. i. Amphoriskos with almost right-angled junction between neck and shoulder, and with handles from shoulder to mid-neck, decorated with feather pattern.
{Chapter Three, p. 247}

The two examples of type III.B.i amphoriskoi in the catalogue and Appendix 2, neither with a known provenance, have very similar shapes and feather pattern decoration and were most probably made by the same craftsman. We have noted that the shape of this type of amphoriskos marks a development from the earlier fifth century B.C. types.

Without further archaeological evidence, we can only approximately place this type to the fourth century B.C., a date that is reinforced by the general similarities of the feather pattern decoration to that of other types of fourth century B.C. core-formed vessels, notably types III.A.i and iii alabastra.

Type III. B. ii. Amphoriskos with almost right-angled junction between neck and shoulder, and with handles from shoulder to rim, decorated with zigzag pattern. {Chapter Three, pp. 247-248}

There are two clearly distinct groups of type III.B.ii amphoriskoi. The first, including nos. 3-5, 7 and 9, is defined by their narrow necks, broad shoulders and more angular bodies and by their relatively carefully made zigzag patterns. The body shape of this group of amphoriskoi is closely related to the bodies of the types III.E.i hydriskai III.F.iii oinochoai, examples of the former of which were found in the same late fourth century B.C. grave at Spina that yielded nos. 4 and 5. No. 3, in Rethymnon, has decorative threads that are applied in a counter-clockwise direction, a style that is usually associated with earlier types of core-formed vessels.

The second group of type III.B.ii amphoriskoi, exemplified by nos. 1, 2, 6, 8 and 10, is characterized by more sloping shoulders and by irregular decoration that

begins on the neck. These feature relates this second group to the thick-walled unguentarium type III.G.i. Both groups of type III.B.ii amphoriskoi have slightly fluted bodies.

While the archaeological evidence for the dates of both groups of this type of amphoriskos is sparse, it can be argued that both were current before the middle of the third century B.C. That the first group should be placed in the the second half of the fourth century B.C is suggested by the date of the Spina examples. This suggestion is supported by the late fourth century B.C. date of the closely related type II.E.i oinochoai. The only archaeological evidence for the second group is the terminus post quem of the Hadra amphoriskos. Although it is true that the majority of the finds from this Alexandrian cemetery belong to the second half of the third century B.C., we cannot date the second group of type III.B.ii amphoriskoi so late. As it will be shown below, type IV.B.i amphoriskoi, which are degenerate offshoots of the second group of type III.B.ii amphoriskoi, were already current in the second half of the third century B.C. Until more evidence is available, we should date this second group of type III.B.ii amphoriskoi to the first half of the third century B.C.

Type III. B. iii. Miniature amphoriskos. {Chapter Three, p. 249}

This type of core-formed vessel is equivalent to the miniature alabastra, type III.A.viii and the miniature oinochoai, type III.F.ii. Like those types, type III.B.iii should be roughly placed in the late fourth and early third centuries B.C. Of the other six examples of this type of vessel cited by Harden in his discussion of the piece in the British Museum, no. 1, three presumably come from Carthage, though their exact findspots are not now known. Given that miniature oinochoai have been found in the Aegean and Italy, however, we should not assume that this type was Punic in origin. Most, if not all, examples of III.B.iii. miniature amphoriskoi were composed of glass having white spots of scum.

III. C. Aryballoi.

Although there are only twenty-two examples of fourth and early third centuries B.C. aryballoi presented in the catalogue and Appendix 2, six distinct types of aryballoi can be isolated. The first type, not recognized by Harden, represents a degenerate continuation of the older, spherical aryballoi of the fifth century B.C. The remaining five types all have lentoid bodies, an innovation that apparently began towards the end of the fourth century B.C.

As Harden recognized, the lentoid aryballoï can be separated into two large divisions: i) those with large bodies and, generally, tall necks, and ii) those with smaller bodies and short concave necks. Within division i, distinctions based on the types of handles and the presence or absence of decorative twists can be used to define types III.C.ii, III.C.iii and III.C.iv. With one exception, all known examples of division ii belong to type III.C.v, the exception, again not recognized in Harden's classification, constituting type III.C.vi.

The decorative bichrome twists that occur in types III.C.iv and III.C.v are another new feature that first appears in the fourth century B.C. These twists, which on the aryballos shape seem to imitate the cords by which they would have been suspended, also occur as handles on III.D.i two-handled jars and III.E.ii hydriskai. Also new are the stand-rolls that appear on types III.C.ii, III.C.iii, III.C.iv and III.C.vi. The function of these stand-rolls is not to make the vessel stable since the rolls are often placed so high on the body that the vessel cannot stand by itself. They serve, rather, as supports by which suspension cords could be attached.

Type III. C. i. Aryballos with rounded body and no handles.
{Chapter Three, p. 250}

This type of aryballos represents a continuation of the spherical aryballos types of the fifth century B.C., albeit in a rather debased form. The two known examples come from a single grave at the Marti cemetery of Ampurias that can be dated by an Attic red-figure palmette lekythos to the middle of the fourth century B.C. Neither vessel has the tailed ring handles typical of earlier aryballoi and both have irregular shapes and very irregular decoration. These two examples were most likely made in a single workshop, one that tried to continue the earlier tradition of core-formed glass production while lacking the technical expertise of its predecessors. Given the Spanish provenance of the two examples of this type, it is tempting to locate this workshop in the West, though to do so would certainly be stretching the evidence.

Type III. C. ii. Lentoid aryballos with tall neck, vertical handles and stand-rolls. {Chapter Three, p. 250}

The six examples of this type listed in the catalogue and in Appendix 2 are all very similar to each other and form a single group. Each is decorated with a carefully made feather pattern and each has substantial vertical handles that extend from the shoulders to the middle of the neck.

These handles distinguish this type from the other III.C lentoid aryballoi.

As mentioned above, type III.C.ii aryballoi are related to types III.C.iii and III.C.iv vessels by virtue of their size. A further connection among these three types of aryballoi can be made on the basis of their decoration. Leaving aside the details of the handles and decorative twists, the decoration of types III.C.ii and III.C.iv are identical. Type III.C.iii differs in having a zigzag pattern as opposed to the feather pattern of the other types, though it shares with the other types the yellow thread on the neck and the closely set, spiralling multi-colored decoration that covers the entire vessel.

The example of type III.C.ii aryballoi from the Great Blisnitsa cemetery at the ancient Black Sea site of Phanagoria is one of two lentoid aryballoi that can be dated by their archaeological contexts. The c. 300 B.C. date of this piece, no. 1, agrees with the 330-300 B.C. date of III.C.iii.1 from Homolion, and suggests that all of the examples of types III.C.ii, III.C.iii and III.C.iv aryballoi were produced in a limited period in the late fourth century B.C.

Type III. C. iii. Lentoid aryballos with ring handles and stand-rolls. (Chapter Three, p. 251)

The three examples of this type presented in the catalogue and Appendix 2 form a single group. Although, as we have just noted, the examples of type III.C.iii aryballoi have certain similarities to the examples of both the preceding and succeeding types, other differences make it likely that the workshop which produced this group was not the same as that which produced the other types. The shoulders of type III.C.iii aryballoi are broader than those of other types of lentoid aryballoi and their bodies are significantly wider.

No. 1, from grave A at the Thessalian site of Homolion, supplies us with a final third of the fourth century B.C. date for type III.C.iii vessels, a date that we have already seen agrees with the date for the related type III.C.ii aryballoi. It is important to note that while no example of type III.C.ii, III.C.iii or III.C.iv aryballoi were made of a glass with white spots of scum, a trait that Harden believes to be characteristic of Italian (Campanian?) produced core-formed glass, grave A at Homolion did yield two type III.A.i alabastra of a dark blue glass with white scum.

Type III. C. iv. Lentoid aryballos with ring handles and stand-rolls joined by twists. {Chapter Three, p. 251}

The two known examples of this type of aryballos are very similar to each other and probably represent the output of a single glass shop. They differ slightly in the size of their necks, the example from Carthage, no. 1, having a neck that is somewhat shorter than both that of the other example of this type and those of type III.C.ii and III.C.iii vessels. The close similarities in shape and decoration between the two examples of type III.C.iv and those of type III.C.ii make it possible that a single workshop was responsible for the production of both groups. In any case, the general similarities of type III.C.iv aryballoi to the datable types III.C.ii and III.C.iii make it certain that they too were current in the final third of the fourth century B.C.

Type III. C. v. Small lentoid aryballos with ring handles joined by twist. {Chapter Three, p. 251}

As we have already observed, this type of lentoid aryballos is fundamentally different from the preceding three types. The examples of this type are much smaller and are composed of a dark blue glass with white spots of scum. While they have a bichrome twist that also appears on type III.C.iv aryballoi, most examples are decorated with a

marvered glob of yellow glass in the center of their bodies, a feature that appears on no other core-formed vessel type.

The ten examples of this type listed in the catalogue and Appendix 2 are all almost identical to each other and were surely all made in a single workshop operating over a limited period of time. The single example with a known provenance, no. 1, may suggest that this workshop was in Italy, an idea that is reinforced if we accept Harden's hypothesis that white scum was a trait of Italian glass produced in this period.

Since no example of type III.C.v aryballoi can be independently dated by an archaeological context, we can only approximately place this type in the second half of the fourth and first half of the third centuries B.C. based on its general similarity to the preceding three types of lentoid aryballoi. Whether type III.C.v vessels were produced at the same time as the other types of lentoid aryballoi or whether they are earlier or later we cannot determine, though the first possibility would seem the most likely. In size, this type of aryballos is related to the miniature alabastra, amphoriskoi and oinochoai.

Type III. C. vi. Small lentoid aryballos with ring handle and stand-rolls. {Chapter Three, 252}

The single known example of this type, in the Freer

Gallery of Art, has the stand-rolls which are characteristic of the larger types of lentoid aryballoi. Its small size and rounded body shape, however, clearly relates it to the more common type III.C.v aryballos. The widely spaced festoon pattern decoration, unparalleled on any other aryballos, is not too dissimilar in style to the decoration on other late fourth and early third centuries B.C. core-formed vessels.

Type III. D. i. Two-handled jar. {Chapter Three, p. 253}

There are five known examples of this rare core-formed glass shape, a shape that is perhaps better thought of as a derivative of the hydria shape, as opposed to an imitation of the wide-mouth stamnos shape. All of these examples have a distinctive rounded globular body and have horizontal handles of bichrome twists. The latter feature connects this type of vessel with the first group of type III.E.ii hydriskai as well as with the lentoid aryballoi types III.C.iv and III.C.v. In addition, each example of type III.D.i two-handled jar has a splayed rim and a tall neck decorated with an unmarvered, clockwise spiralling yellow thread, a trait also found on types III.C.ii, III.C.iii and III.C.iv of the lentoid aryballoi.

Two groups of type III.D.i two-handled jars can be identified. The first group, which consists of nos. 1 and 3

and the two examples listed in Appendix 2, has a rather irregular festoon pattern on the shoulder, a decoration that also appears on the first group of type III.E.ii hydriskai and on the first group of type III.F.i oinochoai. No. 1, from Tarquinia, differs from the other members of the first group of III.D.i two-handled jars in having an inverted festoon pattern decoration on the main part of the body instead of the more normal simple horizontal stripes and zigzag pattern. The second group, represented by a single example, no. 2, has slightly less angled shoulders, lacks the white festoons on the shoulder, and is decorated with a closely set feather pattern.

Only no. 1 comes from a known provenance, and it cannot be independently dated. However, the close relationship of the first group of type III.D.i vessels to type III.C.ii of the lentoid aryballoi and to the first group of the type III.E.ii hydriskai, both of which belong to the final third of the fourth century B.C., allows us to assign that date to this group of III.D.i two-handled jars. Indeed, the first group of type III.D.i and the first group of type III.E.ii vessels are certainly the products of a single workshop. The general similarities of the single example of the second group of type III.D.i two-handled jars to both the first group of this type and to type III.C.ii lentoid aryballoi would also make it likely that it also belongs to the end of the fourth century B.C.

III. E. Hydriskai.

The hydriske shape, which first appears in core-formed glass at the end of the fourth century B.C., imitates the common metal and pottery hydria form.⁵¹ Both Fossing and Harden believe that the core-formed hydriske shape was invented in Alexandria, where glass workers imitated the common Hadra hydriae.⁵² Although it is true that a single example of a type III.E.i hydriske was found in the Sciatbi cemetery, there is nothing specific about the core-formed hydriske shape that would necessitate our associating it with the Hadra vases. Indeed, the sloping shoulders and upturned horizontal handles of the glass shape are equally reminiscent of bronze kalpides of the late fourth century B.C.

As Harden has recognized, there are two types of fourth and early third centuries B.C. core-formed glass hydriskai. Type III.E.i has a sharply curving ovoid body that is very similar to the first group of type III.B.ii amphoriskoi and to type III.F.iii oinochoai. Type III.E.ii hydriskai have larger, more globular bodies that are identical to the "bottle-shaped" bodies of the oinochoai types III.F.iv and III.F.v.

Type III. E. i. Hydriske with sharply curving ovoid body.
{Chapter Three, pp. 254-255}

There are two groups of this type of hydriske. The first group, which includes nos. 1, 4, 5, 10-12, 14, 15 and 17, as well as all of the examples listed in Appendix 1, is decorated with a spiralling thread or threads that continue down to the lower part of the body. No. 12 is unusual in having handles that extend up beyond the level of the shoulders. All of the other examples of type III.E. i hydriskai have handles that are pushed in against the walls of the upper bodies. The second group of type III.E. i hydriskai, represented by nos. 2, 3 and 13, lack any decoration on the lower part of their bodies.

The first group is closely related to the first group of type III.B.ii amphoriskoi, as we have noted above. Both of these groups of core-formed vessels were probably produced in the same workshop. In this regard, it is perhaps significant that the important grave 83 in the Valle Trebba at Spina yielded examples of both the first group of type III.B.ii amphoriskoi and the first group of type III.E. i hydriskai, as well as two examples of the third group of type III.A.ix alabastra. All of the core-formed glass vessels in grave 83 at Spina could well have been purchased at a single time either directly from one workshop or from a merchant peddling wares from one workshop.

The date of type III.E.i hydriskai is well established by the archaeological contexts of nos. 4-9, 11 and 13, all of which date to the final decades of the fourth century B.C. We have already commented on the weakness of the argument that all of the finds from the cemetery at Myrina, which yielded two examples of this type of hydriske, must date to the third and second centuries B.C. The distribution of type III.E.i hydriskai with known provenances shows the same pattern that we have already observed for other types of late fourth century B.C. core-formed vessels, namely a fairly even scatter in the Aegean, Central Italy, North Africa and Cyprus. It is interesting to note that one only type III.E.i vessel has been found in Campania, given the fact that the glass of the examples of this type does not have white spots of scum.

Type III. E. ii. Hydriske with "bottle-shaped" body.
{Chapter Three, p. 256}

The four known examples of this type of hydriske belong to two or three separate groups. The first group, represented by no. 2 and the vessel formerly in the de Clercq collection, has handles formed of dark blue and white glass twists and is decorated with a white festoon pattern on the shoulder, white and yellow horizontal stripes on the upper and lower body and with a white zigzag pattern on the middle of the body. The handles and the decoration of this first

group of type III.E.ii hydriskai are identical to the handles and decoration of the first group of type III.D.i two-handled jars. We have already noted that both of these groups were most likely produced in a single workshop. The decoration of both of these types is also similar to the first group of type III.F.i oinochoai. The second group of type III.E.ii hydriskai consists of no. 3. This vessel, from Cumae, is similar to the two examples of the first group, differing from them in its smaller size and in its plain handles. It is possible that no. 3 was in fact produced in the same workshop as the examples of the first group. The final group of type III.E.ii hydriskai is illustrated by no. 1, supposedly from South Russia. This vessel has a more elongated body than those of the first group and is decorated with a carefully made feather pattern. The shape of no. 1 and its decoration closely link it to the first group of type III.F.iv oinochoai, both of which groups were probably produced by a single workshop.

Type III.E.ii hydriskai can be dated to the final decades of the fourth and the first decades of the third centuries B.C. on the basis of the context of no. 2, which was found with an Etruscan mirror of that period.⁵³ While it is not recorded whether nos. 1 and 3 are composed of glass with white spots of scum, the other two examples of this type of hydriskai certainly do have these spots. The distribution

pattern of type III.E.ii vessels, in which two of the three known provenances are Italian, supports Harden's theory that white spots of scum are a sign of Italian made glass. As we have seen, however, vessels composed of glass having white scum have now been found in Macedonia.

Type III. F. Oinochoai.

The twenty-nine catalogued examples and the fifty-one pieces listed in Appendix 2 indicate that the oinochoe shape was one of the most popular shapes of core-formed glass vessels in the late fourth and early third centuries B.C. There are four varieties of the oinochoe shape in this period: ovoid body, "bottle-shaped" body, angular body, and fusiform body. The first two of these varieties correspond to Harden's divisions i and ii in his classification of the glass vessels in the British Museum. While Harden briefly discusses the fusiform shape, not represented in the British Museum collection, he seems not to have been aware of the angular body oinochoai.⁵⁴

The four basic shapes of the fourth and early third centuries B.C. oinochoai can be divided into six types, there being two types with ovoid bodies (large and miniature) and two types with "bottle-shaped" bodies (with feather pattern and with festoon pattern decoration).

Type III. F. i. Large oinochoe with ovoid body. (Chapter Three, p. 257)

There are two varieties of shapes of types III.F.i oinochoai that can be divided into three groups. The first two groups have taller, more narrow cylindrical necks that are tooled to create a sharp junction between neck and shoulder. The first group, consisting of nos. 1 and 5, is characterized by a festoon pattern on the shoulder. No. 5 lacks the additional festoon pattern at mid-body of no. 1. We have already noted that this festoon pattern links this group of type III.F.i vessels with the first group of type III.D.i two-handled jars and with the first group of type III.E.ii hydriskai. The second group of this type of oinochoai, including nos. 3 and 4, has no decoration on the shoulder or mid-body. It is possible that both groups may in fact represent two varieties produced in a single workshop.

The third group of type III.F.i oinochoai has a shorter, thicker neck that continues in an unbroken curve into the sloping shoulders. No. 1, the two pieces in the Staatliche Museum of Berlin, no. 1900.5-16.5 of the British Museum and the vessel illustrated by Neuburg belong to this third group (see Appendix 2). The members of this third group tend to be smaller than those of the other groups and to have more globular bodies.

No. 5, from either tomb 277 or tomb 200 at El

Cigarralejo in Spain, is the only piece of core-formed glass that comes from a context in the first half of the fourth century B.C. We may suspect that it dates closer to 350 B.C. than 375 B.C. because of its similarity in shape to nos. 3 and 4, which come from contexts no earlier than 325 B.C. Nonetheless, the date of no. 5 does strengthen the case for assuming continuity between the sixth and fifth centuries B.C. core-form glass manufacturing tradition and that of the fourth and early third centuries B.C. Indeed, the large body ovoid oinochoe shape is quite reminiscent of the earlier oinochoai types II.E.iv, II.E.v and II.E.vi. It is interesting to note that all examples of type III.F.i oinochoai are decorated with zigzag patterns that harken back to the normal trail pattern of the earlier core-formed vessels.

While no example of the third group of type III.F.i oinochoai comes from a dated context, we might suspect that they are a bit later than the first two groups since the shapes of their bodies are less carefully formed. On the other hand, this group may represent the products of a contemporaneous though less skilled workshop. In any case, all examples of type III.F.i oinochoai were certainly made sometime within the period 350-275 B.C.

The fact that all of the five examples of this type of oinochoe with known provenances come from contexts in the

central and western Mediterranean make it seem likely that this type was produced in Italy. This assumption is strengthened by the observation that the related groups of type III.D.i two-handled jars and type III.E.ii hydriskai are also from predominately Italian contexts.⁵⁵

Type III. F. ii. Miniature oinochoe. {Chapter Three, p. 258}

These miniature oinochoai are, like the other fourth and early third centuries B.C. miniature alabastra and amphoriskoi, simplified versions of larger, more elaborately decorated types. They range in height from 5.6 cm. to 4.5 cm. (average 5.0 cm.) and have maximum body diameters of 4.0 cm. to 2.9 cm. (average 2.8 cm.).

Type III.F.ii miniature oinochoai have ovoid bodies and can be divided into two groups based on differences in shape analogous to the two varieties of shapes of type III.F.i vessels. The first group of type III.F.ii oinochoai, represented by nos. 1 and 7, have cylindrical necks that are tooled at their lower parts to create a sharp junction between the neck and the flattish shoulder. No. 1 has the simple horizontal threaded decoration that is normal for this type of vessel while no. 7 has an added elaboration of a zigzag pattern at the middle of its body. The second group, including nos. 2-6, have upward tapering necks that continue into the sloping shoulder in an unbroken curve.

It would seem likely that the first group of type III.F.ii vessels were produced somewhere in the eastern Mediterranean, since the two examples of that group with known findspots come from Cyprus and the Eastern Aegean. Another miniature oinochoe belonging to this first group, the vessel formerly in the de Clercq Collection, may also have come from the eastern Mediterranean, since most, if not all, of the de Clercq Collection was formed in Syria. The five examples of the second group with a known provenance all come from Italy or Spain. It would seem probable, therefore, that this second group had been produced in Italy.

Type III. F. iii. Oinochoe with angular body. {Chapter Three, p. 259}

As we have already observed, this type of oinochoe has a sharply curving ovoid body shape that is closely related to the first group of type III.B.ii amphoriskoi and to the first group of type III.E.i hydriskai. There are only two known examples of this type, neither of which has a recorded provenance. The close relationship of type III.F.iii oinochoai to the first groups of type III.B.ii amphoriskoi and type III.E.i hydriskai, however, would date this type to roughly the period 325-275 B.C. The two examples of this type are decorated with threads that spiral downward in a counter-clockwise manner, a trait that occurs on III.B.ii.3

and on nearly all sixth and fifth centuries B.C. core-formed vessels.

The two examples of type III.F.iii oinochoai differ in one striking aspect: no. 1 is made with an upside down body! The body of no. 2 is oriented the same way as all of the bodies of types III.B.ii amphoriskoi and III.E.i hydriskai, and differs from those vessels only in its having a trefoil rim. We can only assume that the craftsman who put the narrow cylindrical neck, trefoil rim and handle on what should have been the bottom of no. 1 did so out of either carelessness or as a joke. No. 1 has a broad, flat pad-foot attached to its wide lower body, as opposed to the short stem and short pad-foot of no. 2 and of type III.E.i hydriskai.

Type III. F. iv. Oinochoe with "bottle-shaped" body, decorated with feather pattern. (Chapter Three, pp. 259-261)

Type III.F.iv and type III.F.v oinochoai are characterized by their large, nearly cylindrical bodies that curve inward abruptly just above their pad-feet. These types are easily distinguishable from the ovoid bodied types III.F.i and III.F.ii by their absence of short stems. The differences between types III.F.iv and III.F.v are based on the style of decoration.

There are four groups of type III.F.iv oinochoai. The first two groups are characterized by tall cylindrical necks that are tooled where they form a sharp junction with the

broad shoulders, and by bodies that curve more dramatically inward towards the pad-feet. The first group, represented by a single example from Corsica, no. 1, has a feather pattern decoration that changes to inverted festoons just above the foot. The second group, including nos. 1 and 3, have tall feather patterns that blanket the entire body.

The last two groups of type III.F.iv oinochoai are smaller, and have shorter necks that continue in an unbroken curve into their more rounded shoulders. The third group, represented by the pieces from Cumae and Teano, nos. 5 and 6, have slightly irregular feather patterns that are composed of threads that do not cover the entire body. The last group of type III.F.iv oinochoai consists of nos. 2 and 10 and is marked by feather pattern decoration that changes to zigzags on the lower part of the body. No. 11 is unusual in being made of a translucent brown glass and in having a feather pattern that begins on its shoulder.

The archaeological context on no. 9 would indicate that the first two groups of type III.F.iv were current in the second half of the fourth century B.C. while the contexts of nos. 5, 6 and 10 would indicate that the third and fourth groups began in the last quarter of the fourth century B.C. and continued into the first quarter of the third century B.C. Every example of type III.F.iv oinochoai that comes from a known provenance, with one exception, was found in

Italy, Sardinia or Corsica. The exception is the piece formerly in the Charvet Collection that is said to have come from Attica.

Type III. F. v. Oinochoe with "bottle-shaped" body, decorated with inverted festoon pattern. {Chapter Three, p. 261}

Two groups of type III.F.v oinochoai can be distinguished using the same difference in neck and body shape that we have already observed in type III.F.iv. The first group, which includes no. 3 and all of the examples listed in Appendix 2 except the piece in the Oppenländer Collection, has tall cylindrical, tooled necks that are set off from broad shoulders. The second group, represented by nos. 1 and 2 and by the Oppenländer oinochoe, has shorter necks that gently merge into sloping shoulders. The second group is significantly smaller than the first.

There is only a single example of type III.F.v oinochoai, no. 2, that can be dated by an archaeological context. However, the close similarities of the first group of type III.F.v oinochoai with the first two groups of type III.F.iv would make it likely that that group should be dated to 350-300 B.C. The 300-275 B.C. date of no. 2 is in agreement with the 325-275 B.C. range that we have already assigned to the related third and fourth groups of type III.F.iv oinochoai. It is once again probably significant

that the only two known provenances for this type of vessel are Italian.

Type III. F. vi. Oinochoe with piriform body. {Chapter Three, pp. 261-262}

We offer the term piriform in replacement for the term fusiform (from the Latin fusus, or spindle) that Harden uses to describe the pear-shaped bodies of this rare type of oinochoe and of later Hellenistic alabastra (types IV.A.iii and IV.A.iv) and amphoriskoi (type IV.B.xi). We will reserve the term fusiform to describe the spindle-shaped bodies of the thick-walled glass unguentaria (types III.G.i and IV.C.i and IV.C.ii).

The seven examples of this type of oinochoe listed in the catalogue and Appendix 2, none from a secure provenance, can be separated into two groups. The first group is illustrated by no. 2, a large vessel with a tall cylindrical neck that is sharply set off from its short rounded shoulder. The second group is represented by no. 1, a much smaller, dumpier vessel with a short neck and no shoulders. Both groups have piriform bodies and are decorated with a style of feather pattern that can be paralleled by the decoration on many vessels of the fourth and early third centuries B.C.

Donald Harden places this type of oinochoe in his Mediterranean Group 2, and suggests that the type derives from the fourth century B.C. alabastra type here listed as

III.A.iii.⁵⁶ We may question, however, Harden's further suggestion concerning the relationship of this type of oinochoe to the later piriform alabastra (types IV.A.iii and IV.A.iv) and piriform amphoriskoi (type IV.B.xi):

All three fusiform types must be closely related. We may consider the oinochoai as experimental prototypes; the alabastra as the main development therefrom; and the amphoriskoi as late offshoots which did not attain wide popularity.⁵⁷

As we will demonstrate below, the piriform alabastra and the piriform amphoriskoi belong to the first centuries B.C. It is difficult to imagine how type III.F.vi oinochoai could have served as a prototype for core-formed vessels produced at least 150 years later. The general similarity of shape between type III.F.vi oinochoai and the later vessels is probably fortuitous.

Type III. G. i. Thick-walled unguentarium with large body and up-turned handles. (Chapter Three, p. 263)

This type of core-formed vessel, with its spindle-shaped body and solid foot-stand, clearly imitates the common Hellenistic clay fusiform unguentarium. Following the now generally accepted pottery terminology, we should abandon Fossing's designation "lacrimatorium" for this type of core-formed vessel and substitute the term unguentarium. As will be shown in Part Four of this chapter, there are two forms of

core-formed glass unguentaria current in the later third and second centuries B.C. The first of these later forms is derived from type III.G.i vessels, both having spindle-shaped bodies with thick walls. The other form is characterized by thin-walled large ovoid bodies without foot-stands; it may have been derived from type III.G.ii vessels.

Donald Harden, following Fossing, places all examples of core-formed unguentaria in his Mediterranean Group 3, though he recognizes that type III.G.i, the equivalent to his division C.i.a., is earlier than his division C.i.b (or our IV.C.ii).⁵⁸ There are two persuasive arguments, however, for assigning type III.G.i vessels to the fourth and early third centuries B.C., i.e. to Harden's Mediterranean Group 2.

It has now been shown that the Hellenistic clay fusiform unguentarium, itself derived from the so-called imitation Cypriot amphora, began in the late fourth and early third centuries B.C.⁵⁹ Type III.G.i glass unguentaria are most closely related to the very earliest of the pottery series. Indeed, the purple line on the neck and belly of the grey ware pottery unguentaria may actually reflect an influence of the glass worker on the potter.

The ovoid fluted bodies of the examples of type III.G.i unguentaria are very closely related to those of the second group of type III.B.ii amphoriskoi, which we have already argued should be placed no later than c. 275 B.C. This

terminus ante quem for type III.G.i vessels is supported by the dating of the types of unguentaria that are derived from type III.G.i, namely types IV.C.i and IV.C.ii. A find from Caltanissetta, Sicily shows that type IV.C.ii unguentaria were already current by c. 250 B.C.

All of the four examples of type III.G.i unguentaria listed in the catalogue show individual traits that would indicate that each was made by a separate hand. Nos. 2 and 4 both have very narrow, tall necks, though the former has solid disc-handles and the latter has a large ovoid body. No. 3 is the only recorded type III.G.i vessel that has decoration on the lower part of its body. No. 1 can be paralleled by the pieces in the Kanellopoulos Museum and in the Oppenländer Collection, all of which may have been produced in a single workshop.

Type III. G. ii. Thin-walled piriform unguentarium with strap handle. {Chapter Three, p. 264}

The single known example of this type of core-formed vessel defies classification. It comes from one of a number of stone-lined cist tombs discovered under a Late Hellenistic industrial installation at Iasos. Within this sealed tomb was also discovered two terracotta female figurines that date to the last third of the fourth century B.C. There can be no question that this core-formed vessel chronologically belongs

with the other type III vessels.

This vessel superficially resembles the tall-necked, large-bodied type IV.B.vi amphoriskoi. However, a number of features clearly differentiate III.B.ii.1 from type IV.B.vi amphoriskoi, a type that we will see is confined to the first century B.C. Whereas type IV.B.vi vessels have very tall necks, cylindrical or globular bodies and handles and end-knobs made out of a transparent glass, III.B.ii.1 has a shorter neck, a sharp junction between the shoulders and the body, and a button-base and a single handle composed out of the same dark green glass that was used to form the body. The sharp junction between shoulder and body and the button-base relate III.B.ii.1 to the types IV.C.iii and iv thin-walled unguentaria. The Iasos vessel further shares with these unguentaria a common decorative motif of a festoon pattern that extends only part way down the body.

Since, as will be demonstrated below, the thin-walled unguentaria date to the third century B.C., it is perhaps best to view III.B.ii.1 as a heretofore unrecognized precursor of types IV.C.iii and IV.C.iv. The apparently sole vertical handle of the Iasos unguentarium, however, sets this piece apart from the later types which have either horizontal handles or no handles.

Part Four: Third to First Centuries B.C.

Following the tradition of Fossing and Harden, this study treats the period of the later third century through the first century B.C. as a single unit, the last in which core-formed glass vessels were produced in the Mediterranean. In some ways, however, this period could more logically be divided into two smaller chronological units. From approximately 250 B.C. to 150 B.C., there is no real break with the core-forming tradition that characterized the previous period of the late fourth and early third centuries B.C. Every type of core-formed glass current from the middle of the third century to the middle of the second century B.C. (type IV.A.i alabastra, types IV.B.i and IV.B.ii amphoriskoi, and types IV.C.i-iv unguentaria) is a continuation, albeit somewhat debased, of types that had begun in the previous one hundred years. On the other hand, a radical change in the core-formed industry occurred sometime after the middle of the second century B.C. Completely new types of alabastra and amphoriskoi replace the older, degenerate forms. Moreover, there is a marked increase in the number of core-formed vessels from this latter period that have survived to the present.

As we have suggested in the case of the earlier break between the core-formed glass tradition of the sixth and fifth centuries B.C. and that of the fourth and early third

centuries B.C., this second radical change in the core-formed glass industry is to be explained by the establishment of new centers of production. As will be argued in Chapter Four, the new, revitalized centers of core-formed glass production of the latter second and first centuries B.C. were located in the East, most probably on the island of Cyprus. It is also in the East where, sometime shortly after c. 50 B.C., the new technique of glass-blowing developed, a technique whose potential for mass-production spelt the demise of the core-formed glass industry.

IV. A. Alabastra.

As Harden recognized, there are two basic forms of alabastra current in the period under discussion: division i (alabastra with long necks and cylindrical bodies) and division ii (alabastra with piriform bodies). Harden separated his division i alabastra into two subdivisions: a) vessels with straight-sided bodies and knob handles placed low on their bodies (here type IV.A.i); and b) vessels with convex-sided bodies and lug handles placed high on their bodies (here type IV.A.ii). Harden also separated his division ii vessels into two units, based on their decoration: 1) vessels decorated with feather pattern (here type IV.A.iii); and 2) vessels decorated with festoon pattern (here IV.A.iv).⁶⁰

Although the present study follows Harden's classification of type IV.A alabastra without change, it does not accept his assertion that all four types were produced throughout the mid-third to first centuries B.C. As will be demonstrated below, it appears, rather, that the types are sequential, with type IV.A.i being the earliest and types IV.A. iii and IV.A.iv being the latest.

Type IV. A. i. Alabastron with tall neck and cylindrical body. {Chapter Three, pp. 265-266}

As already noted, all of the examples of this type of alabastron have straight-sided bodies with knob handles placed towards the middle of their bodies. These features closely link type IV.A.i vessels with the narrow-bodied types III.A.ix, III.A.x and III.A.xi alabastra. The main difference between the earlier and the later types is one of proportion, with type IV.A.i alabastra having significantly longer necks.

Only one true group can be isolated out of the rather heterogeneous collection of type IV.A.i alabastra, the vessels not belonging to that group each being unparalleled. This group, including nos. 2, 3, 5 and 6, as well as the pieces in the Oppenländer Collection and the Okayama Museum (see Appendix 2), is characterized by small, fluted bodies (7.6 cm. to 9.0 cm. in height), very tall necks and

decorations of closely-set zigzag patterns. No. 4 and the vessel formerly in the Berlin Museum (see Appendix 2) are close to this group, differing only in their more elongated bodies. Nos 1 and 7 have more regular cylindrical bodies and more widely spaced spiralling threads. The spiralling thread of no. 1 is pulled into a feather pattern while the thread of no. 7 is uncombed.

Only one example of a type IV.A.i alabastron comes from a context that can be closely dated. That example, no. 6, comes from a context on the City Mound of Gordion that has a terminus ante quem of 189 B.C. supplied by the Gaulic desertion of the site at that date. Two other examples of type IV.A.i alabastra come from tombs which may date to the end of the third century B.C. No. 2 is from the cemetery at Myrina that the excavators generally date to the third and second centuries B.C.; we have already commented, however, on the unreliability of this date. No. 3 is from a series of tombs 2 kilometers northeast of Amphipolis, tombs which the excavator dates from the middle of the fourth to the end of the third centuries B.C. However, among the glass vessels illustrated as coming from this Amphipolis cemetery is a type IV.A.iii alabastron that cannot date to earlier than the middle of the second century B.C.⁶¹ However, on the basis of the context of no. 6, we may date type IV.A.i alabastra to the end of the third century B.C.

Type IV. A. ii. Alabastron with tall neck and convex body.
{Chapter Three, pp. 266-268}

Type IV.A.ii vessels are easily distinguished from the previous type of alabastron by their slightly rounded bodies and by their tooled lug handles that are placed at the shoulder. There are two main classes of type II.A.ii alabastra, those with more globular convex bodies and those with nearly straight-sided bodies that sharply curve inward near their very flattened bottoms. Within each of these classes there are two distinct groups.

The first two groups of type IV.A.ii alabastra, both having globular bodies, are distinguished from each other by the proportion of neck to body. The examples of the first group have necks which are nearly equal in length to their bodies, while the members of the second group have bodies that are significantly longer than their necks. Both groups have nearly identical, carefully made, decorative feather patterns that cover the entire body. The first group is represented by nos. 1, 4, 13 and 20, and by examples in the Newark Museum and the British Museum (Auth's no. 268 and Harden's nos. 328 and 332; see Appendix 2). The second group includes nos. 2, 3, 5, 14, and 16-19 and examples in the National Museum, Athens, the Museum Narodowe, the Oppenländer Collection, the Bristol Museum, the Freer Gallery of Art, and the Newark and British Museum (Auth's no. 14 and Harden's no. 327; see Appendix 2). No. 22 is similar in shape to the

examples of this second group but differs from them in having a festoon pattern decoration.

The third and fourth groups of type IV.A.ii alabastra, both with nearly straight-sided bodies and very flattened bottoms, can likewise be distinguished from each other by the proportions of neck to body. The third group is characterized by vessels with relatively small bodies while the fourth group consists of vessels with more elongated bodies. Nos. 10, 12 and 15 belong to the third group. The fourth group is represented by nos. 6-9 and 11 and by a piece in the Royal Ontario Museum (Hayes' no. 29; see Appendix 2). No. 21 resembles the members of this fourth group in the shape of its body, though it differs in having a convex neck and a marked junction between neck and shoulder. Again, both the third and fourth groups have very similar decorations: a feather pattern composed of threads that are more closely wound than those of the first two groups.

Given the close similarities of the first group to the second group and of the third to the fourth, it is possible that only two workshops may have been responsible for the four groups. The observed differences in sizes of the bodies between the two sets of groups may reflect differences in the amounts of the substances they were meant to contain. This supposition is supported by the observation that the 8.9 cm. average height of the seven examples of the first group

(ranging from 7.9 cm. to 9.5 cm.) is almost exactly one third smaller than the 12.8 cm. average height of the fifteen members of the second group (ranging from 12.0 to 13.8 cm.). This 2:3 proportion has also been observed within groups of type II.A.iv, III.A.i and III.A.ii alabastra.

Another factor which favors the idea that the two sets of groups may have been produced in only two workshops is the geographical distribution of the examples of the four groups with known provenances. All of the examples of the first two groups have come from contexts ranging from the Levant to Italy, while no. 15, said to be from Tortosa, Syria, is the only example of the third and fourth groups that does not come from a western, Punic area. This geographical distribution strongly suggests that the third and fourth groups of type IV.A.ii alabastra were products of a Punic core-formed glass industry. If this was the case, it must be stressed that the great similarities among all the examples of type IV.A.ii vessels indicate that that Punic industry had close contacts with the Eastern, presumably Greek, tradition that produced the examples of the first two groups.

The dating evidence for type IV.A.ii alabastra poses great difficulties. On the one hand, the dates suggested by the excavators of the tombs that yielded nos. 2, 4 and 5 would indicate that the type had begun by the close of the third century B.C. On the other hand, the contexts of nos.

6-9 and 13 would indicate that type IV.A.ii vessels were current in the latter part of the second and the early part of the first centuries B.C. Given the internal consistency among all of the examples of type IV.A.ii alabastra, it is highly unlikely that the type had been produced continually for nearly two hundred years.

However, the chronological problem is not as great as it may seem, if we recognize that there are independent reasons for rejecting the higher dates proposed for nos. 2, 4 and 5.⁶² The destruction date of the sanctuary of Mars at San Favar, Mallorca, dated on historical grounds to 123 B.C., therefore gives us the earliest terminus ante quem for type IV.A.ii alabastra. With this date in mind, we might consider no. 1, from Samothrace, to be an heirloom in its Augustan context. Dusenbery specifically argues against heirlooms in the Samothracian material on the basis of the general simplicity of the the grave groups.⁶³ It is just this simplicity, however, that would make one suspect that the rare, valuable core-formed vessel was a treasured heirloom. We might further note that the grave at Samothrace which produced no. 1 also contained, among the unpublished pottery unguentaria and terracotta figurines that supply the Augustan date, a gold-band glass alabastron, of a type that is usually dated to the second and first half of the first centuries B.C.⁶⁴

Given these chronological considerations, we might best place type IV.A.ii vessels in the general period 150-50 B.C., recognizing that their production must have been limited to a much smaller period within that range, perhaps within the last third of the second century.

Type IV. A. iii. Piriform alabastron with feather pattern decoration. {Chapter Three, pp. 268-272}

The baggy shape of types IV.A.iii and IV.A.iv vessels represent a new development in the shapes of core-formed alabastra. We have already indicated that this shape should be called "piriform" rather than "fusiform" to avoid confusion with the spindle shape of pottery and glass unguentaria. As Harden had pointed out, the fusiform shape is a natural one for core-formed glass vessels, and the occasional occurrence of the shape in clay should reflect the influence of the glass worker on the potter, and not vice versa.⁶⁵

Several other features serve to set off type IV.A.iii and IV.A.iv alabastra from all of the earlier types of core-formed vessels. They seem to have been made on rods that were slightly thinner than those used to hold the cores of earlier types of core-formed vessels; types IV.A.iii and IV.A.iv vessels have mouth diameters of 0.8 cm. to 0.9 cm., as opposed to the 1.0 cm. to 1.2 cm. diameters usually found

on all of the core-formed vessels heretofore described. The glass from which types IV.A.iii and IV.A.iv alabastra were made seems to have been more viscous than the glass used to form earlier core-formed vessels; during the combing of the decorative threads on type IV.A.iii and IV.A.iv alabastra, this more viscous glass was frequently cut through, necessitating an added glass plug, such as on IV.A.iii.25.

It would seem that the piriform-shaped alabastra were more popular than the tall-neck varieties since the number of types IV.A.iii and IV.A.iv vessels that have survived to the present is more than twice that of types IV.A.i and IV.A.ii. All of the examples of both types IV.A.iii and IV.A.iv are very similar to each other and, although it is possible to isolate several groups among each type, the workshops that produced these groups must have been in close contact.

There are at least three main groups of type IV.A.iii alabastra. The first group, including nos. 1-7, 11-13, 23, 26, 27, and 30, is marked by a tall, narrow "neck" or upper body and by a relatively shallow and high carination. The second group, represented by nos. 16, 24, 25, 29 and 31, is very similar to the first group, differing in having a shorter, concave "neck" and a more rounded carination that is slightly lower on the body. The examples of the third group, nos. 9, 15, 22, and 28, have smaller bodies that are more globular than carinated.

There are several other examples of type IV.A.iii alabastra that do not belong to any of the above three groups. Nos. 8 and 14, though differing in shape, both are decorated with feather patterns formed by only slight up and down combing. No. 10 has a very narrow rim-disc and narrow, distinct neck that are not otherwise paralleled. No. 18 has the downward tapering neck characteristic of the second group and the high, shallow carination of the first group. No. 21 stands alone in several ways. It is composed of a translucent light brown glass, of a type that was used to make the cast and ground hemispherical bowls of this period. No. 21 is also the only type IV.A.iv alabastron to have a distinct junction between neck and body.

Type IV. A. iv. Piriform alabastron with festoon pattern decoration. {Chapter Three, pp. 272-275}

As mentioned above, this type of alabastron is closely related to the preceding type. The three main groups that we have identified for type IV.A.iii vessels are matched by equivalent groups among the type IV.A.iv alabastra. These three sets of groups were each made in a single workshop.

The first group of type IV.A.iv alabastra includes nos. 4, 10, 13, 18 and 22. This group, like the first group of type IV.A.iii vessels, is characterized by examples with long "necks" and shallow carinations. The second group, here represented by nos. 3, 5, 9, 14, 15 and 23, has the concave "neck" and more rounded carination already seen on the second group of type IV.A.iii alabastra. The members of the third group of type IV.A.iv vessels, nos. 2, 5, 7, 11, 12, 19 and 21, have the same short, globular bodies that we have observed on the the examples of the third group of type IV.A.iii alabastra.

When we examine the examples of both types IV.A.iii and IV.A.iv alabastra that have a known provenance, we can observe a pattern that is reminiscent of most type II vessels. Instead of the Eastern Aegean dominating the list of findspots, here we find Cyprus playing that role, with nearly half of the catalogued vessels having a Cypriot provenance. It is interesting to note that the distribution

of types IV.A.iii and IV.A.iv vessels decreases with increasing distance from Cyprus, with more examples of these types being found in the areas (Syria, Greece) near Cyprus and fewer in the areas (the Black Sea, Italy) far from Cyprus. It is significant that no example of types IV.A.iii and IV.A.iv alabastra have been found as far away as Spain or the Balearic Islands.

These two types of piriform alabastra were certainly produced over a short period of time. The three workshops that we have postulated for the three sets of groups of types IV.A.iii and IV.A.iv were probably all working contemporaneously. Harden has suggested that the piriform alabastra lasted from the mid-third century B.C. to the mid-first century B.C.⁶⁶ He arrived at the upper limit of this improbably long span based on what we have already suggested to be the fortuitous similarity of the shape of type III.F.vi oinochoai and the shape of types IV.A.iii and IV.A.iv alabastra. The closely dated contexts of IV.A.iii.11, from Ornavasso and IV.A.iv.2, from the Antikythera shipwreck, would suggest that the two types were current around 80 B.C. We therefore suggest a general date of the first half of the first century B.C. for both type IV.A.iii and IV.A.iv alabastra.

Type IV. B. Amphoriskoi.

During the Hellenistic period, the core-formed amphoriskos regains the popularity that it had enjoyed during the fifth century B.C. Harden has recognized five basic variations of the shape that were current during this period. His division i (here IV.B.i) are small vessels with tall necks, vertical handles from shoulder to rim, small bodies and added butt-ends. Harden's division ii (here IV.B.ii) is a rare type of amphoriskos with a bag-shaped body and small handles from shoulder to neck. Harden's division iii (here subdivided into types IV.B.iii-viii) is the most popular, and is characterized by large-bodied vessels with tall vertical handles from shoulder to rim. His division iv vessels (here types IV.B.ix and IV.B.x) have slightly smaller ovoid bodies with S-shaped handles. Harden's last division (here IV.B.xi) is made up of vessels with piriform bodies having S-shaped handles. A sixth variation (here type IV.B.xii), not recognized by Harden, is represented by two examples with inverted ovoid bodies.

Of these six variations of the amphoriskos shape, only the first has any relationship to earlier types of amphoriskoi. The others are all manifestations of the new core-formed glass industry that developed, as we will argue, in Cyprus during the last two centuries B.C.

Type IV. B. i. Small amphoriskos with tall neck, small body and butt-end. {Chapter Three, pp. 275-276}

Type IV.B.i amphoriskoi are a continuation of type III.B.ii vessels. Like that earlier type, they bear a faint resemblance to the full-bodied types current in the sixth and fifth centuries B.C. Together with type IV.A.i alabastra, type IV.B.i amphoriskoi represent the last stage in the degeneration of the core-formed glass industry that produced type II vessels.

Type IV.B.i amphoriskoi are easily distinguished from type III.B.ii vessels by the relative proportions of body length to neck length. Whereas in the type III.B.ii vessels the neck retains the relatively short form that characterized the necks of type II amphoriskoi, the necks of type IV.B.i amphoriskoi are quite long, anticipating the extremely long necks of types IV.B.iii-viii. Further, in type IV.B.i vessels, the bodies are significantly smaller, sometimes no more than a simple oval. In this respect, the shape of type IV.B.i amphoriskoi is essentially that of types IV.C.i and IV.C.ii fusiform unguentaria.

There are two discernible groups among the examples of type IV.B.i amphoriskoi. The first group, represented by nos. 1, 3, 6 and 7, have flat shoulders, slightly fluted bodies and small end-knobs. These features relate this group to the earlier type III.B.ii amphoriskoi. The second group

consists of vessels, nos. 4, 5, 8, 9 and 10, that have sloping shoulders and simple ovoid bodies. The members of this second group were formed around cores that were made with the absolute minimum of modeling. No. 2 is included with type IV.B.i on the basis of its relatively tall neck and small body; its angular body and zigzag pattern decoration covering the entire body are otherwise unparalleled.

We have already shown that type III.B.ii amphoriskoi must belong to the late fourth and early third centuries B.C. Type IV.B.i vessels are in the same tradition but are clearly more degenerate. We should therefore expect that they were produced one or two generations later. The context of IV.B.i.10 indicates that the type had begun by at least the end of the third century B.C. The only other type IV.B.i vessel that has so far been recovered from a datable context, no. 5, would indicate that the type continues into the second century B.C. We therefore suggest a general date of 250-150 B.C. for type IV.B.i amphoriskoi, recognizing that their actual dates of production probably spanned no more than two generations, perhaps in the quarter centuries either side of 200 B.C.

Type IV. B. ii. Bag-shaped amphoriskoi. {Chapter Three, p. 276}

Both Fossing and Harden believed that this rare type of amphoriskos was made in imitation of a type of Punic pottery amphora.⁶⁷ Harden also noted that the transparent glass with a greenish tinge from which the handles and end-knobs of type IV.B.ii amphoriskoi were formed is the same glass that the earliest glass-blowers used. This transparent glass was also used for the handles and end-knobs of types IV.B.iii-xi vessels.

Nos. 1, 2 and 4, and the two vessels listed in Appendix 2 are all very similar, each having a flattened bottom with an added end-knob, and, while they do not form an actual group, represent a common tradition. No. 3 is quite separate, having a pointed bottom and no end-knob.

Harden believed that type IV.B.ii amphoriskoi belonged to the third century B.C., in spite of the fact that no. 3 was found with IV.B.vi.21, which he recognized could not be dated before the second century B.C. Harden felt that, while the Punic amphoras which he believed type IV.B.ii vessels imitate last from the sixth to the second century B.C., the core-formed type "looks earlier."

However, several factors would make it much more probable that type IV.B.ii amphoriskoi were made some time within the period 150-50 B.C. The fact that these vessels

have handles and end-knobs composed of transparent glass links them with types IV.B.iii-xi, types which we will see date to the first centuries B.C. While it is true that transparent glass had been used for centuries by Persian and Greek craftsmen to make cast and ground vessels, the manipulation of hot transparent glass such as is represented by the handles and end-knobs of types IV.B.ii-xi vessels is a step in the history of glass technology that cannot be too far removed from the invention of glass-blowing.

Although the examples of type IV.B.ii are widely distributed, they were probably made within a small geographical area. A clue to where that area may have been is given by the recent discovery of a "Punic" amphora in tomb 4 of Evrykhou, Cyprus, in a context dating to the late third to second centuries B.C.⁶⁸ This vessel, which is of Cypriot fabric, has the flattened bottom and end-knob that is seen on all the examples of type IV.B.ii amphoriskoi with the exception of no. 3. Given the fact that IV.B.ii.4 was found on Cyprus and that the piece in the Baar Collection is probably from Syria, it may not be too unreasonable to suggest that type IV.B.ii amphoriskoi were produced there. This suggestion is supported by the fact that the majority of types IV.B.iii-xi amphoriskoi, which we have already noted are related to type IV.B.ii vessels through the common use of transparent glass, were found on Cyprus. No. 3, on the other

hand, coming from a Spanish context and more closely imitating Punic amphora types, may have been produced in a Punic, or at least Western Mediterranean center.

Type IV. B. iii. Amphoriskos with small neck and large body, decorated with feather pattern. {Chapter Three, p. 277}

Harden has recognized four subdivisions of his division iii amphoriskoi, all of which are characterized by examples with large bodies and tall vertical handles that are clearly made in imitation of the tall pottery transport amphoras common in the later Hellenistic period.⁶⁹ Harden's subdivision a (here types IV.B.iii and IV.B.iv) is defined as the collection of large-bodied amphoriskoi that have relatively small necks. Harden's subdivision b vessels (here types IV.B.v and IV.B.vi) have, in contrast, relatively tall necks. The examples in Harden's subdivisions c and d (here types IV.B.vii and IV.B.viii) have the same shapes as those of his subdivision b vessels, differing from them in having either a base-disc or a simple, rounded bottom.

There are two groups of type IV.B.iii amphoriskoi. The first group, including nos. 1, 2 and 4, consists of pieces with nearly cylindrical bodies. The examples of the second group of type IV.B.iii amphoriskoi, represented by no. 3, have more ovoid bodies. The members of the first group tend to have tall vertical handles that go from shoulder to neck or rim in a single curve while the handles of the examples of

the second group tend to go straight up to the level of the rim and angle sharply back to join the neck. An example of the first group in a private collection in Japan (see Appendix 2) has angled handles like those of the second group and a piece in the Cohn Collection (see Appendix 2), belonging to the second group, has simple curved handles like those of the first group.

Harden noted that no. 4 has handles and an end-knob made from the same dark blue glass from which the body had been formed, a situation that is almost the universal rule for earlier core-formed vessels. This fact has led Harden to postulate that some type IV.B.iii and type IV.B.iv amphoriskoi were made early in his Mediterranean Group 3, no later than the early second century B.C.⁷⁰ However, it should be pointed out that no. 4, as Harden himself noted, has an exact parallel in a piece in the Oppenländer Collection that has handles and end-knob composed of a transparent glass. This fact, together with the observable close relationship of all examples of type IV.B.iii vessels, would make it more likely that the type was produced over a much more restricted span than the third through first centuries B.C.

The only type IV.B.iii amphoriskos that has yet been found in an archaeological context, no. 1, offers little help in determining that span since it provides only a

terminus ante quem of the fifth century A.D. However, as will be shown below, the closely related type IV.B.iv vessels belong to the first century B.C. and the first decade of the first century A.D. We should therefore date type IV.B.iii amphoriskoi to this period, a date which, again, puts these vessels in the same period in which the manipulation of hot transparent glass led to the discovery of glass blowing.

Type IV. B. iv. Amphoriskos with small neck, large body, vertical handles and end-knob, decorated with festoon pattern. {Chapter Three, p. 278}

Type IV.B.iv amphoriskoi can be broken down into two groups, based on the same cylindrical/ovoid body distinctions used to define the two groups of type IV.B.iii vessels. The members of the first group, represented by no. 2 and by pieces Constable-Maxwell Collection and the Carnegie Museum of Natural History (Oliver's no. 15; see Appendix 2), have nearly cylindrical bodies, while those of the second group, represented by no. 1 and by pieces in the British Museum, the Newark Museum, the Cohn Collection and the Carnegie Museum (Oliver's no. 14; see Appendix 2) have more ovoid bodies.

The two examples of type IV.B.iv amphoriskoi listed in the catalogue both come from graves that also produced early types of blown glass. Although these two graves can be dated to the period 50 B.C.-50 A.D., it is unlikely that type

IV.B.iv vessels were produced much later than the turn of the millennium. We have already hypothesized that the invention of glass-blowing caused the end of the production of core-formed vessels. We should not, however, imagine that the older technique stopped immediately after the invention of the glass-blowing technique. We should envision the two techniques co-existing for no more than one or two generations at most, until the more efficient glass-blowers usurped the market from their core-forming colleagues. We therefore assign a general date of the first century B.C. and the first decade of the first century A.D. for type IV.B.iv and the related type IV.B.iii amphoriskoi, recognizing that their actual period of production was probably more restricted, perhaps within the third and fourth quarters of the first century B.C.

Type IV. B. v. Amphoriskos with tall neck and large body, decorated with feather pattern. {Chapter Three, p. 278}

As mentioned above, type IV.B.v amphoriskoi and the closely related type IV.B.vi vessels fall into Harden's subdivision b of his division iii amphoriskoi. There are two groups of type IV.B.v amphoriskoi, again based on the same cylindrical/ovoid body distinction that we have already made within the examples of the previous two large-bodied amphoriskoi types.

The first group, including no. 1 and the examples in Warsaw, Toronto, Corning and Newark (see Appendix 2), consists of examples with straight-sided bodies. The second group, represented by nos. 3, 4 and 5 and by the pieces in Beirut and New Haven (see Appendix 2), is composed of examples with larger, more ovoid bodies. The handles and end-knobs of both groups are made from transparent glass, with the handles of the first group having a gentle curve at their tops and the handles of the second group having a distinct angle where they connect with the upper neck.

Only one example of a type IV.B.v amphoriskos, no. 1, comes from a securely dated context. This piece was found in a cremation burial at Samothrace apparently dating to the reign of Tiberius. We have already suggested that the type IV.A.ii alabastron from Samothrace may have been an heirloom in its late first century B.C. context. While it would be tempting to assume that IV.B.v.1 is earlier than its early first century A.D. context, we must recognize that several of the related type IV.B.vi amphoriskoi, including three from Samothrace, also come from contexts that date to the very end of the first century B.C. and into the early part of the first century A.D. Type IV.B.v amphoriskoi must have been made by the very last generations of craftsmen who produced core-formed vessels. We should therefore assign a general date of the first century B.C. and the first decade of the first century A.D. to the type.

Type IV. B. vi. Amphoriskos with tall neck and large body, decorated with festoon pattern. (Chapter Three, pp. 279-283)

As stated above, type IV.B.vi amphoriskoi, together with type IV.B.v amphoriskoi form Harden's subdivision b of the large-bodied amphoriskoi. It would seem that type IV.B.vi amphoriskoi, decorated with festoon patterns, were more popular than the previous type, decorated with feather patterns, since the number of type IV.B.vi vessels that have survived to the present is five times greater than the surviving number of type IV.B.v amphoriskoi.

Type IV.B.vi amphoriskoi can be divided into two groups, again following the same cylindrical/ovoid body distinction that has been used to form the groups of types IV.B.iii-v vessels. The first group of type IV.B.vi amphoriskoi, including nos. 1, 3-5, 8-12, 15, 20-22, 26, 27, 30, 33, 34, 37 and 38, is defined by vessels with narrower (M.D. body 4.2 cm. to 5.1 cm.), more cylindrical bodies. The second group, represented by nos. 2, 6, 16-18, 29, 31, 32, 35 and 36, consists of examples with wider (M.D. body 6.2 cm. to 6.3 cm.), more globular bodies. No. 39, without a known provenance, has a nearly spherical body that places it somewhere between this second group and the bag-shaped bodies of type IV.B.ii vessels.

Six examples of type IV.B.vi amphoriskoi, nos. 2-6, and 29, have come from closely dated contexts, all of which belong to the first century B.C. and the early part of the first century A.D. This fact, together with the argument concerning the relationship between the core-formed glass industry and the earliest blown-glass industry, allows us to assign the production of type IV.B.vi vessels to the first century B.C. and the first decade of the first century A.D. Again, it is possible that the actual span of time within which these amphoriskoi had been produced may have been less than 110 years.

Type IV. B. vii. Amphoriskos with tall neck, large body and disc-base. {Chapter Three, p. 283}

As mentioned above, this type of amphoriskos, equivalent to Harden's subdivision c of his division iii amphoriskoi, is closely related to the other large-bodied amphoriskoi, types IV.B.iii-vi. The three known examples of type IV.B.vii amphoriskoi have bodies that are more straight-sided and elongated than those of the other large-bodied types of amphoriskoi, and they have small, flat disc-bases in place of the end-knobs of the other types. Type IV.B.vii vessels also differ in having relatively short, curved transparent glass handles that extend from their shoulders to the middle of their necks.

While the three examples of type IV.B.vii amphoriskoi are clearly made within the same tradition that produced the other large-bodied types of amphoriskoi, these differences would indicate that they are products of an otherwise unrepresented workshop. The close similarities among these three examples makes it likely that they were all produced in a single factory, if not by a single individual.

Of the two examples with a known findspot, both from Cyprus, neither can be closely dated. However, the general similarities of type IV.B.vii amphoriskoi with the other large-bodied types would make it probable that they, too, were made within the first century B.C. and the first decade of the first century A.D.

Type IV. B. viii. Amphoriskos with tall neck, large body and rounded bottom. {Chapter Three, p. 284}

The single known example of this type, from Gnathia, is very close in shape to the members of the first group of types IV.B.v and IV.B.vi amphoriskoi. It differs only in its lack of an end-knob. Although this single example cannot be closely dated, we can confidently place it in the period of the production of the related types IV.B.v and IV.B.vi vessels, that is to the first century B.C. and the first decade of the first century A.D.

Taken as a whole, the distribution of findspots of the large-bodied amphoriskoi shows the same pattern that we have observed with the piriform alabastra. Nearly half of the examples with a known provenance come from Cyprus, with most of the remaining large-bodied amphoriskoi coming from the nearby Levant and the Aegean. This distribution pattern is a strong indication that the production center for the large-bodied types of amphoriskoi was Cyprus.

Although we have identified ten groups among the large-bodied types of amphoriskoi, two each for types IV.B.iii-vi and one each for types IV.B.vii-viii, it is possible that no more than three workshops were responsible for the entire production of the large-bodied amphoriskoi. The first groups of types IV.B.iii-vi and type IV.B.viii all have straight-sided, nearly cylindrical bodies, and thus may have been produced in a single workshop. Likewise, the second groups of types IV.B.iii-vi vessels, with their more globular bodies, may all be the products of a single workshop. We have already indicated that the three known examples of type IV.B.vii vessels represent a third workshop.

Type IV. B. ix. Amphoriskos with ovoid body, disc-base and S-shaped handles, decorated with feather pattern on neck and body. {Chapter Three, pp. 284-285}

Type IV.B.ix and the closely related type IV.B.x

amphoriskoi represent a completely new form of core-formed amphoriskoi, one that makes its first appearance at the very end of the history of core-formed glass production. The large, globular bodies of the examples of types IV.B.ix and IV.B.x amphoriskoi have no parallel among the examples of any other type of core-formed vessel. Nonetheless, the tall neck of these two types does relate them to the previous types IV.B.v-viii amphoriskoi. Moreover, the use of transparent glass to form the handles is common on all types IV.B.ii-xii vessels. The S-shaped handles that occur on types IV.B.ix and IV.B.x amphoriskoi also are to be found on types IV.B.xi and IV.B.xii amphoriskoi.

The five catalogued examples of type IV.B.ix amphoriskoi form a single group. All of these vessels are decorated with feather patterns that were created with two separate combing actions: one feather pattern extends from the neck to just above the point of the maximum diameter of the body and the other feather pattern extends from the maximum diameter of the body to the very bottom of the vessel. On type IV.B.ix vessels the maximum diameter of the body is almost exactly at the middle of the height of the vessel.

While none of the five examples of type IV.B.ix amphoriskoi that have a known provenance comes from a context that can be independently dated, they are closely related to

type IV.B.x amphoriskoi, which can be dated to the first century B.C. and the early part of the first century A.D. We should note that no. 4 is from an Amathus tomb that also yielded an example of a type IV.B.vi. amphoriskos; we have already shown that type IV.B.vi vessels also date to the first century B.C. and the first decade of the first century A.D.

Type IV. B. x. Amphoriskos with ovoid body, disc-base and S-shaped handles, decorated with festoon pattern on neck and feather pattern on body. {Chapter Three, pp. 285-286}

Type IV.B.x amphoriskoi differ from the previous type in only one respect. The threads from the maximum diameter of the body to the neck on type IV.B.x vessels are all combed upwards, creating a festoon pattern, as opposed to the up and down combed feather pattern on type IV.B.ix amphoriskoi.

Two groups of type IV.B.x amphoriskoi can be isolated. The the examples of the first group, including nos. 1, 5, 7-9 and 11-14, have bodies shaped like those of type IV.B.ix, where the maximum diameter of the body is close to the middle of the total height of the vessel. The members of the second group of type IV.B.x amphoriskoi, nos. 2-4, 6 and 10, have more rounded bodies where the maximum diameter of the body is higher. The cores of both groups of type IV.B.x amphoriskoi

were formed around rods with diameters of 0.8 cm. to 0.9 cm. We have already noted that type IV.A.iii and IV.A.iv piriform alabastra were also formed on rods of these dimensions.

That these two groups represent contemporary workshops is indicated by the fact that an example of each group was discovered in tomb 5 at Ayios Ermoyenis. Tomb 5 also yielded no. IV.A.iv.18, of a type of alabastron that we have already seen dates to the first century B.C. and the early part of the first century A.D. Given the close relationship among all of the examples of both types IV.B.ix and IV.B.x, we should imagine that the period within which they were produced was limited. We therefore assign a general date of the first century B.C. and the first decade of the first century A.D. for both types IV.B.ix and IV.B.x, recognizing that they were actually produced within a shorter span, perhaps the third or fourth quarter of the first century B.C.

Type IV.B.ix and IV.B.x amphoriskoi have been found only in the Levant and in Cyprus, with three examples coming from Syria and fourteen from Cyprus. We should therefore assign these types of amphoriskoi to a Cypriot center of production, where we have already suggested that the piriform alabastra and the large-bodied amphoriskoi were made.

Type IV. B. xi. Amphoriskos with piriform body and S-shaped handles. {Chapter Three, pp. 286-288}

Type IV.B.xi amphoriskoi have the same shape as the types IV.A.iii and IV.A.iv piriform alabastra, with the addition of an added disc-base and S-shaped handles. Like the piriform alabastra, type IV.B.xi amphoriskoi can be decorated with either a feather pattern or a festoon pattern. Type IV.B.xi are also similar to type IV.A.iii and IV.A.iv alabastra in that they were made on rods with a diameter of slightly under 1 cm., a feature that they share with type IV.B.x vessels.

There are two groups of type IV.B.xi amphoriskoi. The first is equivalent to the first groups of type IV.A.iii and IV.A.iv alabastra, the examples of which have relatively tall necks and high carinations. Some examples of this first group of type IV.B.xi amphoriskoi, nos. 2, 6, and 12 have festoon pattern decoration while others, nos. 2, 5, 7, 8, 10 and 11 have decorative feather patterns. The second group of type IV.B.xi amphoriskoi, represented by a single example, no. 9, is equivalent to the second groups of the piriform alabastra, having a very low, almost negligible carination.

Although no example of type IV.B.xi amphoriskoi has been found in a context that can be independently dated, there can be little doubt that the type belongs to the same period as the piriform alabastra, that is to the first

century B.C. and the first decade of the first century A.D. The distribution of the examples of type IV.B.xi amphoriskoi with a known provenance shows the same pattern as we have already observed with the piriform alabastra, the large-bodied amphoriskoi, and the amphoriskoi with ovoid bodies and disc-bases, namely a concentration of finds from Cyprus, with a scatter of examples from the nearby Levantine and African coasts.

Type IV. B. xii. Amphoriskos with inverted ovoid body.
{Chapter Three, p. 288}

This unusual type of Hellenistic amphoriskos is represented by only two examples, neither having a known provenance. These two vessels are essentially type IV.B.vi amphoriskoi with upside down bodies. We have already seen an example of an oinochoe made with an upside down body, no. III.F.iii.1. The two examples of type IV.B.xi vessels are nearly identical except for their handles, no. 1 having S-shaped handles like the amphoriskoi with ovoid bodies and disc-bases and like the piriform amphoriskoi, and no. 2 having vertical handles like the large-bodied amphoriskoi.

Although the two examples of type IV.B.xii amphoriskoi cannot be independently dated, they can be placed in the first century B.C. and the first decade of the first century A.D. on the basis of their general similarity to type IV.B.vi vessels. The fact that so few of this type are now

known probably reflects their rarity in antiquity.

Type IV. C. Unguentaria.

Harden has recognized that there are two basic divisions of unguentaria current in the Hellenistic period. Harden's division i unguentaria have fusiform bodies either with upturned disc-handles (here type IV.C.i) or without handles (here type IV.C.ii). Harden's division ii unguentaria have larger piriform bodies, again either with handles (here type IV.C.iii) or without handles (here type IV.C.iv).

We have already argued that some of the division i unguentaria with upturned handles that Harden puts in his Mediterranean Group 3 actually belong to his Mediterranean Group 2. These we have classified as III.G.i. It has further been argued that an early example of Harden's division ii piriform unguentarium should also belong to his Mediterranean Group 2. This vessel is classified as III.G.ii.1.

Type IV. C. i. Thick-walled fusiform unguentarium with horizontal handles. (Chapter Three, p. 289)

As mentioned above, the thick-walled fusiform unguentaria, types IV.C.i and IV.C.ii, are derived from the

type III.G.i unguentaria. The type IV fusiform unguentaria are easily distinguishable from the earlier type III vessels by their shorter necks and smaller bodies. We have already noted that types IV.C.i and IV.C.ii unguentaria are similar in shape to type IV.B.i amphoriskoi, both unguentaria and amphoriskoi having bodies formed around the most rudimentary shaped cores.

The four catalogued examples of type IV.C.i unguentaria form a single group, each having relatively wide, fluted bodies. No example of a type IV.C.i unguentaria is from a context that can be independently dated. However, since type IV.C.i vessels are very similar to the following type of unguentaria, we can postulate that the period within which type IV.C.i unguentaria had been manufactured was the same as that for type IV.C.ii vessels, namely from the mid-third to the mid-second centuries B.C.

Type IV. C. ii. Thick-walled fusiform unguentarium without handles. {Chapter Three, pp. 289-290}

As mentioned above, this type of unguentarium is very similar to the preceding type, the difference being that the present type lacks the upturned disc-handles found on type IV.C.i vessels. There are two groups of type IV.C.ii unguentaria. The first group, including nos. 1, 2, 4, 8 and 9, consists of examples that have relatively wide bodies and

broad foot-stands. This first group is identical in these regards to type IV.C.i vessels. The members of the second group, nos. 3, 5-7, and 11, have, in contrast, somewhat narrower bodies and foot-stands.

As we have already stated, types IV.C.i and IV.C.ii fusiform unguentaria are derived from the larger-bodied type III.G.i unguentaria, which we have shown to be related to type III.B.ii amphoriskoi. Since type III.B.ii amphoriskoi are dated to the late fourth and early third centuries B.C., we would expect that the types IV.C.i and IV.C.ii unguentaria date to after the early third century B.C. This expectation is met by the context of IV.C.ii.4, from Caltanisseta, Sicily, which dates to the middle of the third century B.C. A further confirmation that types IV.C.i and IV.C.ii unguentaria begin around the middle of the third century B.C. is given by the context of IV.B.i.10, an amphoriskos with a similarly shaped body from a third century B.C. context on Cyprus. We therefore assign a general date of 250-150 B.C. for the period within which both types IV.C.i and IV.C.ii unguentaria were produced. The actual span of production may have been shorter, perhaps confined to the late third century B.C. This late third century to early second century date for the type IV fusiform unguentaria would fit the expected dates of nos. IV.C.ii.1 and IV.C.ii.3, both of which come from cemeteries that belong to this period. We should not be

surprised that no. IV.C.ii.2 comes from a context as late as the first century A.D. since that date, from an occupation deposit is, after all, only a terminus ante quem.

The distribution of examples of types IV.C.i and IV.C.ii unguentaria with known provenances presents us with a pattern that we have already observed with the related type IV.B.i amphoriskoi, that is, a wide scatter of finds from the Levant to the Balearic Islands with no one area dominating in findspots.

Type IV. C. iii. Thin-walled piriform unguentarium with horizontal handles. {Chapter Three, pp. 290-291}

Type IV.C.iii and the very similar type IV.C.iv unguentaria have distinctive piriform bodies that end in small base-knobs. The four examples of type IV.C.iii unguentaria, all from the Balearic Island of Ibiza, can be divided into two groups. The examples of the first group, including nos. 1 and 2, have solid upturned disc-handles and rounded bodies. The second group, represented by nos. 3 and 4, have coiled knob handles and taller, straight-sided bodies.

Although none of the Ibiza examples comes from an independently dated context, there can be little doubt that type IV.C.iii unguentaria belong to the same period as type IV.C.iv unguentaria, which we will see date to the third

century B.C.

Type IV. C. iv. Thin-walled unguentarium with handles.

{Chapter Three, p. 291}

The five examples of type IV.C.iv unguentaria listed in the catalogue have the same shape as the first group of the previous type of unguentaria. Type IV.C.iv unguentaria differ from this first group of type IV.C.iii vessels in not having any handles. Most examples of type IV.C.iv unguentaria have small excrescences on their shoulders, formed from the upward combing of the decorative threads. Nos. 1-4 and the three examples listed in Appendix 2 are nearly identical in all details, and were probably made in a single workshop. No. 5 is unique among all core-formed vessels in having a garland pattern on its shoulder.⁷¹

We have already suggested that types IV.C.iii and IV.C.iv unguentaria may be related to the unusual no. III.G.ii.1, which comes from a late fourth century B.C. context at Iasos. The single example of a type IV.C.iv unguentarium that comes from a datable context is no. 1, from a third century B.C. Etruscan tomb. Given the internal consistency of the examples of both types IV.C.iii and IV.C.iv vessels, we would expect that they had been produced during a limited period of time. We therefore assign a general date of the third century B.C. to both types IV.C.iii

and IV.C.iv.

Harden noted that types IV.C.iii and IV.C.iv unguentaria were made of a high quality, thin glass that is not used for any other core-formed glass vessel. Harden believed that these thin-walled types of unguentaria were made in Alexandria, basing his argument on the quality of the glass and on the similarity of the garland of no. IV.C.iv.5 to garlands found on Hadra hydriae.⁷² We will discuss in Chapter Four the evidence (or lack thereof) for core-formed glass production in Alexandria. We should point out here that the distribution pattern of types IV.C.iii and IV.C.iv unguentaria would indicate that these types had been produced in the West, since only one of the unguentaria with a known provenance does not come from Italy or the Balearic Islands.

Type IV. D. i. Dinochoe with fusiform body. {Chapter Three, p. 292}

The single known example of this type is essentially a type IV.C.ii unguentarium with a trefoil rim and an added vertical handle. We should therefore assign this piece, which does not come from a datable context, to the general period 250-150 B.C.

NOTES: Chapter Two.

1. Barag, 1970, 164-167, 174-180, 193-197. To Barag's catalogue we should now add a recent find of a typical pointed alabastron from an Achaemenid level at Nippur; see D.E. McCowan, R.C. Haines and R.D. Biggs, Nippur II. The North Temple and Sounding E (The University of Chicago, Oriental Institute Publications, vol. 97, Chicago, 1978), 49, 62, pl. 56:8, no., 4N133.
2. Barag, 1970, 165-167, nos. 1-12.
3. Barag, 1970, 195-196. The hypothesis that Eastern craftsmen established glazing workshops on Rhodes has been embraced by E. J. Peltenburg; see E.J. Peltenburg, "Al Mina Glazed Pottery and its Relations," Levant 1 (1969) 73-96. V. Webb, on the other hand, in her discussion of the stylistic influences found in the later seventh century B.C. East Greek faience industry implies that both Phoenicians and Egyptians were responsible for most of the production of early East Greek types; see Webb, 1978, 6-10.
4. Barag, 1970, 179.
5. Harden, 1981, 55, and note 63.
6. Harden, 1981, 51-56.
7. Harden, 1981, 52-53, 55-57, no. 81a.
8. Haevernick, 1959.
9. Harden, 1981, 138-141.
10. Harden, 1981, 140-141, no. 380.
11. Harden, 1981, 138. See also Fossing, 1940, p. 56 and p. 82.
12. Harden, 1981, 138. We should note in addition that glass beads reappear in post-Bronze Age Greece as early as the ninth century B.C. at Lefkandi and Athens. See E. Smithson, "The tomb of a Rich Athenian Lady of about 850 B.C.," Hesperia 37 (1968), 115, no. 78d; and M.R. Popham, L.H. Sackett and P.G. Themelis, ed., Lefkandi I. The Iron Age, 1980, 223. That the Adriatic glass bead industry may have been inspired by beads coming from Greece is suggested by eighth century B.C. beads from Vitsa in the Zagori mountains. For a report of the Vitsa excavations, with bibliography, see P.A. Vokotopoulos, "Ἀρχαιότητες καὶ Μνημεῖα Ἡπειρώου," Δελτίον 27 (1972) B:2, 444-446; the beads, now in the Ioannina Museum are not published.

NOTES: Chapter Two.

13. Harden, 1981, 109, with references to Fremersdorf's and Auth's suggestions for a late date for this group of I.A.ii.

14. Lordkipanidze, 1972, 238, figs. 215-216.

15. The Vani vessels have a bicolored twist added to their rims, and are decorated with a simple zigzag pattern on their straight upper bodies, features which are paralleled by a Late Bronze Age fragment from Alalakh. cf. Barag, 1970, 151-152, fig. 33.

16. Barag, 1970, 163-164, fig. 66. See also Vošćinina, 1967, 556, pl. 119:1.

17. Harden, 1981, 60-61.

24. Harden, 1981, 109.

18. We should note that Nolte mentions two pieces, apparently type II. A. ii, in the Musée du Cinquanteaire, Brussels, from Nola and Palestrina (nos. R 1548 and R. 1547), a fact which increases the possibility that this type was produced in the West, perhaps at a Greek colony. See Nolte, 1974, 72.

20. For a list of other, unpublished, examples, see Nolte, 1974, 66.

21. Other pieces in this group include examples from Coll. Oppenländer (no. 1064), the Metropolitan Museum of Art, and the Antikenmuseum, Berlin (no.30219, 100 and no.30219, 106). See Appendix 2.

22. Also belonging to this group are pieces in the British Museum (no. 1878.12-30.1, the Coll. Oppenländer (no.1068) and the Antikenmuseum, Berlin (no.30219, 113 and no.30219, 107). See Appendix 2.

23. To these we should add two pieces from the Royal Ontario Museum (no. 950.157.18 and no. 950.157.86). See Appendix 2.

19. Vošćinina, 1967, 557.

25. Among those vessels of this first group of type II.A.viii that do not have a provenance are the examples in the Kanellopoulos Museum, the Villa Giulia, the British Museum, the museums at Yale, Newark, Toronto, and in the Coll. Cohn (no. 15). See Appendix 2.

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26. Other members of this second group that do not have a provenance include examples in the collections of Cohn (nos. 12-14) and Neuburg. See Appendix 2.
27. The third group of II.A.viii includes pieces in Copenhagen and Corning. See Appendix 2.
28. Harden assigns his no. 114 (here II.A.viii.2) to his alabastron form 2; the drawing of no. 114 on Harden's fig. 5, however, clearly shows that this piece has an inward sloping rim-disc.
29. Harden, 1981, 72-73.
30. Also belonging to this group is a piece in the Metropolitan Museum of Art (Neuburg, 1949, pl. III:6). See Appendix 2.
31. Also of this group are the vessels in Warsaw (no. 32208), Cario, the British Museum (Harden, 1981, no. 100), the Royal Ontario Museum, the Metropolitan Museum (Neuburg, 1949, pl. VII:19) and Pittsburgh. See Appendix 2.
32. Another vessel, in the British Museum (Harden, 1981, no. 109), also has an irregular body. We should also note the carelessness of another British Museum piece (Harden, 1981, no. 110), which has the mouth of the vessel protruding beyond the rim and an irregular zigzag pattern that continues to the lower part of the body, the latter being a feature that is characteristic of the fourth century type III.A.v.
33. To this group also belong examples in the Ioannina Museum and the British Museum (Harden, 1981, no. 105). See Appendix 2.
34. Comparable alabastera can be found in the Kanellopoulos Museum, the British Museum (Harden no. 107), the Staatliche Museum, the Newark Museum and the Yale Art Gallery. See Appendix 2.
35. All ancient glass had a natural percentage of iron, from 0.5 % to 2 %, which produces the "Coke-bottle" green tint, unless intentional colorants or decolorants are added. A red vessel from Nālanda has 7.01 % iron, and a green piece from Egypt has 8.6 %. See Turner, 1956, Table V and Table VI. M. Bimson and I.C. Freestone will report on recent studies of opaque red glass at the Symposium on Scientific Studies on Early Vitreous Materials to be held at the British Museum in Nov., 1984.

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36. Barag, 1975.
37. Harden, 1981, 77.
38. Harden, 1981, App. 2, 161-163. See below, App. 1, p. x.
39. Weinberg, 1966.
40. Harden, 1981, 93-96.
41. Haevernick, 1960, 57f.
42. For the arguments for downdating the Muschovitsa Mogila tomb group, see Chapter Three, note 139.
43. Harden, 1981, 94.
44. Harden, 1981, 103.
45. von Saldern, 1981, no. 17.
46. Fossing, 1940, 105; cf. D. Burr, Terracottas from Myrina in the Museum of Fine Arts, Boston (Boston, 1934), 4f.
47. Harden, 1981, 114-115.
48. Harden, 1981, 110-111.
49. Fossing, 1940, 118-119.
50. Harden, 1981, 129. Oddly, Harden in 1981 doesn't mention the Canosa piece that he discussed in 1968; cf. Harden, 1968, 31, no. 2:h.
51. For a general discussion of the hydria shape, see E. Fölzer, Die Hydria (Leipzig, 1906) and E. Diehl, Die Hydria (Mainz, 1964).
52. Fossing, 1940, 97-98; Harden, 1981, 114; For the Hadra cinerary vases, see B.F. Cook, Inscribed Hadra Vases in the Metropolitan Museum, (Metropolitan Museum Art Paper, 12, 1966); L. Guerrini, Vasi di Hadra (Studi misc. 8, Semin. di archeologia, Univ. di Roma, 1964); P. Callaghan, "The Trefoil Style and Second-Century Hadra Vases," BSA, 75 (1980), 33-47.
53. Hayes, 1975, pl. 43.
54. Harden, 1981, 115-116.

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55. Another oinochoe from fourth century B.C. tombs at Palma, Campania is mentioned by L. d'Amore, "Palma, Campania (Napoli)," NSc, 34 (1980), 80. It is not illustrated.

56. This latter suggestion is reported by Auth, 1976, 42, quoting unpublished correspondence between Donald Harden and Michael Vickers.

57. Harden, 1981, 169, no. 103; cf. also Harden, 1981, 125, 130.

58. Harden, 1981, 136.

59. Cf. Sparkes and Talcott, 1970, 191-192; and now see S. Rotroff, "The Origins and Chronology of Hellenistic Grey Unguentaria," abstract of paper presented at the Eight-fifth General Meeting of the Archaeological Institute of America, AJA, 88 (1984), 258. For a recent find of an imitation Cypriote amphora, see M. Andronikos, "The Royal Tomb of Philip II," Archaeology, 31 (1978), no. 4, 40, color photograph at bottom.

60. Harden, 1981, 124-125.

61. IV.A.iii.3; cf. Ergon, 1957, fig. 40, middle.

62. For the problems with the third century B.C. date of the Amphipolis cemetery, see p. 128 above. For the arguments against the third century B.C. dates of the tombs at Cumae and Reggio Calabria, see Chapter Three, n. 184 and 185.

63. Dusenbery, 1967, 36.

64. Dusenbery, 1967, 38, no. 8, fig. 9.

65. Harden, 1981, 125.

66. Harden, 1981, 125.

67. Fossing, 1940, 122, n. 1; Harden, 1981, 129, n. 104.

68. See the article by Mrs. Ino Niclaou in the forthcoming issue of RDAC. Mrs Niclaou reported on the pottery from tomb 4 at Evrykhon on Aug. 4, 1984 at the Archaeological Symposium sponsored by CAARI in Nicosia.

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69. It is not possible to pinpoint a single type of these large transport amphoras that served as a model for any of type IV.B.iii-ix core-formed glass amphoriskoi. For a general discussion of these transport amphoras, see V. Grace, Amphoras and the Ancient Wine Trade (Excavation of the Athenian Agora, Picture Books no. 6, revised ed., Princeton, 1979); cf. especially fig. 36, which shows three first-century B.C. amphoras from Rhodes, Knidos and Chios, any one of which is close enough to the core-formed types to have been their model.

70. Harden, 1981, 129.

71. David Grose informs me that he has seen a similar unguentarium with a garland pattern in a museum in Sicily.

72. Harden, 1981, 136.

CHAPTER THREE: CATALOGUE

Part One: Eighth to Mid-Sixth Centuries B.C.

Type I. A. i. Wide-bodied alabastron.

1. Eretria. Swiss excavations, no. 1694 (=small find 1980 E/8). Unpublished.¹

2. Gordion, City Mound, W2S3, below Floor 3, pit. Gordion excavation no. G 261.² Pl. 1. P.H. 7.4, M.D. body 3.0. Dark blue glass with yellow decoration. Short flat rim; no distinction between neck and slightly upward tapering deeply fluted body. Decoration of continuous yellow thread pulled into shallow festoon pattern all over body. Dark blue solid handles with end-knobs added after decoration. Missing parts of rim and base. Unpublished.

Type I. A. ii. Narrow alabastron with coiled knob handles.

1. Amathus. British Museum, no. 1894.22-2.507. H. 10.5, D. rim 1.7, M.D. body 2.2. Dated 575-525 B.C.³ Translucent dark green glass with yellow decoration. Short rounded rim; no neck; narrow, upward tapering, slightly fluted body; pointed base. Decoration of continuous yellow thread spiralling down counter-clockwise from rim to base, pulled into irregular inverted festoon pattern on upper body. Coiled knob handles added after decoration. Harden, 1981, no. 81a.

2. Poggio Buco, Dono Biserni 1921. Florence Archaeological Museum, no. 88234. H. 11.5, D. body. 2.1. Dated 625-550 B.C.⁴ Dark blue glass with opaque brown(?) decoration. Short rounded rim; no neck; narrow, upward tapering body; rounded base. Decoration of continuous thread spiralling counter-clockwise from rim to base, pulled into inverted festoon pattern all over body. Coiled knob handles added after decoration. Bartoloni, 1972, 200, fig. 99:11, pl. 136:e.

3. Camarina, necropoli arcaica del Rifriscolaro, tomb 350, no. 419. H. 12.7, D. rim 1.6, M.D. body 2.2. Dated 550 B.C.⁵ Dark green (?) glass with white(?) decoration. Shape and decoration as I.A.ii.2 above. Pelagatti, 1973, 142, pl. 46.

Type I. A. ii contd.

4. Carthage, necropole de Douïmés. Musée Lavigerie. H. 11.6, D. rim 2.3, M.D. body 2.8. Pre-sixth century B.C.⁶ Dark green (?) glass with white(?) decoration. Short, rounded rim; no neck; slightly baggy, upward tapering body; pointed bottom. Decoration of continuous spiral all over body, pulled into irregular zigzag pattern on lower body. Missing handles (?). Dellattre, 1895, 325, fig. 45.

Type I. B. i Goblet.

1. Vani, burial 11, no. 3-69/455. H. 15.0. Dated c. 550 B.C.⁷ Dark blue? glass with opaque yellow? decoration. Carinated shape with straight-walled upper part and baggy lower part. Bichrome twist cane added at lip. Decoration of three threads pulled into irregular zigzag pattern between two horizontal threads. Lordkipanidze, 1972, 238, fig. 215.

2. Vani, burial 11. H. 7.5. Dated c. 550. Dark blue? glass with opaque yellow? decoration. Missing upper part of body and rim. Shape and decoration presumably as no. I.B.i.1. Lordkipanidze, 1972, 238, fig. 216.

Type I. B. ii. Bottle.

1. Tel Masos (Khirbet el-Meshāsh), Fortress, Area D. Dated late seventh-early sixth century B.C.⁸ Fragment of dark glass with opaque decoration. On upper? part, threads pulled into a feather pattern, with a row of dots enclosed within horizontal bands below. Aharoni, et al., 1974, 71, pl. 15:3.

Part Two: Mid-Sixth to Fifth Centuries B.C.

Type II. A. i. Alabastron of white glass with horizontal rim-disc and rounded body, with zigzag or festoon decoration of purple glass.

1. Camiros, Macri Langoni, tomb 109. Rhodes Museum, no. 12336. Pl. 1. Dated 510-490 B.C.⁹ H. 13.2, D. rim 3.6, D. mouth 1.2, M.D. body 4.2. Tool marks on underside of rim; short distinct neck; rounded upward tapering body; rounded bottom. Decoration: purple on outside of rim; purple thread beginning at top of body, spiralling down counter-clockwise, pulled into four sets of tall pointed zigzags. White ring handles with end-knobs. Fluted. Mended; missing parts of body; milky weathering. Jacopi, 1931, 220, no. 12, fig. 234.
2. Camiros, Macri Langoni, tomb 109. Rhodes Museum, no. 12358. Dated 525-500 B.C.¹⁰ Fragment of the lower third of a vessel identical to no. 1 above. Jacopi, 1931, 220, fig. 234.
3. Kalapode, Phocis. Storerooms of the joint Greek Archaeological Society and the German Archaeological Institute's excavations, Kalapode, no. U-34. Pre-480 B.C. Small fragment. Unpublished.
4. Olbia, grave 7, 1910. Hermitage Museum, no. Ol.1910:11. 525-500 B.C.¹¹ H. 11.0. Shape and decoration as II.A.i.1 above. Voščinina, 1967, 557, pl. 119:2.
5. Olbia, grave 7, 1910. Hermitage Museum, no. Ol. 1910:12. 525-500 B.C. H. 11.0. Shape and decoration as II.A.i.1 above. Voščinina, 1967, pl. 119:2.
6. Cuase. Raccolta Cumana. n. 12.2. Shape and decoration as II.A.i.1 above. Gábrici, 1913, col. 454, pl. 90:5.
7. Unknown provenance. ex. Coll. Constable-Maxwell. H. 11.8, M.D. body 3.9. Shape as II.A.i.1 above. Decoration: purple on rim; purple inverted festoons all over body. Constable-Maxwell, 1979, no. 14 and color photograph.

Type II. A. ii. Alabastron of white glass, with horizontal rim-disc and rounded body, decorated with inverted festoon pattern.

1. Cervetri. Brussels, no. R1543. H. 12.7 Opaque white glass with purple decoration. Inward sloping rim; rounded upward tapering body. Decoration: purple thread on shoulder, spiralling down, pulled into inverted festoon pattern all over body. White ring handles with end-knobs. Fossing, 1940, fig. 32.

2. Terravecchia di Grammichele. Dated c. 500 B.C. H. 14.7. Glass, shape and decoration as II.A.ii.1 above. Orsi, 1907, col. 146f., fig. 8.

Type II. A. iii. Alabastron of white glass, with horizontal rim-disc and rounded body, with plain trail decoration.

1. Megara. National Museum, Copenhagen, no. 263. White glass with purple? decoration. Wide, flat rim-disc; short neck; sloping shoulders; rounded, upward tapering body. Decoration of unmarvered threads on outside of rim and on upper body at level of handles. White ring handles with end-knobs added after decoration. Fossing, 1940, 51, 60, fig. 28.

2. Panticapaeum, Mithridates-Berg, grave 5. Hermitage Museum, no. P. 1906.6. White glass with purple decoration. Shape and decoration as II.A.iii.1 above, except handles, which are of purple glass. Vošćinina, 1967, 557, pl.117:1 right.

3. Kertch. Hermitage Museum, no. E. 2054, ex. Coll. Bobrinski. H. 10.0. White glass with purple? decoration. Wide, flat rim-disc; cylindrical neck set off from shoulders; rounded, upward tapering body. Decoration of unmarvered threads on outside of rim; at upper body above handles; at mid-body and at lower body. White ring handles with end-knobs added after decoration. Vošćinina, 1967, 557, pl.117:1 middle.

Type II. A. iv. Alabastron of white glass, with horizontal rim-disc and cylindrical body, decorated with zigzag pattern of purple glass.

1. Camiros, Fikellura, grave 178. British Museum, no. 1864.10-7.1230. Dated 500-475 B.C. H. 10.5, D. rim 3.9, D. mouth 0.9, M.D. body 3.0. Shape and decoration as II.A.iv.7 below. Harden, 1981, no. 85.

Type II. A. iv contd.

2. Camiros, Fikellura, grave 172. British Museum, no. 1864.10-7.1232. Dated 450-425 B.C. H. 10.8, D. rim 3.5, D. mouth 0.8, M.D. body 3.1. Harden, 1981, no. 86. Not illustrated.
3. Camiros, Saltzmann excavations. British Museum, no. 1868.5-1.29. H. 10.0, D. rim 3.2, M.D. body 3.0. Harden, 1981, no. 88. Not illustrated.
4. Camiros, Fikellura, grave 171. British Museum, no. 1864.10-7.1231. Dated 475-450 B.C. H. 12.0, D. rim 3.4, D. mouth 1.0, M.D. body 3.2. Glass, shape and decoration as II.A.iv.23 below. Harden, 1981, no. 90.
5. Camiros, Fikellura, grave 277.¹² British Museum, no. 1864.10-7.1228. H. 11.7, D. rim 3.0, D. mouth 1.0, M.D. body 2.8. Harden, 1981, no. 92. Not illustrated.
6. Camiros, Fikellura, grave 147. British Museum, no. 1864.10-7.1229. Dated 460-440 B.C. H. 9.5, D. rim 3.0, D. mouth 1.1, M.D. body 2.6. Glass, shape and decoration as II.A.iv.7 below, except with completely cylindrical body. Harden, 1981, no. 94. Not illustrated.
7. Camiros, Macri Langoni, tomb 25. Rhodes Museum, no. 12423. Pl. 1. Dated 475-450 B.C.¹³ H. 10.0, D. rim 3.7, D. mouth 0.8, M.D. body 3.2. Tool marks of both sides of rim-disc; rounded, upward tapering body; flattened base. Decoration: purple on outside of rim; purple spiral beginning at top of neck, spiralling down counter-clockwise to short neat zigzag pattern at mid-body; final thread wrapped around twice. Completely marvered. Slight silvery weathering. Jacopi, 1931, 97, no. 6, fig. 85.
8. Camiros, Macri Langoni, tomb 25. Rhodes Museum, no. 12424. Pl. 1. Dated 475-450 B.C. H. 11.2, D. rim 3.7, D. mouth 0.8, M.D. body 3.2. Shape and decoration as II.A.iv.7 above. Jacopi, 1931, 98, no. 7, fig. 85.
9. Camiros, Macri Langoni, tomb 26. Rhodes Museum, no. 12462. Dated 475-450 B.C.¹⁴ H. 10.5, D. rim 3.9, D. mouth 0.9, M.D. body 3.5. Shape and decoration as II.A.iv.7 above. Final purple thread unmarvered. Jacopi, 1931, 105, no. 4, fig. 89.

Type II. A. iv contd.

10. Camiros, Macri Langoni, tomb 26. Rhodes Museum, no. 12463. Dated 475-450 B.C. H. 10.3, D. rim 3.4, D. mouth 0.9, M.D. body 3.0. Shape and decoration as II.A.iv.7 above. Final purple thread wrapped around three times; unmarvered. Slightly fluted. Jacopi, 1931, 105, no. 4, fig. 89.
11. Rhodes. Musée du Cinquantaire, Brussels, no. A 1587. Nolte, 1974, 66 (note).
12. Pitane. Istanbul Museum, no. 2133. H. 9.44, D. rim 3.14, M.D. body 2.65. Glass, shape and decoration as II.A.iv.6 above. Freyer-Schauenburg, 1974, no. 1, pl. 1.
13. Athens. British Museum, no. 1928.1-17.1. H 9.2, D. rim 3.2, M.D. body 3.5. Harden, 1981, no. 91. Not illustrated.
14. Megara. National Museum, Athens, no. 2890. Pl. 1. H. 8.8, D. rim 3.7, D. mouth 1.0, M.D. body 3.1. Tool marks on top of rim-disc; short, slightly rounded body; slightly flattened bottom. Decoration: purple on outside of rim; purple thread beginning at shoulder, spiralling down counter-clockwise into sharp zigzag pattern at mid-body. Enamel-like weathering crust on one side.
15. Taman. H 10.3, D. rim , 3.3, M.D. body 3.0. Glass, shape and decoration as II.A.iv.6 above. Gaydukevicha, 1959, 185, fig. 55.
16. Panticapaeum, Mithridates-Berg, grave 28. Hermitage Museum, no. P 1907,23. Dated end of 5th cen. B.C. Glass, shape and decoration as II.A.iv.23 below. Voščinina, 1967, p. 158, pl. 118:2.
17. Sozopol. Varna Museum, no. II-6177. Dated 450-425 B.C. H 9.3, D. rim 2.8, D. body 3.0. Glass, shape and decoration as II.A.iv.6 above. Minčev, 1980, 111, pl. II:1.
18. Capua. British Museum, no. 1873.8-20.407. H. 8.8, D. rim 3.2, M.D. body 2.6. Harden, 1981, no. 95. Not illustrated.
19. Cumae, tomb 81. Dated to fifth century B.C.¹⁵ M.D. body 2.4. Glass, shape and decoration as II.A.iv.6 above. Gàbrici, 1913, col. 454, pl. 90:8.
20. Barka, Cyrenaica. Dated 440-425 B.C.¹⁶ Glass, shape and decoration as II.A.iv.6 above. Ejteily, 1983, 207, pl. 30:2, second row.

Type II. A. iv contd.

21. Amathus. British Museum, no. 1894.11-1.273. H. 9.4, D. rim 3.0, M.D. body 2.7. Glass, shape and decoration as II.A.iv.6 above. Harden, 1981, no. 93.

22. Cyprus. Glass, shape and decoration as II.A.iv.23 below. di Cesnola, 1882, pl. 17:4.

23. Cyprus. Cyprus Museum, no. D. 1835. H. 14.1, D. rim 3.2, D. mouth 1.0, M.D. body 3.3. Glass as II.A.iv.7 above. Short neck; slightly baggy, upward tapering body. Decoration: purple on outside of rim; purple thread spiralling down counter-clockwise to short zigzag pattern below mid-body. Mended; missing parts of body. Slight milky weathering crust. Grayish sand on interior.

24. Unknown provenance. Museum Haaretz, Tel Aviv. H. 10.5, D. rim 3.4, M.D. body 2.9. Glass as II.A.iv.7 above. Cylindrical neck, set off from shoulders, cylindrical body, tapering towards top. Decoration of single purple thread spiralling down counter-clockwise to lower body. White ring handles with end-knobs added after decoration. Neuburg, 1962, fig. 10.

Type II. A. v. Alabastron of white glass, with horizontal rim-disc and cylindrical body, with decoration of blue glass.

1. Sardis. G61.26:3882. P.H. 1.9. Small fragment. von Saldern, 1980, 6, no. 3, pl. 1.

2. Demeter Sanctuary, Cyrene. No. 73-585. From D12/E12, tr. D, st. 3 (Archaic level¹⁷). Pl. 2. P.H. 2.0. Small fragment from body of alabastron, having closely spaced zigzag pattern of translucent green-blue glass.

3. Demeter Sanctuary, Cyrene. No. 74-464. From F12, st. 2. Pl. 2 P.H. 3.6. Small fragment. White glass with translucent dark blue wazy zigzag pattern.

4. Demeter Sanctuary, Cyrene. No. 76-174. From C13/D13, tr. 1, st. 3. Pl. 2. P.H. 1.9. Small fragment. White glass with translucent dark blue wavy zigzag pattern.

5. Unknown provenance. British Museum, no. 1878.12-30.1. H. 13.3, D. rim 3.4, M.D. body 3.2. White glass with dark blue decoration. Shape and decoration as II.A.iv.6 above. Harden, 1981, no. 96.

Type II. A. vi. Alabastron of dark glass, with inward sloping rim-disc and rounded body, decorated with herringbone pattern.

1. Ialysos, tomb Marmaro no. 4. Rhodes Museum, no. 15384. Pl. 2. Dated 500-480 B.C.¹⁸ H. 11.6, D. rim 2.8, D. mouth 1.0, M.D. body 3.2. Dark blue glass with white decoration. Slightly sloping rim with traces of tool marks on underside; short cylindrical neck; rounded, upward tapering body; rounded bottom. Decoration: white outside of rim; white thread beginning at upper body, spiralling down counter-clockwise into three zones of wavy zigzags. Blue ring handles with end-knobs. Fluted. Missing small part of rim; one side slightly weathered. Laurenzi, 1936, p. 96, fig. 83.

2. Rhitsona, tomb 80, no. 268. Thebes Museum. Dated 525-500 B.C.¹⁹ H. 12.0. Dark blue glass with white decoration. Short neck; upward tapering body. Decoration: white on outside of rim; white thread beginning at shoulder, spiralling down counter-clockwise into herringbone pattern all over body; final white stripe at bottom. Blue ring handle with end-knobs. Mended. Ure, 1927, p. 84; and Ure, 1934, p. 76, pl. 21.

3. Trebenishte, tomb 1. Dated to late 6th century B.C. Dark blue and opaque white? glass. Short distinct neck; rounded, upward tapering body. Decoration: herringbone pattern all over body. Ring handles with large end-knobs. Deeply fluted. Missing part of lower body. Filow, 1937, p. 94.

4. Certosa, tomb 281, no. 10. Dated 525-500 B.C.²⁰ Dark blue glass with white decoration. Short neck; upward tapering body. Decoration: white on outside of rim; white thread beginning on neck, spiralling down into herringbone pattern all over body. Blue ring handles with end-knobs. Fluted. Zanonni, 1876, p. 341, pl. 94:10

5. Ampurias, Bonjoan no. 38. Dated to c. 500 B.C. H. 11.8. Dark blue glass with light blue and yellow threads.²¹ Short distinct neck; upward tapering body; flat disc base. Decoration: light blue and yellow threads beginning on shoulder, spiralling down counter-clockwise, pulled into herringbone pattern all over body. Dark blue ring handles with end-knobs. Almargo, 1953, 176-178, fig. 148, pl. V:1.

Type II. A. vi contd.

6. Utica, tomb 10. Dated to the 6th century B.C.²² Dark blue glass with light blue and yellow decoration. Short, distinct neck; upward tapering body. Decoration: light blue and yellow threads pulled into herringbone pattern all over body. Blue ring handles with end-knobs. Fluted. Cintas, 1954, 108-11, fig. 52.

7. Carthage, tomb 27. Dated to 6th cen. B.C.²³ H. 12.0, D. body. 3.5. Dark blue glass with white decoration. Short neck, rounded, upward tapering body. Decoration of short herringbone pattern all over body. Fluted. Seefried, *La verrerie punique*, p. 39, no. 4.

8. Meqabelein, Jordan, no. 35. Amman Museum. Dated post-535 B.C.²⁴ H. 10.5, M.D. body 3.0. Dark blue glass with white decoration. Short neck; upward tapering body. Decoration: white on outside of rim; white thread beginning at shoulder, spiralling down counter-clockwise into herringbone pattern all over body. Fluted. Harding, 1950, pl. XIII:3.

9. Unknown provenance. Berlin, ex. Coll. Bartholdy, no. 18. H. 11.2. Dark blue glass with white? decoration. Short neck; slightly irregular upward tapering body. Decoration: horizontal threads spiralling down to upper body, where pulled into herringbone pattern all over body. Fossing, 1940, fig. 39.

10. Unknown provenance. British Museum, no. 1867.5-8.574. H. 11.7, D. rim 2.8, M.D. body 3.1. Dark blue glass with yellow and white decoration. No distinct neck; rounded, upward tapering body; slightly fluted. Decoration: yellow on outside of rim; white thread at top of handles, spiralling to upper body, where joined by yellow thread, pulled into tall wavy zigzag pattern. Harden, 1981, no. 121.

Type II. A. vii. Alabastron of dark glass, with inward sloping rim-disc and rounded body, decorated with inverted festoon pattern.

1. Camiros, Fikellura, grave 277.²⁵ British Museum, no. 1864.10-7.1224. H. 11.2, D. rim 2.7, D. mouth 1.0, M.D. body 3.1. Dark blue glass with white and yellow decoration. Harden, 1981, no. 145. Not illustrated.

2. Camiros, Fikellura, grave 206. British Museum, no. 1864.10-7.1222. Dated 510-490 B.C. H. 9.0, D. rim 2.4, D. mouth 0.8, M.D. body 2.8. Glass, shape and decoration as II.A.vii.4 below. Harden, 1981, no. 146.

Type II. A. vii contd.

3. Camiros, Macri Langoni, tomb 26. Rhodes Museum, no. 12464. Dated 475-450 B.C.²⁶ H. 8.6, D. rim 2.5, D. mouth 1.0, M.D. body 2.6. Dark blue glass with opaque white and yellow decoration.. Slight milky weathering. Inward sloping rim with traces of tool marks on both surfaces; neck set off from rounded, upward tapering body; rounded bottom. Dark blue ring handles with end-knobs. Decoration: yellow on outside of rim; thick white thread with streaks of yellow beginning on neck, spiralling down counter-clockwise all over body, pulled into inverted festoon pattern. Marvered. Jacopi, 1931, 105, no. 5, fig. 89.

4. Camiros, Macri Langoni, tomb 113. Rhodes Museum, no. 12245. Dated 510-490 B.C.²⁷ H. 12.0. Dark blue glass with white decoration. Missing parts of neck and body. Shape as II.A.vii.3 above. Decoration: white on outside of rim; white thread beginning of neck, spiralling down all over body, pulled into inverted festoon pattern. Jacopi, 1931, 230, no.13, fig. 256.

5. Camiros, Macri Langoni, tomb 106. Rhodes Museum, no. 12262. Pl. 3. Dated 500-450 B.C.²⁸ H. 8.7, D. rim 2.5, D. mouth 0.9, M.D. body 2.5. Glass, shape and decoration as II.A.vii.3 above. Jacopi, 1931, 211, no. 9, fig. 221.

6. Ialysos, tomb 197. Rhodes Museum, no. 10809. Pl. 2. Dated 500-450 B.C.²⁹ H. 8.8, D. rim 2.5, D. mouth 0.9, M.D. body 2.8. Glass, shape and decoration as II.A.vii.3 above. Missing part of rim. Traces of gray sand on interior. Mauiri, 1926, 211, no.3, fig. 210.

7. Ialysos, tomb 197. Rhodes Museum, no. 10810. Dated 500-450 B.C. H. 8.8, D. rim 2.3, D. mouth 0.8. Glass, shape and decoration as II.A.vii.3 above. Mauiri, 1926, 211, no.3, fig. 210.

8. Lindos. British Museum, no. 1951.6-6.21. H. 9.8, D. rim 2.4, M.D. body 3.1. Glass, shape and decoration as II.A.vii.3 above. Harden, 1981, no.142. Not illustrated.

9. Ephesos, sarcophagus 6. Dated 525-500 B.C.³⁰ H. 12.8, M.D. body 2.6. Dark blue glass with white decoration. Inward sloping rim-disc; cylindrical neck, rounded, upward tapering body. Decoration: white on rim and handles; white thread beginning on shoulder, pulled into inverted festoon pattern all over body. Langmann, 1967, 113, fig. 46:4.

Type II. A. vii contd.

10. Eretria.³¹ British Museum, no. 1893.10-9.10. H. 13.6, D. rim. 2.7, M.D. body 3.4. Opaque dull green glass with white decoration. Short rim, no neck, rounded upward tapering body. Decoration: white thread beginning under rim, spiralling down to base, pulled into eight panels of inverted festoon decoration. Added white round bead for handle. Harden, 1981, no. 286.

11. Aegina, sarcophagus 1 (kline Damosso). Dated 500-475 B.C.³² H. 15. Dark blue glass with white decoration. Inward sloping rim; cylindrical neck, rounded, upward tapering body. Blue ring handles with end-knobs. Fluted. Decoration: white on rim and handles; white thread beginning on neck, spiralling down, pulled into inverted festoon pattern all over body. Kallipolites, 1964, p. 77, pl. 75b.

12. Olbia. H. 7.3. Dated 480-450 B.C.³³ Dark blue glass with white? decoration. Short rim; downward tapering neck. Dark blue ring handles with end-knobs. CRPetersb, 1900, p. 9, fig. 19.

13. Ruvo. British Museum, no. 1856.12-26.1156. H. 8.7, D. rim 2.3, M.D. body 2.5. Glass, shape and decoration as II.A.vii.3 above. Harden, 1981, no.141.

14. Ruvo. British Museum, no. 1856.12-26.1155. H. 8.7, D. rim 2.5, M.D. body 2.7. Glass, shape and decoration as II.A.vii.3 above. Harden, 1981, no. 144. Not illustrated.

15. Caere, tomb 9, "Dei Vasi Greci", no. 101. Villa Giulia, no. 20855. Dated 575-425 B.C.³⁴ Dark blue glass with white decoration. H. 9.5. Roll-rim, no neck, rounded body. Decoration as II.A.vii.4 above. Blue ring handles without tails. Ricci, 1955, 292, fig. 37:5.

16. Selinus, tomb 47 (terracotta sarcophagus). Museo Nazionale, Palermo. Dated to 500-450 B.C.³⁵ H. 9.1, M.D. body 2.8. Glass, shape and decoration as II.A.vii.3 above. Tusa, 1971b, 215, pl. XV:f; JGS, 6 (1964), 156-157, no. 3.

Type II. A. viii. Alabastron of dark glass, with inward sloping rim-disc and rounded body, decorated with zigzag pattern.

1. Camiros, Fikellura, grave 28. British Museum, no. 1864.10-7.1220. Dated 475-450 B.C. H. 11.7, D. rim 3.1, D. mouth 1.0, M.D. body 3.6. Short neck; rounded shoulders; rounded upward tapering body. Dark blue glass with yellow and light blue decoration. Decoration of yellow on outside of rim; yellow thread beginning on upper body at level of handles, spiralling down counter-clockwise to lower body, where joined by light blue thread, both pulled into short zigzag pattern; final unmarvered light blue thread flanked by unmarvered yellow thread. Ring handles with end-knobs, one of dark blue and one of yellow, added after decoration. Harden, 1981, no. 112.

2. Camiros, Fikellura, grave 268. British Museum, no. 1864.10-7.1215. Dated 500-475. H. 10.6, D. rim 2.9, D. mouth 1.1, M.D. body 3.0. Glass as II.A.viii.1 above. Short neck, sharply set off from rounded shoulders; straight-sided, upward tapering body. Decoration of light blue on outside of rim; light blue thread on body at middle of handles; at mid-body, yellow thread above short band of yellow and light blue threads pulled into short zigzag pattern; final yellow and light blue threads. Dark blue ring handles with end-knobs added after decoration. Harden, 1981, no. 114.

3. Camiros, Fikellura, grave 117. British Museum, no. 1864.10-7.1217. Dated 475-450 B.C. H. 11.3, D. rim 2.7, D. mouth 1.0, M.D. body 3.3. Glass and shape as II.A.viii.1 above. Decoration of light blue on outside of rim; yellow thread beginning at neck, spiralling down counter-clockwise to near base, joined by light blue thread at middle of handles, both pulled into short zigzag pattern at mid-body. Dark blue ring handles with end-knobs, one having added light blue trail. Harden, 1981, no. 119. Not illustrated.

4. Camiros, Fikellura, grave 253. British Museum, no. 1864.10-7.1221. Dated 475-450 B.C. H. 11.7, D. rim 2.7, D. mouth 1.1, M.D. body 3.4. Dark blue glass with white and yellow decoration. Tall neck; almost no shoulders; baggy, upward tapering body. Decoration of white on outside of rim; white thread beginning on shoulder, spiralling down counter-clockwise to near base, joined by four separate yellow threads, one below handles, two on lower body where, with white thread, pulled into wavy zigzag pattern, fourth yellow thread near base. Dark blue ring handles with vestigial end-knobs. Harden, 1981, no. 120. Not illustrated.

Type II. A. viii contd.

5. Camiros, Fikellura, grave 227.³⁶ British Museum, no. 1864.10-7.1216. H. 8.8, D. rim 2.4, D. mouth 0.8, M.D. body 2.8. Glass as II.A.viii.1 above. Short, downward tapering neck; rounded shoulders; rounded, upward tapering body. Decoration of yellow on outside of rim; yellow thread beginning at top of neck, spiralling down counter-clockwise, joined by light blue thread at middle of handles, both pulled into zigzag pattern at mid-body; the light blue thread continues to lower body where joined by separate yellow thread. Yellow ring handles with end-knobs. Slightly fluted. Harden, 1981, no. 152. Not illustrated.
6. Camiros, Macri Langoni, tomb 113. Rhodes Museum, no. 12244. Dated 510-490 B.C.³⁷ H. 11.0, D. rim 2.7, D. mouth 1.0, M.D. body 3.4. Dark blue glass with white decoration. Tool marks on both surfaces of inward sloping rim; short neck; rounded shoulders; rounded, upward tapering body; slightly flattened base. Decoration of white thread on outside of rim; thin white thread beginning at the top of the neck, spiralling down counter-clockwise, pulled into wavy zigzag pattern at mid-body, continuing in seven horizontal bands to base. Dark blue ring handles with end-knobs added after decoration. Slightly fluted. At one point on body a pink stone has erupted from core. Missing small chip on rim; slight enamel weathering on one side. Jacopi 1931, 230, no. 13, fig. 256.
7. Ialysos, tomb 172. Rhodes Museum, no. 10683. Dated 500-450 B.C.³⁸ Dark blue glass with yellow decoration. Shape and decoration as II.A.viii.8 below. Jacopi, 1928, 170, no. 4, fig 166.
8. Pitane, pithos burial Çnd. 1962/K/II C 3. Istanbul Museum, no. 2427. Dated 500-475 B.C.³⁹ H. 13.03, D. rim 2.58 to 2.75, M.D. body 3.55. Dark blue glass with opaque yellow and light blue decoration.⁴⁰ Short neck; rounded shoulders; rounded, upward tapering body. Decoration of yellow thread on outside of rim; yellow thread beginning at shoulder, spiralling down body, joined by light blue thread, both pulled into wide band of slightly wavy zigzag pattern at mid-body; final light blue and yellow threads. Freyer-Schauenburg, 1974, 143, no.2, pls. 2-3.
9. Pitane, sarcophagus burial Çnd. 1963/N/Viii M 1. Istanbul Museum, no. 2426. Dated 480-450 B.C.⁴¹ H. 12.87, D. rim 2.7 to 2.95, M.D. body 3.37. Glass, shape and decoration as II.A.viii.8 above. Freyer-Schauenburg, 1974, 144, no. 4, pl. 4

Type II. A. viii contd.

10. Melos. British Museum, no. 1842.7-28.579. P.H. 11.0, M.D. body 3.6. Dark blue glass with white and light blue decoration. Rim and neck missing. Rounded, irregular, upward tapering body. Decoration of white thread spiralling down counter-clockwise⁴² to base, joined by single broad yellow thread below handles, where both pulled into closely-set band of slightly wavy zigzags. Dark blue ring handles with end-knobs; one handle missing. Fluted at upper body. Harden, 1981, no. 116.
11. Eretria. National Museum, Athens, no. 2904. H. 12.5, D. rim 2.8, D. mouth 1.0, M.D. body 3.5. Dark blue glass with white and yellow decoration. Shape as II.A.viii.6 above. Decoration of white on outside of rim; white thread beginning at neck and spiralling down counter-clockwise to near base, joined at mid-body by yellow thread, where both pulled into closely-set band of slightly wavy zigzag pattern. Dark blue ring handles with end-knobs.
12. Corinth? Ex. coll. Komnos. H. 13.3. Dark blue glass with opaque white? and yellow? decoration. Shape and decoration as II.A.viii.6 above. Fossing, 1940, 88, fig. 55.
13. Delphi, tomb 1, west of Museum. Delphi Museum, no. 7871. Pl. 4. Dated 475-450 B.C.⁴³ H. 14.1, D. rim 3.4, D. mouth 1.1, M.D. body 3.8. Dark blue glass with white decoration. Shape and decoration as II.A.viii.6 above. At one point on body, a small spherical bubble has burst, revealing reddish core underneath. Konstantinou, 1965, 299-303, no. 50, pl. 358g.
14. Delphi. Delphi Museum, no. 8756. H. 13.5, D. rim 2.8, D. mouth 1.0, M.D. body 3.3. Dark blue glass with yellow and light blue decoration. Shape and decoration as II.A.viii.8 above.
15. Elaius, Thrace, jar burial 13, no. 74. Louvre Museum. Dated: 500-450 B.C.⁴⁴ H. 9.7. Glass, shape and decoration as II.A.viii.8 above. Pottier, 1915, 224-5, pl. 12:74.
16. Comuna Vadu, Raionul Istria. Archeologie Muzeul, Constanța, no. 1512. H. 12.3, M.D. body 3.8. Dark blue glass with yellow and light blue decoration. Irregular rim; short neck; no shoulders; irregular, rounded, upward tapering body. Decoration of yellow thread beginning on neck, spiralling down to lower body, joined by light blue thread at level of handles, both pulled into two zones of slightly wavy zigzag patterns. Dark blue ring handles with end-knobs. Bucovulă., 1969, 80, no. 128.

Type II. A. viii contd.

17. Olbia. Hermitage Museum, n. Ol. 3821. Dated to 525-500 B.C.⁴⁵. Dark blue glass with yellow and light blue decoration. Shape and decoration as II.A.viii.8 above. Voščinina, 1967, 557, pl. 120:1.
18. Panticapæum, Mithridates-Berg. Hermitage Museum, no. P 1898.17. Dated to c. 500 B.C.⁴⁶ H. 14.7. Dark blue glass with yellow and light blue decoration. Shape and decoration as II.A.viii.8 above. Voščinina, 1967, 557, pl. 117:2.
19. Panticapæum, Mithridates-Berg. Hermitage Museum, no. P 1904.58. Dated to c. 500 B.C.⁴⁷ H. 12.0. Dark blue glass with yellow and light blue decoration. Shape and decoration as II.A.viii.8 above. Voščinina, 1967, 557, pl. 122:1.
20. Panticapæum, Mithridates-Berg. Hermitage Museum, no. P 1904.27. Dated to c. 500 B.C.⁴⁸ H. 11.5. Dark blue glass with yellow and light blue decoration. Shape and decoration as II.A.viii.8 above. Voščinina, 1967, 557, pl. 121:1.
21. Bologne. Dark blue glass with opaque yellow? and light blue? decoration. Shape and decoration as II.A.viii.8 above. Grenier, 1912, 301-2, fig. 116.
22. Cumae, grave 79. Dated c. 500 B.C.⁴⁹ H. 11.6. Dark blue glass with white and yellow decoration. Shape and decoration as II.A.viii.8. Gábrici, 1913, col. 454, pl. 90:7.
23. Cumae, Coll. Stevens. P.H. 9.6, M.D. body, 2.9. Shape and decoration as II.A.viii.1 above. Gábrici, 1913, col. 454, pl. 90:4.
24. Capua. British Museum, no. 1873.8-20.405. H. 12.3, D. rim 2.7, M.D. body 3.3. Dark blue glass with yellow and light blue decoration. Shape and decoration as II.A.viii.8. Harden, 1981, no. 156.
25. Ruvo. British Museum, no. 1856.12-26.1157. H. 8.5, D. rim 2.4, M.D. body 2.7. Dark blue glass with yellow and light blue decoration. Shape and decoration as II.A.viii.5 above. Dark blue ring handles with end-knobs. Harden, 1981, no. 150.
26. Ruvo. British Museum, no. 1856.12-26.1141. H. 13.3, D. rim 2.9, M.D. body 3.6. Dark blue glass with white decoration. Shape and decoration as II.A.viii.6 above. Harden, 1981, no. 154.

Type II. A. viii contd.

27. Ruvo. British Museum, no. 1856.12-26.1140. H. 13.7, D. rim 3.0, M.D. body 3.5. Dark blue glass with yellow and white decoration. Shape and decoration as II.A.viii.8 above. Harden, 1981, no. 155.
28. Canosa. British Museum, no. 1873.8-20.406. H. 10.6, D. rim 2.8, M.D. body 3.0. Dark blue glass with yellow and light blue decoration. Shape and decoration as II.A.viii.2 above. Harden, 1981, no. 115.
29. Locri. Coll. Scaglione, no. 694. H. 13.5. D. rim 3.0, M.D. body 3.0. Dark blue glass with yellow and light blue decoration. Shape and decoration as II.A.viii.8 above. Lissi, 1961, 126-7, pl. 63:236.
30. Tarento, tomb B, sarcophagus 1, no. 4597. Dated 520-500 B.C.⁵⁰ H. 13.0, D. rim 2.5, M.D. body 3.4. Dark blue glass with yellow decoration. Short rim; no neck; irregular, upward tapering body. Decoration of yellow on outside of rim; yellow thread beginning at top of body, spiralling down to lower body, pulled into wavy zigzag pattern at mid-body, continuing to final thick stripe. Dark blue ring handles with end-knobs. Porto, 1967, 50, pl. 19:a.
31. Gela, grave 5. Dated 500-400 B.C. H. 13.0. Dark blue glass with white decoration. Shape and decoration as II.A.viii.6 above. Orsi, 1906, col. 514, fig. 361.
32. Ampurias, Bonjoan 23. Dated 500-475 B.C. H. 9.0. Dark blue glass with yellow and light blue decoration. Shape and decoration as II.A.viii.5 above. Almargo, 1953, 164-166, no. 8, fig. 134, pl. 14:3.
33. Ampurias, Bonjoan 23. Dated 500-475 B.C. H. 8.7. Dark blue glass with yellow and light blue decoration. Short rim; almost no shoulders; irregular, upward tapering body. Decoration as II.A.viii.5 above. Almargo, 1953, 164-66, no. 9, fig. 134, pl. 14:2.
34. Ampurias, Bonjoan 43. Dated 480-470 B.C. Dark blue glass with white and yellow decoration. Very short rim; neck only slightly delineated from body; irregular, upward tapering body. Decoration of yellow thread on outside of rim, continuing onto neck; at beginning of shoulder, white and yellow threads spiralling down counter-clockwise, pulled into short, irregular zigzag pattern at mid-body, continuing as horizontal bands to base. Dark blue ring handles with end-knobs. Almargo, 1953, 178-183, no. 6, fig. 151, pl. 14:7.

II. A. viii contd.

35. Ampurias, Bonjoan 69. Museo de Ampurias, no. 1.489. Dated c. 500 B.C. Restored H. 13.0. Dark blue glass with yellow and light blue decoration. Missing neck and rim. Rim incorrectly restored as horizontal. Rounded body. Decoration: light blue thread at upper body; light blue and yellow threads at mid-body, pulled into slightly wavy zigzag pattern; final threads of yellow and light blue. Almargo, 1953, 137-139, 148, 202-209, no.2, fig. 173, pl. V:4.

36. Cyrenaica. British Museum, no. 1866.4-15.241. H. 9.5, D. rim 2.4, M.D. body 3.4. Dark blue glass with yellow and light blue decoration. Shape and decoration as II.A.viii.5 above. Dark blue ring handles with end-knobs. Harden, 1981, no. 153. Not illustrated.

37. Cyrene, Demeter Sanctuary, no. 71-780. E11, tr. 3, st. 3. Pl. 3. Dated to pre-480 B.C.⁵¹ P.H. 6.5, D. rim 3.0, D. mouth 1.3, M.P.D. body. 3.0. Dark blue glass with yellow and white decoration. Missing lower half of body. Shape and decoration as II.A.viii.8 above.

38. Cyrene, Demeter Sanctuary, no. 73-1056. C15/16, tr.1, st. 6. Pl. 3. Dated to pre-480 B.C. P.H. 4.5, Th. 0.3. Dark blue glass with white decoration. Fragment from upper body. Decoration as preserved similar to II.A.viii.6 above.

39. Cyrene, Demeter Sanctuary, no. 77-693. From F13/G13, tr. 2, st. 2. Pl. 3. P.H.6.8. M.D. body 3.4. Dark blue glass with yellow and white decoration. Missing lower half of body. Shape and decoration as II.A.viii.8 above.

40. Cyrene, Demeter Sanctuary, no. 73-990. From C15/16, tr. 1, st. 5. Pl. 3. Dated to pre-480 B.C. P.H. 2.7, Th. 0.3. Fragment from upper body and handle. Dark blue glass with traces of zigzag decoration.

41. Cyrene, Demeter Sanctuary, no. 76-515. From F13/G13, tr. 1, st. 2. Pl. 3. P.H. 3.4, M.Th. 0.8. Fragment of bottom. Dark blue glass with white horizontal stripes. Inside, slightly off-center is a small projection.

42. Amathus. British Museum, no. 1894.11-1.213. H. 10.5, D. rim 2.5, M.D. body 3.4. Dark blue glass with white and yellow decoration. Short, irregular neck; no shoulders; rounded, upward tapering body. Decoration as II.A.viii.8 above. Harden, 1981, no. 122.

Type II. A. viii contd.

43. Amathus. British Museum, no. 1894.11-1.96. H. 10.3, D. rim 2.8, M.D. body 3.4. Dark blue glass with yellow and light blue decoration. Shape and decoration as II.A.viii.5 above. Dark blue ring handles with end-knobs. Harden, 1981, no. 151.
44. Marion-Arsinoe. British Museum, no. 1890.7-31.18. H. 11.5, D. rim 2.9, M.D. body 3.9. Dark blue glass with white decoration. Harden, 1981, no. 123. Not illustrated.
45. Cyprus. di Cesnola, 1882, pl. 17:6.
46. Cyprus. di Cesnola, 1882, pl. 17:7.

Type II. A. ix. Alabastron of dark glass, with inward sloping rim-disc and rounded body, with plain trail decoration.

1. Camiros, Fikellura, grave not recorded. British Museum, no. 1864.10-7.1224. H. 8.7, D. rim 2.4, D. mouth. 0.9, M.D. body 2.5, Dark blue body with white and yellow decoration. Inward sloping rim-disc; distinct neck and shoulder; rounded body. Decoration of yellow trail on rim; single white thread below handles, pulled into short zigzags. Yellow ring handles with end-knobs. Harden, 1981, no. 147.
2. Camiros, Fikellura, grave not recorded. British Museum 1864.10-7.18. Glass, dimensions, shape and decoration as II.A.ix.1 above. Harden, 1981, no. 148.
3. Ruvc. British Museum, no. 1856.12-26.1158. H. 8.5, D. rim 2.3, M.D. body 2.5. Dark blue glass with yellow decoration. Shape and decoration as II.A.ix.1 above, except no white zigzag at mid-body. Harden, 1981, no. 149.
4. Tharros, Sardinia, tomb 5. British Museum, WA 133045 (=1856.12-23.39). H. 6.5, D. rim 2.4, M.D. body 2.6. Dark greenish-blue glass. Shape as II.A.ix.1 above. Undecorated. Harden, 1981, no. 140.
5. Ampurias, Marti no. 73. Fifth century B.C.⁵² P.H. 4.0. Dark blue glass with yellow decoration. Fragment of upper half of body. Shape and decoration as II.A.ix.1 above. Almargo, 1953, 79-80, fig. 51.

Type II. A. x. Alabastron of dark glass, with horizontal rim-disc and rounded body, without decoration.

1. Ialysos, tomb 68. Rhodes Museum, no. 5121. P.H. 7.7, M.D. body 2.6. Dated 525-500 B.C.⁵³ Translucent green glass. Mended; missing rim and neck. Slightly rounded where sharply defined neck meets shoulder; upward tapering body; rounded bottom. Two ring handles. Traces of red sand on interior; milky and silvery weathering. Maiuri, 1926, 321f.
2. Assos. Istanbul Museum, no. 290. Unpublished.
3. Orphan Asylum, Athens. National Museum, Athens, no. 2707. Pl. 4. H. 13.5, D. rim 3.3, D. mouth 0.8. Translucent blue-green glass. Parts of body missing; mended. Short cylindrical neck; rounded shoulder and slightly flattened oval body. Two applied ring handles. Pitted. Unpublished.
4. Capua. British Museum 1873.8-20.408. H. 13.5, D. rim 3.5, M.D. body 4.4. Glass and shape as II.A.x.1 above. Harden, 1981, no. 83.
5. Locri, Coll. Scaglione no. 237. H. 13.5, D. rim 3.0, M.D. body 4.0. Transparent green glass. Shape as no. II.A.x.1 above. Lissi, 1961, pl. LXIII:237.

Type II. A. xi. Alabastron of dark glass, with horizontal rim-disc and cylindrical body, decorated with zigzag pattern at mid-body.

1. Camiros, Fikellura, grave 50. British Museum, no. 1864.10-7.1218. Dated 475-450 B.C. H. 9.6, D. rim 3.4, D. mouth 1.1, M.D. body 3.4. Dark blue glass with yellow and light blue decoration. Wide, flat rim-disc; narrow neck; rounded, upward tapering body. Decoration of yellow on outside of rim; yellow thread beginning at top of neck, spiralling down counter-clockwise to mid-body, joined by light blue thread below handles, both pulled into short zigzag pattern; final yellow and light blue threads added below zigzag. Dark blue ring handles with end-knobs. Harden, 1981, no. 97.
2. Camiros, Fikellura, grave 37. British Museum, no. 1864.10-7.1996. Dated 450-425 B.C. H. 10.5, D. rim 3.3, D. mouth 1.1, M.D. body 3.7. Dark blue glass with yellow and light blue decoration. Wide flat rim; short cylindrical neck; nearly cylindrical body. Decoration as II.A.xi.1 above, except with light blue on rim. Harden, 1981, no. 98.

Type II. A. xi contd.

3. Camiros, Fikellura, grave 189. British Museum, no. 1952.2-4.82. Dated 475-450 B.C. P.H. 8. M.D. body 3.3. Glass, shape and decoration as II.A.xi.2 above. Harden, 1981, no. 99. Not illustrated.
4. Camiros, Fikellura, grave 189. British Museum, no. 1952.2-4..81. Dated 475-450 B.C. H. 10.5, D. rim 2.7, D. mouth 1.1, M.D. body 2.8. Glass, shape and decoration as II.A.ix.2 above. Harden, 1981, no.101. Not illustrated.
5. Camiros, Fikellura, grave 120. British Museum, no. 1864.10-7.1219. Dated 500-470 B.C. H. 10.7, D. rim 3, D. mouth 1.1, M.D. body, 2.7. Glass, shape and decoration as II.A.xi.6 below. Harden, 1981, no. 103. Not illustrated.
6. Ialysos, tomb 197. Rhodes Museum, no. 10807. Pl. 5. Dated 500-450 B.C.⁵⁴ H. 11.2, D. rim 3.1, D. mouth 1.0, M.D. body 3.4. Dark blue glass with yellow and light blue decoration. Wide flat rim; short cylindrical neck; straight-sided, upward tapering body. Decoration as II.A.xi.1 above. Slightly fluted. Jacopi, 1928, 211, no. 4, fig. 210.
7. Ialysos, tomb 197. Rhodes Museum, no. 10808. Pl. 5. Dated 500-450 B.C. P.H. 8.8, M.D. body 3.2. Missing neck and rim. Glass, shape and decoration as II.A.xi.1 above. Traces of reddish sand on interior. Jacopi, 1928, 211, no.4, fig. 210.
8. Smyrna. British Museum, no. 1908.7-24.15. H. 9.5, D. rim 2.6, M.D. body 2.6. Translucent dark green glass with yellow and light blue decoration. Wide, flat rim; short cylindrical neck; cylindrical body. Decoration as II.A.xi.1 above. Harden, 1981, no. 108. Not illustrated.
9. Delos. H. 12.0. Glass as II.A.xi.8 above. Dugas, 1935, 119, pl. LII:4.
10. Delos. H. 11.0. Glass as II.A.xi.8 above. Dugas, 1935, 119, pl. LII:5.
11. Athens. National Museum Copenhagen, no. 264. H. 9.6. Glass, shape and decoration as II.A.xi.2 above. Fossing, 1940, p. 64, fig. 34.
12. Old Orphan Asylum, Athens.⁵⁵ National Museum, Athens, no. 2705. Pl. 5. H. 12.0, D. rim 3.7, D. mouth 1.0, M.D. body 1.0. Glass, shape and decoration as II.A.xi.2 above.

Type II. A. xi contd.

13. Varna Varna Museum, no. II-4622. P.H. 8.7, M.D. body 3.0. Fragment, missing neck and rim. Dark blue glass with yellow and light blue decoration. Shape and decoration as II.A.xi.8 above. Minčev, 1980, 111, pl. II:2, III:2.
14. Nymphe, USSR. H. 12.3, D. rim 3.4, M.D. body 3.4. Dark blue glass with yellow and light blue decoration. Wide, flat rim; short neck; irregular, upward sloping body. Celantzeva, 1959, 24, fig. 8.
15. Olbia, grave 52. Hermitage Museum Ol.1910.206. Dated 475-450 B.C.⁵⁶ H. 8.5. Glass, shape and decoration as II.A.xi.2 above. Voščinina, 1967, 557, pl. 117:4.
16. S. Russia.? H. 8.5, D. rim 4.0, M.D. body 3.5. CRPétersb, 1900, fig. 181.
17. Certosa, tomb 206. Dated 480-460 B.C.⁵⁷. Glass, shape and decoration as II.A.xi.2 above. Zanonni, 1876, 296, pl.x:17.
18. Capua. British Museum, no. 1873.8-20.404. H. 9.3, D. rim 2.8, M.D. body 2.8. Dark blue glass with yellow and light blue decoration. Shape and decoration as II.A.xi.8 above. Mouth protrudes beyond attachment of rim. Irregular yellow spirals on upper body. Harden, 1981, no. 104.
19. Ampurias, Marti no. 77. Dated 475-450 B.C. H. 8.8, D. rim 2.8. Dark blue glass with yellow and light blue decoration. Shape and decoration as II.A.xi.8 above. Almargo, 1953, 81-84, no. 3, fig. 54, pl. V:5.
20. Tell-es-Sa'idiyah, Jordon, 31-G-8. University Museum, Philadelphia. Dated 594-482 B.C.⁵⁸. P.H. 4.0. Fragment from middle part of body. Dark blue glass with yellow and light blue (decayed to white) decoration.
21. Amathus, tomb 335, no. 2. Cyprus Museum, Nicosia. H. 10.0. Dark blue glass with yellow and light blue decoration. Shape and decoration as II.A.xi.8 above. Annual Report of the Director of Antiquities of Cyprus, 1981, 48, fig. 63.
22. Unknown provenance. Newark Museum, no. 50.1258. Reddish brown glass with yellow and light blue decoration. Shape and decoration as II.A.xi.8 above. Auth, 1976, 27, no. 6.

Type II. A. xii. Alabastron of dark glass, with horizontal rim-disc and rounded or cylindrical body, with plain trail decoration.

1. Camiros, Fikellura, grave 89. British Museum, no. 1864.10-7.1213. Dated 450-425 B.C. H. 11.7, D. rim 3.7, D. mouth 1.1, M.D. body 3.4. Dark blue glass with yellow and light blue decoration. Rounded body; one handle higher than other. Decoration: yellow on rim and upper body; yellow and light blue threads on middle and lower parts of body. Yellow ring handles with end-knobs. Harden, 1981, no. 113.

2. Ialysos, tomb 197. Rhodes Museum, no. 10806. Dated 500-450 B.C.⁵⁹ Pl. 6. H. 11.4, D. rim 3.7, D. mouth 1.0, M.D. body 3.7. Wide, flat rim-disc with tool marks on both sides; rounded body; one handle higher than other. Decoration as II.A.xii.1 above, but with one more yellow thread on lower body. Dark blue ring handles with end-knobs. Jacopi, 1931, 37, fig. 210.

3. Assos. Boston Museum of Fine Arts, no. 84.15. H. 11.0. Shape as II.A.xii.2. Decoration as II.A.xii.1, but with extra yellow thread between dark blue handles. von Saldern, 1968, no.4.

4. Tanagra. National Museum, Athens, no. 2877. Pl. 6. H. 9.5, D. rim 2.9, D. mouth 1.0, M.D. body 2.6. Dark blue glass with decoration now decayed to white. Flat rim-disc with tool marks on exterior; oval mouth; short cylindrical neck; cylindrical body; slightly flattened bottom. Blue (?) ring handles with end-knobs. Decoration of white on outside of rim; and three sets of horizontal white threads, at upper, middle and lower body.

5. S. Russia. Hermitage Museum, E. 3159 (ex. Coll. Tolstoi). H. 11.0. Glass, shape and decoration as II.A.xii.1 above. Voščinina, 1967, 557, pl. 117:1, left.

6. S. Russia. Berlin, no. 11863.640. H. 10.55. Shape and decoration as II.A.xii.4 above. Fossing, 1940, fig. 33.

7. Certosa, tomb, 351. Dated 500-475 B.C. ⁶⁰ Glass, shape and decoration as II.A.xii.4 above. Zanonni, 1876, 376, pl. 117:11.

8. Selinus, tomb 45 (=tomb 325 in Daybook of excavation). Museo Nazionale, Palermo. H. 8.9, M.D. body 2.8. Dark blue glass with yellow decoration. Shape as II.A.xii.1 above. Decoration: yellow on outside of rim; yellow thread at upper body and yellow thread at lower body. Yellow ring handles with tails. Tusa, 1971b, 213, pl. XIII:D.

Type II. A. xii contd.

9. Unknown provenance. Newark Museum, no. 50.1486. H. 9.8, D. rim 3.2. Dark purple glass with white decoration. Shape and decoration as II.A.xii.4 above. Auth, 1976, 28, no. 7.

Type II. A. xiii. Alabastron of dark glass with horizontal rim-disc and cylindrical body, decorated with zigzag pattern all over body.

1. Camiros, Fikellura, grave 284. British Museum, no. 1864.10-7.1225. Dated. 450-430 B.C. H. 11.2, D. rim 3.2, M.D. body 2.8. Opaque brown glass with light blue and yellow decoration. No shoulder. Decoration of light blue on outside of rim-disc; light blue and yellow thread beginning at bottom of neck, spiralling down counter-clockwise all over body, pulled into short zigzag pattern from middle of handles to base. Dark blue ring handles with end-knobs. Harden, 1981, no. 130.

2. Camiros, Fikellura, grave 81. British Museum, no. 1864.10-7.1226. Dated 460-440 B.C. H. 10.0, D. body 3.4, D. mouth 1.0, M.D. body 2.8. Dark green glass with red streaks and light blue and yellow decoration. Decoration as II.A.xiii.1 above. Dark green ring handles with end-knobs. Harden, 1981, no. 133. Not illustrated.

3. Camiros, Fikellura, grave 138. British Museum 1864.10-7.1233. Dated 450-400 B.C. H. 11.2, D. rim 3.2, D. mouth 1.0, M.D. body 2.5. Opaque red glass with light blue and yellow decoration. Decoration as II.A.xiii.1 above. Harden, 1981, no. 129. Not illustrated.

4. Camiros, Macri Langoni, tomb 44. Rhodes Museum, no. 13288. Dated 450-425 B.C.⁶¹. Pl. 6. H. 14.2, D. rim 3.3, D. mouth 1.1, M.D. body 2.7. Glass and decoration as II.A.xiii.2 above, except yellow thread on outside of rim. Jacopi, 1931, 135, no. 3, fig. 131.

5. Camiros, Macri Langoni, tomb 19. Rhodes Museum 12247. Dated 450-425 B.C.⁶² H. 10.5. Glass and decoration as II.A.xiii.1 above, except yellow on outside of rim. Jacopi, 1931, 90, no.1, fig. 76.

6. Camiros, Macri Langoni, tomb 19. Rhodes Museum 12248. Dated 450-425 B.C. H. 10.5. Glass as II.A.xiii.2 above. Decoration of yellow on outside of rim; yellow and light blue thread beginning on shoulder, spiralling down counter-clockwise all over body, pulled into tall zigzag pattern from handles to base. Jacopi, 1931, 90, no.1, fig. 76.

Type II. A. xiii contd.

7. Ialysos, tomb 232. Rhodes Museum 11986. Dated 425-400 B.C.⁶³. Pl. 6. H. 14.2, D. rim 3.9, D. mouth 1.0, M.D. body 3.0. Dark green glass with red streaks and light blue and white decoration. Decoration as II.A.xiii.1 above, except zigzag pattern starts below handles. Traces of reddish sand on interior. Jacopi, 1928, 250, no. 17, fig. 244.

8. Ialysos, tomb 232. Rhodes Museum 11987. Dated 425-400 B.C. Pl. 7. H. 11.1, D. rim 2.8, D. mouth 1.0, M.D. body 2.8. Brownish yellow glass with yellow and green-blue decoration. Decoration as II.A.xiii.7 above. Jacopi, 1928, 250, no.18, fig. 244.

9. Rhodes. Storeroom, no. Y58 (marked "tomb CXIII"). Pl. 7. Unpublished.

10. Lindos. British Museum, no. 1951.6-6.22. H. 9.4, D. rim 3.0, M.D. body 2.4. Glass and decoration as II.A.xiii.3 above. Harden, 1981, no. 128.

11. Pitane, surface find, no. Çnd. 1961/I/III E. Istanbul Museum, no. 2131. H. 10.28, D. rim 2.95. Brown glass with white decoration. Decoration: white thread on outside of rim; white thread beginning at top of body, spiralling down counter-clockwise to base, pulled into short zigzag pattern all over body. Freyer-Schauenburg, 1974, 145, 163, no. 4, pl. VI.

12. Mytilene. British Museum, no. 1856.9-2.57. P.H. 8.5, M.D. body 2.6. Glass and decoration as II.A.xiii.2. Harden, 1981, no. 136. Not illustrated.

13. Delphi. P.H. 6.0. Fragment of lower part of body. P. Perdrizet, Fouilles de Delphes, V, 1908, 216, no. 771, fig 947 (published upside down).

14. Elaius, grave 20. Louvre Museum. Dated 500-450 B.C. H. 14.0, M.D. body 3.2. Decoration as II.A.xiii.7 above. Pottier, 1915, 201, no. 82, pl. 12.

15. Kalfata, Apollonia, grave 195. Dated 450-425 B.C.⁶⁴ H. 10.0, M.D. body 2.8. Glass and decoration as II.A.xiii.1. Mlađenova, 1963, 309, pl. 162, 163.

16. Kertch. Ashmolean Museum, no. 1885.501. H. 10.6. Glass and decoration as II.A.xiii.1 above. Fossing, 1940, fig. 42; also, M. Vickers, Scythian Treasures in Oxford, Oxford, 1979, pl. XVII:F.

Type II. A. xiii contd.

17. Panticapaeum, grave 66. Hermitage Museum, no. P.1905.44. H. 10.0. Brown glass with white (=decayed light blue?) and yellow decoration. Shape and decoration as II.A.xiii.1 Voščinina, 1967, 558, pl. 117:3, right.
18. Panticapaeum, grave 66. Hermitage Museum, no. P.1905.43. H. 12.0. Glass as II.A.xiii.17 above. Short, cylindrical neck. Decoration as II.A.xiii.7. Voščinina, 1967, 558, pl. 117:3, left.
19. Panticapaeum, grave 28. Hermitage Museum, no. P.1902.11. Dated c. 400 B.C.⁶⁵ H. 10.0. Glass as II.A.xiii.17 above. Short, cylindrical neck. Decoration as II.A.xiii.7. Voščinina, 1967, 558, pl. 123:2.
20. Kertch. Hermitage Museum. Blue glass with light blue and yellow decoration; brown with light-blue, yellow and white decoration. Voščinina, 1967, 558, pl. 118:1, which illustrates ten vessels of this type, described as "mostly from Kertch".
21. S. Russia. Berlin, no. 11863.838, ex. Coll. Schiller. H. 11.0. Glass, shape and decoration as II.A.xiii.7 above. Fossing, 1940, 66, fig. 41.
22. Certosa, grave 355. Bologna. Dated c. 475 B.C.⁶⁶ H. 10.8. Decoration as II.A.xiii.1 above. Zanonni, 1876, 378, pl. 119:10.
23. Spina, grave 971. Fossing, 1940, 66.
24. Spina, grave 83, di valle Trebba. Dated 475-425 B.C.⁶⁷ Shape and decoration as II.A.xiii.1 above. Aurigemma 1967, pl. XV:b, right.
25. Spina, grave 83, di valle Trebba. Dated 475-425 B.C. Shape and decoration as II.xiii.1 above. Aurigemma and Alfieri, 1967, pl. XV:b, left.
26. Spina, grave 52 B, Valle Pega. Dated c. 400 B.C. Shape as II.xiii.1 above. Massei, 1978, 161, pl. XXXVII:3.
27. Rivalta. Civic Archaeological Museum, Milan, no. 2327. H. 9.5, M.D. body 3.0. Glass, shape and decoration as II.A.xiii.1 above. Tamassia, 1966, 365, fig. 2.
28. Cumae. Raccolta Cumana. H. 8.8. Shape and decoration as II.A.xiii.1 above. Gabrici, 1913, col. 566, pl. 96:12.

Type II. A. xiii contd.

29. Caltanissetta, grave 19. Museo Nazionale, Agrigento, no. V, 1623. Dated 440-430 B.C. Wedendal, 1979, footnote 31.
30. Vassallaggi (S. Cataldo), Sicily, grave 19. Dated 425-400 B.C.⁶⁸ H. 10.0. Glass, shape and decoration as II.A.xiii.1 above. Orlandini, 1971, 46, fig. 61.
31. Ampurias, Marti no. 77. Dated 475-450 B.C. H. 12.5, D. rim 3.5. Brown glass with white and light blue decoration. Shape and decoration as II.A.xiii.1 above. Almargo, 1953, 81-84, fig. 54:2, pl. V:6.
32. Ampurias, Marti no. 84. Dated 420-375 B.C. H. 10.0, D. rim 3.2. Dark blue glass with white (?) decoration. Slightly irregular body. Decoration: white on outside of rim; white thread spiralling down counter-clockwise from shoulder to base, pulled into very irregular zigzag pattern all over body. Almargo, 1953, 86-87, no.26, fig. 61, Pl. V:7.
33. Ampurias, Marti no.84. Dated 420-375 B.C. H. 8.5. Glass, shape and decoration as II.A.xiii.29 above. Almargo, 1953, 86-87, no.27, fig. 61, pl. V:8.
34. Ibiza. H. 9.2. Glass and decoration as II.A.xiii.3 above. Vives y Escudero, 1917, 88-92, pl. 32:1.
35. Syria. Damascus Museum, no. 5540. H. 10.2. Red glass with white and light blue decoration. Decoration: yellow on outside of rim; white thread beginning on neck, joined by yellow on shoulder, both spiralling down counter-clockwise to base, pulled into short zigzag pattern beginning at middle of handles. Zouhdi, 1964, 41, no. 2; see also the color photograph, distributed as a postcard for the 1964 Exposition des Verres Syriens, 3^e Congrès JIV.
36. Cyprus. Cyprus Museum, D1872. Fragment of upper body. Restored H. 10.0, D. rim 3.0, D. mouth 1.1. Glass and decoration as II.A.xiii.1 above. Slightly fluted.
37. Sardis. G66.8:7088. P.H. 5.0. von Saldern, 1980, 6, pl. 1:1.

Type II. A. xiv. Alabastron of dark glass, with horizontal rim-disc and cylindrical body, with spiralling trail decoration all over body.

1. Camiros, Fikellura, grave 172. British Museum, no. 1864.10-7.1227. Dated 450-425 B.C. H. 10.5, D. rim 2.9, D. mouth 1.0, M.D. body 2.6. Dark green glass streaked with red with light blue and yellow decoration. Long, straight-sided body. Decoration: mixed light blue and yellow thread on outside of rim; mixed thread beginning on shoulder, spiralling down counter-clockwise to base. Green ring handles with end knobs. Harden, 1981, no. 139.

2. Merenda. Brauron Museum, no. 12-1-63. Unpublished.

3. Nymphé, USSR. H. 13.5, D. rim 3.3, M.D. body 2.9. Dark green glass with white decoration. Long, straight-sided body. Decoration: white on outside of rim; single white thread, beginning on shoulder and spiralling down counter-clockwise to base. Celantzeva, 1959, 24, fig. 8.

4. S. Russia. Berlin, no. 11863.641. Glass and decoration as II.A.xiv.3 above. Body not elongated. Fossing, 1940, 66, fig. 40.

5. S. Russia. Hermitage Museum, no. E 1476, ex. coll. Schwaloff. Dark blue ? glass with opaque white ? decoration. Decoration of three closely-set threads, spiralling down counter-clockwise from shoulder, making six revolutions to base. Voščinina, 1967, 557, pl. 122:2.

6. Ugarit. National Museum, Damascus, no. 14777. H. 13.6. Glass, shape and decoration as II.A.xiv.3 above. Zouhdi, 1964, 41, no. 1 fig. 23.

Type II. B. Red-formed Kohl Tube.

1. Gordion, City Mound T-E2; G-289. Pl. 8. P.H. 5.4, D. mouth 1.1 Dark blue glass with yellow and white decoration. Fragment of square kohl tube with short zigzag pattern of Barag's Group I.

2. Gordion, City Mound, TB7-D, Layer 4; G 309. Pl. 8. P.H. 1.6. Blue with yellow? decoration, Fragment of shoulder of square vessel.

3. Gordion, City Mound, MN-Ext. 3; G 245. Pl. 8. Dark red glass with white decoration. Fragment from wall of kohl tube of Barag's Group I.

Type II. C. i. Amphoriskos of white glass, with obtuse-angled junction between neck and shoulder, decorated with zigzag pattern..

1. Camiros, Fikellura grave 283. British Museum 1864.10-7.1204. Dated 500-475 B.C. H. 9.3, M.D. body 4.6, D. base 2.2. White glass with purple decoration. Harden, 1981, no. 162. Not illustrated.

2. Ialysos, Marmaro Cemetery, tomb 4. Rhodes Museum, no. 15382. Dated 500-480 B.C.⁶⁹ Pl. 9. H. 12.4, D. rim 3.9, D. mouth 1.0, M.D. body 6.8, D. base 2.1. Glass as II.C.i.1 above. Slightly sloping rim-disc, with tool marks on both sides. Tall neck; sharply defined shoulder; slightly rounded downward tapering body. Added white button base and handles from shoulder to under rim. Decoration: purple on outside of rim; thick purple thread, beginning on shoulder, spiralling down counter-clockwise to base, pulled into very tall and wavy zigzag pattern; purple thread on top and bottom of base. Deeply fluted. Missing part of rim and neck, most of both handles and parts of body. Reddish sand visible on interior. Laurenzi, 1936, 95-96, no. 1, fig. 83.

3. Ialysos, Marmaro Cemetery, tomb 4. Rhodes Museum, no. 15383. Dated 500-480 B.C. H. 11.7, D. rim 3.3, D. mouth 1.1, M.D. body 6.4, D. base 1.7. Glass, shape and decoration as II.C.i.2 above. Laurenzi, 1936, 95-96, no. 2, fig. 83.

4. Pitane, sarcophagus burial. Izmir Museum Cnd. 1965/VIC1. Dated 525-500 B.C.⁷⁰ Glass as II.C.i.1 above. Inward sloping rim-disc; rounded shoulders and body. Decoration: purple on outside of rim; purple thread beginning on neck, spiralling down to base, pulled into two sets of wavy zigzags. Fluted. Freyer-Schauenburg, 1974, no. 5, 145, 152-3, 164, pl. XIII:e.

5. Pitane, stray find. Istanbul Museum storeroom. P.H. 3.8. Glass as II.C.i.1 above. Freyer-Schauenburg, 1974, no. 6, 145, pl. XV:a.

6. Ephesos, sarcophagus 6. Dated 550-500 B.C. H. 11.5. Glass, shape and decoration as II.C.i.4 above. Langmann, 1967, 113, fig. 43:3.

7. Delphi, from tomb near Coucouvayes on road to Arachova. Delphi Museum, no. 8755. Pl. 9. H. 12.2, D. rim 3.3, D. mouth 1.2, M.D. body 6.4. Glass, shape and decoration as II.C.i.4 above. P. Perdrizet, FdD V (1908), 215, no. 767, fig. 946.

Type II.C.1 contd.

8. Delphi, tomb 1, west of museum. Delphi Museum, no. 7870. Dated 475-450 B.C.⁷¹ Pl. 10. H. 10.8, D. rim 3.1, D. mouth 1.5, M.D. body 6.0, D. base 1.6. Glass and shape as II.C.1.2 above; decoration as II.C.1.4 above. Konstantinou, 1965, 299-303, no. 51, pl. 358.
9. Chalkidike. Römisch-Germanisches Zentralmuseum, Mainz, no. O. 37895. Dated to 525-500 B.C. H. 11.0, M.D. body 5.8. Glass, shape and decoration as II.C.1.4 above. Hassel, 1967, 201-205, pls. 49-55; also, Nolte and Haevernick, 1967, pl. 64:5.
10. Sinda, grave 52. Thessaloniki Museum, no. 7822. Dated 510-500 B.C.⁷² Pls. 10, 35. Glass, shape and decoration II.C.1.8 above. Unpublished.
11. Sinda, grave 52. Thessaloniki Museum, no. 7823. Dated 510-500 B.C. Pls. 10, 35. Glass, shape and decoration II.C.1.8 above. Unpublished.
12. Sinda, grave 67. Thessaloniki Museum, no. 7812. Dated c.500 B.C. Pls. 10, 33, 36. Glass, shape and decoration II.C.1.4 above. Unpublished.
13. Sinda, grave 67. Thessaloniki Museum, no. 7813. Dated c.500 B.C. ⁷³ Pls. 10, 35, 36. Glass, shape and decoration II.C.1.4 above. Unpublished.
14. Trebenishhte, grave 9. H. 11.0. Glass, shape and decoration as II.C.1.4 above. Vulić, 1933, 181, no. 42, fig. 96; also *AJA*, 37 (1933), 6, fig. 12.
15. Kertch, tomb 104. Glass, shape and decoration as II.C.1.4 above. Skorpil, 1905, 26, fig. 21.
16. Kertch, tomb 10. H. 12.3. Glass, shape and decoration as II.C.1.4 above. Skorpil, 1910, 15, fig. 10.
17. Certosa, grave 273. Glass, shape and decoration as II.C.1.4 above. Zanonni, 1876, pl. 93.
18. Narce, Necropoli di Monte du Croci, Tomba A, camera 68. Villa Giulia, no. 5189. Glass shape and decoration as II.C.1.4 above.
19. Gnathia, Reg. Puglia. British Museum, no. 1856.12-26.221. H. 11.4, M.D. body 5.8, D. base 1.8. Glass, shape and decoration as II.C.1.4 above. Harden, 1981, no. 161.

Type II.C.i contd.

20. Terravecchia di Grammichele, Catania. Dated 700-500 B.C. H. 12.5. Glass, shape and decoration as II.C.i.2 above. Orsi, 1907, 146, fig. 8.

21. Terravecchia di Grammichele, Catania. Dated 700-500 B.C. Glass, shape and decoration as II.C.i.4 above., Orsi, 1907, 146, fig. 8.

22. Cyrene, Demeter Sanctuary, no. 73-910. From C15/16, tr. 1, st. 4.⁷⁴ Pl. 10. P.H. 3.8. M. Th. 0.8. Fragment from shoulder of vessel like II.C.i.2 above.

23. Cyrene, Demeter Sanctuary, no. 77-439. From F13/G13, tr. 2, st. 2. Pl. 10. P.H. 2.0. Fragment from upper part of body. White glass.

24. Cyrene, Demeter Sanctuary, no. 73-985. From C15/16, tr. 1, st. 5. Dated to pre-480 B.C. Pl. 11. P.H. 2.4. M.Th. 0.8. Fragment from shoulder of vessel like II.C.i.2. above.

25. Cyrene, Demeter Sanctuary, no. 76-1051. From C11, tr. 2, st. 4 SE. Dated to pre-480 B.C. Pl. 11. P.H. 2.9. Fragment of base of vessel like II.C.i.2 above.

26. Marion, Cyprus, grave 7. Dated to sixth century B.C. 75 H. 10.8. Glass, shape and decoration as II.C.i.2 above. Gjerstad, SCE II, 202, no. 3, pl. 37.

27. Gordion, City Mound, Terrace Building 7-E, Level 3, no. G 319.⁷⁶ Pl. 11. PH 4.0. White? glass with blue? decoration. Fragment from shoulder of vessel.

28. Gordion, City Mound, NW, pit under NCT-A8, Mosaic level. No. G 218. Pl. 11. D. rim 2.1. Fragment of rim and neck. Purple thread on outside of rim.

Type II. C. ii. Amphoriskos of white glass, with almost right-angled junction between neck and shoulder, decorated with zigzag pattern. .

1. Melos. British Museum, no. 1842.7-28.585. H. 6.9, M.D. body 4.2. Bluish-white glass with purple decoration. Inward sloping rim-disc; sharp junction between neck and shoulder; ovoid body. Base missing. Decoration: purple on outside of rim; purple thread beginning on shoulder, spiralling down counter-clockwise to mid-body, pulled into short zigzag pattern; final purple thread on lower body. Harden, 1981, no. 181.

Type II. C. iii. Amphoriskos of dark glass, with obtuse-angled junction between neck and shoulder, decorated with wavy zigzag pattern.

1. Camiros. British Museum, no. 1860.4-4.96. H. 11.0, M.D. body 6.1, D. base Dark blue glass with white decoration. Inward sloping rim-disc; rounded body. Decoration: white on outside of rim; thin white thread beginning on shoulder, wound down all over body, pulled into a closely-set wavy zigzag pattern. Concave base-knob. Handles from shoulder to under rim. Deeply fluted. Harden, 1981, no. 163.

2. Pitane, sacrophagus burial. No. Çnd. 1959/B/IIA1. Bergama Museum, no. 830. P.H. 7.6, D. rim 3.2. Fragment from upper part of vessel identical to II.C.iii.1 above; the handles were formed of a loop, pushed up against the neck. Freyer-Schauenburg, 1973, 147, 155, no. 10, pl. X:a,b.

3. Pitane. No. Çnd. 1963/N/VIC. Istanbul Museum, Magazin no. 2428. P.H. 5.4, D. rim 2.8. Dark blue glass with yellow and light-blue decoration. Fragment from upper part of vessel as II.C.iii.1 above. Freyer-Schauenburg, 1973, 147, 155, no. 9, pl. X:c,d.

4. Orphan Asylum, Athens. National Museum, Athens, no. 2709. Pl. 12. H. 11.1, D. rim 2.6, D. mouth 1.2, M.D. body 6.6, D. base 1.8. Glass and shape as II.C.iii.1 above. Decoration: white on outside of rim; thick white thread beginning on upper neck, thinning and spiralling down counter-clockwise to base, pulled into closely-set wavy zigzag pattern. Deeply fluted.

5. Asine, grave 1971-9. Small fragment. Rafn, 22-3, fig. 23.

6. Halieis, Acropolis E, trench 1, NE corner, first pick pass under fifth century floor, no. HV-15.⁷⁷ Pl. 12. P.H. 2.1. Glass as II.C.iii.3 above. Fragment of shoulder. Fluted.

7. Rhitsona, grave 26, no. 235. Thebes Museum. Dated 510-500 B.C.⁷⁸ H. 11.0. Glass as II.C.iii.1 above. Rounded, sloping shoulders and ovoid body. Decoration: white on outside of rim; white thread beginning on shoulder, spiralling down to base, pulled into short wavy zigzag pattern. Burrows and Ure, 1908, 285, pl. XII:b; Ure, 1934, 76.

8. Rhitsona, grave 31, no. 361. Thebes Museum. Dated 515-500 B.C. Fragments of vessel similar to II.C.iii.7 above. Burrow and Ure, 1908, 279; Ure, 1934, 79. Not illustrated.

Type II. C. iii contd.

9. Trebenischte, grave 2. Fragment from upper part of vessel similar to II.C.iii.3 above. Filow, 1927, 94, no. 142, fig. 112:2.r

10. Trebenischte, grave 2. Two non-joining fragment from upper and lower part of vessel similar to II.C.iii.7 above. Filow, 1927, 94, no. 143, fig. 112:1.

11. Trebenischte. Dated c. 500 B.C. Fragment from lower part of body. Vulić, 1930, col. 299, no. 14, fig. 20.

12. Amman, Jordan. Amman Museum, no. TJ 1306a. Dated to sixth century B.C.⁷⁹ Color? Fragment from upper body of vessel like II.C.iii.7 above. Harding, 1953, 56, pl. VII:42.

13. Sardis, G61.25:3804. Dated 6th-5th centuries B.C. Fragment from shoulder of vessel like II.C.iii.3 above. von Saldern, 1980, no. 2.

Type II. C. iv. Amphoriskos of dark glass, with obtuse-angled junction between neck and shoulder, decorated with spirals on neck and with regular zigzag pattern from shoulder to mid-body.

1. Camiros. British Museum, no. 1864.10-7.17. H. 9.5, D. rim 3.2, D. mouth 1.0, M.D. body 5.9, D. base 1.6. Dark blue glass with yellow and light-blue decoration. Flat shoulders; nearly straight-sided lower body. Decoration: yellow on rim; yellow thread beginning on upper neck, spiralling down counter-clockwise to lower body, pulled into slightly wavy zigzag pattern at mid-body. Slightly fluted. Dark blue handles and base-knob. Harden, 1981, no. 170.

2. Camiros, Fikellura, grave 128. British Museum 1864.10-7.1202. Dated 440-400 B.C.⁸⁰ H. 9.4, D. rim 2.8, D. mouth 1.0, M.D. body 5.0, D. base 1.3. Dark blue glass with white and yellow decoration. Carinated body. Decoration of white outside rim; white on neck, spiralling down to carination, where joined by thick yellow thread, pulled into short wavy zigzag pattern. Small pin hole on underside of base. Harden, 1981, no. 167

3. Ialysos, tomb 68. Rhodes Museum, no. 5117. Dated 525-500 B.C.⁸¹ H. 8.8, D. rim 2.5, D. mouth 0.8, M.D. body 5.3, D. base 1.5. Glass, shape and decoration as II.C.iv.1 above. Handles formed of loops, pushed against neck. Maiuri, 1926, 321-2, no. 4, fig. 215.

II. C. iv contd.

4. Archangelos?, Rhodes. Staatliche Museum, Berlin, no.42. H. 8.5, M.D. body 4.8. Glass, shape and decoration as II.C.iv.3 above. Rohde, 1980, 151, no. 7.
5. Pitane, sarcophagus burial, no. Çnd. 1961/H/III G 1. Istanbul Museum, no. 2132. H. 8.95, D. rim 2.94, M.D. body 4.9, D. base 1.53. Glass, shape and decoration as II.C.iv.1 above. Freyer-Schauenburg, 1973, 146, 154, no. 7, pl. XV:b.
6. Pitane, pithos burial, no. Ç nd. 1964 /N Ek/ XIV C 1. Izmir Museum, no. 4985. H. 8.65, D. rim 2.6, M.D. body 5.2, D. base 1.6. Glass, shape and decoration as II.C.iv.1 above. Freyer-Schauenburg, 1973, 146, 154, no. 8, pl. XI.
7. Eretria. National Museum, Athens, no. 3085. Pl. 12. H. 9.2, D. rim 2.7, D. mouth 1.1, M.D. body 4.9, D. base 1.5. Glass and decoration as II.C.iv.1 above. Inward sloping rim-disc with tool marks; long cylindrical neck; sharply angled shoulder; narrow body.
8. Lechaion Cemetery, Corinth, grave C8, no. 9. Corinth Museum, no. MF9751. Dated. 490-480 B.C.⁸² Pl. 12. H. 9.4, D. rim 2.4, D. mouth 1.2, M.D. body 5.0, D. base 1.4. Glass, shape and decoration as II.C.iv.7 above. Eliot, 1968, 352, pl. 103; Corinth notebook, CWJE 1954 II, p. 49.
9. Delphi, tomb 1, west of Museum. Delphi Museum, no. 7869. Dated 475-450 B.C.⁸³ Pl. 13 H. 8.7, D. rim 2.4, D. mouth 1.0, M.D. body 5.6, D. base 1.4. Glass, shape and decoration as II.C.iv.1 above. Konstantinou, 1965, 229-303, no. 48, pl. 358:b.
10. Rhitsona, grave 46, no. 147. Thebes Museum. Dated 500-475 B.C.⁸⁴ H. 7.3, D. rim 2.4, D. mouth 1.1, M.D. body 4.4. Glass, shape and decoration as II.C.iv.7 above. Ure, 1909, 327, fig. 11.
11. Ambrakia, Epirus, amphora burial. Ioannina Museum. Dated 500-475 B.C.⁸⁵ P.H. 6.5. Glass, shape and decoration as II.C.iv.1 above. Tsiribakos, 1965, 358, pl. 424:e, right.
12. Karkinitis (Eupatoria), Crimea. Shape as II.C.iv.6 above. Romantschenko, 1907, 185, fig. 27.
13. Vani, Georgia, burial 6. N. 3-61/662,46. Dated to fifth century B.C.⁸⁶ P.H. 8.1. Glass, shape and decoration as II.C.iv.1 above. Lordkipanidze, 1972, 116-117, fig. 62.

Type II.C.iv contd.

14. Kepy. Glass, shape and decoration as II.C.iv.7 above; fluted. Sokol'skiy, 1963, 97-114, pl. 4:6.
15. Olbia, ex. Coll. Józef Choynowskiego. Museum Narodowe, Warsaw, no. 32212. H. 10.2, M.D. body 4.8. Glass, shape and decoration as II.iv.7 above. Filarska, 1952, no. 18, pl. III:6.
16. Cumae. Raccolta Stevens. Glass, shape and decoration as II.C.iv.7 above. Gabrici, 1913, no.10.
17. Sines, Spain.⁸⁷ H. 10.5. Glass, shape and decoration as II.C.iv.7 above. Garcia y Bellido, 1970, 27, fig. 25.
18. Dermech, tomb 199. Bardo Museum. Dated c. 500 B.C.⁸⁸ H. 8.5, D. 5.2. Glass, shape and decoration as II.C.iv.7 above. Seefried, La verrerie punique, 41, no. 5.
19. Cyrene, Demeter Sanctuary, no. 76-464.⁸⁹ From F13/G13, tr. 1, st. 2. Pl. 13. P.H. 5.1. Dark blue glass with white decoration. Fragment from lower body and base. Narrow body. Decoration of white zigzag pattern; final white thread below; white on button-base.
20. Cyrene, Demeter Sanctuary, no. 76-604. From F13/G13, tr. 1, st. 2. Pl. 13. P.H. 4.0. Glass as II.C.iv.1 above. Fragment from neck and upper body. Tall, narrow neck. Trace of handle where pushed up against neck.
21. Cyrene, Demeter Sanctuary, no. 77-1054. From D15/E15, tr. 1, st. 2. Pl. 13. P.H. 2.5. Dark blue glass with white decoration. Fragment from neck and shoulder and neck. Part of straight handle on shoulder.
22. Cyrene, Demeter Sanctuary, no. 73-1170. From E 10 Baulk Bldg., st. 3. P.H. 3.9. Dark blue glass with yellow and white decoration. Fragment from neck, shoulder and straight handle. Decoration of white spiralling down neck, wavy yellow zigzag beginning on shoulder.
23. Cyrene, Demeter Sanctuary, no. 73-1057. From C15/D15, tr. 1B, st. 4. Pl. 13. P.H. 2.1. Fragment from shoulder. Dark blue glass with thin white tall zigzag pattern.
24. Cyrene, Demeter Sanctuary, no. 78-374. From F14/G14, tr. 1, st. 3. Pl. 13. P.H. 1.0, D. base 1.6. Fragment of base of amphoriskos. Dark blue glass with white on underside of base.

Type II. C. iv contd.

25. Cyrene, Demeter Sanctuary, no. 76-247. From C13/D13, tr. 1, st. 5. Fragment of shoulder and handle. Glass and decoration as II.C.iv.2 above.

Type II. C. v. Amphoriskos of dark glass, with obtuse-angled junction between neck and shoulder, decorated with regular zigzag pattern from shoulder to mid-body.

1. Montefortino, grave 69, near Arcivia, Anacona (Narce). Dated 500-450 B.C.⁹⁰ Dark blue glass with white and yellow decoration. Barnabei, 1895, col. 317, fig. 159.

2. Ruvo. British Museum, no. 1856.12-26.1162. H. 9.2, M.D. body 5.4, D. base 1.5. Dark blue glass with yellow and light blue threads. Decoration: yellow on outside of rim; yellow thread beginning on shoulder, spiralling down to mid-body, joined by light blue thread, both pulled into slightly wavy zigzag pattern; below zigzags, separate light blue thread; light blue and yellow on base. Thick handles. Slightly fluted. Harden, 1981, no. 165.

3. Demeter Sanctuary, Cyrene, no. 71-490.⁹¹ From F11, tr.1, st.1. Pl. 14. P.H. 3.8. Fragment from shoulder of vessel. Dark blue glass with light blue and yellow decoration.

4. Demeter Sanctuary, Cyrene, no. 77-447. From F13/G13, tr. 2, st. 2. Pl. 14. P.H. 3.9. Fragment from neck and shoulder of vessel. Dark blue glass with yellow and light blue decoration.

5. Demeter Sanctuary, Cyrene, no. 73-679. D16/17, st.3. Pl. 14. P.H. 3.1, D. rim 2.8. Fragment of upper part of vessel. Dark blue glass with white decoration.

II. C. vi. Amphoriskos of dark glass with obtuse-angled junction between neck and shoulder, and with handles having a central depression, decorated with regular zigzag pattern.

1. Camiros, Fikellura, grave 211. British Museum, no. 1864.10-7.1200. Dated 490-470 B.C. H. 3.4, D. rim 2.8, D. mouth 1.2, M.D. body 5.0, D. base 1.5. Dark blue glass with yellow and light blue decoration. Volute handles from shoulder to below rim. Decoration: yellow on rim; yellow and light blue threads beginning on shoulder, spiralling down to base, pulled into short wavy zigzag pattern. Slightly fluted. Harden, 1981, no. 176.

Type II. C. vi contd.

2. Camiros, Fikellura grave 231. British Museum, no. 1865.10-7.74. Dated 475-450 B.C. H. 8.0, D. rim 2.6, D. mouth 1.0, M.D. body 5.0, D. base 1.4. Glass as II.C.vi.1 above. Decoration: yellow on rim; thick yellow thread beginning at top of neck, spiralling down to base, joined by light blue thread at mid-body, where pulled into an irregular zigzag pattern; below, two light blue threads. Harden, 1981, no. 179.

3. Camiros, Fikellura grave 260. British Museum, no. 1864.10-7.73. Dated 460-440 B.C. H. 7.8, D. rim 2.8, D. mouth 1.1, M.D. body 4.8, D. base 1.5. Glass and decoration as II.C.vi.2 above. Harden, 1981, no. 180.

4. Camiros, Macri Langoni tomb 69. Rhodes Museum, no. 12388. Dated 490-470 B.C.⁹² Glass, shape and decoration as II.C.vi.1 above. Jacopi, 1931, 167, no. 2, fig. 168.

5. Camiros, Macri Langoni tomb 132. Rhodes Museum, no. 12304. Dated. 510-490 B.C.⁹³ Pl. 14. H. 7.6, D. rim 2.8, D. mouth 1.1, M.D. body 4.9, D. base 1.4. Opaque green glass (misfired) with light blue and yellow decoration. Irregularly shaped body. Decoration as II.C.vi.2 above. Jacopi, 1931, 263, no. 6, fig. 287.

6. Nora, Sardinia. Glass and decoration as II.C.vi.2 above. Patroni, 1904, pl. XVII, third row, second from right.

Type II. C. vii. Amphoriskos of dark glass, with almost right-angled junction between neck and shoulder, decorated with regular zigzag pattern.

1. Camiros, Fikellura grave 89, British Museum, no. 1864.10-7.2020. Dated 450-425 B.C. H. 7.8, D. rim 2.6, D. mouth 1.1, M.D. body 5.2, D. base 1.4. Dark blue glass with light blue and yellow decoration. Short neck; ovoid body. Decoration: light blue on rim; yellow thread beginning on shoulder, spiralling down to mid-body, joined on upper body by light blue thread, both pulled into short zigzag pattern; final yellow and light blue thread; light blue on base. Harden, 1981, no. 183.

2. Camiros. British Museum, no. 1861.4-25.32. H. 8.5, M.D. body 5.0, D. base 1.3. Glass, shape and decoration as II.C.vii.1 above, except zigzag pattern is slightly wavy. Harden, 1981, no. 184.

Type II. C. vii contd.

3. Camiros, Fikellura grave 171. British Museum, no. 1864.10-7.69. Dated 475-450 B.C. H. 8.0, D. rim 2.4, D. 1864.10-7.70. Dated 440-400 B.C. H. 7.6, D. rim 2.2, D. mouth 0.7, M.D. body 5.2, D. base 1.2. Glass, shape and decoration as II.C.vii.1 above, except handles one of which is light blue, the other yellow. Harden, 1981, no. 187. Not illustrated.

4. Camiros, British Museum, no. 1864.10-7.75. H. 8.7, D. rim 2.6, M.D. body 5.0, D. base 1.4. Glass, shape and decoration as II.C.vii.1 above. Harden, 1981, no. 186. Not illustrated.

5. Camiros, Fikellura grave 128. British Museum, no. 1864.10-7.70. Dated to 440-400 B.C. H. 7.6, D. rim 2.2, D. mouth 0.7, M.D. body 5.2, D. base 1.2. Glass, shape and decoration as II.C.vii.1 above, except handles, one of which is light blue, the other yellow. Harden, 1981, no. 187. Not illustrated.

6. Camiros, Fikellura grave 254. British Museum, no. 1864.10-7.67. Dated 475-450 B.C. H. 8.0, D. rim 2.6, D. mouth 0.9, M.D. body 5.3, D. base 1.5. Glass, shape and decoration as II.C.vii.1 above, except yellow on rim and base. Harden, 1981, no. 191. Not illustrated.

7. Camiros, Fikellura grave 235. British Museum, no. 1864.10-7.72. Dated 480-460 B.C. H. 7.5, D. rim 2.9, D. mouth 1.0, M.D. body 5.0, D. base 1.2. Glass, shape and decoration as II.C.vii.6 above. Harden, 1981, no. 196.

8. Camiros, Fikellura grave 37. British Museum, no. 1864.10-7.1197. Dated 450-425 B.C. H. 8.6, D. rim 2.9, D. mouth 1.0, M.D. body 5.6, D. base 1.5. Glass, shape and decoration as II.C.vii.6 above. Harden, 1981, no. 198.

9. Camiros, Fikellura grave 254. British Museum, no. 1864.10-7.1198. Dated 475-450 B.C. H. 8.2, M.D. body 5.3, D. base 0.9. Glass, shape and decoration as II.C.vii.6 above. Harden, 1981, no. 199. Not illustrated.

10. Camiros, Fikellura grave 277. British Museum, no. 1864.10-7.71. Dated 475-450 B.C. H. 8.0, D. rim 2.8, D. mouth 0.9, M.D. body 4.7, D. base 1.1. Glass, shape and decoration as II.C.vii.6 above. Harden, 1981, no. 201. Not illustrated.

Type II. C. vii contd.

11. Camiros, Fikellura grave 252. British Museum, no. 1864.10-7.1199. Dated 480-460 B.C. H. 8.0, D. rim 2.7, D. mouth 1.0, M.D. body 5.6, D. base 1.7. Glass, shape and decoration as II.C.vii.1 above, except one handle light blue and zigzag pattern is wavy. Harden, 1981, no. 204.

12. Camiros, Fikellura grave 226. British Museum, no. 1864.10-7.68. H. 7.1, D. rim 2.3, D. mouth 0.9, M.D. body 4.4, D. base 1.2. Glass, shape and decoration as II.C.vii.1 above, except only yellow final thread and no decoration on base. Harden, 1981, no. 206.

13. Camiros, Macri Langoni tomb 25. Rhodes Museum, no. 12420. Dated 475-450 B.C.⁹⁴ Pl. 14. H. 8.2, D. rim 3.2, D. mouth 1.1, M.D. body 5.3, D. base 1.4. Glass, shape and decoration as II.C.vii.2 above, except no decoration on base. Jacopi, 1931, p. 7, no. 5, fig. 85.

14. Camiros, Macri Langoni tomb 25. Rhodes Museum, no. 12421. Dated 475-450 B.C. Pl. 14. H. 8.6, D. rim 2.3, D. mouth 0.8, M.D. body 5.2, D. base 1.5. Dark blue glass with white decoration: white on rim; white thread beginning on shoulder, spiralling down to mid-body, pulled into short zigzag pattern; final white thread below; white on base and handles. Jacopi, 1931, p. 7, no. 5, fig. 85.

15. Camiros, Macri Langoni tomb 25. Rhodes Museum, no. 12422. Dated 475-450 B.C. Glass, shape and decoration as II.C.vii.1 above. Jacopi, 1931, p. 7, no. 5, fig. 85.

16. Ialysos, tomb 195. Rhodes Museum, no. 10789. Dated 475-450 B.C.⁹⁵ H. 8.4, D. rim 3.1, D. mouth 1.1, M.D. body 5.3, D. base 1.2. Pale blue glass with light blue and yellow decoration: yellow and rim; thick yellow thread beginning on neck, spiralling down to mid-body, joined by light blue thread, both pulled into short zagzag pattern; final yellow thread below zigzag; light blue on base. Jacopi, 1928, 208, no. 5, fig. 204.

17. Ialysos, tomb 197. Rhodes Museum, no. 10811. Dated 500-450 B.C.⁹⁶ P.H. 8.8, D. rim 2.9, D. mouth 1.0. Glass, shape and decoration as II.C.vii.1 above. Missing parts of neck, body and base. Jacopi, 1928, 211, no. 6, fig. 210.

18. Ialysos, tomb 224. Rhodes Museum. Dated 480-460 B.C. Glass, shape and decoration as II.C.vii.1 above. Jacopi, 1928, 236, no. 5, fig. 234.

Type II. C. vii conté.

19. Pitane, sarcophagus burial, no. Çnd. 1964 /L Ek/ XIV C 3. Izmir Museum, no. 5024. Dated 475-450 B.C. H. 7.7, D. rim 2.8, M.D. body 5.7, D. base 1.2. Glass, shape and decoration as II.C.vii.1 above. Freyer-Schauenburg, 1973, 147, 155, 164, no. 11, pl. XVI.
20. Melos. British Museum. H. 8.0, M.D. body 5.2, D. base 1.2. Glass, shape and decoration as II.C.vii.1 above. Harden, 1981, no. 189. Not illustrated.
21. Melos. British Museum. H. 7.0, M.D. body 4.6, D. base 1.0. Dark green glass with light blue and yellow decoration. Shape and decoration as II.C.vii.1 above. Harden, 1981, no. 211.
22. Delos. Delos Museum. H. 8.0. Glass, shape and decoration as II.C.vii.1 above. Dugas, 1935, pl. LI:6.
23. Delos. Delos Museum. H. 7.0. Glass, shape and decoration as II.C.vii.1 above. Dugas, 1935, pl. LI:7.
24. Delos. Delos Museum. H. 7.5. Glass, shape and decoration as II.C.vii.5 above. Dugas, 1935, pl. LI:8.
25. Cave of Pan, Phyle. National Museum, Athens, no. 12828. Pl. 15. H. 7.9, D. rim 2.7, D. mouth 0.9, M.D. body 5.1, D. base 1.4. Glass, shape and decoration as II.C.vii.1 above.
26. Syntagma, Athens? (labeled "Anaktoron", probably not the site of that name). National Museum, Athens, no. 2696. Pl. 15. H. 7.0, D. rim 2.3, D. mouth 0.9, M.D. body 4.1, D. base 1.4. Glass, shape and decoration as II.C.vii.1 above.
27. Brauron. Brauron Museum, no. 1311. Glass and shape as II.C.vii.6 above, decoration as II.C.vii.2 above. Ergon, 1961, 33, pl. 34, right.
28. Sanctuary of Demeter and Kore, Acrocorinth, cistern 64-1.⁹⁷ Pl. 15. Corinth Museum, no. 13280. Three joining fragments from body. P.H. 4.1, PD. 4.0. Glass and decoration as II.C.vii.1 above. Traces of reddish sand on interior.
29. Kazarmas, Argolid. Nauplion Museum. Dated 480-470 B.C.⁹⁸ Glass, shape and decoration as II.C.vii.1 above. Kritzas, 1974, 248, pl. 170:d.

Type II. C. vii contd.

30. Kabirion, Thebes. National Museum, Athens, no. 10495. H. 6.0. Glass, shape (?) and decoration as II.C.vii.6 above. Haevernick, 1979, 111-2, no. 124, pl. 34:25.

31. Delphi. Delphi Museum, no. 8752. H. 7.3, D. rim 2.6, D. mouth 1.1, M.D. body 5.0, D. base 1.0. Glass, shape and decoration as II.C.vii.2 above, but with yellow decoration on base.

32. Delphi. Delphi Museum, no. 8753. H. 7.3, D. rim 2.7, D. mouth 0.7, M.D. body 5.0, D. base 1.0. Glass, shape and decoration as II.C.vii.6 above.

33. Delphi. Delphi Museum, no. 8754. Pl. 15 H. 7.6, D. rim 3.1, D. mouth 0.9, M.D. body 5.4, D. base 1.2. Glass, shape and decoration as II.C.vii.13 above.

34. Eretria. British Museum, no. 1893.10-9.7.⁹⁹ H. 8.2, M.D. body 5.4, D. base 0.9. Glass, shape and decoration as II.C.vii.1 above. Harden, 1981, no. 182.

35. Koila, Chersonese. Picard, 1912, 296, pl. 4,10.

36. Sinda, grave 40. Thessaloniki Museum, no. 7778. Dated 460-450 B.C.¹⁰⁰ Pls. 16, 37. Glass, shape and decoration as II.C.vii.1 above.

37. Sinda, grave 40. Thessaloniki Museum, no. 7779. Dated 460-450 B.C. Pls. 16, 37. Glass, shape and decoration as II.C.vii.1 above.

38. "Greece". National Museum, Copenhagen, no. VIII 941. H. 7.1. Fossing, 1940, 72, fig. 47.

39. Apollonia, Bulgaria, grave 296. Dated c. 400 B.C.¹⁰¹ H. 6.8. Brown glass with yellow and light blue decoration. Shape and decoration as II.C.vii.12 above. Mladenova, 1963, 310, no. 993, pl. 162, 163.

40. Apollonia, Bulgaria, grave 448. Dated c. 400 B.C.¹⁰² H. 7.0. Glass, shape and decoration as II.C.vii.12 above. Mladenova, 1963, no. 992, 310, pl. 163.

41. Apollonia, Bulgaria, grave 645.¹⁰³ H. 6.3. Glass, shape and decoration as II.C.vii.12 above. Mladenova, 1963, no. 990, 310, pl. 162, 163.

42. S. Russia. Fabritsius, 1951, pl. XV:4.

Type II. C. vii contd.

43. Chigirin (Kiev), kurgan 397. Glass, shape and decoration as II.C.vii. 1 above. Petrenko, 1967, 78, pl. 12:7; see also, Fossing, 1940, 50, 72.

44. Koudjensk (Kuban). H. 8.3, D. rim, 2.9, M.D. body 5.0. Syssofeff, 1898, 152, fig. 505.

45. Kertch. Ex Coll. Józefa Choynowskiego. Museum Narodowe, Warsaw, no. 32211. H. 7.9, M.D. body 5.2. Filarska, 1952, no. 13, pl. III:1.

46. Olbia, ex. Coll. Mavrogordato. Staatliche Museen, Berlin, no. 10422. H. 7.0, M.D. body 4.1. Rohde, 1980, 150, no. 5.

47. Vani, Georgia, burial 6. N. 3 -61/662, 47. Dated to fifth century B.C.¹⁰⁴ H. 8.7. Glass, shape and decoration as II.C.vii.2 above. Lordkipanidze, 1972, no. 62.

48. Vani, Georgia, burial 6. N. 3 -61/662, 48. Dated to fifth century B.C. Glass, shape and decoration as II.C.vii.2 above. Lordkipanidze, 1972, no. 63.

49. Civitevecchia. Museo Comunale di Civitevecchia, no. 5016. H. 8.0. Glass, shape and decoration as II.C.vii.2 above. Bastianelli, 1942, 250, pl. XVIII:3.

50. Orvieto, Zone A of necropoli di Crocifisso del Tufo. Dated 500-450 B.C. H. 6.8. Glass, shape and decoration as II.C.vii.1 above. Bizzarri, 1965, 22, 103, fig. 12:A.

51. Montefortino, Arcevia, tomb IX. Dated 425-400 B.C. Brizio, 1899, col. 672, pl. XII:10.

52. Sanctuary of Athena, Motta. Fragment of body. P.H. 3.0. Stoop, 1976, 154, pl. LXXI:7b.

53. Camarina, grave 94. Dated end of sixth-beginning of fifth centuries B.C.¹⁰⁵ H. 7.6. Glass, shape and decoration as II.C.vii.1 above. Orsi, 1904a, col. 788, fig. 11.

54. Gela. British Museum. H. 6.5, M.D. body 5.2, D. base 1.1. Glass, shape and decoration as II.C.vii.1 above, but with one yellow handle. Harden, 1981, no. 188. Not illustrated.

55-61. Nora, Sardinia. From tombs¹⁰⁶. Patroni, pl. XVIII, second row, third row, right, fourth row, right.

Type II. C. vii contd.

63. Tharros, Sardinia. British Museum. H. 7.8, M.D. body 5.0, D. base 0.8. Glass, shape and decoration as II.C.vii.1 above. Harden, 1981, no. 205.
64. Alèria, Corsica, tomb 87. H. 6.9, D. rim 2.9 D. body. 4.1, D. base 1.5. Jehasse, 1973, 442, no. 1648, pl. 164.
65. Alèria, Corsica, tomb 85. Dated 460-400 B.C. H. 7.3, D. rim 2.7, D. body. 4.5. Jehasse, 1973, 408, no. 1576, pl. 164.
66. Ibiza. Vives y Escudero, 1917, pl. XXXII, bottom right.
67. Ampurias, Bonjoan 23. Dated 500-475 B.C. H. 7.5. Glass, shape and decoration as II.C.vii.31 above, but with light blue handles. Almagro, 1953, 164-66, no. 7, fig. 134, pl. XIV:1.
68. Ampurias, Bonjoan 43. Dated 480-470 B.C. H. 8.0. Glass, shape and decoration as II.C.vii.6 above, but with light blue handles. Almagro, 1953, 140, 178-183, no. 5, fig. 151, pl. XIV:8.
69. Ampurias, Bonjoan 55. Dated 480-470 B.C. H. 7.2. Glass, shape and decoration as II.C.vii.1 above. Almagro, 1953, 142-143, 193-196, no. 3, fig. 165, pl. XIV:5.
70. Ampurias, Granada, 12. Dated c. 475 B.C. H. 7.0. Glass, shape and decoration as II.C.vii.6 above, except with one light blue handle. Almagro, 1953, 222, 242-243, no. 3, fig. 207, pl. XIV:11.
71. Ampurias, Marti 77. Dated 475-450 B.C. H. 7.0, D. rim 2.2. Glass, shape and decoration as II.C.vii.1 above. Almagro, 1953, 81-84, no.5, fig. 54, pl. V:12.
72. Ampurias, Marti 77. Dated 475-450 B.C. H. 6.5, D. rim 2.2. Glass, shape and decoration as II.C.vii.1 above. Almagro, 1953, 81-84, no.4, fig. 54, pl. V:9.
73. Valencia, Spain, cremation burial. D. rim 2.1. Fragments of body, deformed in cremation. A. Lazaro Mengod, et al., Materiales de la Necropolis Iberica de Orleyl (Vall d'Uxò, Castellón), Servicio de Investigacion Prehistorica, diputacion provincial de Valencia, serie de trabajos varios núm., 70, Valencia, 1981, 29, fig. 12:15.
74. Dermech, Carthage. Bardo Museum. H. 8.0, M.D. body 4.5. Leclant, 1969, pl. XLI.

Type II. C. vii contd.

75. Cyrene, Demeter Sanctuary, no. 73-935.¹⁰⁷ From D16/17, tr. 2, st. 3. Pl. 16. P.H. 2.6, D. rim 2.4. Fragment of upper part of vessel. Glass and shape as II.C.vii.1 above. Light blue on outside of rim; yellow thread beginning on shoulder.
76. Cyrene, Demeter Sanctuary, no. 74-316. D16/17, tr. 2, st. 4. Dated to pre-480 B.C. Pl. 16. P.H. 2.9. Fragment of neck, shoulder and handle. Glass, shape and decoration as II.C.vii.1 above.
77. Atlit, grave L 16. Rockefeller Museum, E. Jerusalem, no. 687. Dated 470-450 B.C.¹⁰⁸. H. 6.3. Glass, shape and decoration as II.C.vii.2 above. Johns, QDAP, 11 (1932), 62, pl. 18, no. 416.
78. Beth Shean. Israel Museum. Dated to Persian period?¹⁰⁹. N. Tsori, The Bulletin of the Dept. of Antiquities of the State of Israel (in Hebrew, Alon Maklegath ha-atiqot el medinat Jisra'el) 5/6(1957), 17, pl. 1:C.
79. Duweir. Rockefeller Museum, Jerusalem, no. 688. Glass and decoration as II.C.vii.2 above, but with yellow handles.
80. Meqabelein, Jordan. Arman Museum. Dated post- 539 B.C.¹¹⁰ H. 6.4, M.D. body 4.0. Glass, shape and decoration as II.C.vii.6 above. Harding, 1950, 44-48, pl. XIII:3.
81. Al Mina. Ashmolean Museum, Oxford, no. 1937.893. Dated 520-430 B.C.¹¹¹ H. 7.4, M.D. body 5.2. Woolley, 1938, 157, pl. XIII.
82. Lebanon? Archaeological Museum of the American University of Beirut. Baramki, 1967, pl. V, top row, center.
83. Cyprus? Cyprus Museum. H. 6.5. Pl. 16. Glass, shape and decoration as II.C.vii.1 above, except with yellow on rim. Dikaios, 1962, 147, pl. XXXIII:3.
84. Cyprus? Metropolitan Museum of Art. H. 6.3. Myres, 1914, no. 5052.
85. Amathus, tomb 17. British Museum. H. 7.5, M.D. body 5.2, D. base 1.2. Glass, shape and decoration as II.C.vii.1 above. Harden, 1981, no. 197.
86. Gordion, City Mound, Terrace Building 7-C, Level 4, Pit B, no. G312.¹¹² Pl. 16. P.H. 2.3, D. rim 2.7. Dark blue glass with white and yellow decoration. Fragment of rim, neck and handle.

Type II. C. viii. Amphoriskos of dark glass, with almost right-angled junction between neck and shoulder, decorated with irregular zigzag pattern.

1. Camiros, Fikellura grave 41. British Museum 1864.10-7.1201. Dated 440-420 B.C. H. 7.3, D. rim 2.6, Dmouth 0.9, M.D. body 4.0, D. base 1.2. Dark brown glass with yellow and light blue decoration. Short rim and neck; ovoid body. Decoration: yellow on outside of rim; yellow thread beginning on shoulder, spiralling down counter-clockwise, joined at mid-body, both pulled into sloppy zigzag pattern; final yellow thread below. Dark brown handles from shoulder to middle of neck. Harden, 1981, no. 216.

2. Melos. British Museum, no. 1836.6-10.7. H. 6.5, M.D. body 4.3, D. base 0.9. Dark green glass with yellow and light blue decoration. Shape as II.C.viii.1 above. Decoration: mingled yellow and light blue on rim; yellow and light blue thread beginning on shoulder, spiralling down to mid-body, pulled into sloppy short zigzag pattern; final light blue on lower body. Harden, 1981, no. 213.

3. Melos. British Museum, no. 1836.6-10.6. H. 6.6, M.D. body 4.6. Glass, shape and decoration as II.C.viii.1 above but with one purple trail on zigzag pattern. Harden, 1981, no. 215.

4. Apollonia, Bulgaria, grave 440.113 H. 6.9. Glass, shape and decoration as II.C.viii.1 above. Mladenova, 1963, no. 991, 310, pl. 163.

Type II. C. ix. Amphoriskos of dark glass, with almost right-angled junction between neck and shoulder, decorated with plain or spiralling trails.

1. Camiros, Fikellura grave 122. British Museum, no. 1864.10-7.1203. Dated 440-420 B.C. H. 6.2, D. rim 2.2, Dmouth 1.2, MDbody 3.9, D. base 1.4. Translucent blue-green glass with yellow decoration. Shape as II.C.viii.1 above. Decoration: yellow on rim; yellow thread beginning on body below handles, spiralling down in three revolutions. Harden, 1981, no. 217.

2. Eretria. National Museum, Athens, no. 2903. Pl. 16. H. 7.1, Dim. 2.7, D. mouth 0.9, M.D. body 5.1, D. base 1.1. Translucent yellow-green glass with yellow thread on rim. Shape as II.C.viii.1 above, but with handles pushed up against neck.

Type II. C. ix contd.

3. Utica. Bardo Museum.¹¹⁴ H. 7.0, M.D. body 4.2. Dark blue glass with white decoration. Shape as II.C.viii.1 above. Decoration: white thread beginning below handles, spiralling down to mid-body in six revolutions. Seefried, La verrerie punique, 42, no. 6.

4. Utica. Bardo Museum. H. 6.5, M.D. body 4.0. Dark blue glass with yellow and white decoration. Shape as II.C.viii.1 above. Decoration: one yellow and one white thread at mid-body. Seefried, La verrerie punique, 43, no. 7.

5. Cyprus. Metropolitan Museum of Art, no. 74.51.326. Translucent blue-green glass with yellow handles and foot. Myres, 1914, 505, no. 5052.

6. Unknown provenance. Staatliche Museum, Berlin, no. 30219, 121. H. 6.9, M.D. body 4.9. Dark blue glass with yellow and light blue decoration. Shape as II.C.viii.1 above. Decoration: yellow on rim; yellow and light blue thread beginning on shoulder, spiralling down counter-clockwise to base. Platz-Horster, 1976, 13, no. 10.

Type II. D. i. Aryballos of white glass, with obtuse-angled junction between neck and shoulder, decorated with zigzag pattern.

1. Private possession. H. 6.0. Short inward sloping rim; wide neck; sloping shoulder; rounded body and pointed bottom. Decoration: reddish-purple thread on outside of rim; reddish-purple zigzag pattern at mid-body; wide stripe on lower body. Fluted. Neuberger, 1962, pl. V:c.

Type II. D. ii. Aryballos of dark glass, with obtuse-angled junction between neck and shoulder, decorated with wavy zigzag pattern.

1. Camiros, Fikellura grave 135. British Museum no. 1864.10-7.1210. Dated 480-460 B.C. H. 5.7, D. rim 2.3, D. mouth 1.0, M.D. body 4.8. Harden, 1981, no. 221. Not illustrated.

2. Camiros, Fikellura grave 135. British Museum, no. 1864.10-7.1211. Dated 480-460 B.C. H. 5.5, D. rim 2.5, D. mouth 1.3, M.D. body 5.0. Dark blue glass with light blue and yellow decoration. Short inward sloping rim; short wide neck; sloping shoulders; rounded body with slight expansion at bottom. Decoration: yellow thread on outside of rim; yellow and light blue threads on mid-body, pulled into wavy zigzag pattern; separate yellow thread below. Dark blue ring handles with tails. Fluted. Harden, 1981, no. 222.

3. Camiros, Casviri cemetery, grave 2. British Museum, no. 1864.10-7.1212. Dated mid-fifth century B.C. H. 5.5, D. rim 2.3, D. mouth 1.0, M.D. body 4.8. Glass, shape and decoration as II.D.ii.2 above. Harden, 1981, no. 223.

4. "Camiros"; ex. coll. Slade. British Museum, no. 1868.5-1.13. H. 6.1, M.D. body 5.0. Glass as II.D.ii.2 above. Inward sloping rim; tall neck; sloping shoulders; spherical body. Decoration: yellow on outside rim; yellow thread beginning on neck, spiralling down counter-clockwise to mid-body where joined by light blue thread, both pulled into wavy zigzag pattern, the yellow thread continuing to horizontal stripe at lower body. Dark blue loop handles with tails, decorated with yellow thread on outside. Fluted. Harden, 1981, n. 224.

Type II. D. ii contd.

5. Camiros, Macri Langoni tomb 63. Rhodes Museum, no. 13264 bis. Dated 475-450 B.C.¹¹⁵ Pl. 17. H. 5.5, D. rim 2.1, D. mouth 1.0, M.D. body 5.1. Glass, shape and decoration as II.D.ii.2 above. Patch added to bottom. Pinholes of ring handles on opposite sides. Silvery weathering. Yellow glass pitted, light blue glass decayed to white. Jacopi, 1931, 162, fig. 159.

6. Ialysos, Marmaro cemetery, tomb 3. Rhodes Museum, no. 15380. Dated 540-525 B.C.¹¹⁶ Pl. 17. H. 6.6, D. rim 2.9, D. mouth 0.9, M.D. body 5.4. Dark blue glass with white, yellow and light blue decoration. Inward sloping rim with tool marks on upper surface; tall neck; sloping shoulders; spherical body. Decoration: white on outside of rim; white thread beginning at mid-body, spiralling down clockwise, joined by yellow and light blue threads, all pulled into wavy zigzag pattern. Dark blue loop handles with tails. Fluted. Slight milky weathering; one side badly weathered. Laurenzi, 1936, 96, no.7, fig. 81.

7. Ialysos, Marmaro cemetery, tomb 3. Rhodes Museum, no. 15381. Glass ? Shape and decoration as II.D.ii.6 above. Laurenzi, 1936, 96, no. 8, fig. 81.

8. Kertch. Herimtag Museum. Glass, shape and decoration as II.D.ii.2 above. Comptes-rendus de la Commission archeologique imperiales, 1898, 18, fig. 19.

9. Nora, Sardinia. From a tomb. Patroni, 1904, col. 187, pl. XVII: third row, left.

10. Tell el-Mazar, Jordan. Cemetery A, grave 1 (Area A, E/6 topsoil, eastern baulk, found 3/III/77).¹¹⁷ Pl. x. Est. H. 6.0, D. rim 2.2, D. mouth 1.0, Th. 0.3 to 0.2. Glass and decoration as II.D.ii above. Shape? Fluted. Yassine, 1984, 82, fig. 52:60.

Type II. D. iii. Aryballos of dark glass, with obtuse-angled junction between neck and shoulder, decorated with spiralling thread pattern.

1. Melos. British Museum, no. 1842.7-28.581. H. 6.4, M.D body 4.6. Dark blue glass with light blue and yellow decoration. Tall neck; sloping shoulders; nearly spherical body. Decoration: yellow on outside of rim; yellow and light blue trails beginning on shoulder and spiralling down to base. Dark blue ring handles with large tails. Harden, 1981, no. 225.

Type II. D. iv. Aryballoi of dark glass, with almost right-angled junction between neck and shoulders, decorated with zigzag pattern.

1. Camiros, Fikellura grave 23. British Museum 1864.10-77.1208. Dated 485-465 B.C. H. 6.8, D. mouth 1.1, M.D. body 5.3. Dark blue glass with light blue and yellow decoration. Harden, 1981, no. 230. Not illustrated.

2. Camiros, Fikellura grave 23. British Museum, no. 1864.10-77.1205. Dated 450-400 B.C. H. 6.7, D. rim 2.7, D. mouth 0.8, M.D. body 5.4. Glass as II.D.iv.1 above. Cup-shaped rim-disc; nearly cylindrical neck; broad shoulders; regular oval body. Decoration: yellow on outside of rim; yellow thread beginning on shoulder, spiralling down counter-clockwise to mid-body, where joined by light blue thread, both pulled into slightly wavy zigzag pattern; final yellow and light blue trails. One opaque yellow and one opaque light blue ring handle with short tail. Slightly fluted. Harden, 1981, no. 233.

3. Camiros, Fikellura grave 39 bis. British Museum, no. 1953.10-22.1. Dated 485-460 B.C. P.H. 5.2, D. rim 2.9, D. mouth 0.8, M.D. body 5.4. Glass as II.D.iv.1 above. Opaque yellow ring handles with tails. Harden, 1981, no. 234. Not illustrated.

4. Camiros, Fikellura grave 277.118 British Museum, no. 1864.10-7.1209. H. 7.4, D. rim 2.7, D. mouth 1.0, M.D. body 5.2. Glass as II.D.iv.1 above. Shape as II.D.iv.2 above, but with more ovoid body. Decoration as II.D.iv.2 above, but with yellow final thread. Dark blue ring handles with tails. Harden, 1981, no. 236.

5. Camiros, Fikellura grave 226.119 British Museum, no. 1864.10-7.1207. H. 6.0, D. rim 2.2, D. mouth 1.0, M.D. body 4.3. Glass, shape and decoration as II.D.iv.4 above, but with regular zigzag pattern. Harden, 1981, no. 241

6. Stadiou and Christou Lada streets, Athens, grave 2. Third Ephoreia storerooms, Library of Hadrian, inv. no. D1586. Pl. 17. Dated 460-440 B.C.¹²⁰ H. 6.6, D. rim 2.7, D. mouth 0.8, M.D. body 5.6. Glass, shape and decoration as II.D.iv.2 above, but light blue thread with yellow thread on outside of rim. Light blue ring handles streaked with yellow. Alexandri, 1967, 115, pl. 98:d

7. Syntagma ? ("Anaktoron"), Athens. National Museum, Athens, no. NM 2698. H. 5.5, D. rim 2.1, D. mouth 1.0. Glass, shape and decoration as II.D.iv.4 above.

Type II.D. iv continued.

8. Tanagra. National Museum, Athens, no. NM 2875. Pl. 17. H. 6.5, D. rim 3.2, D. mouth 0.9. M.D. body 5.6. Glass, shape and decoration as II.D.iv.2 above, but with light blue on outside of rim. Opaque light blue ring handles with tails.
9. Eretria. From a grave.¹²¹ British Museum, no. 1893.10-9.6. H. 7.0, M.D. body 5.7. Glass, shape and decoration as II.D.iv.4 above. Dark blue ring handles with tails. Harden, 1981, no. 226.
10. Antissa, Lesbos. Dated to early fifth century B.C. H. 6.4, D. rim 2.8, M.D. body 4.9. Glass, shape and decoration as II.D.iv.5 above. Lamb, 1932, fig. 13, right.
11. Melos. British Museum, no. 1842.7-28.583. H. 6.5, M.D. body 5.0. Glass as II.D.iv.3 above. Harden, 1981, no. 232.
12. Sinda, grave 40. Thessaloniki Museum, no. 7773. Dated 460-440 B.C.¹²² Pls. 18, 37. Glass, shape and decoration as II.D.iv.5 above.
13. Sinda, grave 40. Thessaloniki Museum, no. 7774. Dated 460-440 B.C. Pls. 18, 37. Glass, shape and decoration as II.D.iv.5 above.
14. Sinda, grave 40. Thessaloniki Museum, no. 7775. Dated 460-440 B.C. Pls. 18, 37. Glass, shape and decoration as II.D.iv.5 above.
15. Sinda, grave 40. Thessaloniki Museum, no. 7776. Dated 460-440 B.C. Pls. 18, 37. Glass, shape and decoration as II.D.iv.5 above.
16. Sinda, grave 40. Thessaloniki Museum, no. 7777. Dated 460-440 B.C. Pls. 18, 37. Glass, shape and decoration as II.D.iv.5 above.
17. Mikro Karaburun, Thessaloniki. British Museum, no. 1919.11-19.76. From a fourth century B.C. grave.¹²³ H. 6.3, M.D. body 5.3. Glass, shape and decoration as II.D.iv.5 above. Harden, 1981, no. 229.
18. Samothrace. From cremation deposit of the fifth century B.C. H. 5.5. Glass, shape and decoration as II.D.iv.5 above. Dusenbery, 1967, 36, no. 1, fig. 2.
19. Samothrace. From cremation deposit of the fifth century B.C. H. 5.8. Glass, shape and decoration as II.D.iv.5 above. Dusenbery, 1967, 37, no. 2, fig. 3.

Type II. D. iv contd.

20. Trebenischte, grave 1. Dated to late sixth century B.C. H. 6.0, M.D. body 5.2. Glass, shape and decoration as II.D.iv.2 above, but with wavy zigzag pattern. Dark blue ring handles with tails. Filow, 1927, 94, fig. 112:3.
21. Trebenischte, grave IX. Dated to late sixth century B.C. H. 7.0. Glass shape and decoration as II.D.iv.20 above.
22. Certossa, grave 355. Dated c. 475 B.C.¹²⁴ H. 5.2. Shape and decoration as II.D.iv.5 above. Zanonni, 1876, 378, pl. 119:11.
23. Bologna, tomb 23.¹²⁵ Glass, shape and decoration as II.D.iv.5 above. Riccioni, 1953, 238, 280, fig. 25.
24. Orvieto, Zone A of necropolis di Crocifisso del Tufo. Dated 500-450 B.C. H. 5.2. Glass, shape and decoration as II.D.iv.5 above. Light blue ring handles with tails. Bizarri, 1965, 22, 103, fig. 128.
25. Capena. National Museum Copenhagen, no. 8995. H. 6.6. Glass, shape and decoration as II.D.iv.2 above. Fossing, 1940, fig. 48.
26. Cumae. H. 6.5, D. rim 3.2, M.D. body 5.8. Glass, shape and decoration as II.D.iv.20 above. Gábrici, 1913, col. 567, pl. 90:9.
27. Nora, Sardinina. Shape and decoration as II.D.iv.5 above. Patroni, 1904, pl. XVII: third row, second from left.
28. Tharros, Sardinina, tomb 6. British Museum, no. WA 127227. H. 5.6, M.D. body 4.1. Opaque dull green with opaque light blue and yellow decoration. Decoration as II.D.iv.5. Harden, 1981, no. 240. Not illustrated.
29. Aléria, Corsica, tomb 85. Dated 460-400 B.C. H. 6.2, D. rim 2.8, M.D. body 4.7. Glass, shape and decoration as II.D.iv.5 above. Jehasse, 1973, no. 1575, pl. 164.
30. Ibiza. H. 6.2 Shape and decoration as II.D.iv.2 above. Vives y Escudero, 1917, pl. 32:2.
31. Ampurias, Bonjoan 57. Dated c. 525 B.C.¹²⁶ H. 6.0, D. rim 2.5, M.D. body 5.3. Glass, shape and decoration as II.D.iv.4 above, but with wavy zigzag pattern. Dark blue ring handles with tails. Almargo, 1953, 197-198, no. 1, fig. 168, pl. XIV:9.

Type II.D.iv contd.

32. Ampurias, Bonjoan 43. Dated 480-470 B.C. H. 6.5, D. rim 3.0, M.D. body 5.5. Glass, shape and decoration as II.D.iv.6 above. Almargo, 1953, 140, 178-183, no. 4, fig. 151, Pl. XIV:6.
33. Ampurias, Bonjoan 23. Dated 500-475 B.C. H. 6.0. Glass, shape and decoration as II.D.iv.6 above. Light blue ring handles with tails. Almargo, 1953, 222, 242-243, no. 2, fig. 207, Pl. XIV:10.
34. Ampurias, Granada 12. Dated 480-470 B.C. H. 6.3. Glass, shape and decoration as II.D.iv.2 above. Yellow ring handles with tails. Almargo, 1953, 222, 242-243, no. 2, fig. 207, Pl. XIV:10.
35. Tocra, Libya. British Excavations, no. F 166. Level 5/6. Fragment of shoulder, blue glass with yellow horizontal thread and part of yellow wavy zigzag. Boardman and Hayes, 1973, 85, fig. 40.
36. Demeter Sanctuary, Cyrene, no. 77-543. F13/G13, tr. 2, st. 2.¹²⁷ Pl. 18. D. rim. 2.6. Fragment of rim, neck and handle. Dark blue glass with light blue on outside of rim. Dark blue ring handle.
37. Demeter Sanctuary, Cyrene, no. 74-121. D16/17, tr. 2, st. 3. Pl. 18. Th. 0.3. Fragment of shoulder and upper body. Glass and decoration as II.D.iv.20 above. Yellow ring handles.
38. Demeter Sanctuary, Cyrene, no. 74-74. D10/11, tr. C, st. 5. Pl. 18. Fragment from shoulder and neck. Glass and decoration as II.D.iv.4 above. One light blue and one yellow ring handle.
39. Ashdod, Fortress. Dated c. 450 B.C.¹²⁸ Fragment of rim and neck. Porath, 1974, 48, pl. XIII:9.
40. En-Gedi.¹²⁹ YMCA, Jerusalem. H. 7, M.D. body 5.5, Th. 0.3. Glass, shape and decoration as II.D.iv.5 above. Barag, 1966, 58059, pl. XXXVI:5.

Type II. D. v. Aryballos of dark glass, with almost right-angled junction between neck and shoulder, and with small body, decorated with zigzag pattern.

1. Apollonia, Bulgaria, grave 392. Dated 450-425 B.C. H. 6.1. Dark blue glass with yellow and light blue decoration. Well-formed, rounded body. Decoration: yellow on outside of rim; thick yellow thread beginning on shoulder, spiralling down counter-clockwise to upper body, where joined by light blue thread, both pulled into regular zigzag pattern; final double yellow stripe. Dark blue ring handles with tails. Mladenova, 1963, 310, no. 995, pls. 162, 163.

2. Apollonia, Bulgaria, grave 392. Dated 450-425 B.C. H. 6.0. Glass and decoration as II.D.v.1 above. Body more irregular. Mladenova, 1963, 310, no. 996, pl. 163.

3. Italy? Berlin Museum, no. 37. Ex. coll. v. Koller. H. 6.5. Very crude vessel. Tall flaring neck; slightly sloping shoulders; irregular body. Fossing, 1940, 124, fig. 99.

4. Alèria, Corisica, tomb 98. Dated 460-425 B.C. H. 5.3, D. rim 2.4, M.D. body 4.2. Glass, shape and decoration as II.D.v.1 above. Jehasse, 1973, 514, no. 2137, pl. 164.

5. Ampurias, Marti 77. Dated 475-450 B.C. H. 5.0, D. rim 2.2. Glass as II.D.v.1 above. Very tall neck; small body; flattened bottom. Decoration as II.D.v.1 above. Almargo, 1953, 81-84, no. 6, fig. 54, pl. V:10.

6. Ampurias, Marti 77. Dated 475-450 B.C. H. 5.0, D. mouth 2.2. Glass, shape and decoration as II.D.v.5 above. Almargo, 1953, 81-84, no. 7, fig. 54, pl. V:11.

7. Ampurias, Marti 77. Dated 475-450 B.C. H. 5.5, D. mouth 2.5. Glass, shape and decoration as II.D.v.5 above. Almargo, 1953, 81-85, no. 8, fig. 54.

Type II. D. vi. Aryballos of opaque red glass, with almost right-angled junction between neck and shoulder, decorated with zigzag pattern.

1. Cyrene, Demeter Sanctuary, no. 71-786. From E12, tr. 1, st. 3.131 Pl. 18. Th. 0.3. Opaque red-brown glass with trace of opaque white decoration. Fragment from rounded bottom.

Type II. D. vii. Footed aryballos with almost right-angled junction between neck and shoulder, decorated with zigzag pattern.

1. Olynthus, Riverside Cemetery, grave 31. No. 1124, inv. 232. Dated late fifth century to early fourth century B.C. H. 6.5, D. rim 3.1. Dark blue glass with light blue and yellow decoration. Flaring rim; thin neck; broad shoulders; ovoid body and flaring pad-foot. Decoration: yellow? on outside of rim; yellow? beginning on shoulder, spiralling down to mid-body, where joined by light blue?, both pulled into sloppy zigzag pattern; final yellow? double stripe. Dark blue ring handles with tails, from mid-neck to shoulder. Robinson, 1933, 263, pl. 196.

2. S. Avendrace, Caliarì, grave 125. Dated to late fifth century B.C. Missing rim and handles. Glass, shape and decoration as II.C.vii.1 above. Taramelli, 1912, col. 209, fig. 31a.

3. Unknown provenance. Louvre, no. 355. H. 8.0. Opaque white glass with purple decoration. Inward sloping rim-disc; short flaring neck; oval body; short pad-foot. Decoration: purple on outside of rim; purple thread beginning on shoulder, pulled into short zigzag pattern; final triple purple stripe. Fossing, 1940, 70, fig. 45.

Type II. E. i. Dinochoe of white glass, with obtuse-angled junction between neck and shoulder, decorated with wavy zigzag pattern.

1. Camiros, Macri Langoni, tomb 113. Rhodes Museum, no. 12243. Dated 510-490 B.C.¹³² Pl. 19. H. with handle 10.8, H. without handle 9.5, D. mouth 1.0, M.D. body 5.7, D. foot 2.5. White glass with purple decoration. Added rim-disc with two pinch marks; rounded ovoid body; added pad-foot with tool marks on top and small depression on bottom. High swung white handle. Decoration: purple thread on outside of rim; thick purple thread beginning on shoulder, spiralling down to base, pulled into wavy zigzag pattern; purple thread on outside of foot; purple threads on inside and outside of handle. Fluted. Jacopi, 1931, 230, no. 12, fig. 256.

2. Purchased in Greece. Boston Museum of Fine Arts, no. 99.445. H. 11.0. Glass, shape and decoration as II.E.i.1 above. von Saldern, 1968, no. 5.

3. Bologna. Fossing, 1940, 75.

4. Pompeii? National Museum, Copenhagen, no. VIII 813. H. 12.2. Glass, shape and decoration as II.E.i.1 above. Fossing, 1940, 75, fig. 51.

Type II. E. ii. Dinochoe of white glass, with almost right-angled junction between neck and shoulder, decorated with regular zigzag pattern.

1. Camiros, Fikellura grave 100. British Museum, no. 1864.10-7.65. Dated 475-450 B.C. H. 7.8, D. mouth 0.9, M.D. body 4.4, D. foot 2.5. White glass with purple decoration. Low swung handle; straight neck; nearly sloping shoulders; oval body; small irregular pad-foot with concave under surface. Decoration: purple on outside of rim; purple thread beginning on shoulder, spiralling down to mid-body, where pulled into neat zigzag pattern; final double purple thread; purple on outside of pad-foot. Marvered. Harden, 1981, no. 245.

2. Eretria. British Museum, no. 1893.20-9.91³³ H. 9.0, M.D. body 5.5. Glass as II.E.ii.1 above. High swung handle; thick neck; high, flat shoulders; rounded body. Decoration as II.E.ii.1 above, but with slightly wavy zigzag pattern. Harden, 1981, no. 246.

Type II. E. ii contd.

3. Eretria. National Museum, Athens, no. NM 12755. Pl. 19. H. with handle 10.2, H. without handle 9.7, D. mouth 1.1, D. foot 2.9. Glass, shape and decoration as II.E.ii.1 above. Small purple dot on outside of handle at junction of handle and body.
4. Antissa, Lesbos. Dated to the fifth century B.C. P. H. 10.1, M.D. body 5.8. Glass, shape and decoration as II.E.ii.2 above. Missing foot. Lamb, 1932, fig. 13, middle.
5. Brauron, from Sacred Spring? Brauron Museum, no. 2195. Glass, shape and decoration as II.E.ii.1 above.
6. Veroia, Macedonia. From a tomb. Dated c. 400 B.C. Glass as II.E.ii.1 above. Fragment from body of vessel. Touratsaglos, 1974, 717, pl. 515:e.
7. Apollonia, Bulgaria, grave 115.134 H. 8.0. Glass, shape and decoration as II.E.ii.2 above. Missing part of rim and handle. Mladenova, 1963, 310, no. 989, pls. 162, 163.
8. Tanais. Glass, shape and decoration as II.E.ii.1 above. Müller, 1910, 98, fig. 5:16.
9. Tarquinia. Glass, shape and decoration as II.E.ii.1 above. Fossing, 1940, 54, 74, fig. 50.
10. Salamis, Cyprus. di Cesnola, 1882, pl. 17,1.
11. Gordion, City Mound, MW, Pit into Floor 6; no. G 213.135 Pl. 19. P.H. 3.9. Glass as II.E.ii.1 above. Fragment of rim and neck.

Type II. E. iii. Dinochoe of dark glass, with obtuse-angled junction between neck and shoulder, decorated with wavy zigzag pattern.

1. Camiros, Macri Langoni tomb 113. Rhodes Museum 12239. Dated 510-490 B.C. P.H. 10.9, D. mouth 1.1, M.D. body 6.4. Cobalt blue glass with white decoration. Added rim-disc with two pinch marks; straight neck; rounded, ovoid body; added pad-foot with concave under surface and tools marks on top and bottom. Decoration: white thread on outside of rim; white thread beginning on neck, spiralling down counter-clockwise to bottom of shoulder, where pulled into very wavy zigzag pattern all over body. Fluted. Mended, missing most of added cobalt blue handle, and half of the body and foot. Dark grey sand visible on interior. Jacopi, 1931, 229, no. 9, fig. 256.

Type II. E. iii contd.

2. Ialysos, tomb 68. Rhodes Museum. Dated 525-500 B.C. Glass, shape and decoration as II.E.iii.1 above, except for narrower body. Maiuri, 1926, 321-322, no. 6, fig. 215.

3. Ialysos, tomb 68. Rhodes Museum. Dated 525-500 B.C. Pl. 20. Dark blue glass with yellow and white (= light blue?) decoration. Very high swung handle; straight neck; large, rounded ovoid body; added pad-foot. Decoration: yellow on outside of rim; yellow thread beginning at top of neck, spiralling down counter-clockwise to upper body, where joined by thick white (light blue?) thread, both pulled into wavy zigzag pattern; final yellow and white threads: yellow on outside of rim. Fluted. Maiuri, 1926, 321-322, no. 7, fig. 215.

4. Canosa. British Museum, no. 1873.8-20.417. P.H. 10.7, M.D. body 6.3. Glass as II.E.iii.3 above. Shape as II.E.iii.2 above. Decoration: white on outside of rim; white thread beginning at top of neck, spiralling down counter-clockwise to upper body, where joined by yellow thread, both pulled into slightly wavy zigzag pattern, the white thread continuing to spiral to base. Pad-foot missing. Harden, 1981, no. 243.

5. S. Luigi, Caltagirone, Sicily. Dated to sixth and fifth centuries B.C. H. 8.0. Dark blue glass with yellow decoration. Shape and decoration as II.E.iii.1 above. Orsi, 1904b, 135, fig. 60.

6. Palermo, grave 4. P.H. 7.3. Dark blue glass with light blue and yellow decoration. Shape and decoration as II.E.iii.3 above. Marconi, 1928, 484, fig. 3.

7. Utica? Shape and decoration as II.E.iii.3 above. Cintas, 1976, pl. LXXVII:7.

Type II. E. iv. Oinochoe of dark glass, with almost right-angled junction between neck and shoulder, and with low-swung handle, decorated with regular zigzag pattern.

1. Camiros, Fikellura grave 263. British Museum, no. 1864.10-7.64, Dated c. 450 B.C. H. 8.5, D. mouth 1.2, M.D. body 4.8, D. foot 2.3. Translucent greenish-blue glass with opaque light blue and yellow decoration. Rounded, high shoulder body; added pad-foot with flat under surface. Decoration: yellow on outside of trefoil rim; yellow thread beginning on shoulder, spiralling down counter-clockwise to mid-body, where joined by light blue thread, both pulled into neat band of short zigzag pattern; final yellow thread below zigzag pattern; yellow on outside of foot. Marvered. Harden, 1981, no. 256.

2. Camiros, Fikellura grave 157. British Museum, no. 1864.10-7.66. H. 7.0, D. mouth 0.9, M.D. body 3.9, D. foot 2.6. Translucent dull green glass with opaque light blue and yellow decoration. Shape as II.E.iv.1 above, but with concave pad-foot. Decoration: light blue on outside of rim; yellow and light blue thread beginning on shoulder, spiralling down counter-clockwise to mid-body, where pulled into slightly wavy zigzag pattern; final yellow thread below zigzag pattern. Harden, 1981, no. 251.

3. Camiros. British Museum, no. 1868.2.10.1 H. 8.0, M.D. body 4.7. Glass as II.E.iv.2 above. Shape and decoration as II.E.iv.1 above. Harden, 1981, no. 250.

4. Ialysos, tomb 232. Rhodes Museum, no. 11984. Dated 440-400 B.C. ¹³⁶ Pl. 20. H. with handle 11.7, H. without handle 11.1, D. mouth 1.2, M.D. body 6.8, D. foot 2.9. Glass and decoration as II.E.iv.1 above. Shape as II.E.iv.2 above. Jacopi, 1928, 249, no. 16, fig. 244.

5. Ialysos, tomb 232. Rhodes Museum, no. 11985. Dated 440-400 B.C. Pl. 20. H. with handle 11.1, H. without handle 10.8, D. mouth 1.2, M.D. body 6.6, D. foot 3.0. Glass and decoration as II.E.iv.1 above. Shape as II.E.iv.2 above. Jacopi, 1928, 249, no. 16, fig. 244.

6. Nisyros, tomb 25. Rhodes Museum, no. 14259. Dated 480-460 B.C. Shape and decoration as II.E.iv.2 above. Jacopi, 1932, 514, no. 4, fig. 40.

7. Kalymnos. British Museum, no. 1856.8-26.714. H. 7.2, M.D. body 4.4. Glass, shape and decoration as II.E.iv.1 above. Harden, 1981, no. 249.

Type II. E. iv contd.

8. Antissa, Lesbos. Dated 500-450 B.C. P.H. 8.8, M.D. body 5.1. Dark blue glass with light blue and yellow decoration. High shoulder; missing foot. Decoration as II.E.iv.1 above. Lamb, 1932, 41-67, fig. 13, left.
9. Melos. British Museum, no. 1842.7-28.586. H. 8.2, M.D. body 5.2. Glass and decoration as II.E.iv.1 above. Shape as II.E.iv.2 above. Harden, 1981, no. 252.
10. Delos. H. 7.2. Glass, shape and decoration as II.E.iv.2 above. Dugas, 1935, pl. LII:10.
11. Eretria. British Museum, no. 1893.10-9.8.137 H. 8.7, M.D. body 5.2. Dark blue glass with light blue and yellow decoration. Shape as II.E.iv.2 above. Decoration: light blue and yellow on outside of rim; yellow thread beginning on shoulder, spiralling down to mid-body, where joined by light blue, both pulled into zigzag pattern; final yellow thread below; yellow on outside of foot. Harden, 1981, no. 255.
12. Megara, Papanouse plot, grave 1. Dated c. 450 B.C.¹³⁸ Shape as II.E.iv.2 above, but with high swung handle. Alexandri, 1969, 86, fig. 40, pl. 65a, right.
13. Megara, Papanouse plot, grave 1. Dated c. 450 B.C. Shape as II.E.iv.2 above. Missing foot. Alexandri, 1969, 86, fig. 40, pl. 65a, right.
14. Bologna. A. Zannoni excavation, 1896, tomb 8, no. 144. Dark blue glass with light blue and yellow decoration. Shape and decoration as II.E.iv.1 above. Missing handle. H. 6.0. Riccioni, 238, 280, fig. 25.
15. Spina, Valle Pega tomb 724 B. No. 11288. Dated to 425-400 B.C. Dark blue glass with yellow decoration. Shape as III.E.iv.2 above. Massei, 1978, 199-200, no. 10, pl. XLV:2.
16. Tarquinia. British Museum, no. 1928.1-17.4. H. 7.2, M.D. body 4.3. Translucent purple glass with light blue and yellow decoration. Shape as II.E.iv.2 above. Decoration as II.E.iv.1 above. Harden, 1981, no. 248.
17. Nora, Sardinia. Shape and decoration as II.E.iv.2 above. Patroni, 1904, pl. XVII, bottom row, second from left.
18. Ibiza. No. 547. H. 8.8. Dark blue glass with light blue and yellow decoration. Shape as II.E.iv.2 above. Vives y Escudero, 1917, pl. 32:7.

Type II. E. iv contd.

19. Dermech, Carthage. Bardo Museum. H. 9.0, M.D. body 4.5. Dark blue glass with light blue and yellow decoration. Shape as II.E.iv.2 above. Leclant, 1969, pl. XLII.

20. Deve Huyuk, Syria. Woolley, 1916, 124, pi. 26:6.

21. Gordion, City Mound, WS 6, Fl. 2, north, "box". Gordion excavation no. G 322. Context dated to fourth century B.C. Pl. 20. Est. H. 8.1. Est. M.D. body 4.0, D. base 1.6. Four non-joining mended sections. Dark blue glass with light blue (decayed to white) and yellow decoration. Handle made of double coil of dark blue glass.

Type II. E. v. Dinochoe of dark glass, with almost right-angled junction between neck and shoulder, and with high-swing handles, decorated with regular zigzag pattern.

1. Camiros, Fikellura grave 242. British Museum, no. 1864.10-7.61. Dated 460-440 B.C. H. without handle 10.5. M.D. body 6.8. Dark blue glass with light blue and yellow decoration. Large, rounded body; twisted concave foot-pad. Decoration: Light blue on outside of rim; light blue unmarvered thread round middle of neck; yellow thread beginning on upper body, spiralling down counter-clockwise to mid-body, where joined by light blue thread, both pulled into zigzag pattern; final light blue and yellow threads below; light blue on outside of foot; light blue dot with some yellow at base of handle. Harden, 1981, no. 258.

2. Camiros. British Museum, no. 1862.5-30.6. H. without handle 10.5. M.D. body 6.7. Glass, shape and decoration as II.E.iv 1 above, except with yellow dot at base of handle. Harden, 1981, no. 259.

3. Camiros. British Museum, no. 1861.4-25.31. P.H. 9.5. M.D. body 6.9. Glass, shape and decoration as II.E.iv 1 above, except with yellow dot at base of handle. Harden, 1981, no. 260. Not illustrated.

4. Camiros, Fikellura grave 81. British Museum, no. 1864.10-7.62. Dated 460-440 B.C. H. without handle 10.8, D. mouth 1.0, M.D. body 6.0, D. foot 2.9. Glass as II.E.iv.1 above. Shape as II.E.iv.1 above, but with less rounded body and irregular foot. Decoration as II.E.iv.1 above except with yellow trails on rim, neck and foot; final threads of yellow, light blue and yellow. Harden, 1981, no. 261.

Type II. E. v contd.

5. Camiros, Macri Langoni tomb 33. Rhodes Museum, no. 13075. Dated 500-450 B.C.¹³⁹ Pl. 21. H. with handle 12.1, H. without handle 10.5, D. mouth 1.3, M.D. body 6.7, D. foot 3.4. Glass, shape and decoration as II.E.v.1 above, except with final thread of yellow, light blue and yellow and with yellow dot at base of handle. Jacopi, 1931, 115, no. 7, fig. 108.

6. Ialysos, tomb 197. Rhodes Museum, no. 10812. Dated 500-450 B.C. Pl. 21. H. with handle 12.5, H. without handle, 10.9, D. mouth 1.1, M.D. body 6.6, D. foot 4.2. Glass, shape and decoration as II.E.v.1 above, except with yellow on outside of foot and yellow dot at base of handle. Jacopi, 1928, 212, no. 7, fig. 210.

7. Ialysos, tomb 197. Rhodes Museum, no. 10813. Dated 500-450 B.C. Pl. 21. H. with handle 11.6, H. without handle, 10.3, D. mouth 1.1, M.D. body 6.3, D. foot 3.7. Glass, shape and decoration as II.E.v.1 above, except with yellow at mid-neck and yellow dot at base of dark blue handle with two yellow streaks. Jacopi, 1928, 212, no. 7, fig. 210.

8. Ialysos, tomb 197. Rhodes Museum, no. 10814. Dated 500-450 B.C. Pl. 21. H. with handle 12.0, H. without handle, 10.2, D. mouth 1.1, M.D. body 6.4, D. foot 3.5. Glass, shape and decoration as II.E.v.1 above, except with yellow at mid-neck and yellow dot at base of handle. Jacopi, 1928, 212, no. 7, fig. 210.

9. Delos. H. 12.0. Glass, shape and decoration as II.E.v.1 above, except with yellow on rim, neck, foot and dot at base of handle. Dugas, 1935, pl. LI:9.

10. Vari, Attica. National Museum, Athens, no. NM 2845. Pl. 22. H. with handle 12.2. H. without handle 10.4, D. mouth 1.1, M.D. body 6.8, D. foot 4.0. Glass, shape and decoration as II.E.v.1 above, except yellow on rim, foot and dot at base of handle; no thread on neck.

11. Sanctuary of Artemis Brauronia. Brauron Museum, no. 1312. Glass as II.E.v.1 above. Ovoid body. Decoration: Yellow on outside of rim; yellow thread beginning on shoulder, spiralling down to mid-body, where joined by light blue, both pulled into slightly wavy zigzag pattern; final light blue thread below; yellow on outside of foot. Ergon, 1961, 33, pl. 34, left.

Type II. E. v contd.

12. Eretria. National Museum, no. NM 12819. Pl. 22. H. with handle 11.1, H. without handle 9.5. D. mouth 1.0, M.D. body 6.3, D. foot 3.0. Glass and shape as II.E.v.1 above. Decoration: light blue on outside of rim; light blue thread beginning on shoulder, spiralling down counter-clockwise to mid-body, where joined by yellow thread, both pulled into zigzag pattern; final light blue thread below; yellow on outside of foot and yellow dot at base of handle.

13. Muschovitsa Mogila, Duvanlii, Bulgaria. Dated 500-450 B.C.¹⁴⁰ H. 12.6. Shape and decoration as II.E.v.1 above. Filow, 1934, 94, no. 17, fig. 119, left.

14. Muschovitsa Mogila, Duvanlii, Bulgaria. Dated 500-450 B.C. H. 10.7. Shape and decoration as II.E.v.1 above. Filow, 1934, 94, no. 17, fig. 119, middle.

15. Muschovitsa Mogila, Duvanlii, Bulgaria. Dated 500-450 B.C. H. 11.9. Shape and decoration as II.E.v.1 above. Filow, 1934, 94, no. 17, fig. 119, right.

16. Vani, Georgia, burial 6. No. 3-61/662,49. Dated to the fifth century B.C.¹⁴¹ H. 11.0. Shape and decoration as II.E.v.1 above, except without thread on neck. Lordkipanidze, 1972, 116-117, fig. 65.

17. Cyrene, Demeter Sanctuary, nos. 73-1098 and 76-371. From D16/17, st. 3 and F13/G13, tr. 1, st. 2.¹⁴² Pls. 22, 39. Five joining fragments of handle and upper body. Dark blue glass with light blue and yellow decoration. Decoration as II.E.v.1 above, but with yellow dot on base of handle.

18. Cyrene, Demeter Sanctuary, nos. 73-1139, 74-115 and 77-395. From D16/17, tr. 1, st. 2 and st.3 and D16/17, tr. 2, st. 3. Dated to the Archaic period. Pl. 23. Ten fragments mended into three non-joining sections. Missing rim and handle. Glass and decoration as II.E.v.1 above, except with final threads of yellow, light blue and yellow, and with yellow on outside of foot.

19. Cyrene, Demeter Sanctuary, no. 74-729. From E12/13, tr. E, st. 2. Pl. 23. Twelve joining fragments, missing rim, neck and parts of body. Glass and decoration as II.E.v.1 above.

20. Gordion, City Mound. WS 5-6, N, Layer 6. Gordion excavation no. 6 332.¹⁴³ Pl. 24.. Fragment of handle. Dark blue glass with yellow dot.

Type II. E. v contd.

21. Gordion, City Mound, WS 9, Layer 8. Gordion excavation no. G 338. Pl. 24. Fragment of rim and neck. Dark blue glass with light blue (decayed to white) decoration on outside of rim and on mid-neck.

22. Gordion, City Mound, PBX-5, Layer 5. Gordion excavation no. G 354. Pl. 24. Fragment of rim and neck. Dark blue glass with yellow on outside of rim.

Type II. E. vi. Dinochoe of dark glass, with almost right-angled junction between neck and shoulder, decorated with plain trail pattern.

1. Utica? Decoration: yellow? on outside of rim; yellow? thread in three horizontal stripes at mid-body. Cintas, 1976, pl. LXXVII:8.

2. Utica? Fragment of upper part of vessel like II.E.vi.1 above. Cintas, 1976, pl. LXXVII:9.

3. Unknown provenience. Ex Coll. Constable-Maxwell. Dark brown glass with light blue and yellow decoration. H. 9.8, M.D. body 5.4. Low swung handle; ovoid body. Decoration: yellow tinged with green on outside of rim; yellow thread beginning on upper body, spiralling down in twelve horizontal stripes to lower body, joined by light blue stripe at lower body; yellow thread on outside of foot. Constable-Maxwell, 1979, 21, no. 10.

Part Three: Fourth to Early Third Centuries B.C.

Type III. A. i. Alabastron with broad horizontal rim-disc, downward tapering neck and wide body, decorated with feather pattern.

1. Homolion, Thessaly, tomb A. Volos Museum, no. M2672. Dated 330-300 B.C.¹⁴⁴ H. 13.2, M.D. body 4.0. Dark blue glass with opaque white spots of scum; light blue and yellow decoration. Sharp junction between downward tapering neck and shoulder; slightly convex body, expanding towards rounded bottom. Decoration: yellow on outside of rim; yellow thread beginning on shoulder, spiralling down to bottom, joined below handles by light blue thread, both pulled into feather pattern, yellow thread continues to two final stripes at bottom. Dark blue ring handles without tails. Theocharis, 1962, 176, pl. 197a, right; Miller, 1979, 18-19, 23-24, 55, no. 61, pl. 9:e.

2. Homolion, Thessaly, tomb A. Volos Museum, no. M2673. Dated 330-300 B.C. H. 12.4, M.D. body 4.1. Very dark blue glass with opaque white spots of scum; white (= decayed light blue?) and yellow decoration. Shape and decoration as III.A.i.1 above, except threads bunched into three distinct bands at upper, middle and lower body. Theocharis, 1962, 176, pl. 197a, left; Miller, 1979, 18-19, 23-24, 55, no. 62, pl. 9:f.

3. Nea Michaniona, tumulus A, grave 3. Thessaloniki Museum. Dated 350-300 B.C.¹⁴⁵ Dark blue glass with yellow, light blue and white decoration. Wide horizontal rim-disc with tool marks on upper and under surfaces; sharp junction between downward tapering neck and shoulder; convex upward tapering body; slightly flattened bottom. Decoration: thin yellow on outside of rim; yellow thread beginning at shoulders, spiralling down to bottom, joined on upper body by light blue and white threads, all pulled into feather pattern, except at top and bottom, where lack of downward stroke creates festoon pattern. Dark blue knob handles. Complete; mended. Slight milky weathering crust; yellow pitted and light blue decayed to white in places. Reddish sand visible on interior.

4. Montefortino, Ancona, tomb VII. Dated 390-283 B.C.¹⁴⁶ H. 14.4, D. rim 4.5, M.D. body 4.5. Shape and decoration as III.A.i.1 above. Brizo, 1899, col. 665, pl. XII:11.

Type III. A. i contd.

5. Ruvo. British Museum, no. 1856.12-26.1127. H. 18.0, D. rim 5.3, M.D. body 4.7. Dark blue glass with opaque white spots of scum; opaque yellow, white and light blue decoration. Shape as III.A.i.1 above, except with larger body. Decoration: yellow on outside of rim; yellow thread beginning at shoulder, joined by white thread at handles and light blue thread below handles, all spiralling down to bottom, pulled into close-set feather pattern all over body. Harden, 1981, no. 263.

6. Capua. British Museum, no. 1873.8-20.400. H. 17.5, D. rim, 5.5, M.D. body 4.4. Glass, shape and decoration as III.A.2 above, except for handles, which are knob handles with small depressions. Harden, 1981, no. 276.

7. Pompeii? British Museum, no. 1899.2-4.2. H. 17.2, D. rim 5.0, M.D. body 4.7. Glass, shape and decoration as III.A.9 above. Harden, 1981, no. 265. Not illustrated.

8. Pompeii? British Museum, no. 1899.2-4.3. H. 18.0, D. rim 5.3, M.D. body 4.6. Glass, shape and decoration as III.A.9 above. Harden, 1981, no. 266. Not illustrated.

9. Pompeii? British Museum, no. 1899.2-4.1. H. 20.0, D. rim 5.5, M.D. body 4.6. Glass, shape and decoration as III.A.2 above. Harden, 1981, no. 267. Not illustrated.

10. Nora, Sardinia. Patroni, 1904, pl. XVII, top row, right.

Type III. A. ii. Alabastron with broad horizontal rim-disc, downward tapering neck and wide body, decorated with festoon pattern.

1. Camiros. British Museum, no. 1873.8-20.402. H. 17.7, D. rim 5.7, M.D. body 4.7. Dark blue glass with opaque white spots of scum, decorated with yellow, white and light blue. Sharp junction between downward tapering neck and shoulder; large, slightly convex body; rounded bottom. Decoration: yellow on outside of rim; yellow, white and light blue threads beginning on upper body, spiralling down to base, both pulled into festoon pattern, yellow thread continuing into two final stripes. Dark blue ring handles. Harden, 1981, no. 270.

Type III. A. ii contd.

2. Nea Michaniona, tumulus A, cist grave. Dated to 350-300 B.C.¹⁴⁷ Dark blue glass with yellow and white decoration. Shape as III.A.ii.1 above. Decoration: yellow on outside of rim; yellow thread beginning on shoulder, spiralling down to bottom, joined on upper body by white thread, both pulled into festoon pattern all over body.

Type III. A. iii. Alabastron with broad horizontal rim-disc, cylindrical or upward tapering neck and wide body, decorated with feather pattern.

1. Camiros. Metropolitan Museum of Art, no. 17.194.777. Ex Coll. Greau. Dark blue glass with yellow, white and light blue decoration. Upward tapering neck; clearly delineated shoulders; slightly convex upward tapering body; rounded bottom. Decoration: yellow on outside of rim; yellow thread beginning on upper body, spiralling down to bottom, joined below handles by white and light blue threads, all pulled into feather pattern. Dark blue ring handles with short tails. Perrot and Chipiez, 1885, pl. VII:1.

2. Agora Excavations, Athens, no. G 453. Dated to 350-325 B.C.¹⁴⁸ Pl. 25. P.H. 4.0, Th. 0.4. Dark blue glass with white spots of scum and with white (=decayed light blue?) decoration. Fragment from body of alabastron. Feather pattern decoration.

3. Delphi, tholos tomb. Delphi Museum. Dated to the fourth century B.C. Shape and decoration as III.A.iii.1 above, except with flattened bottom and dark blue knob handles. Konstantinou, 1964, 218, pl. 261 b, right; Daux, 1967, 853, fig. 4, right.

4. Delphi, tholos tomb. Delphi Museum. Dated to the fourth century B.C. Tall, thick cylindrical neck; well defined shoulders; slightly convex upward tapering body; flattened bottom. Irregular tall feather pattern. Handles missing. Konstantinou, 1964, 218, pl. 261 b, left; Daux, 1967, 853, fig. 4, left.

5. Nea Michaniona, tumulus A, grave 3. Thessaloniki Museum, no. 7593. Dated 350-300 B.C.¹⁴⁹ Dark blue-green glass with yellow and light blue decoration. Shape as III.A.iii.1 above, except with tall cylindrical neck. Decoration: yellow on outside of rim; yellow thread beginning at shoulder, spiralling down to bottom, joined on upper body by light blue thread, both pulled into feather pattern. Dark blue-green knob handles.

Type III. A. iii contd.

6. Nea Michaniona, tumulus A, cist grave. Thessaloniki Museum. Dated 350-300 B.C.¹⁵⁰ Glass, shape and decoration as III.A.iii.5 above.

7. Nea Michaniona, tumulus A, cist grave. Thessaloniki Museum. Dated 350-300 B.C. Dark blue glass with yellow and light blue decoration. Shape and decoration as III.A.iii.5 above.

8. Nea Michaniona, tumulus A, cist grave. Thessaloniki Museum. Dated 350-300 B.C. Dark blue glass with yellow and white decoration. Shape and decoration as III.A.iii.5 above, except with white glass instead of light blue.

9. Histria, tumulus 1.¹⁵¹ P.H. 8.8. Missing rim, neck and handle. Well defined shoulders; slightly convex upward tapering body; rounded bottom. Decorated with feather pattern all over body. Alexandrescu, 1966, 173, 506, pl. 74:1, 4.

10. Varna, Bulgaria. Varna Museum, no. II -2658. Dated to late fourth century B.C. H. 12.5, D. rim 2.5, M.D. body 2.8. Glass, shape and decoration as III.A.iii.1 above, except with short horizontal rim-disc and small dark blue knob handles placed at mid-body. Minčev, 1980, 111-112, no. 4, pls. I:4 and III:4.

11. Varna, Bulgaria. Varna Museum, no. II -2659. Dated to late fourth century B.C. P.H. 7.9. Fragment of lower body of vessel. Glass, shape and decoration as III.A.iii.1 above. Minčev, 1980, 112, no. 5, pls. II:5 and III:5.

12. Panticapaeum, grave 34, 1862. Hermitage Museum, no. P. 1862.17. H. 24.1. Dark blue glass with yellow and white decoration. Wide, thin horizontal rim-disc; narrow cylindrical neck; sloping shoulders; elongated, slightly convex upward tapering body; rounded bottom. Well-formed feather pattern decoration. Dark blue knob handles. Voščinina, 1967, 558, pl. 118:3.

13. Panticapaeum, grave 83, 1902. Hermitage Museum, no. 1902.44. Dated to 325-300 B.C. H. 17.3. Dark blue glass with yellow and white decoration. Broad, cylindrical neck; well defined shoulders; upward tapering body; rounded bottom. Decoration: yellow? on outside of rim; yellow and white threads beginning at shoulder, spiralling down to just above bottom, pulled into short zigzag pattern. Dark blue knob handles. Slightly fluted. Voščinina, 1967, 558, pl. 124:1, right.

Type III. A. iii contd.

14. Panticapaeum. Hermitage Museum, no. 1903.170. Glass, shape and decoration as III.A.iii.9 above, except with shorter, more rounded body. Voščinina, 1967, 558, pl. 124:1, left.

15. Esquiline, Rome. Shape and decoration as III.A.iii.1 above. Montellius, 1910, pl. 361:14.

16. Cumae, grave 126. Dated to 325-300 B.C.¹⁵² H. 19.5. Glass, shape and decoration as III.A.iii.8 above, except with sharply defined shoulders and small ring handles. Gábrici, 1913, col. 597, pl. 117:5.

17. Cumae, grave 162. Glass, shape and decoration similar to III.A.iii.12 above. Gábrici, 1913, col. 627. Not illustrated.

18. Cumae, grave 187. Glass, shape and decoration similar to III.A.iii.12 above. Gábrici, 1913, col. 648. Not illustrated.

19. Nola. British Museum, no. 1873.8-20.401. H. 15.1, D. rim 5.3, M.D. body 4. Glass, shape and decoration as III.A.iii.1 above. Harden, 1981, no. 274.

20. Paestum, stipe of Temple of Neptune. IV Loculo, Scavi 1952. Paestum Museum. Several joining fragments; missing rim, neck and parts of body. Dark blue glass with yellow and white decoration. Slightly convex upward tapering body; rounded bottom. Feather pattern decoration. Dark blue knob handles.

21. Sciatbi cemetery, Alexandria. Graeco-Roman Museum, Alexandria, no. 19291.¹⁵³ Dated to after 331 B.C. H. 11.5. Dark blue ? glass with yellow ? decoration. Short cylindrical neck; rounded shoulders; rounded, upward tapering body; rounded bottom. Decoration: yellow ? on outside of rim; yellow ? thread beginning on upper body, spiralling down to base, pulled into feather pattern below handles. Dark blue ? knob handles with small depressions facing opposite sides. Breccia, 1912, 100, no. 315, pl. LXI:149.

22. Gordion, Kiral Harman grave. Gordion excavations, no. G 129. Dated to 350-300 B.C.¹⁵⁴ pl. 25. P.H. 11.0, P.D. body 3.1. Several joining fragments of body and non-joining fragments of rim. Dark blue glass with yellow and white decoration. Slightly rounded upward tapering body; flattened bottom. Decoration: yellow on outside of rim; yellow and white threads pulled into feather pattern all over body. Dark blue small knob handle. Young, 1955, 197, fig. 12.

Type III. A. iv. Alabastron with broad horizontal rim-disc, cylindrical or upward tapering neck and wide body, decorated with inverted festoon pattern.

1. Agora Excavations, no. 6485. Dated 325-300 B.C. 155 Pl. 26. P.H. 2.4. Small fragment from body of alabastron. Very badly weathered; no original glass remains. Inverted festoon decoration in opaque glass.

2. Cumae, tomb 126. Dated 325-300 B.C. 156 H. 12.5, D. rim 4.3, M.D. body 3.2. Dark blue glass with yellow, white and light blue decoration. Upward tapering neck; sloping shoulders; cylindrical body; rounded bottom. Inverted festoon decoration from just below shoulders to bottom. Dark blue ring handles with short tails. Gábrici, 1913, col. 597, pl. 117:6.

3. Pompeii? Shape and decoration as III.A.iv.2 above. Pesce, Napoli, 6, fig. 4.

4. Motta, Sanctuary of Athena. P.H. 2.2. Small fragment from lower part of alabastron. Dark blue ? glass with opaque decoration. Inverted festoon decoration. Stoop, 1976, 154, pl. XXXI:7a.

5. Amrit, Syria. H. 12.0. M.D. body 2.6. Dark blue glass with yellow and white decoration. Shape and decoration as III.A.iv.2 above. de Ridder, 1909, no. 242. Not illustrated.

6. Amrit, Syria. H. 13.0, M.D. body 3.2. Dark blue glass with yellow and light blue decoration. Shape and decoration as III.A.iv.2 above. de Ridder, 1909, no. 244. Not illustrated.

Type III. A. v. Alabastron with broad horizontal rim-disc, cylindrical or upward tapering neck and wide body, decorated with festoon decoration.

1. Cumae, grave 126. Dated 325-300 B.C. 157 H. 19.1, D. rim 4.9, M.D. body 4.3. Dark blue glass with yellow and white decoration. Tall cylindrical neck; well defined shoulders; slightly irregular; rounded upward tapering body; rounded bottom. Festoon decoration clustered at upper body, mid-body and lower body. Dark blue ring handles. Gábrici, 1913, 597, pl. 117:1.

Type III. A. v contd.

2. Sciatbi cemetery, Alexandria. Graeco-Roman Museum, Alexandria, no. 10389. Dated to after 331 B.C. 158 Pl. 26. H. 9.6, D. rim 2.8, D. mouth 1.1, M.D. body 2.5. Dark blue glass with yellow and white decoration. Short rim-disc; upward tapering neck; narrow shoulders; slightly convex upward tapering body; rounded bottom. Decoration: yellow and white threads beginning on shoulder, spiralling down clockwise to bottom, both pulled into short festoon pattern. Small dark blue knob handles at mid-body. Slight milky weathering crust. Traces of red sand on interior of vessel. Breccia, 1912, 99-100, no. 312, pl. LXI:150.

3. Sciatbi cemetery, Alexandria. Graeco-Roman Museum, Alexandria, no. 10391. Dated to after 331 B.C. H. 8.4, D. rim 2.6, D. mouth 1.1, M.D. body 2.3. Dark blue glass with white ? decoration. Shape and decoration as III.A.v.2 above. Heavy silverly weathering; opaque glass decayed. Traces of red sand on interior of vessel. Breccia, 1912, 100, no. 313, pl. LXI:148.

Type III. A. vi. Alabastron with broad horizontal rim-disc, short neck and wide body, decorated with zigzag or feather pattern.

1. Kephissia, Attica. National Museum, Athens, no., NM 2844. Pl. 27. H. 14.0, D. rim 3.9, D. mouth 1.1, M.D. body 3.6. Dark blue glass with yellow, white and light blue decoration. Tool marks on top of rim-disc; slightly convex upward tapering body; flattened bottom. Decoration: yellow on outside of rim; yellow thread beginning on upper body, spiralling down clockwise to mid-body, where joined by white and light blue threads, all pulled into feather pattern, yellow thread continuing to two final stripes. Dark blue irregular ring handles with short tails.

2. Eretria. National Museum, Athens, no. NM 2905. Pl. 27. H. 9.2, D. rim 3.2, D. mouth 1.0, M.D. body 3.0. Dark blue glass with yellow? decoration. Thick weathering crust; opaque glass now entirely decayed. Shape and decoration as III.A.vi.1 above.

Type III. A. vi contd.

3. Apollonia, Bulgaria, grave 283. Dated 350-340 B.C. 159
H. 10.2, D. rim 4.5. Dark blue glass with yellow decoration.
Very wide horizontal rim-disc; thick short neck; short
sloping shoulders; convex upward tapering body; flattened
bottom. Decoration: yellow on outside of rim; yellow thread
beginning at upper body, spiralling down to base, with the
thread becoming thicker towards the bottom, pulled into
closely set zigzag pattern. Dark blue knob handles set
unevenly about one quarter of the way down the body.
Mladenova, 1963, 310, no. 985, pl. 163.

4. Apollonia, Bulgaria, grave 231. Dated 350-340 B.C. 160
H. 8.7, D. rim 4.0. Glass, shape and decoration as
III.A.vi.3 above. Mladenova, 1963, 310, no. 986, pl. 163.

5. Apollonia, Bulgaria, surface find. Two non-joining
fragments from lower part of vessel. Glass and decoration as
III.A.vi.3 above. Mladenova, 1963, 310, no. 987, pls. 163
and 166.

**Type III. A. vii. Squat alabastron with broad horizontal
rim-disc, decorated with zigzag or feather pattern.**

1. Capua. British Museum, no. 1873.8-20.410. H. 8.5, D.
rim 4.8, M. D. body 6.0. Dark blue glass with yellow and
white decoration. Tool marks on upper and under surfaces of
wide horizontal rim-disc; wide neck with slight downward
taper; pronounced angular shoulders; short, slightly convex
body expanding to sharp junction with slightly rounded
bottom. Decoration: yellow on outside of rim; yellow and
white thread beginning at shoulders, spiralling down to
bottom, both pulled into feather pattern all over body. Dark
blue ring handles with pointed tails. Harden, 1981, no. 271.

2. Cyprus. Shape and decoration as III.A.vii.1 above,
except with flat bottom. di Cesnola, 1882, pl. 17:5.

3. Unknown provenance. National Museum, Athens, no. NM
E1645. Pl. 27. H. 6.9, D. rim 4.2, D. mouth 0.6, M.D. body
5.4. Dark blue glass with yellow and light blue decoration.
Shape as III.A.vii.1 above, except with cylindrical neck and
flattened bottom. Decoration: yellow on outside of rim;
light blue thread beginning on shoulder, spiralling down
clockwise to bottom, joined at lower body by yellow thread,
both pulled into feather pattern. Dark blue knob handles
applied unevenly at mid-body.

Type III. A. vii contd.

4. Unknown provenance. Newark Museum, no. 50.1234. H. 5.0. Glass and decoration as III.A.vii.1 above. Wide downward tapering neck; sloping shoulders; short, rounded "sack-like" body; flat bottom. Dark blue bead? handles, now broken. Auth, 1976, 31, no. 12.

Type III. A. viii. Miniature alabastron.

1. Unknown provenance. British Museum, no. 1867.5-8.573. H. 6.4, D. rim 2.5, M.D. body 2.5. Dark green glass with yellow and white decoration. Wide, upward tapering neck; distinct shoulders; convex, upward tapering body; rounded bottom with small hole at center. Decoration: yellow on outside of rim; yellow and white trails beginning on shoulder, spiralling down to bottom, pulled into inverted festoon pattern. Dark green knob handles. Traces of red powder? on interior. Harden, 1981, no. 275.

2. Unknown provenance. Coll. Cohn. H. 6.2. Dark blue glass with yellow and white decoration. Shape as III.A.viii.1 above, except with downward tapering neck and no hole at bottom. Decoration: yellow on outside of rim; yellow and white thread beginning on shoulder, spiralling down to bottom, both pulled into festoon pattern. Dark blue ring handles. von Saldern, 1981, no. 25a.

3. Unknown provenance. Coll. Cohen. H. 6.0. Dark blue glass with yellow and white decoration. Shape as III.A.viii.1 above, except with flattened bottom without hole. Decoration: yellow on outside of rim; yellow and white trails beginning on shoulder, spiralling down to bottom, pulled into feather pattern. Dark blue knob handles. von Saldern, 1981, no. 25c.

Type III. A. ix. Alabastron with narrow horizontal rim-disc and narrow body, decorated with zigzag pattern.

1. Myrina, Aeolis. From a tomb. Louvre Museum. Dated to third century B.C.¹⁶¹ H. 10.5. Dark blue glass with yellow and white decoration. Narrow rim; wide, cylindrical neck; sharp junction between neck and shoulders; straight-sided, downward tapering body; rounded bottom. Decoration of yellow and white threads beginning on shoulder, spiralling down clockwise to bottom, bunched into several zones, pulled into closely-set short zigzag pattern. Dark blue knob handles at mid-body. Fossing, 1940, 107, fig. 76.

Type III. A. ix contd.

2. Myrina, Aeolis. From a tomb. Louvre Museum. Dated to third century B.C. H. 9.0. Glass, shape and decoration as III.A.ix.1 above, except with thinner neck and with zigzag decoration all over body. Fossing, 1940, 107, fig. 77.
3. Myrina, Aeolis. From a tomb. Louvre Museum. Dated to third century B.C. Glass, shape and decoration as III.A.ix.1 above. Fossing, 1940, 107, n. 1.
4. Abdera, Thrace, cist grave. Komotini Museum. Dated 350-300 B.C.¹⁶² Dark blue glass with white ? decoration. Narrow horizontal rim; tall, upward tapering neck; articulated shoulders; straight-sided body with slight upward taper; rounded bottom. Decoration: white? thread beginning below shoulders, spiralling down to bottom, pulled into closely set zigzag pattern at mid-body. Dark blue knob handles placed unevenly above mid-body. Triandaphyllos, 1974, 809, pl. 596a.
5. Corfu ? British Museum, no. 1658.1-10.498. H. 10.8, D. rim 2.6, M.D. body 2.8. Dark blue glass with light blue decoration. Shape and decoration as III.A.ix.4 above. Harden, 1981, no. 282.
6. Corfu ? British Museum, no. 1868.1-10.601. P.H. 8.8. Fragment of neck and body. Glass, shape and decoration as III.A.ix.4 above. Harden, 1981, no. 283.
7. Spina (Valle Trebba, zone 1, area C), tomb 83. Dated to late fourth century B.C.¹⁶³ H. 12.0. Dark blue glass with yellow and white decoration. Glass, shape and decoration as III.A.ix.1 above, except with taller neck and no handles. Negrioli, 1924, 310, fig. 9, left.
8. Spina (Valle Trebba, zone 1, area C), tomb 83. Dated to late fourth century B.C. H. 12.3. Glass, shape and decoration as III.A.ix.6 above. Negrioli, 1924, 310, fig. 9, right.
9. Todi (ancient Tudor), Umbria. Villa Giulia. Dated to late fourth century B.C. H. 13.5. Dark blue glass with white decoration. Broad horizontal rim-disc; tall, upward tapering neck; straight-sided body with downward taper; rounded bottom. Decoration: white thread beginning on neck, spiralling down clockwise to bottom, bunched into three groups at upper, middle and lower body, pulled into slightly irregular zigzag pattern. Dark blue knob handles just above mid-body. Fluted. Fossing, 1940, 91, fig. 59.

Type III. A. ix contd.

10. Collo (Chullu), Algeria. Constantine Museum, no. 207. Glass, shape and decoration as III.A.ix.1 above, except with taller neck and without handles. Doublet and Glauckler, 1892, 113, pl. 13:6.

11. Utica, tomb 249, Odeon. Bardo Museum. H. 9.5, M.D. body 2.2. Glass, shape and decoration as III.A.ix.9 above. Seefried, La verrerie punique, 38, no. 2.

12. Alexandria, Polish Excavations, no. Q 1698 171. Dated to after 331 B.C.¹⁶⁴ Pl. 40. H. 12.7, D. rim 3.5, M.D. body 3.1. Dark blue glass with yellow and white decoration. Broad, horizontal rim-disc; tall, cylindrical neck; cylindrical body; rounded bottom. Decoration: yellow on outside of rim; yellow thread beginning of shoulders, spiralling down clockwise to bottom, joined at mid-body by white thread and at lower body by another yellow thread, all pulled into closely set short zigzag pattern all over body. No handles. One opaque yellow knob handle preserved.

13. Unknown provenance. National Museum, Athens, no. NM 12189. Pl. 28. H. 12.4, D. rim 2.7, D. mouth 1.0, M.D. body 3.0. Narrow, irregular rim pulled out of neck; tall, cylindrical neck; sloping shoulders; straight-sided body with downward taper; rounded bottom. Decoration: yellow thread beginning on shoulders, spiralling down to bottom, bunched into two zones at upp and mid-body, pulled into closely set short zigzag pattern. Dark blue knob handles just above mid-body. Fluted.

Type III. A. x. Alabastron with narrow horizontal rim-disc and narrow body, decorated with feather pattern.

1. Chania, Crete, Mathioulake plot, grave B. Chania Museum. Dated 330-300 B.C.¹⁶⁵. Dark blue glass with yellow and white decoration. Narrow, horizontal rim pulled out from neck; tall, cylindrical neck; sharp junction between neck and slightly rounded shoulders; straight-sided body with downward taper; rounded bottom. Decoration: yellow and white threads beginning on shoulders, spiralling down clockwise in alternating zones of white and yellow to bottom, pulled into feather pattern, No handles.

2. Chania, Crete, Mathioulake plot, grave B. Chania Museum. Dated 330-300 B.C. Glass, shape and decoration identical to III.A.x.1 above.

Type III. A. x contd.

3. Varna. Varna Museum, no. II -2657. Dated to late fourth century B.C. H. 11.7, M.D. body 3.2. Dark blue glass with white? decoration. Cylindrical neck; sloping shoulders; slightly irregular, straight-sided body with downward taper; flattened bottom. Decoration: white? thread beginning on upper body, spiralling down to bottom, bunched into several zones, pulled into feather pattern all over body. Dark blue knob handles just above mid-body. Minčev, 1980, 111, no. 3, pls. II and III.

4. Cerveteri. Brussels Museum, no. R. 1544. H. 13.3. Narrow rim; narrow, cylindrical neck; rounded shoulders; tall straight-sided body with upward taper; rounded bottom. Closely set feather pattern extends over neck. Ring handles with short tails. Fossing, 1940, 88, fig. 57.

5. Ruvo. British Museum, no. 1856.12-26.1128. H. 15.3, D. rim 3.2, M.D. body 4.2. Dark blue glass with yellow and white decoration. Sharp junction between cylindrical neck and broad shoulders; slightly convex body; rounded bottom. Decoration: yellow thread beginning on shoulder, spiralling down to bottom, joined by white thread at upper body, both pulled into feather pattern. Small dark blue knob handles. Fluted. Harden, 1981, no. 278.

6. Teano, grave 76. Dated to late fourth century B.C. 166 H. 13.0. Dark blue glass with yellow decoration. Narrow rim-disc; elongated, irregular body with virtually no neck or shoulders; rounded bottom. Decoration: yellow thread beginning at upper body, spiralling down to bottom, bunched into three zones, pulled into feather pattern. Dark blue knob handles placed unevenly above mid-body. Gábrici, 1910, col. 128, fig. 100.

7. Cyrenaica. British Museum, no. 1866.4-15.218. H. 11.1, D. rim 3.4, M.D. body 2.9. Harden, 1981, no. 281. Not illustrated.

8. Cyprus. British Museum, no. 1872.7-26.5. H. 12.7, D. rim 2.5, M.D. body 2.8. Dark blue glass with yellow and white decoration. Narrow rim-disc; tall, upward tapering neck; sharp junction between neck and shoulders; straight-sided body with downward taper; rounded bottom. Decoration: yellow thread beginning on upper body, spiralling down, joined by white thread, both pulled into carefully made feather pattern all over body. Dark blue knob handles. Harden, 1981, no. 277

Type III. A. xi. Alabastron with narrow horizontal rim-disc and narrow body, decorated with festoon pattern.

1. Amathus, Cyprus. British Museum, no. 1894.11-1.505. H. 10.6, D. rim 2.9, M.D. body 2.5. Dark blue glass with yellow and white decoration. Broad rim-disc; tall, cylindrical neck; sharp junction between neck and shoulders; straight-sided body with slight upward taper; rounded bottom. Decoration: white on outside of rim; white and yellow thread beginning on shoulder, spiralling down counter-clockwise to bottom, pulled into festoon pattern all over body. No handles. Harden, 1981, no. 285.

Type III. B. i. Amphoriskos with almost right-angled junction between neck and shoulder, and with handles from shoulder to mid-neck, decorated with feather pattern.

1. Unknown provenance. British Museum, no. 1868.5-1.35. H. 10.8, M.D. body 5.3, D. base 1.0. Dark blue glass with yellow and light blue decoration. Broad, horizontal rim-disc with tool marks on both surfaces; tall, cylindrical neck sharply set off from sloping shoulders; ovoid body; tall base-knob with coiling depression on under surface. Decoration: yellow on outside of rim; yellow thread beginning on upper body, joined by light blue, both spiralling down to base and pulled into closely set feather pattern all over body. Slender, dark blue handles. Harden, 1981, no. 294; Fossing, 1940, 90, fig. 60.

Type III. B. ii. Amphoriskos with almost right-angled junction between neck and shoulder, and with handles from shoulder to rim, decorated with zigzag pattern.

1. Kalymnos. British Museum, no. 1856.8-26.251. H. 8.7, M.D. body 4.0. Dark blue glass with yellow and white decoration. Narrow, horizontal rim-disc with tool marks on both surfaces; tall neck with upward taper; broad shoulders; ovoid body; elongated butt-end with end-knob. Decoration: white thread beginning at top of neck, spiralling down clockwise to shoulder, where joined by yellow thread, both pulled into slightly sloppy short zigzag pattern, the white thread continuing in final stripe. Dark blue handles from shoulder to rim. Slightly fluted. Harden, 1981, no. 344; Fossing, 1940, 124, fig. 100.

2. Rethymnon, Crete. Rethymnon Museum, no. 5. Pls. 28, 40. H. 7.1, D. rim 2.3, D. mouth 1.1. Dark blue glass with yellow decoration. Shape as III.B.ii.1 above. Decoration: yellow thread beginning at top of neck, spiralling down clockwise to mid-body, where pulled into slightly irregular, short zigzag pattern, thread continuing into final stripe. Dark blue handles from shoulder to rim, curving slightly above rim. Slightly fluted. Base hidden by modern wooden stand.

Type III. B. ii contd.

3. Rethymnon, Crete. Rethymnon Museum, no. 6. Pls. 28, 40. H. without base 6.4, D. rim 2.4, D. mouth 1.1. Dark blue glass with yellow and light blue decoration. Shape as III.B.ii.1 above except with broader shoulders and larger body. Decoration: yellow thread beginning at top of neck, spiralling down counter-clockwise to upper body, where joined by light blue thread, both pulled into neat short zigzag pattern; additional final threads of yellow and light blue. Light blue handle from shoulder to rim, sharply angled. Slightly fluted. One handle missing, base hidden in modern wooden stand.

4. Spina (Valle Trebba, zone 1, area C), tomb 83. Dated to late fourth century B.C.¹⁶⁷ H. 7.7. Dark blue glass with yellow and white decoration. Narrow, horizontal rim-disc; very tall cylindrical neck; sharp junction between neck and very broad, flat shoulders; ovoid body; slightly elongated, rounded end-knob. Decoration: yellow thread beginning on shoulder, spiralling down counter-clockwise to lower body, joined at mid-body by white thread, both pulled into neat short zigzag pattern, yellow thread continuing to final stripe. Dark blue handles of end of shoulders to just below rim. Slightly fluted. Missing part of one handle. Negrioli, 1924, 310, fig. 9, second from left.

5. Spina (Valle Trebba, zone 1, area C), tomb 83. Dated to late fourth century B.C. H. 6.5. Glass, shape and decoration as III.B.ii.4 above. Missing both handles. Negrioli, 1924, 310, fig. 9, second from right.

6. Bari. National Museum, Copenhagen, no. Chr. VIII 205. H. 7.1. Shape and decoration as III.B.ii.1 above. Fossing, 1940 118, fig. 92.

7. Canosa, tomba degli ori. Dated to 300-275 B.C.¹⁶⁸ H. 12.0. Glass, shape and decoration as III.B.ii.4 above. Bartoccini, 1935, 225, fig. 12; Harden, 1968, 31, no. 2:h.

8. Hadra cemetery, Rue d'Aboukir, Alexandria, tomb 28. Dated to post 331 B.C.¹⁶⁹ H. 6.5, D. rim 2.5, M.D. body 4.0. Dark blue glass with white and light blue decoration. Narrow, horizontal rim-disc; broad, cylindrical neck; broad shoulders; ovoid body; small end-knob. Decoration as III.B.ii.1 above. Adriani, 1939, 77, fig. 36.

9. Cyprus. Shape and decoration as III.B.ii.4 above. di Cesnola, 1882, pl. 17:3.

10. Cyprus. Glass, shape and decoration as III.B.ii.2 above. di Cesnola, 1882, 167, fig. 182.

Type III. B. iii. Miniature Amphoriskos.

1. Unknown provenance. British Museum, no. 1976.10-11.5. H. 6.1, M.D. body 3.0, D. base 1.3. Dark blue glass with opaque white spots of scum and yellow decoration. Inward sloping rim; cylindrical neck; sloping shoulders; ovoid body; small base-knob. Decoration: yellow thread beginning at upper body, spiralling down clockwise in three revolutions; another yellow thread at lower body spiralling down clockwise in two revolutions; a third yellow thread on outside of base-knob. Dark blue handles from shoulder to mid-neck. Harden, 1981, no. 295.

Type III. C. i. Aryballos with rounded body and no handles.

1. Ampurias, Marti 103. Dated to c. 350 B.C. H. 5.0, D. rim 2.2, M.D. body 4.1. Dark brown? glass with yellow decoration. Inward sloping rim; narrow, concave neck; irregular, spherical body; slightly flattened bottom. Decoration: yellow on outside of rim; yellow on mid-neck; yellow thread beginning at shoulder, spiralling down counter-clockwise, pulled into short irregular zigzag pattern. No handles. Almagro, 1953, 96, no. 2, fig. 73, pl. V:3.

2. Ampurias, Marti 103. Dated to c. 350 B.C. H. 5.0, D. rim 2.8, M.D. body 4.4. Dark blue glass with white? decoration. Shape as III.C.i.1 above, except more irregular body. Decoration: white? on outside of rim; white? at mid-neck; short, irregular white zigzag pattern on body. No handles. Almagro, 1953, 96, no. 1, fig. 73, pl. V:2.

Type III. C. ii. Large lentoid aryballos with tall neck, vertical handles and stand-rolls.

1. Great Blisnitsa, Taman (ancient Phanagoria), grave 4. Hermitage Museum, no. BB. 1868.189. Dated to c. 300 B.C. Dark blue glass with yellow and light blue decoration. Narrow, inward sloping rim-disc; tall, concave neck merging with lentoid body. Decoration: unmarvered yellow thread on neck; yellow and light blue thread beginning on upper body, spiralling down to bottom, pulled into closely set feather pattern all over body. Dark blue vertical handles from shoulders to mid-neck; dark blue stand-rolls at bottom. Fragmentary. Voščinina, 1967, 559, n. 32, pl. 118:4.

2. Pompei? National Museum, Naples. Shape and decoration as III.C.ii.1 above. Pesce, Napoli, 6, fig. 5.

3. Unknown provenance. British Museum, no. 1868.5-1.19. H. 9.5, W. 6.8 by 4.0. Dark blue glass with yellow, white and opaque green decoration. Shape as III.C.ii.1 above; stand-rolls uneven; vessel unstable. Decoration: yellow on lower edge of lip; yellow thread beginning on shoulder, joined by white and green threads, all spiralling down to bottom, pulled into closely set feather pattern. Dark blue handles from shoulders to mid-neck; dark blue stand-rolls with white decoration on outside. Harden, 1981, no. 296; Neuburg, 1949, pl. iv:10a; Fossing, 1940, 92, fig. 61.

Type III. C. iii. Large lentoid aryballos with tall neck, ring handles and stand-rolls.

1. Homolion, grave A. Volos Museum, no. M2674. Dated to 330-300 B.C. 170. H. 7.5, W. 5.4, Th. 0.35. Dark blue glass with yellow and white decoration. Broad, horizontal rim-disc; tall, cylindrical neck; broad, flat shoulders; lentoid body; flattened bottom. Decoration: yellow on lower edge of lip; unmarvered yellow trail spiralling down clockwise on neck; white thread beginning on shoulder, spiralling down to bottom, where joined by yellow thread, both pulled into closely set short zigzag pattern, yellow thread continuing into final two stripes. Dark blue ring handles on shoulders; dark blue stand-rolls on bottom. Miller, 1979, 16-17, 55, no. Hom. G 3, pl. 9:d.

Type III. C. iv. Large lentoid aryballos with tall neck and ring handles jointed to stand-rolls by twists.

1. Doufmes, Carthage. National (formerly Lavigerie) Museum, Carthage. H. 8.0, W. 4.5. Dark blue glass with yellow and white decoration. Narrow, inward sloping rim-disc; narrow, concave neck; lentoid body. Decoration: yellow on lower edge of lip; yellow thread on mid-neck; yellow and white thread beginning on shoulder, spiralling down to bottom, pulled into closely set feather pattern all over body. Dark blue ring handles on shoulders; dark blue stand-rolls with white decoration; blue and white twist joining handles and stand rolls. Leclant, 1969, pl. XL.

Type III. C. V. Small lentoid aryballos with ring handles joined by twist.

1. Ruvo. British Museum, no. 1856.12-26.1143. H. 5.0, W. 4.3 by 2.9. Dark blue glass with yellow decoration. Horizontal rim-disc with tool marks on upper surface; narrow, cylindrical neck; lentoid body. Decoration: yellow on outside of rim; yellow thread on neck; on center of each face of vessel a marvered yellow oval blob. Dark blue ring handles on shoulders, linked by independent blue and yellow glass twist. Harden, 1981, no. 297.

Type III. C. vi. Small lentoid aryballos with ring handles and stand-rolls.

1. Unknown provenance. Freer Gallery of Art, Washington, D.C., no. 09.426. H. 4.5. Dark blue glass with yellow decoration. Inward sloping rim-disc; tall, downward tapering neck; lentoid body; slightly irregular bottom. Decoration: yellow on outside of rim; yellow thread beginning on neck, spiralling down clockwise to lower body, pulled into widely spaced festoon pattern. Dark blue ring handles on shoulders; dark blue stand-rolls on lower body. Ettinghausen, 1962, 16, fig. 26.

Type III. D. i. Two-handled Jar.

1. Tarquinia. British Museum, no. 1873.8-20.413. P.H. 7.6, M.D. body 5.9. Dark blue glass with white spots of scum, with yellow and white decoration. Missing splayed rim. Tall, cylindrical neck; sloping shoulders; large, rounded body tapering to constriction above added pad-foot with rounded edge. Decoration: unmarvered yellow thread on neck, spiralling down clockwise; white, yellow and another white thread on shoulder, pulled into festoon pattern; white and yellow thread on upper body, spiralling down to lower body, pulled into inverted festoon pattern; yellow thread on outside of pad-foot. Horizontal handles of dark blue and white twist, pushed into wall of vessel at mid-body. Harden, 1981, no. 299; Fossing, 1940, 99, fig. 74.

2. Unknown provenance. Museum Haaretz, Tel Aviv. Glass and shape as III.E.i.1 above. Decoration: yellow on outside of rim; unmarvered yellow thread on neck, spiralling down clockwise; yellow and white thread beginning on upper body, spiralling down to bottom, pulled into closely set feather pattern; yellow thread on outside of pad-foot. Israeli, Ancient Glass.

3. Unknown provenance. Toledo Museum of Art, no. 23.128. H. 8.5. Dark blue glass with white spots of scum, with yellow, white and light blue decoration. Shape as III.D.i.1 above. Decoration: yellow on outside of rim; unmarvered yellow thread on neck, spiralling down clockwise; white thread on shoulder, spiralling down in two revolutions, pulled into sloppy festoon pattern; yellow thread at mid-body, spiralling down clockwise, joined by light blue thread; below mid-body, white thread spiralling down in five revolutions, pulled into very shallow zigzag pattern; on lower body yellow thread spiralling down clockwise in three revolutions and another white thread spiralling down in two revolutions. Dark blue and white twist horizontal handle not pushed into wall of vessel. Art in Glass, 19, Grose, 1978, cover, third from right.

Type III. E. i. Hydrieke with sharply curving ovoid body.

1. Myrina, Aeolis. Louvre Museum. Dated to third century B.C.¹⁷¹ H. 6.0. Dark blue glass with yellow and white decoration. Horizontal rim-disc; tall, cylindrical neck; sharp junction between neck and broad, flat shoulders; ovoid body curving inward to short cylindrical stem; small flat pad-foot. Decoration: yellow thread beginning on shoulder, spiralling down clockwise to upper body, where joined by white thread, both pulled into short zigzag pattern at mid-body, yellow thread continuing down in seven revolutions to lower body. High-swung dark blue handle from shoulder to rim, two small dark blue horizontal handles pressed into upper body. Slightly fluted. Fossing, 1940, 126, fig. 104.
2. Myrina, Aeolis. Louvre Museum. Dated to third century B.C. P.H. 5.0. Dark blue glass with white and light blue decoration. Shape and decoration as III.E.i.1 above, except no threaded decoration on lower body. Missing pad-foot. Fossing, 1940, 126, fig. 105.
3. Rethymnon. Rethymnon Museum, no. 7. Pls. 28, 40. Glass and shape as III.E.i.1 above. Decoration: yellow and white threads beginning on shoulder, spiralling down clockwise in five revolutions each to just below mid-body, pulled into slightly wavy zigzag pattern. Vertical handle from shoulder to neck. Horizontal handles not evenly placed. Missing pad-foot.
4. Spina (Valle Trebba, zone 1, area C), grave 83. Dated to the late fourth century B.C.¹⁷² H. 7.0. Glass, shape and decoration as III.E.i.1 above. Negrioli, 1924, 310, fig. 9, third from right.
5. Spina (Valle Trebba, zone 1, area C), grave 83. Dated to the late fourth century B.C. H. 7.4. Glass, shape and decoration as III.E.i.1 above. Negrioli, 1924, 310, fig. 9, third from left.
6. Spina (Valle Trebba, zone 1, area C), grave 83. Dated to the late fourth century B.C. H. 7.5. Glass, shape and decoration as III.E.i.1 above. Negrioli, 1924, 310, not illustrated.
7. Spina (Valle Trebba, zone i, area C), grave 406. Dated to the late fourth century B.C.¹⁷³ H.7.5. Negrioli, 1927, 181. Not illustrated.
8. Spina (Valle Trebba, zone i, area C), grave 406. Dated to the late fourth century B.C. H.7.5. Negrioli, 1927, 181. Not illustrated.

Type III. E. 1 contd.

9. Spina (Valle Trebba, zone i, area C), grave 406. Dated to the late fourth century B.C. H.7.5. Negrioli, 1927, 181. Not illustrated.
10. Etruria. Musée du Cinquenaire, Brussels, no. R 1570, ex Coll. Ravestein. H. 7.2. Glass, shape and decoration as III.E.i.1 above. Fossing, 1940, 98, fig. 73.
11. Cumae, grave 202. Dated to late fourth century B.C. 174 H. 7.0. Glass, shape and decoration as III.E.i.1 above. Gábrici, 1913, col. 657, pl. CXVII:9.
12. Utica? Shape and decoration as III.E.i.1 above, except horizontal handles extend up beyond shoulder. Cintas, 1976, pl. LXXVII:11.
13. Sciatbi cemetery, Alexandria. Graeco-Roman Museum, Alexandria, no. 10390. Dated to post-331.¹⁷⁵ H. 7.4, D. rim 2.9, D. mouth 1.0. Glass, shape and decoration as III.E.3 above, except with white on outside of rim and on outside of pad-foot. Shoulder very bumpy. Silvery weathering; traces of red sand on interior. Breccia, 1912, 100, no. 314, pl. LXI:151.
14. Amathus, Cyprus, Sites D and E, tomb 96. British Museum, no. 1894.11-1.318. H. 6.6, M.D. body 4.3. Glass and shape as III.E.i.1. Decoration: white thread beginning on rim, spiralling down clockwise to shoulder where joined by yellow thread; yellow thread stops after one quarter revolution, where another yellow thread begins, white and yellow thread continue to lower body, pulled into slightly wavy zigzag pattern at mid-body. Harden, 1981, no. 301.
15. Polis (ancient Marion?), Cyprus, tomb 117, I.¹⁷⁶ Cyprus Museum, no. D1847. Pl. 28. Missing most of rim and parts of body. Glass and shape as III.E.i.1. Decoration: white thread beginning at top of bumpy shoulder, spiralling down clockwise, joined at upper body by yellow thread, both pulled into zigzag pattern, white thread continuing down to stem; yellow on outside of pad-foot. Myres and Ohnefalsch-Richter, 1899, 100f, no. 2501.
16. Cyprus. Shape and decoration as III.E.i.1 above, except with more elongated body and with high splayed foot (incorrect restoration?). di Cesnola, 1882, fig. 171.
17. Cyprus. Shape and decoration as III.E.i.1. above. di Cesnola, 1882, fig. 172.

Type III. E. ii. Hydriske with "bottle-shaped" body.

1. South Russia. Staatliche Museum, Berlin, no. 11863.673. Dark blue glass with yellow?, white? and/or light blue? decoration. Inward sloping rim-disc; broad, cylindrical neck; broad, sloping shoulders; large ovoid body, curving inward to short, wide pad-foot. Decoration: yellow? on outside of rim; unmarvered yellow? thread spiralling down neck; yellow? thread beginning on upper body, joined by white? and/or light blue? threads, all spiralling down to bottom, pulled into closely set feather pattern all over body; yellow? on outside of pad-foot. Thick, dark blue handle from shoulder to under rim; two dark blue horizontal handles at upper body, one pushed into wall of vessel. Fossing, 1940, 97, fig. 72.

2. Perugia, Umbria. Royal Ontario Museum, no. 918.5.2. Dated to late fourth century B.C. H. 10.3, M.D. body 6.3. Dark blue glass with white spots of scum, with yellow and white decoration. Shape as III.E.ii.1 above, except with more rounded body. Decoration: yellow on outside of rim; unmarvered yellow thread spiralling down clockwise on neck; white thread on shoulder, spiralling in two revolutions, pulled into irregular festoon pattern; yellow thread on upper body, spiralling down in three revolutions; white thread beginning at mid-body, spiralling down in five revolutions, pulled into shallow zigzag pattern; yellow thread beginning on lower body, spiralling down in two revolutions, below which is another white thread, spiralling down in three revolutions; yellow on outside of pad-foot. Dark blue and white twist handle from shoulder to rim; two dark blue and white twist horizontal handles, pushed into wall of vessel at upper body. Hayes, 1975, 12, no. 21, pl. 2:21.

3. Cumae. Coll. Stevens. H. 6.0. Dark blue glass with yellow and white decoration. Shape as III.E.i.1 above, except smaller and more irregular. Decoration: unmarvered thread (yellow?) spiralling down clockwise on neck; spiralling thread (white?) on shoulder; thread (white?) on mid-body, pulled into shallow zigzag pattern; thread (yellow?) on lower body. Gábrici, 1913, col. 715, pl. CXVIII:4.

Type III. F. i. Large oinochoe with ovoid body.

1. Bologna, from a Gallic grave. Museo Civico, Bologna. H. 16.0. Dark blue glass with yellow and white decoration. Trefoil rim; tall, cylindrical neck; sloping shoulders; rounded, ovoid body, curving inward to short stem; wide flat pad-foot. Decoration: unmarvered yellow thread on neck, spiralling down clockwise; white and yellow threads on shoulder, spiralling in two revolutions, pulled into inverted festoon pattern; at top of body, yellow thread spiralling down in three revolutions; below, white thread spiralling down in five revolutions, pulled into shallow zigzag pattern; below mid-body, white and yellow threads in two revolutions, pulled into inverted festoon pattern; on lower body, yellow thread spiralling down in two revolutions and, below, white thread spiralling down in five revolutions; yellow thread on outside of pad-foot. High-swung dark blue handle with groove, from shoulder to rim. Fossing, 96, fig. 71.

2. Pompeii. British Museum, no. 1899.2-4.4. P.H. 12.5, M.D. body 7.5. Dark blue glass with some white spots of scum, with yellow, white and light blue decoration. Shape as III.F.i.1 above, except with more narrow neck and less sloping shoulders. Decoration: unmarvered yellow on outside of lip; unmarvered yellow thread spiralling down neck; at upper body, yellow thread spiralling down; light blue and white threads spiralling down, both pulled into shallow zigzag pattern; on lower body, yellow thread spiralling down in two revolutions, light blue thread in one revolution and white thread in four revolutions; unmarvered yellow on outside of pad-foot. Harden, 1981, no. 303. Not illustrated.

3. Cumae, grave 126. Dated to end of fourth century B.C. 177 H. 11.8. Dark blue glass with white spots of scum, with yellow and light blue decoration. Shape and decoration as III.F.i.2 above, except with sharply sloping shoulders and nearly straight-sided body. Gábrici, 1913, col. 597, pl. CXVII:8.

4. Alèria, Corsica, tomb 53, no. 882a; 66/21. Dated to 320-280 B.C. H. with handle 9.0, D. foot 3.2. Dark blue glass with white and yellow decoration. Shape and decoration as III.F.i.3 above, except with more rounded body. Jehasse, 1973, 277, no. 796, pl. 163.

5. El Cigarralejo, Spain, tomb 277. Dated to 375-350 B.C. 178 P.H. 10.0, M.D. body 5.6. Dark blue glass with yellow and white decoration. Missing parts of rim and handle. Shape and decoration as III.F.i.1 above, except without lower set of festoon pattern. Cuadrado, 1968, 178, no. 2717a, fig. 29.

Type III. F. ii. Miniature oinochoe.

1. Eastern Aegean. British Museum, no. 1859.12-26.831. H. 4.6, M.D. body 3.2. Dark blue glass with yellow and white decoration. Trefoil rim; short, cylindrical neck; sharp junction between neck and sloping shoulders; slightly rounded, small, downward tapering body; no stem; low pad-foot. Decoration: unmarvered yellow thread spiralling clockwise down neck in three revolutions; on upper body, yellow thread spiralling down in two revolutions; below, white thread spiralling down in two revolutions; yellow on outside of pad-foot. High-swung dark blue handle with groove, from shoulder to rim, triangular in section. Harden, 1981, no. 307.

2. Ruvo. British Museum, no. 1856.12-26.1144. H. 4.7, M.D. body 229. Dark blue glass with white spots of scum, with yellow decoration. Trefoil rim; very short cylindrical neck; nearly flat shoulders; ovoid body; no stem; low-pad-foot. Decoration: unmarvered yellow thread on outside of rim; unmarvered yellow thread on neck; yellow thread at top of body, spiralling down clockwise in three revolutions; yellow thread on lower body, spiralling down clockwise in three revolutions; yellow thread on outside of pad-foot. High-swung dark blue handle from shoulder to rim. Harden, 1981, no. 311.

3. Teano, tomb 16. Dated to the late fourth century B.C. H. 4.5. Translucent blue green glass with yellow decoration. Shape and decoration as III.F.ii.2 above, except with more obtuse angle between neck and shoulder. Gabrici, 1910, col. 69, fig. 36:b.

4-6. La Hoya de Santa Ana Tobarra, tomb 54. Albacete Museum. Dated to fourth century B.C. 179.

7. Cyprus. Ex Coll. Grèau. Shape and decoration as III.F.ii.1 above, except with shallow zigzag pattern at mid-body. Perrot-Chipiez, 1885, pl. VIII:1.

Type III. F. iii. Large oinochoe with angular body.

1. Unknown provenance. Victoria and Albert Museum, no. 1009-1868. H. 8.5. Dark blue glass with yellow? (or light blue?) and white decoration. Trefoil rim; tall, narrow, cylindrical neck; upside down ovoid body; broad, flat pad-foot. Decoration: yellow? and white thread beginning on bottom of vessel, spiralling upward in counter-clockwise direction, pulled into zigzag pattern on lower body, continuing in five revolutions each to upper body. Dark blue handle from upper body to rim. Fossing, 1940, 126, fig. 103.

2. Unknown provenance. Corning Museum of Glass, no. 50.1.2. Dark blue glass with yellow and white decoration. Trefoil rim; tall, narrow, cylindrical neck; broad, nearly flat shoulders; ovoid body; short stem; small, flat pad-foot. Decoration: yellow and white treads beginning on shoulder, spiralling down counter-clockwise to lower body, pulled into slightly wazy zigzag pattern at mid-body. Dark blue handle from shoulder to rim. Goldstein, 1979, no. 265, pl. 16.

Type III. F. iv. Large oinochoe with "bottle-shaped" body, decorated with feather pattern.

1. Attica. Ex Coll. Charvet. Dark blue glass with yellow? and white? (and/or light blue?) decoration. Trefoil rim; broad, cylindrical neck; sharp junction between neck and sloping shoulders; slightly rounded body that is nearly cylindrical, tapering slightly towards very wide pad-foot. Decoration: unmarvered yellow? thread on rim; unmarvered yellow? thread spiralling down clockwise on neck; yellow? and white? thread on upper body, spiralling down to base, pulled into festoon pattern for three revolutions on upper body and into feather pattern that covers rest of body; yellow? on outside of foot. High-swung dark blue handle with grooves, from shoulder to rim. Froehner, 1879, pl. 2:9; Vavra, 1951, pl. III, center.

2. Genoa. Villa Durazzo Pallavicini, Genova-Pegli. H. 11.5. Shape and decoration as III.F.iv.1 above, except with slightly wavy zigzag pattern instead of feather pattern. Fossing, 1940, 95, fig. 67.

3. Canosa. National Museum, Copenhagen, no. Chr. 203. H. 14.8. Shape and decoration as III.F.iv.1 above, except with taller, higher-shouldered body. Fossing, 1940, 95, fig. 65.

4. Canosa. National Museum, Copenhagen, no. Chr. 204. Fossing, 1940, 95.

Type III. F. iv contd.

5. Cumae, grave 126. Dated 325-300 B.C. H. 10.0. Dark blue glass with yellow, white and light blue decoration. Shape as III.F.iv.1 above, except with wider body with only a slight incurving towards base, and less high-swung handle. Decoration: yellow thread spiralling down clockwise on neck; yellow, white and light blue threads beginning on upper body, strongly pulled into slightly spaced feather pattern covering entire body. Gábrici, 1913, col. 597, pl. CXVII:7.

6. Teano, tomb 43. Dated to late fourth and early third centuries B.C. H. 7.0. Glass as III.F.iv.5 above. Shape as III.F.iv.1 above, except with shorter neck, more rounded shoulders and body, and with shorter handle. Decoration: yellow thread spiralling down clockwise on neck; yellow, white and light blue thread beginning on upper body, all spiralling down to lower body, bunched into two zones at upper and lower body, sharply pulled into feather pattern. Gábrici, 1910, col. 89, fig. 59.

7. Paestum. Paestum Museum, 3626. Fragment of wide pad-foot and lower part of vessel. Dark blue glass with yellow and white decoration. Yellow and white feather pattern on lower part of body; unmarvered yellow thread on outside of foot.

8. Nora, Sardinia. Shape and decoration as III.F.iv.2 above. Patroni, 1904, pl. XVII: top row, center.

9. Aléria, Corsica, tomb 67, no. 2005b; Inv. no. 66/541. Dated to 350-320 B.C. H. 16.5, D. foot 6.3. Dark blue glass with yellow, white and light blue decoration. Shape as III.F.iv.2 above, except with broader, flatter shoulder. Decoration: unmarvered yellow thread on outside of rim; unmarvered yellow thread spiralling down clockwise on neck; yellow, white and light blue threads beginning on upper body, spiralling down to base, pulled into feather pattern that becomes inverted festoon pattern towards foot. Jehasse, 1973, 353, no. 1247, pl. 163.

10. Aléria, Corsica, tomb 79, no. 2286a; Inv. no. 67/55. Dated to 275-260 B.C. H. 12.5, D. foot 5.1. Dark blue glass with yellow decoration. Shape as III.F.iv.2 above, except with more narrow neck and with unbroken curve between neck and shoulder. Decoration: unmarvered yellow thread on outside of rim; unmarvered yellow thread spiralling down clockwise in two revolutions on neck; yellow thread beginning on body, spiralling down clockwise to base, pulled into feather pattern that becomes shallow zigzag pattern on lower body; unmarvered yellow thread on outside of foot. Jehasse, 1973, 393, no. 1496, pl. 163.

Type III. F. iv contd.

11. Unknown provenance. Louvre Museum, ex Coll. Campana, no. 346 (8713). Translucent brown glass with yellow and white decoration. Feather pattern beginning on shoulder. Fossing, 1940, p. 95. Not illustrated.

Type III. F. v. Large oinochoe with "bottle-shaped" body, decorated with inverted festoon pattern.

1. Genoa. Villa Durazzo Pallavicini, Genova-Pegli. H. 8.5. Dark blue glass with yellow? and white? decoration. Trefoil rim; narrow, cylindrical neck; unbroken convex curve between neck and sloping shoulders; rounded, nearly cylindrical body, curving inward near broad, low pad-foot. Decoration: unmarvered yellow? spiralling down clockwise on neck; yellow? and white threads beginning on upper body, spiralling down to bottom, pulled into inverted festoon pattern after one revolution. High-sprung dark blue handle with groove, from shoulder to rim. Fossing, 1940, 95, fig. 66.

2. Canosa, tomba degli ori. Dated to 300-275 B.C. H. 13.0. Dark blue glass with yellow and white decoration. Shape and decoration as III.F.v.1 above. Bartoccini, 1935, 225, fig. 12; Harden, 1968, 31, no. 2:g.

3. Unknown provenance. Coll Cohn. H. 15.0, D. rim, 5.0, D. shoulder 6.8. Glass as III.F.v.2 above. Trefoil rim; tall, cylindrical neck; sharp junction between neck and rounded, sloping shoulders; rounded, nearly cylindrical body, curving inward near broad, low foot-pad. Decoration as III.F.v.1 above, except with two revolutions each of the white and yellow threads on shoulder before the inverted festoon pattern. von Saldern, 1981, 29, no. 7.

Type III. F. vi. Large oinochoe with piriform body.

1. Olbia? Coll. Oppenländer, no. 2007. H. 6.1. Dark blue glass with yellow decoration. Trefoil rim; narrow, cylindrical neck; no break between neck and top of body; rounded, piriform body with sharp incurving near broad flat pad-foot. Decoration: unmarvered yellow on outside of rim; unmarvered yellow thread spiralling down clockwise in two revolutions on neck; yellow thread beginning on upper body, spiralling down to bottom, pulled into feather pattern. Dark blue handle with grooves, from upper body to rim. Nolte, 1974, 58, no. 129.

Type III. F. vi contd.

2. Unknown provenance. Newark Museum, no. 50.1237. H. without handle 15.0, D. foot 4.2 to 4.4. Dark blue glass with yellow, white and light blue decoration. Shape as III.F.vi.1 above, except with taller neck, sharp junction between neck and slightly rounded, small shoulders. Decoration: white? on outside of rim; unmarvered white? thread spiralling down clockwise in five revolutions on neck; yellow, light blue and white threads beginning on upper body, spiralling down to just above lower body, pulled into feather pattern with yellow thread continuing for three revolutions; white thread on body, just above foot, spiralling down in three revolutions; unmarvered yellow thread on outside of foot. High-sprung dark blue handle with grooves, from upper body to rim. Auth, 1976, 42, no. 32.

Type III. G. i. Thick-walled unguentarium with large body and up-turned handles.

1. Myrina. Louvre Museum. H. 8.5. Dark blue glass with yellow? and white? decoration. Narrow, horizontal rim-disc; tall, cylindrical neck; unbroken convex curve between neck and sloping shoulders; ovoid body; tall, solid, cylindrical foot-stand splaying to flat foot. Decoration: yellow? thread beginning on upper neck, spiralling down clockwise to upper body, where joined by white? thread, both pulled into slightly wavy, closely set zigzag pattern on upper body. Fluted on upper body. Dark blue loop handles on upper body, slightly up-turned. Fossing, 1940, 117, fig. 89.

2. Chiusi. British Museum, no. 1873.8-20.412. H. 11.4, M.D. body 4.7. Dark blue glass with yellow and white decoration. Shape as III.G.i.1 above, except with more narrow, taller neck and more narrow foot-stand. Decoration: white thread beginning on upper neck, spiralling down clockwise in five revolutions to upper body, where joined by yellow thread, both pulled into irregular zigzag pattern on upper body, yellow thread continuing to spiral down in several revolutions to mid-body. Solid, dark blue semi-circular handles added at mid-body and bent upward. Fluted on upper body. Harden, 1981, no. 373.

3. Cyprus. Shape as III.G.i.1 above, except with more globular body and shorter foot-stand. Decoration as III.G.i.1 above, except with yellow? thread continuing on lower body in three clockwise revolutions. Dark blue loop handles added at upper body and pushed in against wall of vessel. di Cesnola, 1882, fig. 169.

4. Unknown provenance. British Museum, no. 1870.6-6.1. H. 13.5, M.D. body 6.6. Glass and shape as III.G.2 above, except with flatter shoulders and larger body. Decoration: yellow thread beginning on rim, spiralling down clockwise to upper body, where joined by white thread, both pulled into closely set zigzag pattern, both continue with one horizontal stripe at mid-body. Dark blue loop handles added on shoulder and bent upward. Harden, 1981, no. 372.

Type III. G. ii. Thin-walled piriform unguentarium with strap handle.

1. Iasos, tomb XI. Smyrna Museum, no.638. Dated to 330-300 B.C. H. 13.0, M.D. body 5.0. Dark green glass with white and yellow decoration. No added rim-disc; tall, cylindrical neck, gradually merging with sloping shoulders; sharp junction between shoulders and slightly convex, downward tapering body; body ends in small button-base; single? dark green strap handle from shoulder to upper neck. Decoration: yellow and white threads beginning at top of neck, forming flange that serves as rim, spiralling down clockwise to just below mid-body, pulled into shallow festoon pattern on body, leaving spirals on neck and shoulders. Levi, 1954, 213, fig. 18.

Part Four: Third to First Centuries B.C.

Type IV. A. i. Alabastron with tall neck and cylindrical body.

1. Camiros. British Museum, no. 1873.8-20.409. H. 15.5, H. neck 4.7, M.D. body 2.9. Dark blue body with white decoration. Horizontal rim-disc; tall, slightly irregular neck with downward taper; short, sloping shoulders; cylindrical body; flattened bottom. Decoration: white thread, beginning on shoulder, spiralling down clockwise to bottom, pulled into widely-spaced feather pattern at mid-body.¹⁸² Dark blue knob handles at mid-body, one placed 1 cm. higher than other. Harden, 1981, no. 325.
2. Myrina, Aeolis. Louvre Museum. H. 9.0. Glass as IV.A.i.1 above. Horizontal rim-disc; tall, irregular neck, merging gradually into short, slightly convex body; flattened bottom. Decoration: white thread beginning at top of neck, spiralling down clockwise to bottom, pulled into closely-set zigzag pattern covering most of body, white thread continuing in two revolutions at bottom. Dark blue lug handles at mid-body, one slightly higher than other. Slightly fluted. Fossing, 1940, 109, fig. 80.
3. Amphipolis, from a tomb. Glass, shape and decoration as IV.A.i.2 above. Ergon, 1957, 39, fig. 40:c.
4. Corfu? British Museum, no. 1868.1-10.499. H. 12.3, H. neck 2.8, M.D. body 2.6. Dark blue glass with reddish streaks, with yellow and white decoration. Shape as IV.A.i.2 above, except with taller, slightly irregular body. Decoration: yellow yellow beginning on outside of rim, joined by white thread at top of neck, both spiralling down clockwise to bottom, pulled into slightly irregular zigzag pattern at mid-body. Dark blue knob handles at mid-body. Slightly fluted. Harden, 1981, no. 324.
5. Ibiza. H. 7.6. Dark blue glass with yellow decoration. Shape and decoration as IV.A.i.2 above. Vives y Escudero, 1917, no. 543, pl. XXXII:8.
6. Gordion, City Mound, NCT-A2. Gordion Excavation, no. G 130.¹⁸³ Pl. 29. P.H. 4.1, D. rim 2.3. Fragment from upper half of vessel. Dark blue glass with yellow decoration. Shape and decoration as IV.A.i.2 above.

Type IV. A. i contd.

7. Unknown provenance. National Museum, Athens, NM 2936. Pl. 29. H. 10.4, D. rim 2.9, D. mouth 1.4, M.D. body 2.7. Glass as IV.A.i.5 above. Horizontal rim-disc; tall cylindrical neck; short, sloping shoulders; cylindrical body; flattened bottom. Decoration: yellow thread beginning on outside of rim, spiralling down clockwise to bottom, concentrated in four revolutions at shoulder, and three revolutions at mid-body and lower body. Dark blue lug handles at mid-body, one placed higher than the other.

Type IV. A. ii. Alabastron with tall neck and convex body.

1. Samothrace, from a tile tomb. Dated to Augustan period.¹⁸⁴ H. 7.9. Dark blue glass with yellow decoration. Short horizontal rim-disc; tall, slightly irregular neck with downward taper; neck merging into very short convex body; flattened bottom. Decoration: yellow thread beginning on outside of rim, spiralling down clockwise to bottom, pulled into feather pattern covering entire body. Dark blue lug handles at top of body. Dusenbery, 1967, 37, no. 3, fig. 4.

2. Amphipolis, from a tomb. Glass and decoration as IV.A.ii.1 above. Shape as IV.A.ii.1 above, except with much longer body. Ergon, 1958, 74, fig. 78, upper row, second from left.

3. Aquileia, Aquileia and Grado Museum. Glass, shape and decoration as IV.A.ii.2 above. Brusin, 1964, fig. opposite p. 176.

4. Cumae, chamber tomb. Naples National Museum. Dated to 250-200 B.C.¹⁸⁵ H. 8.5. Dark blue glass with white and yellow decoration. Shape as IV.A.ii.1 above, except with shorter neck. Decoration: white and yellow threads beginning at mid-neck, spiralling down clockwise to bottom, pulled into feather pattern all over body. Levi, 1925, 88, fig. 4.

5. Reggio Calabria, tomb VIII. Dated to c. 200 B.C.¹⁸⁶ Shape and decoration as IV.A.ii.2 above. Spinazzola, 1907, 709, fig. 8.

6-9. San Favar, Mallorca. Dated to pre-123 B.C.¹⁸⁷ Four vessels nearly identical in shape and decoration. H. 11.0, M.D. body 3.5. Short horizontal rim-disc; slightly concave neck; short, sloping shoulders; nearly straight-sided body, curving inward abruptly near very flattened bottom. Decoration as IV.A.ii.4 above. Dark blue lug handles at top of body. Amoros and Garcia y Bellido, 1947, 12, fig. 13, second row, first two on left and last two on right.

Type IV. A. ii contd.

10. Ibiza. H. 8.8. Glass, shape and decoration as IV.A.ii.1 above. Vives y Escudero, 1917, no. 542, pl. XXXII:3.
11. Cirta, Algeria, from a tomb. Constantine Museum. Dark blue glass with light blue decoration. Shape and decoration as IV.A.ii.6-9 above. Doublet and Gauckler, 1892, 113, pl. 13:4
12. Cirta, Algeria, from a tomb. Constantine Museum. Glass, shape and decoration as IV.A.ii.1 above, except with slightly straighter sides and more flattened bottom. Doublet and Gauckler, 1892, 70, 113, pl. 13:5.
13. Borg, el Dalia, Tripoli, Libya. From a tomb. H. 9.0. Dark blue glass with white decoration. Shape and decoration as IV.A.ii.2 above.
14. Egypt? National Museum, Copenhagen, no. 9851. H. 13.0. Glass, shape and decoration as IV.A.ii.2 above. Fossing, 1940, 111, fig. 83.
15. Tortosa, Syria. Ex Coll. de Clercq. H. 8.2, M.D. body. 2.3. Glass, shape and decoration as IV.A.ii.12 above. de Ridder, 1909, no. 245, pl. VIII.
16. Cyprus. British Museum, no. 1912.10-25.19. H. 13.8, H. neck 3.5, M.D. body 3.5. Dark blue glass with yellow and white decoration. Shape and decoration as IV.A.ii.2 above. Harden, 1981, no. 326.
17. Cyprus. Cyprus Museum, no. D 1851. Pl. 30.. P.H. 12.1, D. rim 3.0, D. mouth 1.2, M.D. body 3.3. Missing part of lower body. Traces of grayish sand on interior. Glass, shape and decoration as IV.A.ii.2 above. [Note that restored drawing is wrong in suggesting that this piece had a pointed bottom.]
18. Cyprus. Cyprus Museum, no. D1833. Est. H. 12.0, D. rim 2.5, D. mouth 1.2. Fragment from upper half of vessel. Glass, shape and decoration as IV.A.ii.16 above.
19. Cyprus. Coll. Pierides. H. 13.8, M.D. body 3.8. Glass, shape and decoration as IV.A.ii.2 above. Seefried, 1974, 149, pl. XXII:6.
20. Unknown provenance. National Museum, Athens, no. NM 10874. Pl. 30. H. 9.5, D. rim 2.9, D. mouth 1.0, M.D. body 3.3. Dark blue glass with white decoration. Shape and decoration as IV.A.ii.1. above.

Type IV. A. ii contd.

21. Unknown provenance. British Museum, no. 1976.10-11.8. H. 12.2, H. neck, 3.7, M.D. 3.5. Dark blue glass with white decoration. Short, horizontal rim-disc; tall, concave neck; sharp junction between neck and body; nearly straight-sided body, curving sharply inward near flattened bottom. Decoration as IV.A.ii.1 above. Harden, 1981, no. 330.

22. Unknown provenance. Royal Ontario Museum, no. 950.157.201. H. 13.0, M.D. body 3.5. Dark blue glass with yellow and white decoration. Shape as IV.A.ii.2 above. Decoration: yellow thread beginning on outside of rim, joined by white thread on neck, both spiralling down clockwise to bottom, pulled into festoon pattern all over body. Hayes, 1975, 13, no. 28, pl. 2.

Type IV. A. iii. Piriform alabastron with feather pattern decoration.

1. "Greek Archipelago." British Museum, no. 1868.5-1.915. H. 14.5, M.D. body 4.3. Dark blue glass with white decoration. Inward sloping rim-disc; "neck" merging gradually with expanding body; rounded carination two-thirds of the way down the body, below which body tapers inward to rounded, pointed bottom. Decoration: white thread beginning on outside of rim, spiralling clockwise down neck in five, thin, widely spaced revolutions to upper body, continuing in closely spaced revolutions to carination, pulled into feather pattern, thread continuing to bottom in five, thick revolutions. Dark blue, horizontal lug handles, 4 cm. below rim. Harden, 1981, no. 333.

2. Ayios Thomas (Heracleion), Crete. Heracleion Museum. Glass, shape and decoration as IV.A.iii.1 above, except with more revolutions on upper and lower body. Lug handles placed at different levels. Alexiou, 1965, 556, pl. 698a.

3. Chania, Crete. Chania Museum, no. 82. H. 14.5, D. rim 3.2, D. mouth 1.2, M.D. body 3.8. Dark blue glass with yellow decoration. Shape as IV.A.iii.1 above, except with tool marks on underside of rim-disc. Decoration as IV.A.iii.1 above, except thread begins at top of neck, with six revolutions on upper body and six on lower body. Missing parts of lower body. Traces of red sand on interior.

4. Veroia, Macedonia. H. 12.5, M.D. body 2.5. Glass, shape and decoration as IV.A.iii.1 above, except with four revolutions on upper body and six on lower body. Drougou and Touratsoglou, 1980, 25, 39, no. P.1263, pl. 14.

Type IV. A. iii contd.

5. Amphipolis, from a tomb. Shape and decoration as IV.A.iii.1 above. Ergon, 1957, 39, fig. 40, middle.
6. Panticapaeum. Hermitage Museum, no. P. 1848.49. Fragment from lower half of vessel. Shape and decoration as IV.A.iii.1 above. Voštinina, 1967, 558, pl. 124:2, left.
7. Georgyppia. Hermitage Museum, no. GP 1882.18. Glass, shape and decoration as IV.A.iii.1 above. Voštinina, 1967, 558, pl. 124:2, right.
8. Olbia. Glass, shape and decoration as IV.A.iii.1 above, except for combed decoration, which is in shallow feather pattern. CRPetersb, 1900, 12, fig. 26.
9. Ancona, from a tomb. National Museum, Ancona. Dark blue glass with white? decoration. Inward sloping rim-disc; downward tapering neck, gradually merging with slightly rounded, expanding body; slight, rounded carination very low on vessel, below which slightly rounded lower body tapers to rounded, pointed bottom. Decoration: white? thread beginning at top of neck, spiralling clockwise down to bottom, widely spaced, after one revolution pulled into feather pattern covering entire body. Brizio, 1902, 463, fig. 31.
10. Cumae. Coll. Cumana, no. 86414. H. 15.4. Dark blue glass with yellow? and white? decoration. Shape as IV.A.iii.9 above, except with shorter rim-disc. Decoration as IV.A.iii.1 above, except with bicolored threads. Gàbrici, 1913, col. 454, pl. XC:3.
11. Ornavasso, Torino, grave 57. Dated to 100-50 B.C. 188 Shape and decoration as IV.A.iii.1. Fossing, 1940, 113, n. 6.
12. Tharros, Sardinia, tomb 33. British Museum, no. WA 133046. H. 12.5, M.D. body 3.7. Glass, shape and decoration as IV.A.iii.1 above. Harden, 1981, no. 335. Not illustrated.
13. Carthage. British Museum, no. 1876.5-5.1. H. 12.8, M.D. body 3.6. Dark blue glass with yellow and white decoration. Shape and decoration as IV.A.iii.1, except with bicolored decoration. Harden, 1981, no. 339. Not illustrated.

Type IV. A. iii contd.

14. Cyrenaica. British Museum, no. 1867.5-12.31. H. 12.5, M.D. body 4.1. Glass and shape as IV.A.iii.1 above, except with shorter "neck." Decoration as IV.A.iii.8 above. Harden, 1981, no. 336.
15. Sidon? Univerisity Museum, American University of Beirut. Glass as IV.A.iii.9 above. Shape and decoration as IV.A.iii.8 above, except white thread begins on outside of rim. MacKay, 1951, 77, pl. XII:9; Baramki, 1967, pl. V, top row, right.
16. Hauran, Syria. Damascus Museum, no. 3322. H. 11.8. Dark blue glass with yellow decoration. Shape and decoration as IV.A.iii.1 above, except with downward tapering "neck" and more rounded carination. Zouhdi, 1964, 42, no. 3, fig. 24.
17. Syria. Damascus Museum, no. 5537. H. 11.5. Glass, shape and decoration as IV.A.iii.1 above. Zouhdi, 1964, no. 4. Not illustrated.
18. Syria? Ex Coll. de Clercq. Glass, shape and decoration as IV.A.iii.1 above, except with downward tapering "neck". de Ridder, 1909, no. 248, pl. 8.
19. Kourion, site B, tomb 26. British Museum, no. 1896.2-1.115. P.H. 9.4, M.D. body 3.5. Glass, shape and decoration as IV.A.iii.1 above. Harden, 1981, no. 337. Not illustrated.
20. Kourion. Cyprus Museum, no. D. 1868. Pl. 31. Dark blue glass with light blue decoration. Shape and decoration as IV.A.iii.1 above. Myres and Ohnefalsch-Richter, 1899, no. 2536.
21. Ayios Ermoyenis, Kourion, tr. 43, tomb 1, no. GL 50. University Museum, Philadelphia, no. 63-1-114 a-b. Pl. 43. Dated to first century B.C. 189 H. 11.8, D. rim 2.2, D. mouth 0.8, M.D. body 3.6. Translucent light brown glass with light blue decoration. Inward sloping rim-disc with tool marks on under surface; short, downward tapering neck; sharp junction between neck and upper body; expanding body; rounded carination four-fifths of the way down body; below carination, body tapers inward to rounded, pointed bottom. Decoration: light blue thread beginning on upper body, spiralling clockwise down to bottom, pulled into feather pattern on upper body, thread continuing on lower body in five revolutions. Translucent green tooled lug handles at junction of neck and body. Missing parts of body; mended. Weathered and pitted.

Type IV. A. iii contd.

22. Amathus, sites D and E, tomb 228. British Museum, no. 1984.11-1.504. H. 11.5, M.D. body 3.2. Dark blue glass with yellow and light blue decoration. Shape and decoration as IV.A.iii.1 above, except with horizontal rim-disc and downward tapering "neck." Harden, 1981, no. 338.

23. Amathus. Cyprus Museum, no. 1844. Pl. 31. Dark blue glass with white and yellow decoration. Shape and decoration as IV.A.iii.1 above. Myres and Ohnefalsch-Richter, 1899, no. 2528.

24. Amathus, tomb 147. Limassol Museum, no. 556/5. Pls. 31, 41. Dated to Hellenistic II (c. 100 B.C.).¹⁹⁰ H. 11.5, D. rim 2.1, D. mouth 0.7, M.D. body 4.2. Glass as IV.A.iii.1 above. Shape and decoration as IV.A.iii.16 above. Karageorghis, 1974, 843, fig. 35.

25. Cyprus. Cyprus Museum, no. D 1864. Pl. 31. H. 11.3, D. rim 2.8, D. mouth 0.8, M.D. body 3.8. Translucent light blue glass with yellow decoration. Shape and decoration as IV.A.iii.16 above. On lower body, a circular plug of light blue glass was added, apparently where the combing action had broken into the core.

26. Cyprus. Cyprus Museum, no. D 1860. H. 11.8, D. rim 2.2, D. mouth 0.9, M.D. body 3.6. Translucent light blue glass with yellow decoration. Shape and decoration as IV.A.iii.1 above.

27. Cyprus. Cyprus Museum, no. D 1866. H. 11.9, D. rim 3.2, D. mouth 0.9, M.D. body 3.3. Glass, shape and decoration as IV.A.iii.1 above.

28. Cyprus. Cyprus Museum, no. D. 1845. H. 9.4, D. rim 2.5, D. mouth 0.9, M.D. body 3.0. Translucent light blue glass with white decoration. Shape and decoration as IV.A.iii.9 above. At mid-body, the combing action seems to have broken into the core; this was patched by squeezing in the body, seriously distorting the feather pattern.

29. Cyprus. Coll. Pierides, Larnaca. H. 11.2, M.D. body 4.0. Dark blue glass with white and yellow decoration. Shape and decoration as IV.A.iii.16 above, except with added yellow decoration. Seefried, 1974, 149, pl. XXII:4.

30. Cyprus. Metropolitan Museum of Art, no. 74.51.319. Shape and decoration as IV.A.iii.1 above. Myres, 1914, no. 5059.

Type IV. A. iii contd.

31. Alishar Huyuk. Shape and decoration as IV.A.iii.16 above. Schmidt, 1929, 99, no. b 1748, fig. 155.

Type IV. A. iv. Piriform alabastron with festoon pattern decoration.

1. Rhodes. National Museum, Copenhagen, no. 7648. Fossing, 1940, 112. Not illustrated.

2. Antikythera shipwreck. National Museum, Athens, no. NM 15133-14. Pl. 32. Dated 80-50 B.C. 191 P. H. 8.5, M. D. body 3.9. Missing rim, parts of neck, handles, and body. Dark blue glass with white and light green decoration; light green now mostly decayed. "Neck" merging gradually into body; body expands to rounded carination; below carination body curves inward. Decoration: light green and white threads spiralling down clockwise, pulled into festoon pattern, below carination, both threads continue in several revolutions. Traces of one dark blue tooled lug handle on upper body.

3. Corinth? Metropolitan Museum of Art, no. 17.194.579. Dark blue glass with white decoration. Inward sloping rim-disc; "neck" merging gradually with body; expanding body to rounded carination, three-fourths of the way down body; below carination, body curves inward to rounded, pointed bottom. Decoration: white thread beginning on outside of rim, spiralling down clockwise to bottom, pulled into festoon pattern on body above carination. Dark blue tooled lug handles, placed unevenly at top of festoon pattern. Froehner, 1879, pl. I:3; Vavra, 1951, pl. I, upper left.

4. Cumae. Coll. Cumana, no. 86412. H. 13.5. Dark blue glass with yellow? and white? decoration. Shape and decoration as IV.A.iv.3 above, except with downward tapering "neck" and evenly placed lug handles. Gabrici, 1913, col. 714, pl. CXVII:2.

5. Mineo, Sicily. H. 10.8. Dark blue glass with yellow and white decoration. Shape and decoration as IV.A.iv.2 above, except with short rim-disc and short, concave neck. Orsi, 1903, 438, fig. 3.

6. North Syria. Damascus Museum, no. 5951. H. 12.5. Dark blue glass with yellow and light blue decoration. Zouhdi, 1964, 42, no. 5. Not illustrated.

Type IV. A. iv contd.

7. North Syria. Damascus Museum, no. 5952. H. 10.0. Dark blue glass with white and light blue decoration. Shape and decoration as IV.A.iv.5 above; light blue thread begins on neck. Zouhdi, 1964, 42, no. 6. Illustrated on postcard issued for the 1964 Exposition des Verres Syriens.
8. Syria. Damascus Museum, no. 6772. H. 10.2. Dark blue glass with white decoration. Zouhdi, 1964, 43, no. 7. Not illustrated.
9. Amrit, Syria. Ex. Coll. de Clercq. H. 12.3, M.D. body 3.5. Glass, shape and decoration as IV.A.iv.3 above, except with slightly concave upper body. de Ridder, 1909, no. 253.
10. Syria? Ny Carlsberg Glyptotek, Copenhagen. H. 10.5. Shape and decoration as IV.A.iv.4 above. Fossing, 1940, 113, fig. 85.
11. Amathus, sites D and E, tomb 49. British Museum, no. 1894.11-1.124. H. 9.9, M.D. body 3.9. Shape as IV.A.iv.4 above, except with shorter, slightly concave body that expands rapidly to more rounded carination. Harden, 1981, no. 340.
12. Amathus, sites D and E, tomb 78. British Museum, no. 1894.11-1.163. H. 9.8, M.D. body 4.0. Dark blue glass with yellow and white decoration. Shape and decoration as IV.A.iv.11 above; white thread begins on neck, yellow thread begins on rim and continues on lower body. Harden, 1981, no. 341. Not illustrated.
13. Amathus, sites D and E, tomb 30. H. 13.7, M.D. body 3.8. Dark blue glass with white decoration. Shape and decoration as IV.A.iv.4 above. Just above carination, a hole made during manufacture has been filled with a dark blue plug. Harden, 1981, no. 343.
14. Amathus. Cyprus Museum, no. D 1850. H. 11.5, D. rim 2.6, D. mouth 0.9. M.D. body 3.5. Blue glass with white decoration. Shape and decoration as IV.A.iv.3 above. Myres and Ohnefalsch-Richter, 1899, no. 2526.
15. Amathus. Cyprus Museum, no. D. 1869. H. 12.0, D. rim 2.5, D. mouth 0.9, M.D. body 3.6. Glass, shape and decoration as IV.A.iv.3 above. On lower part of body, a hole made during manufacture has been filled in with a dark blue plug. Myres and Ohnefalsch-Richter, 1899, no. 2530.

Type IV. A. iv contd.

16. Amathus. Cyprus Museum. Dark blue glass with white decoration. Myres and Ohnefalsch-Richter, 1899, no. 2534.

17. Amathus. Cyprus Museum. Dark blue glass with white decoration. Myres and Ohnefalsch-Richter, 1899, no. 2535.

18. Ayios Ermoyenis, Kourion, tomb 5, no. GL 25. University Museum, Philadelphia, no. 63-1-184. Pl. 43. Dated to first century B.C.¹⁹² H. 12.6. Dark blue glass with white decoration. Shape and decoration as IV.A.iv.3 above.

19. Ayios Ermoyenis, Kourion, tr. 43, tomb 1, no. GL 51. University Museum, Philadelphia, no. 63-1-115. Pl. 43. Dated to first century B.C. P.H. 7.7, D. rim 2.4, M.D. body 3.1. Mended; missing parts of body. Blue glass with yellow and white decoration. Inward sloping rim-disc; short, downward tapering neck, merging gradually with expanding body; very rounded carination; body tapering inward below carination. Decoration: yellow thread beginning on outside of rim, joined by white thread on neck, both spiralling down clockwise to bottom, pulled into festoon pattern on upper body. Blue, tooled lug handles, placed unevenly on upper body. Weathered; blue glass mostly decayed to opaque light blue.

20. Ayios Ermoyenis, Kourion, tr. 43, tomb 1, no. GL 52. University Museum, Philadelphia, no. 63-1-116. Pl. 43. Dated to the first century B.C. H. 12.4, D. rim 2.6, M.D. body 4.2. Mended; missing parts of body. Dark blue glass with light blue decoration. Shape and decoration as IV.A.iv.3 above.

21. Ayios Ermoyenis, Kourion, tr. 43, tomb 1, no. GL 55. University Museum, Philadelphia, no. 63-1-119. Pl. 43. Dated to the first century B.C. H. 9.1, D. rim 2.3, M.D. body 3.4. Dark blue glass with white decoration. Shape and decoration as IV.A.iv. 19 above; one of the lug handles has not been tooled. Weathered; dark blue glass mostly decayed to opaque light blue.

22. Ayios Ermoyenis, Kourion, tr. 43, tomb 1, no. GL 56. University Museum, Philadelphia, no. 63-1-120. Pl. 43. Dated to the first century B.C. H. 12.0, D. rim 2.6, M.D. body 3.2. Dark blue glass with yellow decoration. Shape and decoration as IV.A.iv.3 above, except with slightly irregular, more narrow body.

Type IV. A. iv contd.

23. Cyprus. Pierides Coll, Larnaca. H. 11.5, D. 3.8. Glass, shape and decoration as IV.A.iv.3 above. Seefried, 1974, 149, pl. XXII:5.

Type IV. B. i. Small amphoriskos with tall neck, small body and butt-end.

1. Myrina, Aeolis. Louvre Museum. H. 7.5. Dark blue glass with yellow? decoration. Horizontal rim-disc; tall neck; flat shoulders; small ovoid body; added butt-end with rounded end-knob. Decoration: yellow? thread beginning on rim, spiralling down clockwise to lower body, pulled into irregular zigzag pattern on upper body. Tall dark blue handles from shoulder to rim; now mostly missing. Slightly fluted. Fossing, 1940, 119, fig. 93.

2. Kavala? Thessaloniki Museum, no. B.E. 10628. Dark blue glass with yellow decoration. Shape as IV.B.i.1 above, except with larger, flatter shoulders and more angular body. Decoration: yellow thread beginning on shoulder, spiralling down to butt-end, pulled into very shallow zigzag pattern. Not fluted. Petsas, 1969, 292, pl. 295:g.

3. Crete. Heracleion Museum, no. 148. Glass, shape and decoration as IV.B.i.1 above.

4. Cumae. Glass, shape and decoration as IV.B.i.1 above, except with sloping shoulders and no end-knob. Gabrici, 1913, col. 715, pl. CXVIII:3.

5. Bab-ben Gashir, Tripoli, Libya, tomb 8. Tripoli Museum. Dated to second century B.C. Glass shape and decoration as IV.B.i.4 above.

6. Cyrenaica. British Museum, no. 1866.4-15.217. H 10.3, M.D. body 3.9. Glass, shape and decoration as IV.B.i.1 above, except with taller neck. Harden, 1981, no. 347.

7. Sidon. British Museum, no. 1893.10-9.1. H. 8.5, M.D. body 3.5. Dark blue glass with white decoration. Shape and decoration as IV.B.i.1. Harden, 1981, no. 345.

8. Sidon. British Museum, no. 1893.10-9.3. P.H. 8.7, M.D. body 4.3. Glass, shape and decoration as IV.B.i.4 above. Harden, 1981, no. 348.

9. Sidon. British Museum, no. 1893.10-9.2. H. 10.0, M.D. body 3.8. Glass, shape and decoration as IV.B.i.4 above. Harden, 1981, no. 349.

Type IV. B. i contd.

10. Aphenrika, Cyprus, tomb 36, no. 7. Dated to 250-200 B.C. P.H. 6.3. Dark blue glass with yellow and light blue decoration. Missing handles and butt-end. Shape and decoration as IV.B.i.4 above. Dray and Taylor, 1951, 120, pl. XXXI:5.

Type IV. B. ii. Bag-shaped amphoriskos.

1. Sklavopoula Selinou, Crete. Chania Museum, no 114. Restored H. 15.0, M.D. body 8.5. Missing rim, neck and most of one handle. Dark blue glass with white decoration. Trace of concave neck; bag-shaped body with flattened bottom. Decoration: white thread beginning on rim?, spiralling down clockwise to bottom, after several revolutions on upper body pulled into festoon pattern, changing to irregular zigzag pattern on lower body, thread continuing in several careless revolutions to bottom. Added end-knob of transparent glass with greenish tinge and yellow-brown streaks. Alexiou, 1962, 299, pl. 357:b.

2. Rome. British Museum, no. 1869.6-24.6. H. 10.0, M.D. body 5.4. Translucent dark green glass with white decoration. Short, horizontal rim-disc; no distinct neck; bag-shaped body with flattened bottom. Decoration as IV.B.ii.1 above (beginning on rim), except without zigzag pattern on lower body. Added small vertical handles and tooled end-knob of transparent glass with greenish tinge. Harden, 1981, no. 350.

3. Almeria, Spain. Coll. Macaya, Barcelona. Shape as IV.B.ii above, except with pointed bottom without end-knob. Decoration of closely set linear thread from neck to bottom. Vigil Pascual, 1969, 78, fig. 69.

4. Amathus, sites D and E, tomb 53. British Museum, no. 1894.11-1.138. P.H. 8.5, M.D. body 5.0. Translucent dark green glass with white and red decoration. Shape and decoration as IV.B.ii.2 above, except with more angular shoulder. Harden, 1981, no. 351.

Type IV. B. iii. Amphoriskos with short neck and large body, decorated with feather pattern.

1. Athenian Agora, no. G 538. Agora storerooms. From a context dated to the fifth century A.D. 193 Pl. 32. P.H. 7.5, D. rim 3.3, D. mouth 1.1. Blue glass with white decoration. Fragment of rim, neck and upper part of vessel. Inward sloping rim-disc with tool marks on upper and under surfaces; tall neck with slight downward taper, merging gradually with sloping shoulders; straight-sided body. Decoration: white thread beginning on rim, spiralling down clockwise, pulled into feather pattern on upper body. Vertical handles of transparent glass with greenish tinge, going from shoulder to upper neck in one curve; one handle missing. Silvery weathering crust. Traces of brown sand on interior.

2. Tortosa, Syria. Ex Coll. de Clercq. H. 14.0, D. rim 2.8, M.D. body 4.7. Glass and shape as IV.B.iii.1 above; body nearly cylindrical, curving inward towards bottom; added end-knob of transparent glass with greenish tinge. Decoration as IV.B.iii.1 above; feather pattern changes to shallow zigzags at mid-body and to horizontal stripes on lower body. de Ridder, 1909, 130, no. 230, pl. VII.

3. Syria. Ex Coll. de Clercq. H. 13.0, D. rim 2.8, M.D. body 5.0. Blue glass with yellow, white and light blue decoration. Shape as IV.B.iii.2 above, except with more rounded body and with handles that go straight up from shoulder to the level of the rim and then angle back to attach at mid-neck. Decoration as IV.B.iii.2 above. de Ridder, 1909, 130, no. 224, pl. VII.

4. Unknown provenance. British Museum, no. 1868.5-1.38. H. 14.6, M.D. body 4.8, D. end-knob 1.5. Dark blue glass with white decoration. Shape as IV.B.iii.2 above. Decoration: white thread beginning on rim, spiralling down clockwise to bottom, pulled into feather pattern all over the body, except on one vertical section of the body where the absence of the down stroke has formed a panel of festoons, thread continues on lower body in three revolutions. Handles and end-knobs of dark blue glass. Harden, 1981, no. 352.

Type IV. B. iv. Amphoriskos with short neck and large body, decorated with festoon pattern.

1. Nisyros, tomb 41. Rhodes Museum, no. 14252. Dated to 25 B.C.-25 A.D. H. 13.0. Dark blue glass with white and light blue decoration. Shape as IV.B.iii.2 above. Decoration: white and light blue thread beginning on rim, spiralling down clockwise to bottom, pulled into shallow festoon pattern on body. Jacopi, 1932, 533, no. 11, fig. 67, bottom row, fourth from left.

2. Panticapaeum, from a tomb. Dated to 50 B.C.-50 A.D. Shape and decoration as IV.B.iv.1 above. Pharmakowsky, 1911, 198, fig. 6.

Type IV. B. v. Amphoriskos with tall neck, large body, vertical handles and end-knob, decorated with feather pattern.

1. Samothrace, from a cremation burial. Dated to the early first century A.D. H. 17.5. Translucent dark blue-green glass with yellow and white decoration. Short, inward sloping rim-disc with tool marks on upper and under surfaces; very tall cylindrical neck, gradually merging with sloping shoulders; tall, nearly cylindrical body that tapers downward towards the bottom. Decoration: yellow thread beginning on rim, spiralling down clockwise to bottom, joined at upper body by white thread, both pulled into feather pattern covering entire body. Handles and end-knob of transparent glass with greenish-yellow tinge; tall vertical handles from shoulder to upper neck with gentle curve at top. Dusenbery, 1967, 37, no. 7, fig. 8.

2. Samothrace, from the fill of the South Necropolis. Green glass with white and red decoration. Fragment of vessel similar to IV.B.v.1 above. Dusenbery, 1967, 38.

3. Samaria? Rockefeller Museum, no. 1238. Green? glass with white? decoration. Shape as IV.B.v.1, except with concave neck and more ovoid body. Decoration as IV.B.v.1 above. Handles with pronounced angle at top.

4. Syria. Ny Carlsberg Glyptotek, Copenhagen. H. 23.0. Shape and decoration as IV.B.v.3 above, except feather pattern only on mid-body, with simple spirals on lower body. Fossing, 1940, 120, fig. 95.

5. North Syria. Damascus Museum, no. 5953.194 H. 13.6. Dark blue glass with yellow and red decoration. Shape and decoration as IV.B.v.4 above, except with more globular body. Zouhdi, 1964, 43, no. 10, fig. 25.

Type IV. B. vi. Amphoriskos with tall neck, large body, vertical handles and end-knob, decorated with festoon pattern.

1. Miletus, grave D47.30. Staatliche Museum, Berlin, no. M 122.2. P.H. 13.5. Dark blue glass with white and red decoration. Inward sloping rim-disc; very tall cylindrical neck, gradually merging with sloping shoulders; nearly straight-sided body, curving inward to pointed bottom. Decoration: white and red thread beginning on rim, spiralling down clockwise to bottom, pulled into festoon pattern on upper body, continuing in six revolutions on lower body. Handles and end-knob (missing) of transparent glass; tall, vertical handles from shoulder to mid-neck. Rohde, 1980, 154, no. 13, fig. 13.

2. Samothrace, from a deposit around a cinerary urn. Dated to the Augustan period. H. 16.3. Dark blue glass with light blue and yellow decoration. Shape as IV.B.vi.1 above, except with shorter, more ovoid body, and with handles attached higher on neck. Decoration as IV.B.vi.1 above, except with festoon pattern continuing to just above bottom. Dusenbery, 1967, 37, no. 4, fig. 5.

3. Samothrace, from a deposit around a cinerary urn. Dated to the Augustan period. H. 17.5. Glass as IV.B.vi.3 above. Shape as IV.B.vi.1 above, except with more elongated body and with handles attached higher on neck. Decoration as IV.B.vi.1 above, except with more closely spiralling threads pulled into a very shallow festoon pattern continuing to just above bottom. Dusenbery, 1967, 37, no. 5, fig. 6.

4. Samothrace, from an inhumation in a tile. Dated to the Augustan period. H. 16.9. Glass as IV.B.vi.3 above. Shape as IV.B.vi.1 above, except with handles attached higher on neck. Decoration as IV.B.vi.1 above, except with festoon pattern on middle and lower body. Dusenbery, 1967, 37, no. 6, fig. 7.

5. Anchiale, Bulgaria, tomb 1. Dated to 50 B.C.-50 A.D. H. 18.4. Shape and decoration as IV.B.vi.1, except with handles attached higher on neck. Balabanou, 1979, 29, fig. 13.

6. Varna. Varna Museum, no. II-6179. Dated to early first century B.C. H. 16.2, D. rim 2.7, M.D. body 6.3. Shape and decoration as IV.B.vi.3 above. Minčec, 1980, 112, no. 7, pls. I and III.

7. Bulgaria. Varna Museum, no. II-4624. P.H. 6.0, D. rim 2.5. Fragment of rim and neck from vessel like IV.B.vi.7 above.

Type IV. B. vi contd.

8. Jaroslawska, Stanitsa, Kuban. H. 14.0. Glass, shape and decoration as IV.B.vi.4 above. CRPetersb, 1896, 59, fig. 288.
9. Cirta, Algeria. Constantine Museum, no. 114. Two non-joining fragments of upper and lower part of vessel. Glass, shape and decoration as IV.B.vi.1 above, except taller curve to handles. Doublet and Gauckler, 1892, 70, 113, pl. 13:2.
10. Utica? Shape and decoration as IV.B.vi.1 above, except with handles attached to top of neck. Cintas, 1976, pl. LXXVII:13.
11. Sidon. British Museum, no. 1913,5-22.1. H. 16.3, M.D. body 4.8, D. end-knob 1.2. Dark green glass with white and red decoration. Shape and decoration as IV.B.vi.5 above. One handle transparent with yellowish-green tinge, other hand and end-knob transparent with green tinge. Harden, 1981, no. 355.
12. Lebanon? University Museum, American University of Beirut. Shape and decoration as IV.B.vi.1 above. Handles missing. Baramki, 1967, pl. V, top row, left.
13. Nessana. P.H. 3.4. Green glass with white and yellow decoration. Small fragment of vessel. Harden, 1962, 77, no.1. Not illustrated.
14. Nessana. P.H. 2.2. Blue glass with white decoration. Small fragment of vessel. Harden, 1962, 77, no. 2. Not illustrated.
15. Djeblè, Syria. Aleppo Museum. P.H. 13.0, M.D. body 4.5. Glass, shape and decoration as IV.B.vi.1 above, except handles folded back at attachment to neck. Mouhanded, 1964, 35, fig. 13.
16. Haylonnè, Hama, Syria. Hama Museum, no. 621. P.H. 11.0, D. rim 2.5. Dark blue glass with yellow and white decoration. Shape and decoration as IV.B.vi.3 above. Masri, 1964, 72, fig. 71.
17. North Syria. Damascus Museum, no. 5950. Glass, shape and decoration as IV.B.vi.3 above. Zouhdi, 1964, 44, no. 11. Illustrated on postcard issued for the 1964 Exposition des Verres Syriens.

Type IV. B. vi contd.

18. Syria. British Museum, no. 1913.5-22.2. H. 15.5, M.D. body 6.2. D. end-knob 0.9. Dark green glass streaked with red, with yellow and white decoration. Shape and decoration as IV.B.vi.3 above. Harden, 1981, no. 359.

19. Amathus, site B, tomb 17.195 British Museum, no. 1894.11-1.21. P.H. 4.9. Green glass with white decoration. Fragment of upper part of vessel. Harden, 1981, no. 356A. Not illustrated.

20. Amathus, sites D and E, tomb 53. British Museum, no. 1894.11-1.137. H. 16.5, M.D. body 5.0, D. end-knob 1.5. Dark green glass with yellow and white decoration. Shape and decoration as IV.B.vi.5 above. Handles and end-knob of transparent glass with yellow-brown tinge. Harden, 1981, no. 357.

21. Amathus, sites D and E, tomb 87A. British Museum, no. 1894.11-1.326. H. 16.8, M.D. body 5.1, D. end-knob 1.5. Glass, shape and decoration as IV.B.vi.21 above. Harden, 1981, no. 358. Not illustrated.

22. Amathus, sites D and E, tomb 78.196 British Museum, no. 1894.11-1.162. H. 13.7, M.D. body 5.1, D. end-knob 1.0. Dark bluish-green glass with yellow and white decoration. Shape and decoration as IV.B.vi.3 above, except with shorter neck. Harden, 1981, no. 361.

23. Amathus. Cyprus Museum. Dark blue glass with white and yellow decoration. Myres and Ohnefalsch-Richter, 1899, no. 2513.

24. Amathus. Cyprus Museum. Dark blue glass with white and red decoration. Myres and Ohnefalsch-Richter, 1899, no. 2514.

25. Amathus. Cyprus Museum. Dark blue glass with white and red decoration. Myres and Ohnefalsch-Richter, 1899, no. 2515.

26. Kourion, site E, tomb 118. British Museum, no. 1896.2-1.207. P.H. 14.8, M.D. body 4.7. Dark green glass with yellow and white decoration. Shape and decoration as IV.B.vi.5 above. Harden, 1981, no. 360; Murray, *et al.*, 1900, 69, fig. 98, where wrongly ascribed to Site B, tomb 26.

27. Idalion? Metropolitan Museum of Art, no. 74.51.323. Shape and decoration as IV.B.vi.5 above. di Cesnola, 1877, 73, pl. III.

Type IV. B. vi contd.

28. Kuklia. Ashmoleon Museum. Dark blue? glass with white decoration. Fossing, 1940, 120. Not illustrated.
29. Paphos, from a rectangular grave. Dated to the Late Hellenistic period.¹⁹⁷ Pl. 41. Dark blue glass with white and yellow decoration. Missing part of rim, handles and end-knob. Shape and decoration as IV.B.vi.3 above.
30. Cyprus. British Museum, no. 1912.10-25.18. H. 13.8, M.D. body 4.8. Green glass with white decoration. Shape and decoration as IV.B.vi.5 above. Harden, 1981, no. 356. Not illustrated.
31. Cyprus. Fitzwilliam Museum.¹⁹⁸ Shape and decoration as IV.B.vi.3 above. Handles curve around shoulder. Fossing, 1940, 120, fig. 94.
32. Cyprus. Cyprus Museum, no. D 1842. Pl. 33. H. 16.0, D. rim 2.5. Dark blue glass with white and red decoration. Shape and decoration as IV.B.vi.3 above. Karageorghis, 1969, fig. 146:1.
33. Cyprus. Coll. Pierides, Larnaca. P.H. 15.5, M.D. body 4.2. Dark blue glass with yellow and light blue decoration. Shape and decoration as IV.B.vi.5 above; missing handles and end-knob. Seefried, 1974, 149, pl. XXIII:1.
34. Cyprus. Coll. Pierides, Larnaca. H. 15.3, M.D. body 4.9. Dark blue glass with white and red decoration. Shape and decoration as IV.B.vi.5 above. Seefried, 1974, 150, pl. XXIII:2.
35. Cyprus. Metropolitan Museum of Art, no. 74.51.320. Shape and decoration as IV.B.vi.3 above. di Cesnola, 1885, pl. 76:5.
36. Cyprus. Metropolitan Museum of Art, no. 74.51.321. Shape and decoration as IV.B.vi.3 above, except with more rounded, slightly irregular body. di Cesnola, 1885, pl. 76:3; Myres, 1914, no 5056.
37. Cyprus. Metropolitan Museum of Art, no. 74.51.324. Shape and decoration as IV.B.vi.5 above. di Cesnola, 1885, pl. 76:4; Myres, 1914, 5054.

Type IV. B. vi contd.

38. Unknown provenance. National Museum, Athens, no. E 85/175. Pl. 32. P.H. 16.4, D.rim 2.7, D. mouth 0.9, M.D. body 5.0. Dark green glass with yellow and white decoration. Shape as IV.B.vi.5 above. Decoration: yellow thread beginning on rim, spiralling down clockwise, joined by white thread at shoulder, both pulled into shallow festoon pattern on body, yellow thread continuing in four revolutions to bottom. In three places the combing action had cut into the core. Handles and end-knob of transparent glass with yellow-green tinge. Most of handles and part of end-knob missing.

39. Unknown provenance. Private collection, Japan? H. 10.3. Dark blue? glass with white? and yellow? decoration. Short, inward sloping rim-disc with tool marks on upper and lower surfaces; short, cylindrical neck, merging gradually with sloping shoulders; wide, nearly spherical body. Decoration as IV.B.vi.1. Transparent glass handles and end-knob; short handles of one continuous curve from top of shoulders to top of neck. Sugiyama, 1980, no. 96.

Type IV. B. vii. Amphoriskos with tall neck, large body, vertical handles and disc-base.

1. Amathus. Cyprus Museum, no. 2512. Pl. 33. H. 16.0. Dark blue glass with white and yellow decoration. Short, inward sloping rim-disc; tall, cylindrical neck, merging gradually with long sloping shoulders; long, straight-sided downward tapering body, curving inwards at very bottom. Decoration: Yellow thread beginning on rim, joined by white thread at top of neck, both spiralling down clockwise to bottom, pulled into festoon pattern on entire body. Handles curving from shoulder to mid-neck; small, flat disc-base. Both handles and disc-base of transparent glass with greenish tinge. Myres and Ohnefalsch-Richter, 1899, no. 2512; Karageorghis, 1969, fig. 146:2.

2. Soli. Cyprus Museum. Dark blue glass with yellow decoration. Shape and decoration as IV.B.vii.1 above. Myres and Ohnefalsch-Richter, 1899, no. 2511.

Type IV. B. viii. Amphoriskos with tall neck, large body, vertical handles and rounded bottom.

1. Gnathia. British Museum, no. 1856.12-26.1150. H. 13.5, M.D. body 4.2. Green glass with white decoration. Short, inward sloping rim-disc; very tall, cylindrical neck, merging gradually with sloping shoulders; slightly rounded, large body, curving inward sharply near rounded bottom. Decoration: white thread beginning on rim, spiralling down clockwise to bottom, pulled into festoon pattern on middle of body. Transparent, tall, vertical handles from shoulder to nearly level of rim, curving back abruptly to attach at mid-neck. Harden, 1981, no. 363.

Type IV. B. ix. Amphoriskos with ovoid body, S-shaped handles and disc-base, decorated with feather pattern on neck and body.

1. Amrit, Syria. Ex Coll. de Clercq. H. 9.6, D. base 2.4. Dark blue? glass with yellow? and white? decoration. Inward sloping rim-disc with tool marks on upper and under surfaces; tall, cylindrical neck, expanding towards bottom, gradually merging with sloping shoulders; large, ovoid body; large, added, flat disc-base with rounded edge and tool marks on upper surface. Decoration: yellow? and white? thread beginning on rim, spiralling down clockwise to bottom, pulled into two sets of feather patterns, one on neck, shoulders and upper body, other on middle and lower body. S-shaped transparent glass handles beginning on upper body and touching shoulder and attached to rim, forming a nearly closed loop from upper body to shoulder and a large, open loop from shoulder to rim. de Ridder, 1909, 135, no. 239. pl. 8.

2. Syria. British Museum, no. 1913.5-22.3. H. 11.0, M.D. body 4.9, D. base 2.2. Dark blue glass with yellow and white decoration. Shape and decoration as IV.B.ix.1 above, with mostly white on neck. Harden, 1981, no. 365. Not illustrated.

3. Amathus, sites D and E, tomb 72. British Museum, no. 1894.11-1.325. H. 11.0, M.D. body 5.1, D. base 3.2. Dark green glass with yellow and white decoration. Shape and decoration as IV.B.ix.2 above. Harden, 1981, no. 354.

4. Amathus, site B, tomb 17.199 British Museum, no. 1894.11-1.19. H. 10.6, M.D. body 4.9, D. base 2.6. Dark blue glass with yellow and light blue decoration. Shape and decoration as IV.B.ix.1 above, with more light blue than yellow on neck. Harden, 1981, no. 366.

Type IV. B. ix contd.

5. Cyprus. Shape and decoration as IV.B.ix.1 above. di
Cesnola, 1882, 167, fig. 183.

Type IV. B. x. Amphoriskos with ovoid body, S-shaped handles and disc-base, decorated with festoon pattern on neck and feather pattern on body.

1. Syria. British Museum, no. 1913.5-22.4. H. 11.6, M.D. body 5.0, D. base 3.1. Dark blue glass with yellow and white decoration. Inward sloping rim-disc with tool marks on upper and under surfaces; tall, cylindrical neck, expanding towards its bottom, where it gradually merges with sloping shoulders; slender, ovoid body; large, added flat disc-base with rounded edge and tool marks on upper surface. Decoration: yellow and white threads beginning on rim, spiralling down clockwise to bottom, pulled into festoon pattern on neck, shoulders and upper body, and, in a separate combing action, pulled into shallow feather pattern on middle and lower body. S-shaped handles of transparent glass with greenish-yellow tinge, beginning on upper body and touching shoulder and attached to rim, forming a small, nearly closed loop on shoulder and a large, open loop from shoulder to rim. Harden, 1981, no. 370.

2. Amathus. British Museum, no. 1894.11-1.691. H. 11.0, M.D. body 5.2, D. base 3.4. Dark green glass with white and yellow decoration. Shape and decoration as IV.B.x.1 above, except with more globular body and with feather pattern extending higher on body. Harden, 1981, no. 368.

3. Amathus, sites D and E, tomb 124. British Museum, no. 1969.4-1. 74. P.H. 10.0, M.D. body 5.2, D. base 4.0. Glass, shape and decoration as IV.B.x.2 above. Harden, 1981, no. 369. Not illustrated.

4. Amathus, sites D and E., tomb 124. British Museum, no. 1894.11-1.346. H. 12.2, M.D. body 4.7, D. base 2.3 to 2.5. Glass, shape and decoration as IV.B.x.2 above. Harden, 1981, no. 371. Not illustrated.

5. Amathus. Cyprus Museum, no. D 1836.200 H. 11.5, D. mouth 0.6, M.D. body 5.6, D. base 3.6. Glass, shape and decoration as IV.B.x.1 above. Myres and Ohnefalch-Richter, 1899, no. 2517.

6. Ayios Ermoyenis, Kourion, tomb 5, no. GL 24. University Museum, Philadelphia, no. 63-1-183. Pl. 43. Dated to the first century B.C. H. 11.5. Glass as IV.B.x.1 above. Shape and decoration as IV.B.x.2 above.

Type IV. B. x contd.

7. Ayios Ermoyenis, Kourion, tomb 5, no. GL 26. University Museum, Philadelphia, no. 63-1-185. Pl. 42. Dated to the first century B.C. H. 11.8. Glass, shape and decoration as IV.B.x.1 above.

8. Cyprus. Cyprus Museum, no. D 1862. Pl. 33. H. 12.0, D. rim 2.8, D. mouth 0.8, M.D. body 6.0, D. base 3.2. Glass, shape and decoration as IV.B.x.1 above. Handles of transparent glass with light brown tinge; most of one handle missing. [Note that drawing wrongly omits the traces of one handle.]

9. Cyprus. Cyprus Museum, no. D 1870. H. 11.8, D. rim 2.4, D. mouth 0.9, D. base 2.7. Blue glass with yellow decoration. Shape and decoration as IV.B.x.1 above.

10. Cyprus. Cyprus Museum, no. D 1859. H. 11.5, D. rim 2.7, D. mouth 0.8. Translucent light blue glass with opaque light blue and white decoration. Shape and decoration as IV.B.x.2 above.

11. Cyprus. Cyprus Museum, no. D 1838. P.H. 10.0. D. mouth 0.8. Rim, part of neck and handles missing. Translucent light blue glass with white and yellow decoration. Shape and decoration as IV.B.x.1 above.

12. Cyprus. Cyprus Museum, no. D 1262a. P.H. 11.3, D. rim 2.8, D. mouth 0.8, M.D. body 5.5. Missing most of base. Glass, shape and decoration as IV.B.x.1 above.

13. Cyprus. Cyprus Museum, no. D 1841. H. 12.5, D. rim 2.2, D. mouth 0.8. Translucent light blue glass with white and yellow decoration. Shape and decoration as IV.B.x.1 above.

14. Cyprus. Coll. Pierides, Larnaca. H. 12.0. M.D. body 5.4. Dark blue glass with light blue and white decoration. Shape and decoration as IV.B.x.1 above. Seefried, 1974, 150, pl. XXIII:3.

Type IV. B. xi. Amphoriskos with piriform body, S-shaped handles and disc-base.

1. Varna? Varna Museum, no. II-4623. P.H. 4.2, D. base 3.9. Dark blue glass with yellow and white decoration. Fragment from lower body and added disc-base. Minčev, 1980, 112, no. 9, pls. II and III.

Type IV. B. xi contd.

2. Cyrene? Boston Museum of Fine Arts, no. 01.8219. H. 14.5. Dark blue glass with yellow and white decoration. Inward sloping rim-disc with tool marks on upper and under surfaces; tall, cylindrical "neck", gradually merging with piriform body with high, rounded carination; added dark blue disc-base. Decoration: yellow and white thread beginning on rim, spiralling down clockwise to bottom, pulled into festoon pattern on upper and middle body. S-shaped handles of transparent glass, beginning on upper body, touching neck and attached under rim, forming a small, nearly closed loop on upper body and a large, open loop above. von Saldern, 1968, no. 2.
3. Cyrene, Boston Museum of Fine Arts. Similar to IV.B.xi.2 above. von Saldern, 1968, mention under no. 2.
4. Poli (ancient Marion), Cyprus. Fitzwilliam Museum, no. 84. Shape and decoration as IV.B.xi.2 above, except with thread pulled into feather pattern. Fossing, 1940, 123, fig. 98.
5. Amathus. Cyprus Museum. Shape and decoration as IV.B.xi.4 above. Myres and Ohnefalsch-Richter, 1899, no. 2520; Dikaios, 1961, 147, pl. 33:1.
6. Idalion. Ex Coll. de Clercq. H. 13.8, D. base 3.0. Glass, shape and decoration as IV.B.xi.2 above. de Ridder, 1909, 133, no. 235, pl. 7.
7. Salamis? Shape and decoration as IV.B.xi.4 above. di Cesnola, 1882, pl. 17:10.
8. Salamis? Shape and decoration as IV.B.xi.4 above. Missing disc-foot? di Cesnola, 1882, pl. 17:12.
9. Cyprus. Cyprus Museum. 201 Pl. 33. H. 15.5, D. rim 3.0, D. base 4.6. Blue glass with light blue and yellow decoration. Shape and decoration as IV.B.xi.4 above, except with lower, more rounded carination. Handles missing.
10. Cyprus. Cyprus Museum, no. D 1853. H. 14.0, D. rim 2.6, D. mouth 0.8. Glass, shape and decoration as IV.B.xi.4 above. Handles of transparent glass with light-brown tinge.
11. Cyprus. Cyprus Museum, no. D 1852. P.H. 6.5, D. rim 2.9, D. mouth 0.8. Dark green glass with white and yellow decoration. Fragment from upper half of vessel like IV.B.xi.4 above.

Type IV. B. xi contd.

12. Cyprus. Cyprus Museum, no. D. 1834. P.H. 8.0, D. base 2.4. Blue glass with white and yellow decoration. Fragment from lower half of vessel like IV.B.xi.2 above.

13. Cyprus. Ashmolean Museum, no. 1888.1283. Harden, 1981, 170, n. 110.

14. Cyprus? Ashmolean Museum, no. 1950.32. Harden, 1981, 170, n. 110.

Type IV. B. xii. Amphoriskos with inverted ovoid body.

1. Unknown provenance. Metropolitan Museum of Art. Dark blue glass with yellow and white decoration. Short, inward sloping rim-disc with tool marks on upper and under surfaces; tall cylindrical neck, gradually merging with inverted ovoid body with flattened bottom. Decoration: yellow and white thread beginning on rim, spiralling down clockwise to bottom, pulled into festoon pattern on upper and middle body. S-shaped handle of transparent glass. Richter, 1974, 384, fig. 514.

2. Unknown provenance. Carnegie Museum of Natural History, Pittsburgh, no. 21819/6. H. 12.2. Transparent glass with dark greenish tinge with yellow and white decoration. Shape and decoration as IV.B.xii.1 above, except with tall vertical handle from upper body to top of neck. Oliver, 1980, 42, no. 13.

Type IV. C. i. Thick-walled fusiform unguentarium with small body and upturned handles.

1. Olbia. Staatliche Museum, Berlin, no. 10428 (Gl. 2654), ex Coll. Mavrogordato. H. 9.5, M.D. body 4.4. Dark blue glass with yellow and white decoration. Inward sloping rim-disc; slightly irregular, cylindrical neck, merging gradually with ovoid body; added tall, flaring foot-stand of dark blue glass. Decoration: yellow thread beginning on rim, spiralling down clockwise, joined by white thread on neck, both pulled into irregular zigzag pattern on upper body, continuing in several irregular spirals on lower body. Dark blue solid semi-circular handles attached to mid-body and bent upward. Slightly fluted on upper body. Rohde, 1980, 153, no. 11, fig. 11.

2. Syria. Ex Coll. de Clercq. Shape and decoration as IV.C.i.1 above. de Ridder, 1909, 132, no. 233, pl. VII.

3. Cyprus. Cyprus Museum, no. D 2955. Pl. x. H. 8.8, D. rim 2.0, D. mouth 0.9. Glass, shape and decoration as IV.C.i.1 above.

4. Cyprus. Shape and decoration as IV.C.i.1. above. di Cesnola, 1882, 168, fig. 170.

Type IV. C. ii. Thick-walled fusiform unguentarium with small body, without handles.

1. Myrina, Aeolis. Louvre Museum. Dark blue glass with yellow decoration. Inward sloping rim-disc; cylindrical neck, gradually merging with flat shoulders; wide, ovoid body; added tall, flaring foot-stand. Decoration: yellow thread beginning on rim, spiralling down to mid-body, pulled into slightly irregular zigzag pattern on upper body. Slightly fluted. Fossing, 1940, 117, fig. 90.

2. Athenian Agora, no. G 186. Agora storerooms. From context of the first century A.D.²⁰² Pl. 34. P.H. 7.0, M.D. body 4.0. Missing rim and most of neck. Glass, shape and decoration as IV.C.ii.1 above.

3. Amphipolis, from a tomb. Glass, shape and decoration as IV.C.ii.1 above, except with narrower body and taller, thinner foot-stand. Ergon, 1957, 39, fig. 40, left.

4. Butera, Caltanisseta, Sicily, tomb 60, Porta Reale. Dated to c. 250 B.C. H. 8.5. Dark blue glass with white decoration. Shape and decoration as IV.C.ii.1 above. Adamestenu, 1958, 278, fig. 40.

Type IV. C. ii contd.

5. Ibiza. H. 9.4. Dark blue glass with yellow and white decoration. Shape and decoration as IV.C.ii.3 above. Vives y Escudero, 1917, no. 544, pl. XXXII:6.

6. Cirta. Musée de Constantine, no. 113. Dark blue glass with white decoration. Shape and decoration as IV.C.ii.3 above. Doublet and Gauckler, 1892, 70, 113, pl. 13:1.

7. Homs. Damascus Museum, no. 15347. H. 9.2. Dark blue glass with white decoration. Shape and decoration as IV.C.ii.3 above. Exposition des verres syriens, 1964, 5, no. 8.

8. Cyprus. Paphos Museum. Dark blue glass with white decoration. Shape and decoration as IV.C.ii.1 above.

9. Cyprus. Metropolitan Museum of Art, ex Coll. di Cesnola. H. 8.7. Dark blue glass with yellow and white decoration. Shape and decoration as IV.C.ii.1 above. Myres, 1914, no. 5053.

10. Unknown provenance. National Museum, Athens, no. NM 2981. Pl. 34. P.H. 9.0, D. rim 2.5, D. mouth 0.9, M.D. body 4.0. Dark blue glass with yellow decoration. Shape and decoration as IV.C.ii.1 above. Missing part of foot-stand.

11. Unknown provenance. National Museum, Athens, no. NM 2989. Pl. 34. H. 8.8, D. rim 2.6, D. mouth 0.9, M.D. body 3.3, D. base 2.4. Dark blue glass with yellow and light blue decoration. Shape as IV.C.ii.3 above. Decoration: yellow thread beginning on rim, spiralling down clockwise, joined by light blue thread at base of neck, both continuing to mid-body, pulled into irregular zigzag pattern on upper body.

Type IV. C. iii. Thin-walled piriform unguentarium with upturned handles.

1. Ibiza. H. 10.0. Dark blue glass with yellow decoration. Upright rim with trail at side; tall, cylindrical neck, merging gradually with tall, sloping shoulders; sharp junction between shoulders and body; rounded, ovoid body ending in pointed bottom with dark blue base-knob. Decoration: yellow thread beginning on rim, spiralling down to just below mid-body, pulled into festoon pattern on body. Dark blue, semi-circular upturned disc-handles at base of shoulders. Vives y Escudero, 1917, no. 545, pl. XXXII:4.

Type IV. C. iii contd.

2. Ibiza. H. 8.6. Dark blue glass with white decoration. Shape and decoration as IV.C.iii.1 above. Vives y Escudero, 1917, no. 546.

3. Ibiza. H. 12.0. Dark blue glass with white decoration. Shape as IV.C.iii.1 above, except with taller, straight-sided body. Decoration as IV.C.iii.1 above, except with feather pattern on body. Dark blue coiled knob handles at base of shoulders. Vives y Escudero, 1917, no. 533, pl. XXXII:5.

4. Ibiza. Barcelona Museum. Shape and decoration as IV.C.iii.3 above. Vigil Pascual, 1969, 79, fig. 46.

Type IV. C. iv. Thin-walled piriform unguentarium without handles.

1. Chiusi, from a tomb. Boston Museum of Fine Arts, no. 13.2800. Dated to the third century B.C. P.H. 6.0. Dark blue glass with yellow and white decoration. Rim, base and part of body missing. Shape as IV.C.iii.1 above. Decoration: yellow and white thread beginning on rim?, spiralling down to just below middle of body, pulled into festoon pattern on body, with small projections on the junction between shoulder and body created by the combing strokes. Eldridge, 1918, 293, fig. 8:c.

2. Canosa. British Museum, no. 1878.8-20.414. P.H. 6.6, M.D. body 3.6. Glass, shape and decoration as IV.C.iv.1 above. Harden, 1981, no. 375.

3. Cumae, Coll. Cumana, no. 86421. P.H. 9.8. Base missing. Shape and decoration as IV.C.iv.1 above. Gábrici, 1913, col. 715, pl. CXVIII:1.

4. Syria. Bristol Museum, ex Coll. de Clercq. P.H. 12.0. Missing foot. Glass, shape and decoration as IV.C.iv.1 above. de Ridder, 1909, 138, no. 246, pl. VIII; Thomas, 1976, no. 19.

5. Unknown provenance. British Museum, no. 1868.1-10.500. P.H. 6.6, M.D. body 3.6. Glass and shape as IV.C.iv.1 above. Decoration: on lower shoulders and upper body, a marvered garland of alternating yellow and white leaves, formed by up and down hooked combing. Harden, 1981, no. 376.

Type IV. D. i. Dinochoe with fusiform body.

1. Unknown provenance. National Museum, Athens, no. NM 2988. Pl. 34. H. 9.3, D. mouth 1.0, M.D. body 3.6, D. base 2.6. Dark blue glass with yellow decoration. Missing part of handle; mended. Trefoil rim with pinch mark on interior; tall, cylindrical neck, merging gradually with flattish shoulders; rounded ovoid body; added dark blue, tall, flaring foot-stand. Decoration: yellow thread beginning on neck, spiralling down clockwise to lower body, pulled into short zigzag pattern on body. Traces of dark blue vertical handle from shoulder to rim. Slightly fluted upper body.

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1. I wish to thank Virginia Webb for pointing out this new find to me.
2. For a discussion of the Gordion deposits, see App. 1, 346-348.
3. For the pottery from this tomb, see Murray, *et al.*, 1900, 104f., fig. 151.
4. This tomb, which is reported in *BdA*, 22 (1922), 183, is dated on the basis of a Corinthian alabastron (625-600 B.C.) and slightly later Etrusco-Corinthian pottery (600-550 B.C.).
5. This tomb is dated by two Corinthian aryballoi, a ring-shaped aryballos and a plastic duck vase. See Pelagatti, 1973, no. 420-424.
6. See also, Decheletter, *Manuel*, III, fig. 311; Fossing, 1940, 57, 66; and Musée Lavignerie I, 183, pl. 26:6.
7. Burial 11 is dated on the basis of an imported Attic Siana kylix. see Lordkipanidze, 1972, fig. 213.
8. The excavators label this an "Assyrian bottle." It was most probably made in Babylonia.
9. For the dating of this tomb, see App. 1, p. 337.
10. For the dating of this tomb, see App. 1, p. 337.
11. See also *CRPetersb*, 1901-1910, p. 96, fig. 122. See also, E. Berlin de Ballu, *Olbia, cité antique du littoral nord de la mer noire* (Leiden, 1972). Grave 7 is dated by three imported Attic black-figure vases: a late eye cup, and two oinochoai. It probably dates closer to 500 than 525 B.C.
12. Grave 277 contained only three other core-formed glass vessels, here II.A.vi.5, II.C.viii.6, and II.D.iv.4. While this tomb group thus does not present independent dating evidence for these glass vessels, it is important to note that each type of vessel present in grave 277 can be independently dated, and that the dates for these types are consistently within the first half of the fifth century B.C.
13. For the dating of this tomb, see App. 1, p. 335.
14. For the dating of this tomb, see App. 1, p. 336.

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15. Tomb 81 was apparently an interment of a middle-class person. It contained 5 fibulae, 2 Attic aryballoi, a black-figure lekythos, a pelike and an owl skyphos (on which see ABV 982). Unfortunately Gábrici illustrates only the core-formed vessel and we can only assume that this tomb predates 450 B.C.

16. This alabastron, illustrated only in an unsatisfactorily small photograph, came from a tomb group dated by the excavator to the fourth century B.C. This tomb group, however, contained a lamp and a skyphos which are closely paralleled by a lamp (L1110) and a skyphos from a deposit in the Athenian Agora, R 13:4, dated 440-425 B.C. For the Agora parallels, cf. Howland, 1958, no. 168 and Sparkes, 1970, no.344. I wish to thank Dr. J. Binder for pointing out the Agora lamp parallel.

17. For a discussion of the deposits in the Demeter Sanctuary at Cyrene, see App. 1, p. 342-344.

18. For the dating of this tomb, see App. 1, p. 340.

19. The cemetery of Rhitsona, nestled in the highlands just above Aulis, contained a wealth of goods dating from the eighth through the third centuries B.C. It was excavated by R.M. Burrows and P.N. Ure from 1907 until 1909 and again between 1921 and 1922. Burrows and Ure promptly published the material in preliminary reports and specialized pottery studies. The study by Brian Sparkes and the recent publication of the guide to the museum of Thebes facilitate the study of the tomb groups. Cf. B.A. Sparkes, "The Taste of a Boeotian Pig," JHS. 87 (1967), 116-130; D. Konsola, Archaeological Museum of Thebes, Guide (Athens, 1981), 57-63. The material not part of the excellent display is currently unavailable for study, being housed deep within the Frankish tower at the Museum. Four pieces of core-formed glass were recovered from the cemetery. II.C.iii.7 came from grave 26, dated 510-500 B.C.; cf. Sparkes, op. cit., 129 (with ABV and ABL references. II.C.iii.8 came from grave 31, dated by Sparkes to c. 515 B.C. II.A.iii.2 was in grave 80, dated by Sprrkes to c. 500 B.C. II.C.iv.10 came from grave 46, dated 500-475 B.C. It is interesting to note that all four Rhitsona burials which contained glass were rich tombs close to each other on that part of the cemetery which bordered the Valthy-Aulis road; for the position of the graves, see Ure, 1927, fig. 9. It seems likely that this cluster of tombs was the traditional burial plot of a wealthy family that had a taste for exotic imports.

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20. See also, Fossing, 1940, p. 65. The tomb is dated to the last quarter of the sixth century on the basis of an Attic black-figure neck amphora, pl. 94:11.

21. The piece is described as white glass with grey and yellow stripes.

22. See also, Cintas, 1976, pl. LXXVII:12. Cintas dates this sarcophagus on the basis of a jasper scarab of the XXV Dynasty (715-656 B.C.) to "well before the 4th century B.C." We might note that the two plain ware vessels, a pitcher and a jug with a mid-neck handle, which were found just outside the sarcophagus, are of a type common in the cemetery. Indeed, they represent the remains of a funeral celebration that was similar throughout the cemetery, which was used in the seventh and sixth centuries B.C. For a discussion of the funeral rites, see Vezat, 1969, 67-94.

23. See also, Cintas, 1950, p. 57, no.II. See also, Cintas, 1976, p. 332.

24. See also Barag, 1966, n.50; Barag, 1970, p. 197, no. 231; and Harden, 1981, App. 2, p. 161, no.3. This tomb produced two core-formed vessels, II.A.iii.8 and II.C.vii.80. Harding originally dated the tomb to the latter half of the seventh century B.C. Baraga agrees with this early date. Harden noted that the neo-Babylonian seal stone in the Meqabelein tomb is accompanied by Persian style knee-fibulae, and thus must date after 539 B.C. Dan Barag's response to Harden is expected in the forthcoming issue of Antiquities Journal. That the Meqabelein tomb, like the Amman tomb that contained II.C.iii.12 was used for many generations is indicated by Harding's brief mention of Greek pottery from this tomb. James Sauer believes that in addition to the seals, many of the pottery forms belong to the Persian period; for Sauer's down-dating of the defensive towers at Amman from the Iron II to the Neo-Babylonian and Persian periods, see J.A. Sauer, "Prospects for Archaeology in Jordan and Syria," Biblical Archaeologist, 1982, 82. I wish to thank Prof. Sauer for his explication of the pottery from the Jordanian tomb-groups with glass. The dates of types II.A.iii and II.C.vii, 525-500 and 475-450 B.C., respectively, do indicate that the Meqabelein tomb was re-used. Recent finds from Tel el Hesi, En-Gedi and Tell el Mazar are showing that whenever Mediterranean types of core-formed glass appear in the Levant, they do so in contexts that also contain Attic pottery of the fifth and early fourth centuries B.C.

25. For a discussion of tomb 277, see note 12 above.

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26. For the dating of this tomb, see App. 1, p. 336.

27. For the dating of this tomb, see App. 1, p. 337.

28. For the dating of this tomb, see App. 1, p. 337.

29. This tomb contained nine core-formed vessels and two pottery stamnoi; see App. I, p. 339. While stamnoi and the related pyxides do occur in Rhodian tombs, it is curious to note that the closest parallels to the larger of the tomb 197 stamnoi are Apulian. The black-glazed body with thin reserved bands of the Rhodian piece is also found on a piece in the British Museum (cf. Pryce, 1932, CVA British Museum fasc. 8, IV.D.a, pl.4:6., labeled Peucetian) and on a piece in the Museo Civico di Bassano del Grappa (cf. F. Rossi, Ceramica geometrica Apulia nell' collezione Chini del Museo Civico di Bassano del Grappa, Rome, 1961, 122, no.100). The striking similarity of the shape of these vessels at least raises the possibility that they are all the products of a single area. Since Rossi declares that the type is "senz'altro un prodotto locale", it would seem that tomb 197 might contain South Italian imports. Without close, preferably petrographic, analyses of the fabrics of these stamnoi, the possibility will remain that they are separate developments from a common, Corinthian model, or that the Apulian pieces are in fact Rhodian imports. In any case, the shape is securely placed to the late sixth and early fifth centuries B.C. An example of the type has been found in an early fifth century B.C. grave in the cemetery of Nymphia, in southern Russia; see Gaydukevicha, 1959, 41, fig. 18.

30. The alabastron was found near the right hand of the skeleton. Also in the tomb was a late Fikellura amphoriskos, of a shape similar to Cook's Y36 (=Rhodes Museum 12306), with decoration similar to Cook's Y41 (=Rhodes Museum 13478). Cook's Y36 came from tomb 100 of the Macri Langoni cemetery at Camiros, dated to the end of the sixth century B.C. Cook's Y41 came Macro Limoni, tomb 133, which is dated on the basis of an Attic black-figure oinochoe to c. 500 B.C. For the Ephesos Fikellura amphoriskos, see Langmann, 1967, fig. 46:1. For the Rhodian parallels, cf. Cook, -1934, 1f; and CiRh, IV, figs. 213, 292. For the oinochoe, see ABV, 437.

31. No. 10 came from a tomb group from Eretria that was given to the British Museum in 1893. In addition to this unusual alabastron, the group includes nos. II.C.vii.34, II.D.iv.9, II.E.ii.2, and II.E.iv.10, all of which belong to the middle two quarters of the fifth century B.C.

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32. The tomb of the wealthy lady Damosso also contained an Attic late black-figure lekythos and two Corinthian pyxides.

33. This alabastron came from a child's burial that also contained 10 vessels, including a lidded black-glazed lekane. The lekane, with its high profile and ring foot with a torus outer face can be paralleled by Sparkes and Talcott, 1970, no. 1218, dated 480-450 B.C.

34. The grave goods from this long-used tomb include a Chiot chalice and a St. Valentin kantharos. The latter belongs to Howard and Johnson's Group IV (450-425 B.C.); cf. S. Howard and F.P. Johnson, "The Saint Valentin Vases," AJA 58 (1954), 191-207.

35. Selinus tomb 47, which is the same as tomb 151 of the excavation daybook, was a terracotta sarcophagus burial that evidently had disturbed an earlier rock-cut burial. Tusa, 1971, 217, n. 79, discusses the circumstances of the discovery of this tomb. Inside the broken sarcophagus were found the glass alabastron, a bull-shaped askos, two red-figure lekythoi, a black-glazed skyphos and a Late Corinthian miniature akyphos; the pottery vessels range in date from 500 to 450 B.C. Outside of the sarcophagus were found five terracotta items: a standing female, a seated female, a female protome, a banqueting male and a pig; these range in date from 525 to 500 B.C. While Tusa believes that both the figurines and the finds inside the sarcophagus were from the same burial, the former representing some form of funeral rites practiced outside the grave, it seems more likely that, given the difference in the range of dates of the two groups of objects, the figurines may have been grave goods from the earlier disturbed burial.

36. The only other find from grave 227 was a Corinthian hydria (BM 1952.2-4.74) that cannot be closely dated.

37. For the dating of this tomb, see App. 1, p. 337.

38. For the dating of this tomb, see App. 1, p. 338.

39. This burial is dated by an Attic red-figure lekythos of Haspels' Phanyllis Group. See Freyer-Schauenburg, 1973, 160.

40. Freyer-Schauenburg's description of the weathering of this piece makes it more than likely that what she describes as "weiss" is, in reality, "hellblau." We will see that tricolor decoration does not occur on core-formed glass until the fourth century.

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41. This burial is dated by an Attic black-glazed skyphos of Ure's Class IV B. See Freyer-Schauenburg, 1973, 161.

42. It should be noted that Harden believed the decoration on this piece began at the base and was wound up the body of the vessel; this would explain the unusual thickness of the threads at the basal angle and the equally unusual fluting above the zigzag pattern. Since, however, the rim and neck of this vessel are missing, we cannot state definitively how the decoration was applied.

43. This tomb, found during the extension of the Museum's storerooms in 1964, contained many grave goods interred with a wealthy man, including 43 lekythoi, a kyathos, two small dishes, a female terracotta figurine, two core-formed vessels, an alabaster alabastron and a sea shell. Konstantinou has assigned several of the Attic lekythoi to the Haimon Group (no. 8, 14, and 18) and to the Beldam Painter (no. 21 and 32). The Paralipomena is current to only the first vol. of the 1965 Deltion, and thus misses this important group. Also of interest is no.10, a lekythos decorated in the Six's technique, belonging to the Workshop of the Beldam Painter. Konstantinou is correct in saying that this collection of vessels has a limited range of dates. The group probably dates closer to 475 than 450 B.C.

44. Elaius was excavated by French soldiers during WW I. Grave 13 can be dated to a terracotta figurine (no.73) and two imported Attic skyphoi (no. 76-77).

45. This tomb is dated by a Chiot cup and an Attic black-figure oinochoe to 525-500 B.C. See Vošćinina, 1967, 557.

46. This vessel came from a tomb with an unparalleled archaic Ionic amphora.

47. Grave 136 also yielded an Ionic askos of the late sixth century to early fifth century B.C.

48. Grave 80 also contained a late black-figure lekythos of c. 500 B.C.

49. Grave 79 contained an Attic black-figure lekythos which is not illustrated in Gábrici's report.

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50. This vessel came from an extremely rich burial, the sarcophagus containing an iron strigil, a Panathenaic amphora, 4 black-figure volute kraters, 2 black-figure skyphoi, 2 black-figure oinochoai, a black-figure kalpis, a black-figure lekythos, 2 black-glazed vessels, a red-figure hydria and 3 red-figure kraters. All of the pottery vessels belong to the last two decades of the sixth century; see Porto, 1967, passim, for Beazley and Haspels references.

51. For a discussion of the deposits in the Demeter Sanctuary at Cyrene, see App. 1, p. 342-344.

52. The other contents of Marti no. 73 include a nail and a local unguentarium, neither of which can be closely dated. Nonetheless, this tomb must date to the prime period of use of the cemetery, i.e. to the first half of the fifth century B.C.

53. For the dating of this tomb, see App. 1, p. 338.

54. See note 29 above.

55. The excavations at the old Orphan Asylum in Athens evidently uncovered part of a cemetery just outside a small gate to the northeast of the Dipylon gate. I wish to thank Dr. J. Binder for sharing her knowledge of the whereabouts of the Orphan Asylum. For the position of these excavations, see H. Bengtson, et al., Grosser Historischer Weltatlas, I. Teil. Vorgeschichte und Altertum, 5th ed. (Bayerischer Schulbuch Verlag, München, 1972), map 34, "Gräber", just above "Dipylon-Tor".

56. This grave is dated by a black-glazed bowl and a bronze laddle of the second quarter of the fifth century. See Voščinina, 1967, 557, pl. 122:1.

57. This vessel was interred next to the left hand of a man who was also buried with an Etruscan candleabra and bow-fibulae together with Attic late black-figure vases.

58. This fragmentary alabastron came from Building 117, stratum V, which produced, along with some pottery and jewelry, some grain (P1442) that yielded a carbon-14 date of 538± 56 B.C. This, to my knowledge, is the only piece of core-formed glass that can be dated by a radiocarbon date. I wish to thank Dr. Tom McClellan for providing me with this information. cf. daybook 3/26/66 Bk.8.

59. See note no. 29, above.

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60. It is not clear where the glass alabastron was located in this tomb which contained bow fibulae, a bronze mirror and candleabra, earrings, beads and an Attic oinochoe and a late black-figure column crater.

61. For the dating of this tomb, see App. 1, p. 336.

62. For the dating of this tomb, see App. 1, p. 335.

63. For the dating of this tomb, see App. 1, p. 339.

64. Grave 195 also yielded two vases, including a tall, narrow plain-ware amphora (n. 746).

65. Grave 28 also contained a black-glazed bowl and a late red-figure squat lekythos of the second quarter of the fourth century B.C.

66. This alabastron and a core-formed aryballos were found near the left hand of the skeleton in this interment which can be dated by an Attic red-figure kylix of the Painter of Agora P42 (Mild-Brygan Group; near the Dokimasia Ptr); cf. ARV², 415.

67. Grave 83 also contained a head vase close to Beazley's Group L: The Providence Group, dated 490-480. cf. J. D. Beazley, "Charinos," JHS 49 (1929), 38-78.

68. Grave 19 also contained a bronze mirror, a local oinochoe, a fusiform unguentarium and three Attic black-glazed lekythoi. The latter can be parallel by Sparkes and Talcott, 1970, no. 1121, no. 1129-1130, dated 430 and 420-400 respectively. The glass alabastron was found near the left hand of the skeleton.

69. For the dating of this tomb, see App. 1, p. 340.

70. This sarcophagus, dated by a black-figure lekythos of the Phanyllis Group, is the oldest of those reported by Freyer-Schauenburg.

71. For this tomb from Delphi, see note 43 above.

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72. The recent exciting finds from the late Archaic and early Classical cemetery at Sinda are on display in the Thessaloniki Museum; cf. A. Despini, Sindos, Archaeological Museum of Thessaloniki, Ministry of Culture and Science, 1982. Preliminary reports on the Sinda excavations can be found in Ergon, 1981, 18-20, Ergon, 1982, 21-23, and in JHS-AR, 29 (1982-1983), 37. In addition to the two amphoriskoi, grave 52 also contained local gold jewelry.

73. Grave 67 was one of the richest at Sinda and contained a gold mask, two bracelets, tweezers, a ring, bronze ophalos bowls and a bronze kothon (exaleiptron), miniature iron fire-dogs and spits, chair and table and a miniature iron four-wheeled cart, and an Attic stemless kylix and hydria of c. 535-515 B.C. See Pls. 35, 36 for the grave group.

74. For the Cyrene deposits, see App. 1, p. 342-344.

75. Grave 7 also contained a Black Slip V biconical jug, and a Bichrome Red II (V) biconical amphoriskos of the later part of Cypro-Archaic II.

76. For a discussion of the Gordion deposits, see App. 1, p. 346-348.

77. cf. Halieis excavation notebook 26, p. 36, July 7, 1966 (basket 1). This fragment evidently came from phase five of the temenos on the Acropolis of Halieis. This phase represents the cleaning of the destruction of the earlier phase four of the sanctuary. Thus, this fragment of a glass votive offering should date to the main period of phase four, or c. 450 B.C. In any case, the fragment cannot be later than the end of the fifth century B.C., the date of phase five. The American excavations on the acropolis of Halieis produced four other small fragments of core-formed vessels, including one tiny fragment of an alabastron, HV-13, that was associated with an altar in the sanctuary. My sincerest thanks to Daniel Pullen for showing me the pieces in the storerooms in Nauplion, to James Dengeate for helping me with the stratigraphy of the sanctuary, and to Michael Jameson for permission to use the photographs. For a discussion of the sanctuary, cf. S. Dublin, "A Greek Acropolis and its Goddess," Expedition 11, n. 2 (Winter 1969), 22-29; Dublin believes that the sanctuary was sacred to a female military deity.

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78. See note 19 above.

79. As Harden (1981, 161) points out, it is not certain that all of the material found in this tomb came from a single burial. We might also add that the carnelian seal of Adoni Nur need not be contemporaneous with the date of the interment. For a further discussion of the down-dating of the Jordanian tomb groups that contain glass vessels, see note 19 above.

80. Harden, 1981, App. 1, 157-8, dates this tomb on the basis of a black-glazed amphoriskos. We should also note that a black-glazed lecanid lid and a pyxis from this tomb date to 475-450 B.C.

81. See App. 1, p. 338.

82. This grave contained two miniature bronze lions, a bronze handle, a bronze bar from a dinos and a lid from a trefoil oinochoe. The lid is similar to one from grave 263 of the North cemetery; cf. Belgen, *et al.*, 1964, 216, no. 263.

83. See note 43 above.

84. See note 19 above.

85. This tomb produced a black-glazed kylix, trefoil oinochoe and an aryballos and a black-figure lekythos in the circle of the Athena Painter.

86. Burial 6 also yielded a rod-formed kohl tube, two other core-formed amphoriskoi and an oinochoe as well as a bronze ladle with a duck's head handle, a horizontally ribbed cup and a silver phiale. Barag, 1975, 24-25 dates this grave group to the fifth to early fourth centuries on the basis of the ladle and the phiale. It is, however, possible that burial 6 does not represent a single interment; the alternative would have a number of heirlooms, including the amphoriskos II.C.iv.12, buried fifty or more years after they had been manufactured.

87. This amphoriskos was found in a tomb together with a gold necklace having embossed griffins. Garcia y Bellido dated the style of these griffins to the middle of the seventh century B.C., a date at least one hundred and fifty years too early for the glass vessel.

88. This tomb is dated by scarabs, cf. P. Gouckler, *N.P.*, 84, pl. 147.

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89. For the Demeter Sanctuary glass, see App. 1, 342-344.
90. See also, Brizio, 1899, col. 665, pl. XII, fig. 11; Montellius, 1910, pl. 323:8; Fossing, 1940, 55,76. Grave 69 was an inhumation of a wealthy lady and contained glass and amber beads, an iron bracelet, a bronze strigile and 30 pottery vases, including Attic black-figure and red-figure vessels. These latter are unfortunately not illustrated.
91. For the Demeter Sanctuary glass, see App. 1, 342-344.
92. See App. 1, 336.
93. G. Weinberg (1966) has already observed that this amphoriskos is clearly the work of a presumably Rhodian novice. For the dating evidence, see App. 1, p.
94. See App. 1, 335.
95. See App. 1, 338.
96. See note 29 above.
97. For the cistern deposit, which is a mixed deposit to the 4th century B.C., cf. R. S. Stroud, "Sanctuary of Demeter and Kore on Acrocorinth," *Hesperia* 37 (1968), 309-310; and Dep. Index Acro Sant. of Demeter and Kore, cistern 64-1. These fragments came from the top fill (to -2.95 m.) of the cistern in cut 20:64; cf. Corinth notebook 280, 184, Basket 5, lot 2099. I wish to thank Drs. Nancy Bookides and Charles Williams for providing a photograph of this piece.
98. The Kazarmas tomb also produced a black-glazed stemless cup, a one handled kyathos, a handleless kyathon, a kotyle and a pyxis and two bronze strigils. For the stemless cup cf. Sparkes and Talcott, 1970, 100, 267, n. 456, (small Rheneia cup), dated 480-470 B.C.
99. For the Eretria group in the British Museum, see note 31 above.
100. For the new cemetery at Sinda, see note 69 above. Grave 40 is a particularly rich burial, containing five core-formed aryballoi and two amphoriskoi, 6 female terracotta figurines and two dwarf figurines, 10 miniature skyphoi, a miniature lekythos, two small pitchers, an Attic red-figure kythos and a stemless cup and an iron sword. For the tomb group, see Pl. 37

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101. Some of the tombs from the Milesian colony of Apollonia have been assigned too low a date. Grave 296 also contained a black-glazed kylix that is not illustrated.

102. Grave 448 also produced a short lekythos (not illustrated) and two bone objects.

103. Grave 645 is wrongly placed to the end of the fourth century B.C. The core-formed amphoriskos, no. 990 is the only find from this tomb!

104. For burial 6 from Vani, see note 86 above.

105. This amphoriskos was found near the left hand of a child. Orsi dates the tomb on the basis of its similarity to a nearby tomb.

106. It is impossible to assign tomb groups to the eight core-formed amphoriskoi that Patroni illustrates.

107. For the Demeter Sanctuary deposits see App. 1, 342-344.

108. See also Fossing, 1940, 46; Encyclopedia of Archaeological Excavations in the Holy Land, vol. I, 1975, 140. This vessel was found with a coin and an imported Attic pattern lekythos dating to 475-450 B.C; for the latter, cf. Kurtz, 1975, 152-155, pl. 69:5.

109. See also Harden, App. 2, 161, n. 6; Barag, 1966, 59, note 50. For further evidence favoring a down-dating in the Syro-Palestinian tombs with glass, cf. note 24 above.

110. See note 24 above.

111. See also, J. du Plat Taylor, Iraq XXI (1959), 90f., who dates this level as early as the later eighth century B.C. Harden, 1981, App. 2, 161, n. 1, assigns this vessel to level 4, a date which is dictated by the form of the vessel.

112. For the Gordion deposits, see App. 1, p.x.

113. Grave 440 produced only this vessel and a bronze fibulae. Note that the vessel on pl. 162 numbered 991 cannot be the same as no. 991 on the color pl. 163.

114. See also, l'Abbè Moulard, Bulletin Archéologique du Comité des Travaux Historiques et Scientifiques, 1924, 142. Seefried notes that though this cemetery has been dated to the fifth century, the scarab types continue into the fourth century B.C.

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115. See App. 1, 336.

116. See App. 1, 339. For the dating, cf. Gates, 1979, 332.

117. For an unattributed discussion of the Tell el-Mazar aryballos written by this author in 1978, see Yassine, 1984, 60-61. Grave 1 also contained a number of metal finds, including spear points, arrowheads, fibulae and a knife.

118. For grave 277, see note 12 above.

119. Grave 226 yielded only one other item, the core-formed amphoriskos, II.C.vii.12.

120. Grave 2 was excavated in March, 1966. It yielded three lekythoi, including a second quarter of the fifth century B.C. red-figure lekythos with a youth holding a flower approaching an altar. The grave also contained a phiale, a black-glazed pyxis and a Corinthian lekane. See Daybook III 9 1966, page 22.

121. For the other core-formed vessels from this group, see note 31 above.

122. For the Sinda cemetery, see note 71 above. For grave 40, see note 100 above.

123. The grave group included four red-figure vases of the fourth century G.C., a bronze helmet, three iron swords, two bronze strigils, two bronze knucklebones, a fragmentary gold and ivory dagger and fifty fragments of gold leaf. See Gardner and Casson, 1919, 39, pl. 8.

124. For grave 355, see note 66 above.

125. This is from A. Zannoni's excavations in 1896. The burial was that of a female and also contained plain-ware pottery and four bronze fibulae.

126. Now see Webb, 1978, 119-121, no. 818. Webb dates her "Section 3: Spherical Aryballoi -Crudest type" to before the Persian invasion of Egypt in 525 B.C.

127. For the Cyrene deposits, see App. 1, 342-344.

128. Porath dates the stratum from which this fragment came to the Persian period. Most of the illustrated pottery seems to belong to the mid-fifth century B.C.

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129. Barag would like to place this vessel in the Iron II period, following his high chronology. For arguments rejecting this high chronology, see Harden, 1981, App. 2, 161-163; see also note 24 above.

130. Grave 392 produced a wealth of finds, including a red-figure lekythos, several Boiotian late black-figure cups, two black-glazed kylikes, a black-glazed pitcher and ribbed mug, five terracotta figurines and a black-glazed lamp.

131. For the Cyrene deposits, see App. 1, 342-344.

132. See App. 1, 337.

133. For the Eretria tomb group in the British Museum, see note 31 above.

134. Mladenova dates grave 115 to the second half of the fourth century B.C. However, the red-figure oinochoe, no. 292, which is cited as the basis of this date, in fact came from grave 283.

135. For the Gordion deposits, see App. 1, 346-348.

136. See App. 1, 339.

137. For the tomb group from Eretria in the British Museum, see note 31 above.

138. Grave 1 contained two lekythoi with black ivy-leaves, two female terracotta figurines, a terracotta plaque, two small cups and a lamp. The mid-fifth century B.C. date is based on a comparison of one of the figurines to Higgins, 1954, pl. 89, no. 678. The figurine is the only find other than the core-formed vessel that is illustrated.

139. See App. 1, 336.

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140. Filow and Welkow, *JdI*, 1930, 320, argue for a date of the first decade of the fifth century B.C. for the Muschovitsa Mogila burial at Duvanlii. They based their argument on the late sixth century B.C. date of an Attic black-figure amphora from the tomb and on the archaic nature of a gold breast plate, a female terracotta statuette and a bronze mirror also found in the burial. They felt that the actual date of the internment would have been a little after the turn of the century. We should point out, however, that the tomb also contained two Attic black-glazed vessels that date closer to the middle of the fifth century B.C.: 1) a stemless cup of the large, plain rim type [Filow, 1934, 93, no. 13, fig. 115], for which cf. Sparkes and Talcott, 1970, 102, no. 474, dated 460-450 B.C. and 2) a small bowl of the early and heavy type [Filow, 1934, 93, no. 14, fig. 116] for which cf. Sparkes and Talcott, 1970, 134, no. 860, dated c. 450 B.C. It should not be surprising that in a Thracian burial mound of the mid-fifth century B.C. one might find treasured Greek keepsakes or heirlooms of the end of the sixth century B.C. See Filow, 1934, fig. 106, for the position of the three glass oinochoai by the head of the interned.

141. For the question of the dating of burial 6 at Vani, see note 86 above.

142. For the Cyrene deposits, see App. 1, 342-344.

143. For the Gordion deposits, see App. 1, 346-348.

144. The two alabastera from Homolion came from the lower part of tomb A, the upper part of which had been disturbed by local villagers; see Theocharis, 1962, fig. 1, nos. 3-4. Miller bases her dating of this tomb on the black-glazed hydria, which she takes to be later than the examples at Olynthus, and to a comparison of the jewelry types to those of tomb B, itself dated by a third quarter of the fourth century B.C. red-figure pelike.

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145. The site of Nea Michaniona is 32 km. east of Thessaloniki. The unpublished material from the recent excavation of Tumulus A is on display in the Thessaloniki Museum. Grave three produced, in addition to the core-formed alabastra, a faience alabastron, a rock-crystal phiale, a terracotta female protome, a gilded bronze skyphos, a bronze lidded mirror decorated with a winged Eros, a gilded bronze laurel wreath, two black-glazed salt cellars, two black-glazed small dishes with stamped and rouletted decoration, and a number of items that presumably originally served as ornaments on a kline, including five hemispherical transparent glass discs, five transparent glass square plaques, three gilded terracotta rosettes, five gilded terracotta plaques with females playing a lyre and winged males in pointed caps holding a shield. The grave also yielded ninety miniature gilded terracotta shields of the so-called Argive type, 16 of which had a crowned female head, the rest having a head of Athena surrounded by winged Nike; miniature shields apparently from the same molds were also recovered in Derveni tomb A, dating to the last quarter of the fourth century B.C.

146. Déchelette, Manual d'archéologie, 1914, 1091, dates the entire cemetery of the Gallic tribe of the Senontes to 390-283 B.C. Fossing, 1940, 88, n. 2, follows Déchelette's dating. Harden, 1981, 102, would place tomb VII towards the end of that period.

147. The cist grave of Nea Michaniona tumulus A was composed of six vertical slabs of shelly limestone, the interior of which was plastered and painted in two main zones separated by an egg and dart painted molding. The upper zone represented various offerings 'hanging' from 'nails' on the walls (alabastron, two handled bowl, fillets, wreaths); the lower painted zone consisted of an elaborated floral zone. Inside the cist, together with the cremated bones, were set the following objects (listed from the 'head' of the cist to the 'foot'): an imitation Cypriote amphora, III.A.ii.2, III.A.iii.8, three alabaster alabastra, a gilded bronze necklace with flat pointed leaves interspersed with elongated beads, six miniature bronze round shields and six transparent glass hemispherical discs, three more alabaster alabastra, III.A.iii.6 and 7, and two gilded alabaster alabastra.

148. For the Agora contexts, see Appendix 1, 341.

149. For the contents of grave 3 at Nea Michaniona, tumulus A, see note 147 above.

150. For the contents of the cist grave at Nea Michaniona, tumulus A, see note 147 above.

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151. Alexandrescu dates this tumulus to the fifth century B.C. An examination of the stratigraphy, however, shows that the core-formed alabastron came from a pit dug into the tumulus, and thus must post-date the burial under the tumulus.

152. Grave 126 at Cumae produced a wealth of finds. In addition to the core-formed glass vessels III.A.iii.12, III.A.iii.13, III.A.iv.2 and III.A.v.1, other burial goods included gold jewelry (a necklace, a ring, two fibulae and a bracelet), two silver fibulae, a bone spindle whorl, a lead box, two alabaster alabastra, a bronze crater, a bronze mirror, a lidded black-glazed ribbed amphora, a lidded hydria, a Campanian crater, a black-glazed plate with stamped palmette decoration, a black-glazed bowl with incurving rim, two skyphoi, two kantharoi, a stamnos, a lecane, two olpe and a lekythos.

153. I would like to thank Dr. Youssef el Ghasiani, the Director of the Greco-Roman Museum of Alexandria for his facilitating my study of the glass from Sciatbi.

154. For the Gordion deposits, see Appendix 1, 346-348. The Kiral Harman grave also contained parts of two alabaster alabastra and several bits of gold jewelry. The gold jewelry, two pendants with double rosettes, a bead with double spiral decoration and a plaque with a granulated palmette and three rosettes, can be paralleled by a number of finds of the second half of the fourth century B.C. See, for instance, a gold necklace from grave A at Homolion for parallels of the double rosettes and the granulated palmette; Miller, 1979, Hom.J2, with other parallels cited. A necklace from Abdera has beads similar to the Gordion bead with double spirals; see Triandaphyllos, 1974, pl. 598:b; K. Ninou, ed., Treasures of Ancient Macedonia (Athens, 1979), no. 423 and N. Yalouris, et al., The Search for Alexander, an Exhibition (Boston, 1980), no. 59. A necklace from grave Z at Derveni is also close to the Gordion plaque and pendant; see K. Ninou, op. cit., no. 254.

155. For the Agora contexts, see Appendix 1, 341.

156. For the contents of grave 126, see note 152 above.

157. For the contents of grave 126, see note 152 above.

158. This vessel was found together with III.A.v.3 and III.E.i.13 in a small fosse that also contained the bones of a young boy.

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159. Grave 263 at Apollonia also contained a number of other grave goods, including six red-figure lekythoi, a black-glaze bowl, three alabaster alabastra, several glass beads, a bronze ring and two bronze coins, dating to 480-350 and 350-306 B.C. respectively.

160. Grave 231 at Apollonia also yielded a red-figure lekythos with two female heads and a fragment of a red-figure lekythos with applied plastic decoration representing a griffin attacking a warrior.

161. The cemetery at Myrina was excavated in the late nineteenth century and most of the finds from it are now in the Louvre Museum. It is not now possible to reconstruct individual grave groups from the publication of Pottier and Reinach; cf. E. Pottier and S. Reinach, Nécropole de Myrina (Paris, 1887). In her study of the terracotta figurines from Myrina, Dorothy Burr (Thompson) reiterated Pottier and Reinach's conclusion that most of finds from the cemetery date from the middle of the third to the first centuries B.C.; cf. D. Burr, Terracottas from Myrina in the Museum of Fine Arts, Boston (Boston, 1934), 4f. We should note, however, that, as a city, Myrina dates back to at least the fifth century B.C., as witnessed by its appearance on the Athenian Tribute List of 451 B.C.

162. The cist grave at Abdera also contained a black-glazed skyphos with tall handles, seven terracotta figurines of dancing ladies, two gold earrings with suspended erotes, two gold ring bezels, a gold thigh-band, a gold necklace and a gold wreath. For the gold, jewelry, see also, K. Ninou, op. cit., 99-100, nos. 421-426.

163. Tomb 83 at Spina also contained four plastic vases (two deer and two bulls), an iron spear head and a blue glass Gallic bracelet.

164. I wish to thanks Mrs. Gladys Weinberg for supplying a photograph and information on this piece.

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165. This and the following alabastron came from a recently discovered chamber tomb in Chania, Crete. The tomb, which consists of several loculi opening off of a central corridor, was apparently in use for at least a century. The loculi had benches around their sides and were sealed with a painted plaster covering upon which was written the name of the deceased. Tomb B was that of a female, as the final omega of the otherwise not preserved name would indicate. In this tomb was also a group of large terracotta female figurines. I wish to thank Dr. I. Tsadakis for permission to examine the glass from this tomb.

166. Grave 76 at Teano is dated by a late Kerch style red-figure lekythos.

167. For the finds from grave 83 at Spina, see note 163 above.

168. Andrew Oliver has dated the jewelry and silver vessels from this grave to the second half of the third century B.C.; see Oliver, 1968, 53. Harden, however, accepts Bartoccini's original estimate of the first quarter of the third century B.C. for the jewelry.

169. The core-formed amphoriskos, III.B.ii.7, was the only grave good from tomb 28 at the Hadra cemetery. While the main period during which the Hadra cemetery was in use was in the second half of the third century B.C., it did produce objects that belong to the late fourth and early third centuries B.C. For a discussion of the chronology of the Hadra area, see P.M. Fraser, Ptolemaic Alexandria (Oxford, 1972), vol. 1, 33, with further references.

170. For the dating of Homolion grave A, see note 144 above.

171. For the question of the dating of finds from Myrina, see note 161 above.

172. For tomb 83 at Spina, see note 163 above.

173. Tomb 406 at Spina produced two black-glazed kotylai, two black-glazed olpai, five small black-glazed bowls, four black-glazed footed plates and a blue glass Gallic bracelet.

174. Grave 202 at Cumae also contained a late fourth century B.C. black-glazed thymiaterion; see Gabrici, 1913, pl. CVIII:4.

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175. For the Sciatbi burial from which this vessel came, see note 158.

176. Tomb 117,I at Polis apparently was reused over a long period of time, as was common in Cyprus throughout the first millennium B.C. For a list of the grave goods from this tomb, see Myres and Ohnefalsh-Richter, 1899, 173f.

177. For the contents of tomb 126 at Cumae, see note 152 above.

178. El Cigarralejo is a native Iberian city that had a sanctuary of some goddess represented as a potnia hippon. Guardrado believes that tomb 277 and the slightly later tomb 200 were those of the princes of Cigarralejo and their wives. Tomb 277 contained the remains of a man and a woman in two niches in a rectangular tomb with three steps. The glass oinochoe came from a mixed layer between the upper two steps. At the north part of the tomb were recovered a number of ceramics, including two Attic black-glazed kotylai with stamped decoration, eight Attic bowls with stamped and rouletted decoration and eight Attic fish plates.

179. I wish to thank Dr. Charles K. Williams for supplying me with information on these pieces.

180. For the contents of tomb 126 at Cumae, see note 152 above.

181. For the tomb of gold at Canosa, see note 168 above.

182. Harden believed that the decorative thread on this piece began on the bottom of the vessels and spiralled upwards.

183. For the Gordion deposits, see Appendix 1, 346-348.

184. This tomb also produced a number of clay unguentaria and terracotta figurines that Dusenbery dated to the Augustan period. In addition, this tomb yielded a gold-band alabastron of a type usually dated to the first century B.C. For further discussion of the gold-band alabastron, see Oliver, 1967, 20-23, 33.

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185. The date of this piece seems to be based on the fact that the tomb did not contain Attic red-figure pottery. The tomb, which had three stone couches, also produced a plate and an unguentarium of brown and white onyx glass. Harden, 1968, 43, n. 48 accepts the third century B.C. date for this tomb suggested by Levi, though he notes that to do so would push back the date for the earliest appearance of onyx glass. Oliver believes that onyx glass first begins in the early first century B.C.; see Oliver, 1967, 15-17, and Oliver, 1968, 64. IV.C.ii.4 is also illustrated in Pease, Napoli, p. 6; Pease mislabeled this piece as "da Pompeii."

186. Spinazzola dated this tomb to the end of the third century B.C. on the basis of the jewelry. The bowl with an inturned rim in which IV.C.ii.5 is illustrated would be more at home in the middle of the second century B.C.

187. Amoras and Garcia y Bellido believed that the mound at San Favor was a sanctuary of Mars, destroyed in 123 B.C. by Metellus. The mound also contained an imported Italian thin-walled dot barbotine beaker of a type that has recently been dated to 130-70 B.C.; cf. F. Mayet, Les ceramiques à parois fines dans la peninsule iberique, (Paris, 1975), 25 and P. Russell, "Corinth: Excavations of 1980. Appendix. Early Roman Thin-Walled Wares and Lamps," Hesperia, 50 (1981), 35.

188. This tomb contained Roman denarii, dating to 88 and 84 B.C., and an Arretine bowl signed by L. Sanicus L. I. Surus. I have not been able to check the Bianchetti reference cited by Fossing, 1940, 113, n.6.

189. For the Ayios Ermoynis cemetery, see App. 1, 345.

190. Tomb 147 was used in two distinct periods: Cypro-Achaic II (600-475 B.C.) and Hellenistic II. In addition to the alabastron, the late phase also contained two terracotta figurines of horses and riders, and several pottery vessels.

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191. This core-formed alabastron was discovered on 29 Nov., 1976 by the team of Jacques Cousteau which re-dredged the underwater site of the Antikythera shipwreck that had originally been explored in 1900. That Cousteau's team was at the same site as the 1900 exploration was shown by their discovery of a fragment of a reticella glass bowl that joined with the parts discovered in 1900. The alabastron, no. 259 in Cousteau's records, was apparently complete until 1976, since all breaks on it are modern. The finds from the 1900 exploration were restudied and published in G.D. Weinberg, et al., "The Antikythera Shipwreck Reconsidered," TAPS, new series, vol. 55, part 3 (1965). The 80-50 B.C. date for the shipwreck, based on the studies of the transport amphoras and Greek and Roman pottery by V. Grace, G. Roger Edwards and H.S. Robinson, was accepted by D.J. de S. Price in his reevaluation of the astrolabe from the shipwreck; D.J. de S. Price, "Gears from the Greeks. The Antikythera Mechanism -- A Calander Computer from ca. 80 B.C.," TAPS, vol. 64, part 7 (1974). For a study of the other glass finds from the shipwreck, see Weinberg, op. cit., 30-39.

192. For the Ayios Ermoynis cemetery, see Appendix 1, 345.

193. For the Agora contexts, see Appendix 1, 341

194. This piece is mentioned in Exposition des verres syriens, 1964, 4, no. 4. This piece is also in M. Abu-l-Farq al Ush, Catalogue du Musée National de Damas, Damascus, 1969, 100, no. 2, color plate VI. However, in the publication by Ush, which was reprinted in 1976 under Zouhdi's name, the inventory number is given as 3752, and the piece is said to be 9.2 cm. high and to have been found in Zawieh. The vessel as pictured in Ush's plate VI, which incidentally is the first plate of the book, clearly bears in white ink the Arabic number 13736. A core-formed vessel with that number is in S. Abdul-Hak and A. Abdul-Hak, Catalogue illustré du département des antiquités greco-romaines du Musée de Damas, Damascus, 1951, 160, no. 7. Abdul-Hak describes the piece as 13.5 cm. high and gives its provenance as Homs. The Abdul-Hak publication is the only one which notes that the decoration on this piece is of yellow and red glass.

195. This tomb also produced a fragment of a type II.A.xii alabastron, a type II amphoriskos (II.C.vii.85) and a type IV amphoriskos (IV.B.ix.4). As Harden pointed out, this tomb must therefore have been used more than once.

196. This tomb also contained IV.A.iv.12.

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197. I wish to thank Dr. Demetrios Michaelides of the Department of Antiquities of Cyprus for supplying me with a photograph and information on this piece which he recently excavated.

198. This piece may be the no. 93,104 from Amathus mentioned by Myres and Ohnefalsch-Richter, 1899, as comparanda for their no. 2513.

199. See note 195 above.

200. Myres and Ohnefalsch-Richter list three type IV.B.x amphoriskoi from Amathus in their catalogue of the Cyprus Museum (nos. 2516-2518). Of the seven type IV.B.x amphoriskoi now in the Cyprus Museum, this is the only one that can be associated with those in Myres and Ohnefalsch-Richter's catalogue.

201. Myres and Ohnefalsch-Richter list three examples of type IV.B.xi amphoriskoi in their catalogue of the Cyprus Museum (nos. 2520, 2522 and 2524). No. 2520, here IV.B.xi.4, is also listed in Dikaïos' guide to the Cyprus Museum. There are at least four other examples of this type in the Cyprus Museum (here IV.B.xi.9-12). It is not now possible to associate these with nos. 2522 and 2524 of Myres and Ohnefalsch-Richter's publication.

202. For the Agora contexts, see Appendix 1, 341.

CHAPTER FOUR: CONCLUSIONS.

In Chapters Two and Three we have presented a catalogue and a detailed discussion of the types of core-formed glass vessels that were produced in the Mediterranean from the last quarter of the sixth century B.C. to the end of the first century B.C. In this chapter we will examine the evidence for the location of the centers in which core-formed glass vessels were produced and we will present a brief summation of the general characteristics of types I-IV core-formed glass vessels.

Before we turn to an examination of the possible centers of manufacture of core-formed glass vessels, brief mention should be made of the related rod-formed glass beads and pendants. These small items were fashioned directly around a rod, perhaps precoated with a thin slip of clay. This technique of manufacture was also used to produce the type II.B kohl tubes. Rod-formed beads and pendants are composed of the same kinds of glass that we find used in the manufacture of core-formed vessels, namely opaque blue, yellow, white and blue-green.

The distribution of the numerous types of rod-formed glass beads and pendants is vast, and these objects were certainly produced in many different localities.¹ In her recent monumental study of rod-formed pendants, Monique Seefried hypothesized that the earlier types, beginning

perhaps as early as the seventh century B.C., were made primarily in Phoenicia, with lesser industries in Egypt, Cyprus and Rhodes, and that at the end of the fourth century B.C. Carthage became the main center of production, at which time the Cyprus and Rhodes continued to produce rod-formed pendants and the production of these pendants began in Alexandria.² Veronica Tatton-Brown has taken exception to Seefried's hypothesized Carthaginian production of rod-formed pendants, noting that the same types which Seefried believed were produced in Carthage are also frequently found in the Black Sea region. Tatton-Brown believes that Phoenicia remained the main center of production of these pendants after the fourth century B.C.³

Wherever rod-formed beads and pendants may have been produced, the important point for the present study is that their production is not necessarily connected to the production of core-formed glass vessels, in spite of the fact that both classes of objects were made from the same kinds of glass. The distribution pattern of the rod-formed glass beads and pendants is not the same as that for core-formed glass vessels. For example, in the Italian peninsula, where core-formed vessels have been found in some quantity, rod-formed beads and pendants are relatively scarce. In some areas, particularly Rhodes and, later, Cyprus, rod-formed beads and pendants may well have been produced in the same

workshops that produced certain types of core-formed vessels. In other areas, such as Egypt, Phoenicia and Carthage, the production of rod-formed beads and pendants seems to have occurred in workshops devoted exclusively to the manufacture of those items.

As we turn to an examination of the production centers of core-formed glass vessels of the latter part of the first millennium B.C., a cautionary note must be sounded. While we do have tangible evidence for the production of core-formed glass vessels in Eighteenth Dynasty Egypt, no actual kiln or significant amount of cullet or wasters associated with the production of core-formed glass vessels of the first millennium B.C. has yet been discovered.⁴ Without such tangible evidence, all theories concerning the production of core-formed glass vessels must be considered tentative and must be continually reevaluated in the light of future discoveries.

The earliest first millennium core-formed glass vessels in the Mediterranean come from seventh and sixth centuries B.C. contexts in Rhodes, Crete, Eretria, Etruria and Carthage. We have shown in Part One of Chapter Two that, while all of these early vessels were made in the Mesopotamian tradition, having deep fluting and very short zigzag pattern decoration, some, if not all, of them were probably made by Mesopotamian craftsmen working in the

Mediterranean. These transplanted artisans were certainly responsible for the production of the small juglets (Barag's shape no. 16), which have been found at Camiros, Fortetsa, Vulci and Tarquinia but not in Mesopotamia itself, and were most likely responsible for the production of those wide-bodied alabaster (Barag's shape no. 8) found in the Mediterranean in contexts dating to the end of the seventh century B.C. Where the workshops of these transplanted craftsmen may have been located is not known, though it is a priori more likely that they would have been established in the eastern Mediterranean. Since there is reason to believe that there was a related faience industry on Rhodes established by other Mesopotamian immigrants, we may tentatively suggest that that island also housed some of these early core-formed glass producing workshops.

We have also suggested in Part One of Chapter Two that by the middle of the sixth century local core-formed glass producing workshops had been established, and that these were responsible for the production of I.A.i.2 and type I.A.ii alabaster. Again, the location of these workshops is not known, though, given their close connection to the workshops of the immigrant Mesopotamian craftsmen one may suggest that they were in the eastern Aegean.

As we turn to examine the problem of the location of the workshops that produced types II, III and IV core-formed

vessels, we can utilize distribution patterns that in many cases are based on significant numbers of examples. The geographical distribution of types II, III and IV core-formed glass vessels are summarized in Appendix 4. However, as we have pointed out in Chapter One, in using these distribution tables we must keep in mind that the patterns reflected in them may represent patterns of modern archaeological exploration rather than the actual distribution of the objects in antiquity. To help alleviate this problem, we have recorded both the number of examples of a given type of core-formed vessel found within a given geographical region and the number of sites which have yielded those vessels within that region. In using these tables we must search for large patterns involving many different contemporary types. The absence of one particular type within a given geographical region may be indicative of no more than the happenstance of discovery.

Fossing believed that all type II core-formed glass vessels were made in Egypt, since these vessels show a superficial resemblance in decoration to New Kingdom core-formed vessels. Fossing postulated that this later Egyptian core-formed glass industry was established in the middle of the sixth century B.C. as part of King Amasis' nationalistic revival of older Egyptian craftsmanship.⁵ Fossing's argument was refuted by von Bissing, who pointed out that few, if any, examples of core-formed glass vessels of this period have ever

been found in Egypt and that the Egyptian nationalism began a century before Amasis.⁶ In his study of the Phoenicians, Harden once held the view that type II vessels had been produced in the Levant.⁷ Others, such as T.E. Haevernick and G.D. Weinberg believed that certain type II vessels were made on Rhodes, and a Rhodian center of production for type II vessels has become generally accepted.⁸

When we look at the distribution tables of type II vessels (Appendix 4, pp. 397-403), a clear pattern emerges. Of the 505 examples of type II vessels with a known provenance, nearly half (240) come from the Aegean and the Greek mainland. Of those, nearly half (113) came from Rhodes. Of the thirty-five types of vessels represented, the Aegean and the Greek mainland yielded examples of twenty-five types. In contrast, far fewer examples and types are represented in the other geographical regions. Sixty-four examples of twenty-one types have been found in Thrace and the Black Sea area; twenty-nine examples of sixteen types have been found in northern and central Italy; thirty-four examples of sixteen types have come from southern Italy and Sicily; fifty-eight examples of fourteen types have been found in the western Mediterranean; forty examples of thirteen types are from northern Africa; fourteen examples of nine types have come from the Levant; sixteen examples of eight types have been found on Cyprus; ten examples of eight

type have come from central Anatolia.

Taken as a whole, the distribution of the 505 examples of these thirty-five types shows a pattern centered on Rhodes, with the frequency of examples and types lessening with increased distance from that island. Further, it should be noted that whenever a large number of examples of a given type have been found outside of Rhodes, such as is the case with types II.A.viii, II.A.xiii, II.C.iv, II.C.vii, and II.D.iv, that type is always well represented on Rhodes. While, as we have noted, a distribution pattern alone cannot be taken as conclusive proof that a given region was a center of manufacture, the pattern that emerges here nonetheless provides a strong indication that Rhodes was indeed the main center of the production of type II core-formed glass vessels.

The distribution tables for type III core-formed vessels (see Appendix 4, pp. 404-409) show a completely different situation. Of the 122 type III vessels with a known provenance only two have been found on Rhodes. The majority of type III vessels have been found on the Greek mainland (mostly Thessaly and Macedonia), central Italy, and southern Italy. The distribution pattern for type III vessels would thus indicate that Rhodes ceased to be an important center for the manufacture of core-formed vessels by the end of the fifth century. It is tempting to think that the

synoicism of Lindos, Camiros and Ialysos in 408 B.C. played a role in this decline of Rhodes as a core-formed glass manufacturing center.⁹

As we have seen in Part Three of Chapter Two, type III core-formed vessels show a drastic change from type II vessels. New shapes appear and new styles of decoration are employed. There are, however, enough similarities between vessels of type II and those of type III to make it unlikely that there had been an absolute break between the older core-forming tradition and the new. We have suggested that the craftsmen who first began producing type III vessels may have apprenticed at the declining older centers.

Where the new centers that produced type III vessels may have been located is difficult to determine. As we have shown, the distribution pattern of type III vessels would indicate that they may have been made in Thessaly or Macedonia, in central Italy, or in southern Italy. However, the sample is too small at this point in time to be able to suggest whether any one or two of these three areas was primarily responsible for the production of type III vessels or whether all three shared in their production equally.

Harden has suggested that the spots of white scum found in the glass of some groups of types III.A.i-viii, III.B.iii, III.C.v, III.D.i, III.E.ii and III.F.i-ii vessels are an indication of their Italian origin.¹⁰ Harden based this

suggestion on the fact that most of the examples of core-formed vessels composed of glass having white scum known to him had Italian provenances. We have seen, however, that the recent excavations in the Macedonian cemetery at Nea Michaniona have produced several examples of types III.A.i-iii alabastra that are composed of dark glass with white spots of scum. At this time, therefore, we must reserve judgement on Harden's theory and not consider the presence of white spots of scum a necessary indication of Italian manufacture. Future discoveries may well show that vessels made of glass having white scum are indeed overwhelmingly from Italian contexts, in which case we must consider the Macedonian alabastra as being imported from Italy. That there were Italian workshops that did produce core-formed vessels of glass with white spots of scum is indicated by the distribution of the closely related examples of the first groups of types III.D.i, III.E.ii and III.F.i, all of which have identical short festoon pattern decoration on their shoulders and all are composed of glass with white scum. These vessels were certainly made in a single workshop. Of the five examples of this workshop that have a known provenance, four come from central Italy and one is from Spain.

Harden has also postulated that some type III and IV vessels, particularly type III.E.i hydriskai and type

IV.C.iii-iv thin-walled unguentaria, were made in Alexandria.¹¹ Fossing had held the view that most type III and IV core-formed vessels had been produced in Alexandria.¹² While we know from several ancient references that Alexandria was, by the time of Cicero at least, an important producer of glass vessels, there is no reason to believe that she was especially prominent in the manufacture of any type of core-formed vessel.¹³ Indeed, there are only five core-formed vessels (III.A.v.2-3, III.A.ix.12, III.B.ii.8 and III.E.i.13) with a known Alexandrian provenance, each of a type that is well attested in Italy and Greece. However, that there were eastern Mediterranean workshops which produced some type III vessels is indicated by the distribution of the second group of type II.F.ii miniature oinochoai.

As we have discussed in Part Four of Chapter Two, the core-formed vessels types of the later third and early second centuries B.C., types IV.A.i, IV.B.i-ii and IV.C.i-iv, represent a direct continuation of the types current in the late fourth and early third centuries B.C. The pattern that emerges from the distribution tables of those types, while based on a limited sample of only forty pieces, reinforces this observation since that pattern is essentially the same as we have seen for type III vessels, namely a fairly equal concentration in several geographical regions. As we have noted, Harden believed that the thin-walled unguentaria of type IV.C.iii-iv were Alexandrian products. Harden based his

belief on the high quality of the glass of these types and on the fact that one very rare example has a garland pattern decoration that is reminiscent of the decoration on Hadra hydriae. We should note, however, that of the eight type IV.C.iii and type IV.C.iv unguentaria which have a known provenance, only one was not found in Italy or the western Mediterranean. We should also note that the unguentarium with a garland pattern decoration, whose findspot is not recorded, may have a parallel in an unpublished piece from Sicily.

As had been the case with most type III vessels, the limited sample of these early type IV vessels that come from a known provenance prevents us from hazarding any guesses concerning their origins. When we look at the distribution of the other type IV vessels, however, a very clear pattern emerges. The distribution of these later type IV vessels, which date to the end of the second century B.C. to the beginning of the first century A.D., shows a high concentration on Cyprus, with a decreasing frequency in areas of increasing distance from that island. Of the 146 examples of these later type IV core-formed vessels that have a recorded provenance, sixty-nine were found on Cyprus, twenty-five in the Levant, eighteen in the Aegean and the Greek mainland, ten in northern Africa, nine in Thrace and the Black Seas area, six in southern Italy and Sicily, three in

northern and central Italy, six in Spain and the western Mediterranean, and one in central Anatolia.

This radiating distribution pattern provides a strong indication that these later type IV vessels were manufactured on Cyprus. However, while Cyprus did have the ample supplies of fuel necessary for any glass-working operation, the island is almost totally lacking in one raw material essential to the production of glass, silicon.¹⁴ Either the Cypriot glass-workers utilized the few deposits of sandstone to be found on the island, deposits which can yield an iron-rich silica suitable for the creation of colored but not transparent glass, or they imported raw cullet from elsewhere, perhaps from the Levant, which was a center of production of contemporary molded glass bowls. We know that glass cullet was frequently transported within the eastern Mediterranean during several points in history, though none is attested for the late Hellenistic period.¹⁵

That Cyprus was not the only center of production of core-formed glass vessels in this period is suggested by the distribution of the examples of the related third and fourth groups of the alabastra with convex bodies, type IV.A.ii. Of the vessels of these groups that have a known provenance, only one did not come from a Punic site. We have also tentatively suggested that one example of the bag-shaped amphoriskos, IV.B.ii.3, may likewise have been the product of

a Punic workshop. It should be stressed, however, that if these vessels had been produced in Punic workshops, those workshops were in close contact with the presumably Cypriot workshops which produced the other groups of types IV.A.ii and IV.B.ii vessels.

We now present a brief overview of the general characteristics of types II-IV core-formed glass vessels. During this discussion the reader may wish to refer back to the more detailed discussions of the individual types presented in Chapter Two, and to the summary of types presented in Appendix 3.

Most type II core-formed glass vessels were made of a translucent dark blue or blue glass and were decorated with trails of opaque white, yellow or light-blue. Type II vessels could be decorated with trails of one or two of these colors, but never with trails of all three colors. Type II vessels were also made from an opaque white glass, usually decorated with a translucent purple, though translucent blue or blue-green decoration also occurs. The use of opaque white glass to form the body of type II vessels seems to have ceased after the middle of the fifth century B.C. During the second half of that century core-formed vessels, mostly alabaster, composed of a translucent or opaque green glass with red streaks are also found.

The earliest type II core-formed vessels seem to date to just before the final quarter of the sixth century B.C. Many of the earliest types, such as types II.A.i, II.C.i, II.C.iii, II.D.i-ii and II.E.i-ii, are characterized by tall, fluted bodies and by wavy zigzag pattern decorations, both of which features harken back to the shape and decoration found on earlier type I vessels. By the early fifth century B.C., type II vessels are nearly all well marvered and are decorated with regular zigzag patterns. The first half of the fifth century saw the most prolific production of core-formed glass vessels, to judge from quantity of examples that date to that period.

In the second half of the fifth century B.C., core-formed vessels tended to be decorated with trails that covered most of the body of the vessel, such as we see in types II.A.xiii, II.A.xiv, II.C.ix, II.D.iii and II.E.vi. The alabastera of this period, represented by the fourth group of type II.A.iv, the third group of type II.A.ix, the second group of type II.A.xii and by types II.A.xiii and II.A.xiv, tend to have straight-sided cylindrical bodies.

The production of core-formed glass vessels seems to have nearly ceased soon after the end of the fifth century B.C. and not to have resumed on a large scale until the middle of the fourth century B.C. Many new shapes of core-formed glass vessels make their first appearance in the later

fourth century B.C., such as the type III.A.vii squat alabastron, the type III.C.ii-vi lentoid aryballos, the type III.D.i two-handled jar, the type III.E.i-ii hydricke, the type III.G.i fusiform unguentarium and the type III.G.ii piriform unguentarium. Also at this time new styles of decoration, the feather pattern and the festoon pattern, replace the older zigzag pattern as the most popular decoration for core-formed vessels. Decorative trails on core-formed glass vessels of this period could be of one, two or three colors. Another innovation in core-formed glass vessels of the later fourth and early third centuries B.C. is represented by the miniature perfume containers, types III.A.viii, III.B.iii and III.F.ii.

Many type III shapes continued to be produced during the later third and early second centuries B.C., as is witnessed by types IV.A.i, IV.B.i-ii and IV.C.i-iv. By the end of the second century, however, a completely new core-formed glass tradition has emerged. Characteristic of this late Hellenistic tradition are the piriform alabastra, types IV.A.iii-iv and the large-bodied amphoriskoi, types IV.B.iii-viii. It is at this time that transparent glass is first employed in the manufacture of core-formed vessels, being used to form the vertical handles of types IV.B.iii-viii amphoriskoi and the S-shaped handles of type IV.B.ix-xii amphoriskoi.

It is ironic that the core-formed glass craftsmen who were experimenting with the manipulation of this transparent glass helped to destroy the core-formed glass industry. Their experimentation with this new kind of glass led to the invention of glass-blowing, a technique eminently suited for mass-production. Within a few generations after the invention of glass-blowing, masses of inexpensive blown vessels had completely captured the market previously served by the manufacturers of core-formed glass vessels.

NOTES: Chapter Four.

1. For the types, see Alekseeva, 1975, 1978, passim. For the local production of eye beads in central Europe, see N. Venclová, "Prehistoric Eye Beads in Central Europe," JGS, 25 (1983), 11-17.
2. Seefried, 1982, 36-45.
3. V. Tatton-Brown, "Chapter 3. Rod-formed Glass Pendants and Beads of the 1st Millennium B.C.," in Harden, 1981, 143.
4. For New Kingdom Egypt, see W.M.F. Petrie, Tell el Amarna (London, 1894), 25-27; Nolte, 1968, 23-24; C.A. Keller, "Problems in Dating Glass Industries of the Egyptian New Kingdom: Examples from Malkata and Lisht," JGS, 25 (1983), 19-28. The late third century B.C. glass factory on Rhodes, for which see Weinberg, 1969, apparently did not manufacture core-formed glass vessels, though it certainly did produce rod-formed beads and pendants. Only three small fragments of core-formed glass vessels were uncovered in the excavations of the Kakoula plot, from which a mass of material from a glass factory had been used in a rebuilding of an ancient house. These fragments are probably not to be associated with the glass factory; if, on the other hand, they do belong to the remains of the factory, they most likely represent the odd piece of broken glass that had been collected for reuse as cullat, rather than fragments of objects manufactured in the factory. The examples of the types of beads made in the factory always are found in vast quantities.
5. Fossing, 1940, 81-82; 134.
6. von Bissing, 1942, 79-82, 107, 117.
7. D.B. Harden, The Phoenicians (London, 1962), 154.
8. Haevernick, 1960, 57; Weinberg, 1966. Now see Hayes, 1975, 5; Harden, 1981, 52-53, 60.
9. Harden, 1981, 53.
10. Harden, 1981, 103, 106, 112-116.
11. Harden, 1981, 53, 112, 136 and n. 55.
12. Fossing, 1940, 136.

NOTES: Chapter Four, contd.

13. Cicero (Pro Rabirio, 14.20) states that glass from Alexandria was exported to Italy. Athenaeus (Deipnosophistai II.784c) reports that the Alexandrians imitated all types of clay cups [Ποτηρίων] in glass. Strabo (16, 756) tells us that he was informed by the glass workers of Alexandria that their costly colored glass [τὰς πολυχρόους καὶ πολυτελεῖς κατασκευάς] was made from the glassy Egyptian sand. There is reason to believe that the colored glass referred to in this last passage was mosaic and millefiori glass, which has been found in Alexandria in some quantity: cf. Breccia, 1912, 102-106, nos. 323-332 and 338-345; A. Adriani, Annuaire du Musée gréco-romain iii, 1940-1950 (Alexandria, 1952), pl. XXXV. Mosaic and millefiori glass vessels, mostly bowls of typical Hellenistic shapes, were made from pre-formed cane sections, the use of which is well attested in Egypt as early as the mid-fourth century B.C.; see J.D. Cooney, "An Egyptian Mosaic Glass Panel," Boston Museum Bulletin, LXXIV (1976), no. 370, 11-114. Alexandria is a logical choice for the place where the Hellenistic mosaic and millefiori tradition began, since that tradition involved a combination of an Egyptian glass technique with Greek vessel shapes. We may question Rostovtzeff's assertion, accepted by Fraser, that the above passage in Strabo refers to a very rare type of Hellenistic clear glass bowls with polychrome paint; see M. Rostovtzeff, The Social and Economic History of the Hellenistic World, I (Oxford, 1941), 372, n. 198, pl. xliiii:4; P.M. Fraser, Ptolemaic Alexandria II (Oxford, 1972), 242, n. 38. Such polychrome painted decoration is clearly not dependent on the glassy Egyptian sand.

14. For analyses of Cypriot sandstones see L.M. Bear, The Mineral Resource and Mining Industry of Cyprus, Bulletin no. 1 (Ministry of Commerce and Industry, Geological Survey Department, 1963) 181-2; Th.M. Pantazis, The Geology and Mineral Resource of the Pharmakas-Kalavasos Area, Memoir no. 8 (Geological Survey Department, Cyprus, 1967), 29, 163; G. Constantinou, Annual Report of the Geological Survey Department for the Year 1979 (Ministry of Agriculture and Natural Resources, Republic of Cyprus, Nicosia, December, 1980), 14.

NOTES: Chapter Four, contd.

15. Glass cullet has been uncovered from two underwater wrecks excavated by Prof. George Bass in southern Turkey. One of these ships, a Middle Byzantine wreck at Serçe Liman, also carried an enormous quantity of glass vessels; see G.F. Bass, "The Shipwreck at Serçe Liman, Turkey," Archaeology, vol. 32, no. 1 (Jan./Feb., 1979), 36-43. The other wreck, a Late Bronze Age ship discovered in the summer of 1984 at Ulu Burun, also carried copper ingots and Cypriot pottery; I wish to thank Prof. Bass for providing me with information about his recent discoveries at Ulu Burun. The nine ton glass slab discovered at Beth She'arim, probably dating to the fourth century A.D., represents a failed melt of what must have been a large-scale production of cullet.

Appendix 1. Contexts with Core-Formed Glass

The Italian Excavations on Rhodes

Camiros

This Rhodian city and its cemeteries were excavated at different times by Auguste Salzmänn and Sir Alfred Biliotti for the British Museum and by Giulio Jacopi under the auspices of the Italian Mission. It is a tribute to the care of the British Museum that most of the tomb groups excavated by Salzmänn and Biliotti one hundred and twenty years ago are still intact, and hence provide important dates. Some of the material Salzmänn obtained is now in the Louvre and in Lausanne. The Italian material is in Rhodes, having suffered some disruption and loss during its storage during the Second World War. For the British Museum material, cf. Higgins, 1954, 25-29; Webb, 1978, App. I, p. 136; Gates, 1979; Harden, 1981, App. 1, 157-159.

The following provides a list of the tombs containing core-formed glass vessels which were excavated by Jacopi at the Macri Langoni cemetery of Camiros. The catalogue numbers of the core-formed glass vessels are indicated in boldface. The date of deposition of each tomb is given, together with a list of the other grave goods.

Tomb 19. C1Rh, IV, 90, fig. 76

Date: 475-425 B.C.

Glass: **II.A.xiii.5,6**

Other finds: Small bowl, early and heavy: cf. Sparkes and Talcott, 1970, 134. It is impossible to determine the exact profile from the photograph.

Tomb 25. C1Rh, IV, 96-102, fig. 85-88.

Date: 475-450 B.C.

Glass: **II.A.vi.7,8. II.C.vii.13,14,15.**

Other finds: Three standing female terracotta figurines: cf. Higgins, 1954, no. 206. Seated female terracotta figurine. Terracotta relief of Polyphemos. Pyxis with conical foot. Large stemless black-glazed cup-skyphos with incised tongue pattern: cf. Sparkes and Talcott, 1970, no. 483. Fragment of female terracotta figurine. Terracotta figurine of a squatting boy: cf. Higgins, 1954, no. 261. Terracotta of a Hera: cf. Higgins, 1954, no. 254. Terracotta figurine of a lion: cf. Higgins, 1954, no. 172. Terracotta female protome. Attic red-figure oinochoe. Black-glazed small bowl, early and heavy: cf. Sparkes and Talcott, 1970, 134. Two alabaster alabastra. Terracotta figurine of a stool. Corinthian? skyphos. Bone cylinders. Two faience miniature jugs.

Appendix 1, Cairos, contd.

Tomb 26. C1Rh, IV, 104-107, figs. 89-95.

Dated: 475-450 B.C.

Glass: II.A.iv.9.10, II.A.vii.3.

Other finds: Attic red-figure pelike by Erichthonios Painter: ARV², 1218, 2. Fragmentary black-glazed cup. Black-glazed beaked jug. Attic black-glazed stemless cup. Mollusk shells. Bone fibula plate. Bronze mirror. Terracotta figurine of seated Demeter and Persephone: cf. Higgins, 1954, nos. 231 and 232. Terracotta figurine of standing female. Terracotta figurine of seated female. Terracotta figurine of dove: cf. Higgins, 1954, no. 275.

Tomb 33. C1Rh, IV, 114-115, fig. 108.

Dated: 500-450 B.C.

Glass: II.E.v.5

Other finds: Two alabaster alabastra. Terracotta figurine of two squatting figures. Bronze mirror. Three terracotta pigs: cf. Higgins, 1954, no. 177. Small terracotta female head, from epinetron? Two small terracotta female heads with conical hats, from epinetron?: cf. Higgins, 1954, no. 150. Two large terracotta female protomes: cf. Higgins, 1954, no. 140.

Tomb 44. C1Rh, IV, 134-135, fig. 131.

Dated: 450-400 B.C.

Glass: II.A.xiii.4

Other finds: Plain-ware hydria. Local? lidless pyxis. Attic black-glazed stemless cup, delicate class?

Tomb 63. C1Rh, IV, 159-163, fig. 159.

Dated: 475-450 B.C.

Glass: II.D.ii.5

Other finds: Attic red-figure hydria, Earlier Mannerist: ARV², 571, 82. Black-glazed feeder. Attic palmette lekythos of Beidas workshop: cf. Kurtz, 1975, 153f. Corinthian pattern skyphos: cf. Blegen, et al., 1964, 123. Black-glazed plate. Alabaster alabastron. Terracotta figurine of seated female. Terracotta figurine of a squatting boy: cf. Higgins, 1954, no. 267. Terracotta figurine of turtle: cf. Higgins, 1954, no. 191.

Tomb 69. C1Rh, IV, 167, fig. 168.

Dated: 490-470 B.C.

Glass: II.C.vi.4

Other finds: Attic black-figure oinochoe of the Haimon Group: ABV, 555, 432. Attic black-glazed saltceller with echinus wall: cf. Sparkes and Talcott, 1970, no. 899.

Appendix 1, Caniros, contd.

Tomb 106. CIRh, IV, 210, 211, figs. 221, 222.

Dated: 500-450 B.C.

Glass: II.A.vi.5

Other finds: Terracotta female protome: cf. Higgins, 1954, no. 140. Terracotta figurine of seated female: cf. Higgins, 1954, no. 121. Terracotta figurine of a seated figure with mantel and conical cap. Terracotta figurine of a lion: cf. Higgins, 1954, no. 172. Terracotta figurine of a turtle: cf. Higgins, 1954, no. 191. Two terracotta figurines of boars: cf. Higgins, no. 177. Terracotta plaque of a baby in a cradle: cf. Higgins, 1954, no. 156. Attic black-glazed small bowl, early and heavy: cf. Sparkes and Talcott, 1970, 134, no. 255.

Tomb 109. CIRh, IV, 215-226, figs. 232-249.

Dated: 510-490 B.C.

Glass: II.A.v.1,2

Other finds: Terracotta figurine of donkey carrying vessels: cf. Higgins, 1954, no. 170. Attic black-figured stemless cup, Segment Class: ABV, 213, 20. Two other Attic black-figure stemless cups. Two Attic black-figure olpai. Attic black-figure amphora, Group of Würzburg 199: ABV, 288, 17. Attic black-figure amphora. Three Attic black-figure lekythoi of the Cock Group: ABV, 469, 78-80, cf. ABL, 67-68. Black-glazed oinochoe. Local? glazed amphora. Local? stemless cup, Local? lidded pyxis. Terracotta figurine of a female with a bell-shaped body. Two terracotta female protomes: cf. Higgins, 1954, no. 134. Corinthian? kothon. Fikellura amphora: Cook, 1934, 21, L12. Fikellura amphoriskos: Cook, 1934, 50, Y35. Local? lidless pyxis. Corinthian pattern skyphos.

Tomb 113. CIRh, IV, 228-230, figs. 254-259.

Dated: 510-490 B.C.

Glass: II.A.vii.4, II.A.viii.6, II.E.i.1, II.E.iii.1.

Other finds: Two terracotta female protomes: cf. Higgins, 1954, no. 134. Two Corinthian pattern skyphoi. Two Attic? stemmed dishes, convex and small: cf. Sparkes and Talcott, 1970, no. 966. Attic black-figure lekythos, Lekythos Painters IV, Class of Athens 581: ABV, 490, 41. Bronze mirror. Two Attic red-bodied oinochoai III: ABV, 439, 1, 2. Attic black-figure olpe.

Appendix 1, Cansires, contd.

Tomb 132. C1Rh, IV, 261-263, figs. 287-289.

Dated: 510-490 B.C.

Glass: II.C.vi.5

Other finds: Attic black-figure olpe, Painter of Rhodes 13472: ABV, 449, 2. Attic black-figure lekythos, the Cock Group: ABV, 466, 2. Terracotta figurine of an ape holding a child. Attic black-glazed saltcellar with concave wall: cf. Sparkes and Talcott, 1970, no. 922. Corinthian pattern skyphos. Local? miniature kalathos.

Ialyssos

Two cemeteries, one of the Mycenaean period and the other of Archaic period, were excavated by Jacopi, Maiuri and Laurenzi for the Missioni Italiane in Oriente. The following list of tomb-groups is arranged as the above.

Tomb 68. ASatene, VI-VII, 320-324, figs. 214-216.

Dated: 525-500 B.C.

Glass: II.A.x.1, II.C.iv.3, II.E.ii.2,3.

Other finds: Attic black-glazed kothon, type B: ABV, 349, 5. Two Attic black-glazed miniature plates. Three ivory plaques: cf. Y. Hula, Ivoires d'Etrurie, Rome, 1957, 192-194. Bronze mirror. Two rock-crystal discs. Three nails with silver covering. Gold bracelet.

Tomb 172. C1Rh, III, 169-170, fig. 165-166.

Dated: 500-450 B.C.

Glass: II.A.viii.7

Other finds: Corinthian? kothon. Attic? amphoriskos. Terracotta conical loomweight.

Tomb 195. C1Rh, III, 207-209, figs. 204-206.

Dated: 475-450 B.C.

Glass: II.C.vii.16.

Other finds: Bronze mirror. Two black-glazed oinochoai. Two Attic black-figure hydrias: ABV, 556, 437, 438 (in manner of Haimon Painter); Paralipomena, 289, 5, 6 (BRNO Painter). Attic black-glazed lidded pelike: EVP, 178; cf. Sparkes and Talcott, 1970, no. 20. Attic white-ground lekythos, type 3 shape: cf. Kurtz, pl.61.2 (shape) and fig. 31 (Diosphos Workshop palette). Small black-glazed kylix. Wide-mouth jug. Small grey-ware olpe. Two gold earrings.

Appendix 1, Ialysos, contd.

Tomb 197. CIRh, III, 212-213, figs. 209-210.

Dated: 500-450 B.C.

Glass: **II.A.vii.6,7, II.A.xi.6,7, II.A.xii.2, II.C.vii.17, II.E.v.6,7,8.**

Other finds: Local? lidless pyxis: cf. Chapter Three, note 24. Local? storage bin. Bronze mirror.

Tomb 224. CIRh, III, 235-238, fig. 234-238.

Dated: 480-460 B.C.

Glass: **II.C.vii.19**

Other finds: Attic, female head vase, Class N: the Cook Class: ARV², 1543, 130. Inscribed bronze mirror. Bronze box with lion's feet. Four bronze rings. Black-glazed lamp. Miniature oinochoe. Corinthian? pyxis. Terracotta loomweight. Thin silver blade. Attic black-bodied lekythos in manner of Athena Painter: ABL, 262, 5. Attic black-glazed olpe: cf. Sparkes and Talcott, 1970, no. 277. Black-glazed cup, Type C, concave lip: cf. Sparkes and Talcott, 1970, no. 411. Three Attic black-glazed stemless cups. Attic white-ground lekythos by the Bowdoin Painter: ARV², 687, 210 (where inv. number is cited incorrectly). Large plate.

Tomb 232. CIRh, III, 248-252, figs. 244-246.

Dated: 440-400 B.C.

Glass: **II.A.xiii.7,8, II.E.iv.4,5.**

Other finds: Attic red-figure lekythos, name piece of Group of Rhodes 11966: ARV², 1196, 1. Attic red-figure squat lekythos by the Washing Painter: ARV², 1132, 185. Attic white-ground pattern lekythos of the Beldam Workshop: cf. Kurtz, 1975, 154, pl. 70:6-8. Attic red-figure oinochoe. Attic red-figure squat lekythos. Attic red-figure squat lekythos in the manner of the Washing Painter: ARV², 1134, 19. Two Attic black-glazed ribbed squat lekythoi: cf. Sparkes and Talcott, 1970, nos. 1129-1134. Attic black-glazed oinochoe. Attic black-glazed lekane with ribbon handles: cf. Sparkes and Talcott, 1970, no. 1220. Attic black-glazed bowl with inturned rim. Local? lidded bowl. Three miniature skyphoi. Alabaster lidded pyxis. Attic red-figure crater. Attic red-figure hydria by the Niobid Painter: ARV², 606, 81. Bronze omphalos bowl. Bronze mirror. Rock-crystal astragal. Two gold pins.

Marmaro Cemetery, corridor of tomb 3.

CIRh, VIII, 95-96, figs. 81-82.

Dated: 540-525 B.C.

Glass: **II.D.ii.6,7.**

Other finds: Two Attic Droop cups: cf. Gates, 1979, 332. Terracotta figurine of seated female. Two bronze bracelets.

Appendix 1, Ialysos, cont.

Marmaro Cemetery, corridor of tomb 4.

CIRh, VIII, 96-105, figs. 83-92.

Dated: 500-480 B.C.

Glass: II.A.vi.1, II.C.i.2,3.

Other finds: Attic black-figure Little Master band cup, Group of Rhodes 12264: ABV, 192,1. Attic black-figure skyphos, Ure's Class of Skyphoi A2: Paralipomena, 91, 8. Attic black-figure cup-skyphos of the Haimon Group: ABV, 581, 10. Attic black-figure oinochoe, approximate to the Dot Ivy Group: ABV, 449. Attic black-figure neck amphora. Attic black-figure cup-skyphos. Two Attic black-figure band cups. Local? one-handed jug. Fikeilura amphoriskos: Cook, 1934, 48, Y12a. Three bronze nails. Bronze ring.

Nisyros

Jacopi published in 1931 two tombs that contained glass from the small island of Nisyros, near Rhodes.

Tomb 25. CIRh, VI-VII, 512-516, figs. 40-41.

Dated: 480-460 B.C.

Glass: II.E.iv.6

Other finds: Attic black-glazed skyphos, type A: cf. Sparkes and Talcott, 1970, nos. 340, 342. Lidded pyxis. Attic black-glazed bowl with incurving rim. Black-glazed lamp: cf. Bailey, 1975, no. Q 376. Terracotta female protome.

Tomb 41. CIRh, VI-VII, 528-534, figs. 64-70.

Dated: 25 B.C.- 25 A.D.

Glass: IV.B.iv.1.

Other finds: Two Eastern Sigillata A plates. Two Eastern Sigillata B plates. Two plain-ware pitchers. Eight bulbous unguentaria. Fusiform unguentarium. Molded glass bowl (Zarte Rippenschale). Molded and ground? clear glass bowl. Blown glass one-handed jug. Blown glass unguentarium. Bowl with inturned rim. Plain-ware wide-mouth jug. Bronze pyxis. Two molded lamps. Two Cnidian lamps.

Appendix 1, contd.

The American Excavation at the Athenian Agora

The civic center of ancient Athens has been extensively excavated by Greek, German and American archaeologists since the middle of the last century. The American excavations, conducted under the auspices of the American School of Classical Studies at Athens, began in 1931 and have continued to the present day. For a brief overview of the excavations at the Agora, see H.A. Thompson and R.E. Wycherley, The Athenian Agora. Vol. XIV. The Agora of Athens, Princeton, 1972 and H.A. Thompson, The Athenian Agora. A Guide to the Excavation and Museum, Athens, 1976.

Only ten fragments of core-formed glass vessels have been catalogued by the American excavators of the Athenian Agora, though indubitably more exist in the context pottery. These fragments of core-formed glass in the Agora probably originally belonged to vessels that had been placed as offerings in one of the sanctuaries in the area.

Four pieces of core-formed glass vessels from the Athenian Agora are included in the present study. The following lists these pieces by their catalogue numbers (in boldface), gives the Agora inventory numbers, and briefly discusses their contexts.

III.A.iii.2 G 453. Section N #760. Area south of East-West Late Roman Wall: dumped bedrock on east side of 4th century hole, p. 1632. March 11, 1952. Context: J 11:1. This context is dated to the third quarter of the fourth century B.C. on the basis of the stamped amphora handles and the terracotta figurines.

III.A.iv.1 G 485. Section M₂ # 564. Civic offices, Room 2, hard green fill over strosis 3, p. 1046 and 1070. April 18, 1953. This fill probably came from the rebuilding of the Great Drain in the fourth century B.C. Material from under this fill, saved in baskets 220 and 221, dates as late as 325 B.C.

IV.B.iii.1 G 536. Section O # 1025. Late Roman fill in front of Middle Stoa near its east end, p. 874. December 8, 1955. This context dates to the fifth century A.D.

IV.C.ii.2 G 186. Section Ψ # 851. 40/10, soft fill beside Late Roman wall, p. 485. June 14, 1938. In the material from this fill, saved in tin 31, were two stamped handles from a first century A.D. Roman amphora, bearing the letters LVIPOR.

Appendix 1, contd.

The American Excavation at the Sanctuary of Demeter and Persephone at Cyrene, Libya.

From 1969 to 1978 seven campaigns of excavation at the extra-mural sanctuary of Demeter and Persephone at Cyrene were undertaken by the University of Michigan and the University Museum, University of Pennsylvania under the direction of Donald White. The first of a series of final reports on these excavations has now been published. See D. White, The Extramural Sanctuary of Demeter and Persephone at Cyrene, Libya. Final Reports. Vol. 1. Background and Introduction to the Excavations, University Museum Monograph 52, Philadelphia, 1984.

525 fragments of core-formed glass have been catalogued from this amazingly rich sanctuary. While the majority of these fragments are too small to be diagnostic and the number of actual vessels represented by these fragments is probably on the order of three to four hundred, these finds from the Demeter Sanctuary nonetheless are by far the largest collection of core-formed glass from any recorded excavation. The rich cemeteries of the Rhodian cities of Camiros and Ialysoi, in contrast, have yielded only 113 examples.

Almost all of the Cyrene fragments belong to types of the late sixth and fifth centuries B.C., though, owing to the frequent rebuilding at the sanctuary, most are found in disturbed contexts of later dates. The vast majority (492 or 93.8%) are composed of the normal dark blue glass. Of these, 199 (or 38% of the total) had decoration of opaque white and yellow threads and 163 (31.1%) decoration of opaque yellow and light blue; the rest, 130 (24.8%), are not complete enough to determine the decoration. Of the 525 examples, 18 (3.4%) were composed of opaque white glass, 11 (2.1%) of translucent blue-green, and 4 (0.8%) of red-brown to dark green glass.

Andrew Oliver, Jr., has studied all of the glass from the Demeter Sanctuary, and, in his forthcoming monograph, will present 39 of the best preserved fragments of core-formed glass. The present study includes only 31 fragments (15 of which will be in Oliver's work). The following lists these fragments by their catalogue numbers (in boldface), and gives their excavation numbers, contexts and, where applicable, Oliver's catalogue number. For further discussion of the contexts, see D. White, op cit., 114-116.

II.A.v.2

73-585
D12/E12, tr. D, st. 3

Oliver no. 26.

Appendix 1, Cyrene, contd.

II.A.v.3	74-464 F12, st.2	Oliver no. 7.
II.A.v.4	76-174 C13/D13, tr. 1, st. 3	
II.A.viii.37	71-780 E11, tr. 3, st.3	Oliver no. 3.
II.A.viii.38	73-1056 C15/16, tr. 1, st. 6	
II.A.viii.39	77-693 F13/G13, tr. 2, st. 2	
II.A.viii.40	73-990 C15/16, tr. 1, st. 5	
II.A.viii.41	76-515 F13/G13, tr. 1, st. 2	
II.C.i.22	73-910 C15/16, tr. 1, st. 4	Oliver no. 15.
II.C.i.23	77-439 F13/G13, tr. 2, st. 2	
II.C.i.24	73-985 C15/16, tr. 1, st. 5	
II.C.i.25	73-1051 C11, tr. 2, st. 4SE	
II.C.iv.19	76-464 F13/G13, tr. 1, st. 2	Oliver no. 14.
II.C.iv.20	76-604 F13/G13, tr. 1, st. 2	
II.C.iv.21	77-1054 D15/E15, tr. 1, st. 2	
II.C.iv.22	73-1170 E10 Bauk Bldg., st. 3	Oliver no. 12.
II.C.iv.23	73-1057 C15/D15, tr. 1B, st. 4	
II.C.iv.24	78-374 F14/G14, tr. 1, st. 3	

Appendix 1, Cyrene, contd.

II.C.iv.25	76-247 C13/D13, tr. 1, st. 5	Oliver no. 13.
II.C.v.3	71-490 F11, tr. 1, st. 1	
II.C.v.4	77-447 F13/G12, tr. 2, st. 2	Oliver no. 38.
II.C.v.5	73-679 D16/17, st. 3	Oliver no. 9.
II.C.vii.75	73-935 D17/16, st. 3	Oliver no. 11.
II.C.vii.76	74-316 D16/17, tr. 2, st. 4	
II.D.iv.36	77-543 F13/G13, tr. 2, st. 2	
II.D.iv.37	74-121 D16/17, tr. 2, st. 3	Oliver no. 19.
II.D.iv.38	74-74 D10/11, tr. C, st. 5	Oliver no. 18.
II.D.vi.1	71-786 E12, tr. 1, st. 3	Oliver no. 6
II.E.v.17	73-1098 D16/17, tr. 1, st. 3 76-371 F13/G13, tr. 1, st. 2	Oliver no. 20.
II.E.v.18	73-1139a D16/17, tr. 1, st. 2 74-115 D16/17, tr. 1, st. 3 77-395 D16/17, tr. 2, st. 3	Oliver no 21.
II.E.v.19	74-729 E12/13, tr. E, st. 2	

Appendix 1, contd.

The American Excavation at Ayios Ermoynis, Kourion, Cyprus.

The area around the Middle Byzantine church of Saint Herakogenes, just to the southeast of the ridge on which stood the city of Kourion, was used as a cemetery from the Classical to the Roman periods. These cemeteries were explored by Luigi Palma di Cesnola, H.B. Walter and others in the previous century. In 1940 and 1941, ten of these tombs were excavated by the University Museum of the University of Pennsylvania, under the direction of George H. McFadden. To date, only one of these tombs has received proper publication; see G.H. McFadden, "A tomb of the Necropolis of Ayios Ermoynis at Kourion," AJA, 50 (1946), 449-489. Andrew Oliver has recently restudied some of the material from this cemetery; see A. Oliver, Jr, "Ayios Ermoynis Cemetery," in An Archaeological Guide to the Ancient Kourion Area and the Akrotiri Peninsula, ed. H.W. Swiny, Nicosia, 1982, 140-145.

Two tombs excavated by McFadden contained core-formed glass vessels. The contents of these tombs, Tr. 43, tomb 1 and tomb 5, are now in the collection of the University Museum. Both of these tombs seem to have been in use from the second half of the second century B.C. through the first half of the first century A.D. Miss Frances Jones is currently preparing a full study of these two tombs.

In the following list the eight core-formed vessels from Ayios Ermoynis are arranged by catalogue numbers. The tomb number, the Kourion excavation numbers and the University Museum inventory numbers also are given.

IV.A.iii.21	Tomb 1, GL 50.	63-1-114a-b
IV.A.iv.18	Tomb 5, GL 25	63-1-184
IV.A.iv.19	Tomb 1, GL 51	63-1-115
IV.A.iv.20	Tomb 1, GL 52	63-1-116
IV.A.iv.21	Tomb 1, GL 55	63-1-119
IV.A.iv.22	Tomb 1, GL 56	63-1-120
IV.B.x.6	Tomb 5, GL 24	63-1-183
IV.B.x.7	Tomb 5, GL 26	63-1-185

Appendix 1, contd.

The American Excavation at Gordion, Turkey

The central Anatolian site of Gordion was briefly explored by a German expedition in 1900 and was the subject of extensive excavations by the University Museum of the University of Pennsylvania, led by Rodney S. Young from 1950 until his death in 1973. The first of a proposed series of final reports on the Gordion excavations has been published recently: R.S. Young, et al., The Gordion Excavations. Final Reports. Vol. I. Three Great Early Tumuli, University Museum Monograph 43, Philadelphia, 1981. For a brief outline to the history of the site, see R.S. Young, Gordion. A Guide to the Excavations and Museum, Ankara, 1975.

Forty-four pieces of core-formed glass vessels were uncovered in the University Museum's excavations at Gordion. All but four came from the city mound (Yassihöyük), three of the exceptions coming from the tumulus suburb (Küçük Höyük) and the other from a grave three miles to the west, near Kiral Harman (see Chapter Three, note 154). The city mound was inhabited from the Early Bronze Age until its desertion of 189 B.C., after which there was a restricted settlement in Roman times. The dates of deposition of the contexts in which the core-formed glass fragments were found are mostly later than the dates of the core-formed vessel types, a situation to be expected in a continually occupied settlement.

Fourteen examples of core-formed glass vessels from Gordion are discussed in this work. The following lists their catalogue numbers (in boldface), together with their Gordion excavation inventory numbers, the contexts in which they were found, the chronological range of datable objects from those contexts, and references to the relevant excavation notebooks.

- I.A.i.2** **G 261 (6462)**
City Mound. W2S3, below Floor 3, pit.
Vol. 87, p. 143.
Sixth through early fourth centuries B.C.
- II.B.1** **G 289 (7383)**
City Mound. T- E2, Floor 4 SE corner.
Vol. 109, p. 13.
Fifth through fourth centuries B.C.?
- II.B.2** **G 309 (7988)**
City Mound. TB7-D, Layer 4.
Vol. 120, p. 24.
Sixth through fourth centuries B.C.

Appendix 1, Gordion, contd.

- II.B.3** G 245 (5666)
City Mound. MN -Ext. 3, Yellow H., Rm. 1,
between floor and stone paving beneath.
Vol. 72, p. 87.
Fifth century B.C.
- II.C.i.27** G 318 (8351)
City Mound. Terrace Building 7-E, Level 3.
Vol. 118, p. 43.
Fourth through third centuries B.C.
- II.C.i.28** G 218 (4687)
City Mound. NW, pit under NCT-A8, mosaic
level.
Vol. 67, p. 35.
Fifth through fourth centuries B.C.
- II.C.vii.86** G 312 (8240)
City Mound. Terrace Building 7-C, Level 4,
Pit B.
Vol. 118, p. 21.
Fifth through fourth centuries B.C.?
- II.E.ii.11** G 213 (4538)
City Mound. NW, Pit into Floor 6, North of
wall 13.
Vol. 67, p. 37.
Fifth through fourth centuries B.C.
- II.E.iv.21** G 322 (8516)
City Mound. WS 6, Fl. 2, north, "box."
Vol. 127, p. 34.
Fourth century B.C.
- II.E.v.20** G 332 (8910)
City Mound. WS 5-6, N, Layer 6.
Vol. 130, p. 73, #31.
Sixth through fourth centuries B.C.
- II.E.v.21** G 338 (9040G)
City Mound. WS 9, Layer 8.
Vol. 127, p. 75.
Late fifth through early fourth centuries B.C.
- II.E.v.22** G 354 (9715)
City Mound. PBX-5, Layer 5.
Vol. 142, p. 103.
Late sixth through fifth centuries B.C.

Appendix 1, Gordion, contd.

- III.A.iii.22** G 129 (2580)
Kiral Haran grave.
Vol. 37, p. 118f., esp. p. 123.
350-300 B.C.
- IV.A.i.6** G 130 (2591)
City Mound. NCT-A2, Ash, gravel, plaster
level.
Vol. 23, p. 131.
189 B.C.? (apparently Galatian desertion).

Appendix 2. Core-Formed Glass Vessels without Provenances.

Type I. A. i.

Toledo Museum of Art, no. 61.39. H. 8.6. Toledo, 1969, p. 15; also, Grose, 1978, p. 72, fig. 5.

Carnegie Museum of Natural History, Pittsburgh, no. 26543/2. H. 15.0, M.D. body 5.0. Oliver, 1980, 34, no.1.

Type I. A. ii.

British Museum, no. EA 4745. H. 11.7, D. rim 1.6 to 1.9, D. mouth 1.0, M.D. body 2.0. Cooney, 1976, 99, no. 1049; also, Harden, 1981, no. 287.

British Museum, no. 1878.12-30.8. P.H. 12.7, D. neck. 1.5, M.D. body 2.9. Harden, 1981, no. 288.

Toledo Museum of Art, no. 80.655. H. 12.7, M.D. body 2.6. Harden, 1981, p. 168, footnote 61a.

Type II. A. i.

Hermitage Museum, no. E. 120. Ex Coll. Pizzati. Voščinina, 1967, pl. 122:3.

British Museum, no. 1864.2-20.40. P.H. 13.0, M.D. body 4.4. Harden, 1981, no. 111.

National Museum, Athens, no. 3076. P.H. 12.9, D. mouth 1.1, M.D. body 4.1.

Oppenländer Coll., no. 2086. H. 13.2. Nolte, 1974, 66, no. 154.

National Museum, Copenhagen, no. 469. H. 10.6. Fossing, 1940, 62, fig. 31.

Type II. A. iv.

Haaretz Museum, Tel Aviv. H. 10.6, D. rim 3.8, M.D. body 3.2. Neuburg, 1962, fig. 11.

British Museum, no. 1878.12-30.2. H. 9.5, D. rim 3.0, M.D. body 3.4. Harden, 1981, no. 87. Not illustrated.

British Museum, no. EA 4744. H. 8.2, D. rim 3.3, M.D. body 2.8. Cooney, 1976, no. 1048.

Type II. A. iv contd.

Coll. Oppenländer, ex Coll. Vogell, no. 1064. H. 10.3.
Nolte, 1974, 66, no. 158.

Coll. Oppenländer, ex. Coll. Vogel, no. 1068. H. 10.5.
Nolte, 1974, 70, no. 176.

Antikensmuseum, Berlin, no.30219, 106. H. 10.8, D. rim 3.6.
Platz-Horster, 1976, no. 2.

Antikensmuseum, Berlin, no. 30219, 100. H. 10.3, D. rim 3.7.
Platz-Horster, 1976, no. 3.

Antikensmuseum, Berlin, no.30219, 113. H. 11.3, D. rim 3.6.
Platz-Horster, 1976, no. 4.

Antikensmuseum, Berlin, no. 30219, 107. H. 11.6, D. rim 3.0.
Platz-Horster, 1976, no. 5.

Münzen und Medaillen Sale, Marz, 1968, Basel. H. 9.3.
Sonderliste J, no. 123, p. 37.

London Art Market. H. 13.3. Sotheby's, 21 May, 1984, no.3.

Royal Ontario Museum, no. 950.157.18. H. 10.5, D. rim 3.2.
Hayes, 1975, no. 17.

Royal Ontario Museum, no. 950.157.86. H. 9.1, D. rim 3.3.
Hayes, 1975, no. 18.

Metropolitan Museum of Art, ex. Coll. Greau. Neuburg, 1949,
pl. VI:bottom row, second from right. also, Perrot, Histoire
de L'Art, tome III, pl. IX:left.

Newark Museum, no. 50.1262. Restored H. 10.5, D. rim 3.0.
Auth, 1976, no. 259.

Carnegie Museum, Pittsburgh. H. 8.0. Oliver, 1980, n 7.

Type II. A. v.

British Museum, no. 1878.12-30.1. H. 13.3, D. rim 3.4, M.D.
body 3.2. Harden, 1981, no. 96.

Type II. A. vi.

Pierides Coll., Larnaka. H. 13.1, Dbody. 3.8. Seefried,
1974, p. 149, pl. XII:2.

Type II. A. vi contd.

Newark Museum, no. 50.1311. H. 10.0, D. rim 2.6 to 2.9.
Auth, 1976, 28, no. 8.

Newark Museum, no. 550.1261. H. 9.5, D. rim 2.8. Auth,
1976, 29, no. 9.

Museum Narodowe, Warsaw, no. 198966. H. 11.8, M.D. body 2.8.
Filarska, 1952, no. 9, pl. 2:3.

Museum Narodowe, Warsaw, no. 147551. H. 11.4, M.D. body 2.9.
Filarska, 1952, no. 10, pl. 2:4.

Type II. A. vii.

Hermitage Museum, no. E. 120, ex Coll. Pizzati. Voščinina,
pl. 122:3.

Ashmolean Museum. H. 10.6. Fossing, p. 65, fig. 37.

British Museum, no. 1878.12-30.7. H. 9.8, D. rim 2.4, M.D. body
3.1. Harden, 1981, no. 143.

Royal Ontario Museum, no. 951.8.20. H. 9.0, M.D. body 2.7.
Hayes, 1975, no.4.

Coll. Oppenländer, no. 2089. H. 9.0. Nolte, 1974, 71, no.
183.

Museum Narodowe, Warsaw, no. 198998. H. 10.3, M.D. body 2.8.
Filarska, 1952, no. 7 pl. 2:1.

Type II. A. viii.

Kanellopoulos Museum, Athens, no. 571. Unpublished.

Museum Narodowe, Warsaw, no. 198964. H. 11.0, M.D. body 3.3.
Filarska, 1952, no.5, pl. 1:5.

Coll. Oppenländer, no. 2085. H. 10.0. Nolte, 1974, no. 166.

Coll. Oppenländer, no. 2003. H. 12.5. Nolte, 1974, no. 186.

Coll. Oppenländer, n 2031. H. 6.7. Nolte, 1974, no. 197.

National Museum, Copenhagen, no. 120. H. 11.8. Fossing,
1940, 64, fig. 35.

Type II. A. viii contd.

Private Coll. H. 8.8. Neuburg, 1962, pl. IIIa.

Villa Giulia, no. 50843. Unpublished.

British Museum, no. 1868.5-1.30. H. 12.7, D. rim 2.7, M.D. body 3.5. Harden, 1981, no. 117.

British Museum, no. 1868.5-1.28. H. 10, D. rim 2.8, M.D. body 3.3. Harden, no. 118,

British Museum, no. 1868.5-1.24. H. 11, D. rim 3.1, M.D. body 3.5. Harden, 1981, no. 157; not illustrated.

Royal Ontario Museum, no. 950.157.202. H. 11.9, D. rim 2.9. Hayes, 1975, no.1.

Royal Ontario Museum, no. 951.8.23. H. 12.0, D. rim 2.8. Hayes, 1975, no.2.

Corning Museum, no. 50.1.4. H. 13.75, M.D. body 4.25. Goldstein, 1979, 124, no. 258. (Neck wrongly restored).

Newark Museum, no. 50.1257. H. 15.8, D. rim 3.6. Auth, 1976, 27, no. 5.

Yale Univ. Art Gallery, no. 1930.375. H. 9.5. Matheson, 1980, no. 25.

Coll. Cohn. H. 9.3, D. rim 2.5, M.D. body 2.7. von Saldern, 1981, no. 12.

Coll. Cohn. H. 9.6, D. rim 2.5, M.D. body 2.8. von Saldern, 1981, no. 13.

Coll. Cohn. H. 9.0, D. rim 2.2, M.D. body 2.7. von Saldern, 1981, no. 14.

Coll. Cohn. H. 11.2, D. rim 2.5, M.D. body 3.4. von Saldern, 1981, no. 15

Type II. A. x.

Berlin, ex Coll. Bartholdy no. 26. Fossing, 1940, p. 59. Not illustrated.

Berlin, ex Coll. Bartholdy no. 27. Fossing, 1940, p. 59. Not illustrated.

Type II. A. x contd.

British Museum, no. 1869.6-24.15. H. 14.5, D. rim 3.5, M.D. body 4.4. Harden, 1981, no. 84.

Type II. A. xi.

Kanellopoulos Museum, no. 2427.

Coll. Andromache Mela, Ioannina Museum, no. Eur. 14. H. 11, D. rim 3.5. Andreiomenou, 1973, pl. 624d.

Cario Museum. Nolte and Haevernick, 1967, pl. 64:1

Museum Narodowe, Warsaw, no. 198657. H. 9.1. Filarska, 1952, no. 2, pl. 1:2.

Museum Narodowe, Warsaw, no. 32208. H. 11.6, M.D. body 3.5. Filarska, 1952, no. 6, pl. 1:6.

Private Coll. H. 8.5. Neuburg, 1962, pl. IIa.

British Museum, no. 1868.5-1.27. H. 10.7, D. rim 3.0, M.D. body 3.0. Harden, 1981, no. 100.

British Museum, no. 1976.10-11.1. H. 10.3, D. rim 3.1, M.D. body 3.0. Harden, 1981, no. 102. Not illustrated.

British Museum, no. 1832.2-24.419. H. 8.8, D. rim 3.2, M.D. body 2.8. Harden, 1981, no. 105.

British Museum, no. 1873.8-20.403. H. 9.8, D. rim 2.8, M.D. body 3.0. Harden, 1981, no. 106. Not illustrated.

British Museum, no. 1878.12-30.3. H. 8.7, D. rim 3.0, M.D. body 2.6. Harden, 1981, no. 107.

British Museum, no. 1867.5-8.575. H. 11.0, D. rim 3.1, M.D. body 2.8. Harden, 1981, no. 109.

British Museum, no. 1836.2-24.417. H. 10.0, D. rim 2.8, M.D. body 2.9. Harden, 1981, no. 110.

ex. Coll. Constable-Maxwell. H. 9.8, M.D. body 2.6. Constable-Maxwell, 1979, 23, no. 15.

Staatliche Museen, Berlin, no. 32042. H. 10.7, Rohde, 1980, 152, no. 10.

Type II. A. xi contd.

Royal Ontario Museum, no. 951x8.21. H. 11.0. Hayes, 1975, 9, no. 5.

Royal Ontario Museum, no. 951x8.175. H. 10.5, D. rim 2.7. Hayes, 1975, 9, no.6.

Metropolitan Museum of Art. Neuburg, 1949, pl. III:6, second from left.

Metropolitan Museum of Art. Neuburg, 1949, pl. VII:19, bottom row, left.

Newark Museum, no. 50.1259. H. 9.6. D. rim 2.9. Auth, 1976, 187, no. 260.

Yale University Art Gallery, no. 1955.6.4. H. 8.0. Matheson, 1980, no. 22.

Yale University Art Gallery, no. 1940.263. H. 10.25. Matheson, 1980, no. 23.

Yale University Art Gallery, no. 1920.378. H. 10.0. Matheson, 1980, no. 24.

Carnegie Museum of Natural History, Pittsburgh, no. 29825. Oliver, 1980, 36, no. 6.

Type II. A. xii.

Villa Giulia, no. 13581. ex. Coll. Barbarini.

London Art Market. H. 11.4. Sotheby's, 21 May, 1984, no. 11.

Metropolitan Museum of Art. Neuburg, 1949, pl. VI, bottom row, center.

Type II. A. xiii.

National Museum, Athens. Coll. Stathatos. H. 9.5. Rolley, 1966, no. 184, pl. XXXIX.

Museum Haaretz, Tel Aviv. Israeli, Ancient Glass.

Museum Narodowe, Warsaw, no. 198659. H. 10.3, D. rim 2.5. Filarska, 1952, no.1, pl. I:1.

Type II. A. xiii contd.

- Museum Narodowe, Warsaw, no. 147829. H. 9.0, Diam 3.5. cf. Filarska, 1952, no. 3, pl I:3.
- Museum Narodowe, Warsaw, no. 32210. P.H. 7.8. M.D. body 2.5. Filarska, 1952, no. 4, pl. I:4.
- Nordens Museum, no. MM 1962:16. H. 10.0, M.D. body 2.7. Wedendal, 1979, 31.
- Victoria and Albert Museum, no. C.269-1937. Honey, 1946, pl. 1:A; Davis, 1966, no.5.
- British Museum, no. 1878.12-30.5. H. 12.5, D. rim 3.2, M.D. body 2.8. Harden, 1981, no. 124.
- British Museum, no. 1868.5-1.23. H. 13.0, D. rim 3.8, M.D. body 2.9. Harden, 1981, no. 125.
- British Museum, no. 1868.5-1.15. H. 10.0, D. rim 2.8, M.D. body 2.3. Harden, 1981, no. 127.
- British Museum, no. 1878.12-30.4. H. 14.3, D. rim 3.4, M.D. body 3.1. Harden, 1981, no. 131.
- British Museum, no. 1879.2-1.2. H. 12.9, D. rim 3.7, M.D. body 3.0. Harden, 1981, no. 132.
- British Museum, no. 1836.2-24.418. H. 11.0, D. rim 2.8, M.D. body 2.6. Harden, 1981, no. 134.
- British Museum, no. 1976.10-11.2. H. 10.5, D. rim 3.2, M.D. body 2.9. Harden, 1981, no. 135.
- British Museum, no. 1894.11-1.20. H. 9.7, D. rim 3.3, M.D. body 2.1. Harden, 1981, no. 137.
- ex Coll. Constable-Maxwell. H. 9.2. Constable-Maxwell, 1979, 25, no. 19.
- Staatlich Museum, Berlin, no. 11863,636. H. 10.0. Rohde, 1980, 152, no. 9.
- Coll. Oppenländer, no. 2121. H. 10.2. Nolte, 1974, no. 184.
- Coll. Oppenländer, no. 2091. H. 10.0. Nolte, 1974, no. 185.
- Royal Ontario Museum, no. 950.157.13. H. 10.4. Hayes, 1975, 9, no. 7, pl. 1.

Type II. A. xiii contd.

Royal Ontario Museum, no. 951x8.19. Restored H. 10.0.
Hayes, 1975, 10, no. 8, pl. 1.

Metropolitan Museum of Art. Neuburg, 1949, pl. V:12.

Corning Museum, no. 50.1.5. H. 9.5, D. rim 3.0. Goldstein,
1979, 124, no. 257.

Newark Museum, no. 50.1260. H. 9.0, D. rim 2.7. Auth, 1976,
188, no. 263.

Newark Museum, no. 50.1263. H. 9.0, D. rim 2.5. Auth, 1976,
188, no. 264.

Newark Museum, no. 50.1264. H. 9.8, D. rim 3.1. Auth, 1976,
188, no. 265.

Private Coll. Ancient Art and Antiquities, Winter 1974, Alex
G. Malloy Inc., no. 46.

Type II. A. xiv.

Boston Museum of Fine Arts, no. 52.1253.

Metropolitan Museum of Art, ex Coll. Greau. Chipez-Perrot,
III, pl. IX; Richter, 1917, fig. 49; Neuburg, 1949, PL. VI:
bottom row, second from left.

Type II. B.

Carnegie Museum of Natural History, Pittsburgh, no. 26543/4.
Oliver, 1980, no. 3.

Carnegie Museum of Natural History, Pittsburgh, no. 21341/9.
Oliver, 1980, no. 4.

Type II. C. 1.

Ioannina Museum, no. Eur. 75. H. 11.3. Andreiomenou, 1973,
653, pl. 619:d.

National Museum, Athens, no. 2960. H. 11.5, D. rim 3.3, D.
mouth. 1.3, M.D. body 5.7, D. base 1.5.

Museum Narodowe, Warsaw, no. 198658. H. 12.4, M.D. body 5.8.
Filaraska, 1952, no. 12, pl. II:6.

Coll. Oppenländer. H. 11.4. Nolte, 1974, no. 156.

Coll. Oppenländer. H. 12.0. Nolte, 1974, no. 157.

Victoria and Albert Museum, no. 985-1868. H. 11.0. Honey,
1946, pl. 1:E; Neuburg, 1949, fig. 11; Fossing, 1940, 69,
fig. 43. Davis, 1966, 12, no.4.

British Museum, no. 1878.12-30.11. H. 11.8, M.D. body 6.0,
D. base 1.8. Harden, 1981, no. 159.

British Museum, no. 1868.5-1.22. H. 12.5, M.D. body 6.3.
Harden, 1981, no. 160.

ex Coll. Constable-Maxwell. H. 10.1, M.D. body 4.8.
Constable-Maxwell, 1979, no.16.

London Art Market. H. 10.5. Sotheby's 21 May, 1984, no. 12.

Basel Art Market. H. 10.8. Münzen und Medaillen, 1968, no.
132.

Metropolitan Museum of Art, no. 17.194-761. Neuburg, 1949,
pl. V:13.

Metropolitan Museum of Art,. Neuburg, 1949, pl. VI, top row,
third from left.

Corning Museum, no. 51.1.103. H. 12.5, M.D. body 6.5.
Goldstein, 1979, no. 260.

Type II. C. i contd.

Yale University Art Gallery, no.1955.6.6. H. 12.0.
Matheson, 1980, no. 20.

Yale University Art Gallery, no. 1930.409. H. 12.5.
Matheson, 1980, no. 21.

Newark Museum, no. 59.349. H. 12.5, D. rim 3.0, D. base 1.5.
Auth, 1976, no. 19.

Newark Museum, no. 50.1240. H. 12.0, D. rim 3.2. Auth,
1976, no. 276.

Carnegie Museum of Natural History, Pittsburgh, no. 24055/8.
H. 10.9. Oliver, 1980, no. 9.

Coll. Cohn. H. 11.0, M.D. body 5.2. von Saldern, 1981, 26,
no. 1.

Type II. C. ii.

National Museum, Athens, no. 2959. H. 7.7, D. rim 2.3, D.
mouth 0.9, M.D. body 5.3, D. base 1.1.

Private Coll. H. 8.1. Neuburg, 1962, pl. 5:b.

Private Coll. H. 7.0. Münzen und Medaillen. Sonderliste Q,
Nov. 1976, no. 12.

Coll. Oppenländer, no. 2075. H. 7.3. Nolte, 1974, 66, no.
153.

Metropolitan Museum of Art. Neuburg, 1949, fig. 19 middle,
far right.

Type II. C. iii.

Museum Narodowe, Warsaw, no. 42612. H. 12.0, M.D. body 6.0.
Filarska, 1952, no. 17, pl. III:5.

Coll. Oppenländer. H. 11.0, Nolte, 1974, 62, no. 141.

Type II. C. iv.

Haaretz Museum, Tel Aviv. H. 10.0. Neuburg, 1962, fig. 21.

Haaretz Museum, Tel Aviv. H. 10.0. Neuburg, 1962, fig. 22.

Type II. C. iv contd.

Coll. Stathatos, National Museum, Athens. H. 9.0. Rolley, 1966, no. 187.

Basel art market. H. 10.6. Münzen und Medaillen, 1968, no. 131.

Nedelhavsmuseet, no. MM 830. H. 9.5, M.D. body 5.5. Wedendal, 1979, 30.

British Museum. H. 9.8, M.D. body 5.7. Harden, 1981, no. 169.

British Museum. H. 9.4, M.D. body 5.6, D. base 1.5. Harden, 1981, no. 171.

British Museum. H. 9.0, M.D. body 4.9, D. base 1.6. Harden, 1981, no. 173.

British Museum. H. 9.4, M.D. body 5.2, D. base 1.4. Harden, 1981, no. 174.

British Museum. H. 8.5, M.D. body 4.9. Harden, 1981, no. 175.

Royal Ontario Museum, no. 950.157.197. H. 10.7, M.D. body 5.6. Hayes, 1975, 9, no. 3.

Corning Museum, no. 50.1.3. H. 9.0, M.D. body 4.9. Goldstein, 1979, 127, no. 262.

Yale University Art Gallery. H. 8.8. Matheson, 1980, no. 17.

Yale University Art Gallery. H. 11.1. Matheson, 1980, no. 18.

Yale University Art Gallery. H. 10.5. Matheson, 1980, no. 19.

Metropolitan Museum of Art. Neuburg, 1949, pl. VII: bottom row, third from right.

Type II. C. v.

Metropolitan Museum of Art. Richter, 1917, fig. 49, second from left; Neuburg, 1949, bottom row, second from left.

Banco di Sicilia, Palermo. H. 9.4, M.D. body 5.3. Tusa, 1971a, 27, no. 13, pl. III:D.

Type II. C. vi.

Coll. Pierides, Larnaka. Seefried, 1974, 149, pl. XXII:7.

Coll. Oppenländer, no. 2058. H. 6.0. Nolte, 1974, no. 132.

British Museum. H. 8.7, M.D. body 4.4, D. base 1.3.
Harden, 1981, no. 177.

British Museum. H. 7.7, M.D. body 4.4, D. base 1.2. Harden,
1981, no. 178.

Type II. C. vii.

Cairo Museum, no. 29827. Nolte and Haevernick, 1967, taf.
64:2.

Haaretz Museum, Tel Aviv. H. 7.0. Neuburg, 1962, fig. 13.

Archaeological Museum, American University of Beirut.
Baramki, 1967, pl. V, top row, middle.

Kanellopoulos Museum, Athens. H. 7.0.

Coll. Lydia Mela, Ioannina Museum, no. EUR 54. H. 7.5.
Andreimenu, 1973, 653, pl. 619:a.

Museum Narodowe, Warsaw, no. 199000. H. 5.4, M.D. body 3.9.
Filarska, 1952, no. 14, pl. III:2.

Museum Narodowe, Warsaw, no. 198963. H. 6.8, M.D. body 4.3.
Filarska, 1952, no. 15, pl. III:3.

Museum Narodowe, Warsaw, no. 32213. H. 7.7, M.D. body 4.5.
Filarska, 1952, no. 16, pl. III:4.

Museo Conservatori, Rome, room XXI, no. 73 MAL.

Staatliche Museen, Berlin, no. 32041. H. 8.0, M.D. body 6.0.
Rohde, 1980, no.1.

Staatliche Museen, Berlin, no. 32785. H. 8.0, M.D. body 5.5.
Rohde, 1980, no.2.

Staatliche Museen, Berlin, no. 32787. H. 7.5, M.D. body 4.8.
Rohde, 1980, no.3.

Type II. C. vii contd.

Staatliche Museen, Berlin, no. 32786. H. 7.0, M.D. body 4.7.
Rohde, 1980, no.4.

Antikensmuseum, Berlin, no. 30219, 129. H. 8.6, M.D. body
5.3. Platz-Horster, 1976, 13, no. 9.

Coll. Oppenländer, no. 2030. H. 11.4. Nolte, 1974, no. 128.

Coll. Oppenländer, no. 2082. H. 6.0. Nolte, 1974, no. 130.

Coll. Oppenländer, no. 2038. H. 7.6. Nolte, 1974, no. 131.

Coll. Oppenländer, no. 2058. H. 6.0. Nolte, 1974, no. 132.

Coll. Oppenländer, no. 2047. H. 7.3. Nolte, 1974, no. 133.

Coll. Oppenländer, no. 2025. H. 6.4. Nolte, 1974, no. 134.

Coll. Oppenländer, no. 2024. H. 7.7. Nolte, 1974, no. 135.

Coll. Oppenländer, no. 2018. H. 8.0. Nolte, 1974, no. 136.

Coll. Oppenländer, no. 2101. H. 7.9. Nolte, 1974, no. 137.

Coll. Oppenländer, no. 2101. H. 7.9. Nolte, 1974, no. 137.

Coll. Oppenländer, no. 2094. H. 8.0. Nolte, 1974, no. 138.

Coll. Oppenländer. H. 10.0. Nolte, 1974, no. 139.

Coll. Oppenländer. H. 7.0. Nolte, 1974, no. 140.

Coll. Oppenländer. H. 7.1. Nolte, 1974, no. 142.

Coll. Oppenländer, no. 2044. H. 7.6. Nolte, 1974, no. 146.

Medelhavsmuseet, Stockholm, no. MN829. H. 6.5, M.D. body
4.1. Wedendal, 1979, 29-30.

Basel art market. H. 5.9. Münzen und Medaillen, 1968, no.
129.

Basel art market. H. 7.8. Münzen und Medaillen, 1968, no.
130.

British Museum. H. 5.0, M.D. body 3.5, D. base 0.8.
Harden, 1981, no. 190.

Type II. C. vii contd.

- British Museum. H. 7.5, M.D. body 5.2, D. base 1.1. Harden, 1981, no. 192.
- British Museum. H. 7.6, M.D. body 4.9, D. base 1.3. Harden, 1981, no. 193.
- British Museum. H. 8.5, M.D. body 4.8, D. base 1.3. Harden, 1981, no. 194.
- British Museum. H. 7.7, M.D. body 4.7, D. base 1.0. Harden, 1981, no. 195.
- British Museum. H. 7.0, M.D. body 4.4, D. base 1.1. Harden, 1981, no. 200.
- British Museum. H. 7.6, M.D. body 4.7, D. base 1.3. Harden, 1981, no. 202.
- British Museum. H. 5.8, M.D. body 3.4, D. base 1.0. Harden, 1981, no. 203.
- British Museum. H. 8.2, M.D. body 5.3, D. base 1.2. Harden, 1981, no. 208.
- British Museum. H. 7.2, M.D. body 4.4, D. base 1.3. Harden, 1981, no. 209.
- British Museum. H. 8.8, M.D. body 5.4, D. base 1.2. Harden, 1981, no. 210.
- British Museum. H. 7.1, M.D. body 4.4, D. base 1.4. Harden, 1981, no. 212.
- British Museum. H. 6.7, M.D. body 4.3, D. base 1.0. Harden, 1981, no. 214.
- ex Coll. Constable-Maxwell. H. 8.3, M.D. body 5.0.
Constable-Maxwell, 1979, 22, no. 12.
- Bristol Museum, ex Coll. Bomford. H. 8.2. Bomford, 1976, no. 9.
- Royal Ontario Museum, no. 951x8.26. H. 7.6, M.D. body 5.4.
Hayes, 1975, no. 9.
- Royal Ontario Museum, no. 950.157.17. H. 8.3, M.D. body 5.6.
Hayes, 1975, no. 10.

Type II. C. vii contd.

Royal Ontario Museum, no. 948.34.82. H. 7.8, M.D. body 5.5.
Hayes, 1975, no. 11.

Royal Ontario Museum, no. 951x8.28. H. 7.9, M.D. body 4.9.
Hayes, 1975, no. 12.

Yale University Art Gallery. H. 9.0. Matheson, 1980, no.
13.

Yale University Art Gallery. H. 7.5. Matheson, 1980, no.
14.

Yale University Art Gallery. H. 8.2. Matheson, 1980, no.
15.

Metropolitan Museum of Art. Neuburg, 1949, pl. VII, middle
row, third and fourth from left; bottom row, second from
right.

Newark Museum. H. 7.0, D. rim 2.4. Auth, 1976, no. 17.

Newark Museum. H. 6.0, D. rim 2.2. Auth, 1976, no. 18.

Newark Museum. H. 8.0, D. rim 2.4. Auth, 1976, no. 272.

Carnegie Museum of Natural History, Pittsburgh, no. 21342/9.
H. 8.0. Oliver, 1980, no. 4.

Carnegie Museum of Natural History, Pittsburgh, no. 22553/2.
H. 7.0. Oliver, 1980, no. 5.

Type II. C. ix.

Newark Museum. H. 4.9, D. rim 2.2. Auth, 1976, no. 273.

Type II. C. ix

Coll. Oppenländer, no. 2099. H. 7.5. Nolte, 1974, no. 147.

Yale University Art Gallery. H. 8.4. Matheson, 1980, no.
16.

Metropolitan Museum of Art. Neuburg, 1949, pl. VII, middle
row, right.

Newark Museum. H. 7.2, D. rim 2.2. Auth, 1976, no. 21.

Type II. D. i.

Ioannina Museum, no. 6729.

Type II. D. ii.

British Museum. H. 6.5, M.D. body 5.5. Harden, 1981, no. 219.

British Museum. H. 5.8, M.D. body 4.8. Harden, 1981, no. 220.

Museum Narodowe, Warsaw, no. 42606. H. 6.0, M.D. body 5.2. Filarska, 1952, no. 20, pl. IV:2.

Coll. Oppenländer. ex coll. Vogell. Nolte, 1974, no. 149.

Type II. D. iv.

Kanellopoulos Museum, Athens. No. 287.

Villa Giulia, Coll. Castellani, no. 50.861.

British Museum. H. 7.0, M.D. body 5.5. Harden, 1981, no. 227.

British Museum. H. 6.2, M.D. body 5.4. Harden, 1981, no. 228.

British Museum. H. 6.2, M.D. body 5.2. Harden, 1981, no. 231.

British Museum. H. 7.1, M.D. body 5.0. Harden, 1981, no. 235.

British Museum. H. 5.6, M.D. body 4.4. Harden, 1981, no. 239.

ex. Coll. Constable-Maxwell. H. 6.0, M.D. body 5.4. Constable-Maxwell, 1979, no.7.

Museum Narodowe, Warsaw, no. 199445. H. 6.0, M.D. body 5.1. Filarska, 1952, no. 19, pl. IV:1.

Museum Narodowe, Warsaw, no. 42606. H. 6.0, M.D. body 5.2. Filarska, 1952, no. 20, pl. IV:2.

Coll. Oppenländer. H. 7.0. Nolte, 1974, no. 143.

II. D. iv.

- Coll. Oppenländer. H. 7.2. Nolte, 1974, no. 144.
- Coll. Oppenländer. H. 6.0. Nolte, 1974, no. 145.
- ex. Coll. Rath. Kisa, 1908, pl. II.
- Basel Art Market. H. 7.0. Münzen und Medaillen, 1968, no. 124.
- Basel Art Market. H. 6.4. Münzen und Medaillen, 1968, no. 125.
- Basel Art Market. H. 5.6. Münzen und Medaillen, 1968, no. 126.
- Medelhavsmuseet, no. MM 1974.6. H. 6.2, M.D. body 5.0. Wedendal, 1979, 31-32.
- Bristol Museum, ex. Coll. Bomford. M.D. body 5.0. Thomas, 1976, no. 8.
- Bristol Museum, ex. Coll. Bomford. H. 6.4. Thomas, 1976, no. 10
- Private Coll. H. 6.0. Neuburg, 1962, pl. V:a.
- Royal Ontario Museum. H. 5.9, M.D. body 5.3. Hayes, 1975, no. 14.
- Royal Ontario Museum. H. 6.4, M.D. body 5.0. Hayes, 1975, no. 15.
- Royal Ontario Museum. H. 6.8, M.D. body 5.2. Hayes, 1975, no. 16.
- Corning Museum of Glass. H. 4.3, M.D. body 3.8. Goldstein, 1979, no. 259.
- Yale Univ. Art Gallery. H. 6.5. Matheson, 1980, no. 10.
- Yale Univ. Art Gallery. H. 7.3. Matheson, 1980, no. 11.
- Metropolitan Museum of Art. Richter, 1917, fig. 49, left; Neuburg, 1949, pl. VII: 19, third from left.
- Newark Museum. H. 7.0, D. rim 2.7. Auth, 1976, 33, no. 16.
- Newark Museum. H. 7.5, D. rim 3.2. Auth, 1976, 33, no. 271.

II. D. v contd.

British Museum. H. 5.2, M.D. body 4.1. Harden, 1981, no. 237.

Bristol Museum, ex. Coll. Bowford. H. 5.9. Thomas, 1976, no. 11.

II. D. vi.

Newark Museum. H. 5.4, D. rim 2.8. Auth, 1976, no. 270.

Ex. Coll. Vogell, no. 1040. Fossing, 1940, 73.

II. E. i.

Metropolitan Museum, ex. Coll. Greau. Neuburg, 1949, pl. VI, bottom left.

II. E. ii.

Kanellopoulos Museum, Athens, no. 570.

Coll. Kofler-Truniger, Lucerne. H. 8.5. Neuburg, 1962, no. 9.

Coll. Oppenländer, no. 2118. H. 8.3. Nolte, 1974, no. 155.

British Museum. P.H. 9.3, M.D. body 5.7. Harden, 1981, no. 247.

Royal Ontario Museum. H. with handle 14.5. Hayes, 1975, 11, no. 19.

Freer Gallery, Washington D.C. H. 10.2. Ettinghausen, 1962, fig. 27.

Carnegie Museum of Natural History, Pittsburgh. H. 8.6. Oliver, 1980, no. 8.

Metropolitan Museum of Art. Neuburg, 1949, Pl. VI: 18, upper left.

Metropolitan Museum of Art. Neuburg, 1949, Pl. VI: 18, lower left.

II. E. iii.

British Museum, ex. Coll. Hamilton. ("Probably from the Naples area") H. 10.0, M.D. body 6.1. Harden, 1981, no. 242.

British Museum, H. 8.7, M.D. body 5.1. Harden, 1981, no. 244.

Victoria and Albert Museum. Neuburg, 1949, pl. III:9.

Yale Univ. Art Gallery. H. 9.7. Matheson, 1980, no. 9.

II. E. iv.

National Museum, Athens. Coll. Stathatos. H. 10.0. Rolley, 1966, no. 188, pl. XXXIX.

II. E. iv contd.

Coll. Oppenländer; ex. Coll. Vogel no. 1011. H. 7.8. Nolte, 1974, no. 118.

Coll. Oppenländer. H. 8.0. Nolte, 1974, no. 119.

Basel Art Market. H. 9.0. Münzen und Medaillen, 1969, no. 127.

British Museum. H. 8.0, M.D. body 5.1. Harden, 1981, no. 254.

Yale Univ. Art Gallery. H. 10.5. Matheson, 1980, no. 7.

Metropolitan Museum of Art. Richter, 1917, fig. 49, right; Neuburg, 1949, pl. VII:19, top, second from right.

Newark Museum. H. 8.3, M.D. body 4.8. Auth, 1976, no. 29.

Type II. E. v.

Museum Haaretz, Tel-Aviv, no. 1058. Israeli, Ancient Glass.

Museum Narodowe, Warsaw, no. 198969. H. 10.5. Filarska, 1952, no. 21, pl. IV:3.

Coll. Oppenländer. H. 10.5. Nolte, 1974, no. 127.

Basel Art Market. H. 9.8. Münzen und Medaillen, 1968, no. 128.

British Museum. H. 9.3, M.D. 6.3. Harden, 1981, no. 262.

ex Coll. Constable-Maxwell. H. 11.5, M.D. body 7.0. Constable-Maxwell, 1979, no. 8.

Bristol Museum, ex Coll. Bomford. H. 9.6. Thomas, 1976, no. 12.

Corning Museum of Glass, no. 50.1.6. H. with handle 11.6, M.D. body 6.2. Goldstein, 1979, no. 261,

Toledo Museum of Art, no. 23.89. H. 11.0. Grose, 1978, cover, second from right.

Type III. A. i.

National Museum, Athens, Coll. Stathatos. H. 19.5. Rolley, 1963, no. 185.

Villa Giulia, Rome, no. 50840.

Museum Narodowe, Warsaw. H. 16.7, M.D. body 4.8. Filarska, 1952, no. 25, pl. V:3.

Antikemuseum, Berlin. H. 12.7, D. rim 3.2. Platz-Horster, 1976, no. 7.

Thorvaldsen Museum, Copenhagen, no. 5. H. 12.4. Fossing, 1940, 90, fig. 56.

British Museum. H. 17.3, D. rim 5.2, M.D. body 4.5. Harden, 1981, no. 264.

Victoria and Albert Museum, no. 1020-1868. Honey, 1946, pl. 1:d; Davis, 1966, 12, no. 6.

Royal Ontario Museum. H. 13.1, D. rim 3.5. Hayes, 1975, no. 25.

Corning Museum of Glass. P.H. 16.2. Goldstein, 1979, no. 264.

Metropolitan Museum of Art. Neuburg, 1949, pl. V:17.

Newark Museum. H. 17.5, D. rim, 5.5. Auth, 1976, no. 11.

Carnegie Museum of Natural History, Pittsburgh. H. 18.7. Oliver, 1980, no. 10.

Toledo Museum of Art, no. 67.3. Art in Glass, 1969, 18, top; Grose, 1978, cover, center.

Coll. Cohn. H. 19.4, D. rim 5.1, M.D. body 4.0. von Saldern, 1981, no. 17.

Coll. Cohn. H. 17.0, D. rim 4.8, M.D. body 4.3. von Saldern, 1981, no. 19.

Type III. A. ii.

British Museum. H. 18.0, D. rim 6.0, M.D. body 4.5. Harden, 1981, no. 268.

British Museum. H. 18.0, D. rim 6.0, M.D. body 4.4. Harden, 1981, no. 269.

Type III. A. ii contd.

Toledo Museum of Art, no. 23.178. H. 17.8. Art in Glass, 1969, 19, right.

Coll. Cohn. H. 12.3, D. rim. 4.8, M.D. body 3.8. von Saldern, 1981, no. 10.

Coll. Cohn. H. 18.1, D. rim 5.1, M.D. body 4.5. von Saldern, 1981, no. 11. [Note that this vessels is not illustrated on colorplate 1.]

Type III. A. iii.

Antikensmuseum, Berlin. H. 12.9, M.D. body 3.3. Platz-Horster, 1976, no. 8.

Coll. Oppenländer. H. 13.3. Nolte, 1974, no. 181.

Coll. Oppenländer. H. 16.5. Nolte, 1974, no. 190.

Coll. Oppenländer. H. 11.5. Nolte, 1974, no. 194.

Ex Coll. Constable-Maxwell. H. 9.8, M.D. body 3.2. Constable-Maxwell, 1979, no. 18.

Royal Ontario Museum. H. 10.6, D. rim 3.8. Hayes, 1975, no. 24.

Boston Museum of Fine Arts. H. 13.8. von Saldern, 1968, no. 3.

Yale University Art Gallery. P.H. 10.0. Matheson, 1980, no. 32.

Newark Museum. H. 11.4, D. rim 2.5. Auth, 1976, no. 10.

Newark Museum. H. 8.8, D. rim 2.8. Auth, 1976, no. 266.

Newark Museum. P.H. 11.0. Auth, 1976, no. 267.

Coll. Cohn. H. 13.5, D. rim 4.5, M.D. body 4.0. von Saldern, 1981, no. 18.

Type III. A. iv.

Coll. de Clercq. de Ridder, 1909, no. 241, pl. VIII.

Museum Narodowe, Warsaw. P.H. 11.6, M.D. body 3.6. Filarska, 1952, no. 8, pl. II:2.

Type III. A. vi.

Antikensmuseum, Berlin. H. 8.0, D. rim 3.1. Platz-Horster, 1976, no. 12.

British Museum. H. 7.5, D. rim 3.6, M.D. body 3.3. Harden, 1981, no. 284.

Bristol Museum, ex Coll. Bowford. H. 9.5. Thomas, 1976, no. 15.

Type III. A. vii.

Museum Narodowe, Warsaw. H. 8.5, D. 5.0. Filarska, 1952, no. 24, pl. V:2.

Antikensmuseum, Berlin. H. 7.4, M.D. body 4.5. Platz-Horster, 1976, no. 13; Greifenhagen, 1960, pl. 84:3.

Coll. Neuburg. H. 7.7. Neuburg, 1962, pl. II:b; JGS, 1 (1959), 107, fig. 3.

Royal Ontario Museum. H. 10.6, D. rim 3.8. Hayes, 1975, no. 24.

Metropolitan Museum of Art. Neuburg, 1949, pl. VII, bottom row, third from left.

Coll. Cohen. H. 8.9, D. rim 4.7, M.D. body 5.6. von Saldern, 1981, no. 6.

Type III. A. viii.

Coll. Oppenländer. H. 5.5. Nolte, 1974, no. 198.

Coll. Cohn. H. 6.2. von Saldern, 1981, no. 25b.

Type III. A. ix.

Coll. Pierides. Larnaca. H. 9.8, D. rim 2.7, M.D. body 2.8. Siefried, 1974, 149, pl. XXII:3.

Coll. Barbarini, Villa Giulia, no. 13569. Pallottino, et al., 1980, 298, no. 431.

National Museum, Copenhagen, no. 2069. H. 15.5. Fossing, 107, fig. 78.

Type III. A. ix contd.

Coll. Oppenländer. H. 18.4. Nolte, 1974, no. 187.

Royal Ontario Museum. H. 12.5, M.D. body 2.8. Hayes, 1975, no. 20.

Corning Museum of Glass. H. 9.8, M.D. body 3.0. Goldstein, 1979, no. 263.

Newark Museum. H. 11.2, D. rim 2.2. Auth, 1976, no. 13.

Coll. Cohn. H. 8.5, D. rim 2.0, M.D. body 2.0. von Saldern, 1981, no. 9.

Private collection. H. 9.8. Neuburg, 1962, pl. III:b.

Type III. A. x.

Coll. Oppenländer. H. 13.5. Nolte, 1974, no. 189.

Toledo Museum of Art, no. 14.9. H. 14.9. Grose, 1978, cover, right.

Coll. Cohn. H. 12.2, D. rim 2.9, M.D. body 2.6. von Saldern, 1981, no. 16.

Type III. B. i.

London Art Market. H. 10.2. Sotheby's, Catalogue of Antiquities, 21 May, 1984, 6, no. 5.

Type III. B. ii.

Coll. Cohn. H. 8.0, D. rim 2.0, M.D. body 4.2. von Saldern, 1981, no. 3.

Type III. B. iii.

National (formerly Lavignerie) Museum, Carthage. cf. Harden, 1981, 111. Three examples.

Vatican Museum. Fremersdorf, 1975, 28, nos. 15-17, pl. 3. Three examples.

Villa Giulia, no. 50852.

Type III. C. ii.

Museum Narodowe, Warsaw. H. 11.0 W. 7.3. Filarska, 1952, no. 23. pl. V:1.

Victoria and Albert Museum, no. 989-1868. Fossing, 1940, 92.
ex Coll. Gréau. Froehner, 1903, no. 35, pl. vii:3.

Type III. C. iii.

Coll. Oppenländer. Ex Coll. Vogell, no. 1037. H. 5.6.
Nolte, 1974, no. 150.

? H. 7.5. Sugiyama, 1980, 190, no. 103.

Type III. C. iv.

Staatliche Museum, Berlin, no. 38. Ex Coll. v. Koller. H.
8.4. Fossing, 1940, 93, fig. 62.

Type III. C. v.

Museum Haaretz, Tel Aviv. Israeli, Ancient Glass.

National (formerly Lavigerie) Museum Carthage. cf. Harden,
1981, 112.

Museum of Decorative Arts, Madrid. Vigil Pascual, 1969, 68,
fig. 37.

Private Coll., Barcelona. Vigil Pascual, 1969, 68.

British Museum. H. 5.2, W. 4.0 by 2.8. Harden, 1981, no.
298.

Victoria and Albert Museum, no. 1019-1868. H. 6.5. Fossing,
1940, 94, fig. 63.

Metropolitan Museum of Art, no. 17.194.309. Ex Coll. Gréau.
Harden, 1981, 112.

Brunier Gallery, Ames, Iowa. H. 5.1.

Coll. Cohen. H. 5.2, D. rim 2.3, W. 3.9. von Saldern, 1981,
no. 26.

Type III. D. i.

Coll. Barbarini, Villa Giulia, no. 13576.

Toledo Museum of Art, no. 23.106. Harden, 1981, 113.

Type III. E. i.

Villa Giulia, Coll. Castellani, no. 50857.

British Museum. H. 6.7, M.D. body 4.2. Harden, 1981, no. 300.

Metropolitan Museum of Art, no. 17.184.767. Ex Coll. Greau. Froehner, 1903, pl. XIV:2.

Metropolitan Museum of Art, no. 17.194.759. Ex Coll. Greau. Froehner, 1903, pl. XIV:7; Neuburg, 1949, pl. VII, top row, second from left.

Newark Museum. H. 6.0, D. rim 2.2, M.D. body 3.8. Auth, 1976, no. 28.

Freer Gallery of Art, Washington, D.C. H. 7.7. Ettinghausen, 1962, fig. 25.

New York Art Market. H. 6.9. Sotheby Parke Bernet, Antiquities and Pre-Columbian Art, Nov. 7, 1980, no. 31.

Type III. E. ii.

Ex Coll. de Clercq. de Ridder, 1909, pl. VII, no. 2377.

Type III. F. i.

Villa Giulia, Coll. Castellani, no. 50854.

Villa Giulia, Coll. Castellani, no. 50863.

Staatliche Museum, Berlin, ex Coll. von Gans, no. 30219, 104. H. with handle 9.0, M.D. body 5.3. Greifenhagen, 1960, 26, 43, no. 84; Platz-Horster, 1976, no. 11.

Staatliche Museum, Berlin, ex Coll. von Koller, no. 77. H. 9.3. Fossing, 1940, 96, fig. 69.

Thorvaldsen Museum, Copenhagen, no. 16. H. 15.3. Fossing, 1940, 95, fig. 68.

Type III. F. i contd.

British Museum. H. 11.5, M.D. body 6.3. Harden, 1981, no. 302.

British Museum. H. 10.4, M.D. body 5.7. Harden, 1981, no. 304.

British Museum. H. 9.8, M.D. body 5.9. Harden, 1981, no. 305.

British Museum. H. 12.0, M.D. body 7.0. Harden, 1981, no. 306.

Private Coll. H. 8.7. Neuburg, 1962, pl. IV:a.

Type III. F. ii.

Villa Giulia, Coll. Castellani, no. 50851.

Private Coll., Switzerland. H. 5.4, M.D. body 2.9. Dörig, 1972, no. 315.

British Museum. H. 5.0, M.D. body 3.4. Harden, 1981, no. 308.

British Museum. H. 4.7, M.D. body 3.2. Harden, 1981, no. 309.

British Museum. H. 5.6, M.D. body 3.2. Harden, 1981, no. 310.

British Museum. H. 5.0, M.D. body 3.0. Harden, 1981, no. 312.

Ex Coll. de Clercq. de Ridder, 1909, pl. VIII:246.

Newark Museum. H. 5.5, M.D. body 4.0. Auth, 1976, no. 30.

Coll. Cohen. Five examples. von Saldern, 1981, nos. 24a-e.

Type III. F. iv.

Museum Narodowe. H. 13.0 M.D. body 6.2. Filarska, 1952, no. 22, pl. IV:4.

Coll. Oppenländer. H. 13.1. Nolte, 19774, no. 116.

Coll. Oppenländer. H. 10.2. Nolte, 1974, no. 117.

Type III. F. iv contd.

Bibliothèque Nationale, Cabinet des Médailles, Paris.

Victoria and Albert Museum, no. 1002-1868. Honey, 1946, pl. 1:G; Neuburg, 1949, fig. 11, right; Davis, 1966, 13.

British Museum. H. 13.8, D. shoulder 6.5, D. foot 4.5.
Harden, 1981, no. 313.

British Museum. H. 14.0, D. shoulder 7.2, D. foot 5.2.
Harden, 1981, no. 314.

British Museum. H. 14.5, D. shoulder 7.3, D. foot 5.3.
Harden, 1981, no. 315.

British Museum. H. 13.0, D. shoulder 6.9, D. foot 4.9.
Harden, 1981, no. 316.

British Museum. H. 11.5, D. shoulder 5.8, D. foot 4.8.
Harden, 1981, no. 317.

British Museum. H. 13.0, D. shoulder 6.8, D. foot 4.8.
Harden, 1981, no. 318.

British Museum. H. 8.6, D. shoulder 5.4, D. foot 4.1.
Harden, 1981, no. 319.

British Museum. H. 10.3, D. shoulder 6.4, D. foot 5.0.
Harden, 1981, no. 320.

British Museum. Harden, 1981, no. 321.

British Museum. H. 12.4, D. shoulder 7.0, D. foot 4.5.
Harden, 1981, no. 322.

British Museum. H. 14.0, D. shoulder 7.4, D. foot 4.8.
Harden, 1981, no. 323.

Boston Museum of Fine Arts, no. 65.1748.

Yale University Art Gallery. H. 11.5. Matheson, 1980, no. 26.

Newark Museum. H. 8.5, D. foot 2.8. Auth, 1976, no. 31.

Toledo Museum of Art, no. 23.152. H. 15.1. Grose, 1976, cover, second from left.

Coll. Cohn. H. 11.0, D. rim 4.0, D. shoulder 5.7. von Saldern, 1981, no. 8.

Type III. F. iv contd.

Private Coll. H. 8.7. Neuburg, 1962, pl. IV:b.

Type III. F. v.

Coll. Oppenländer. H. 5.6. Nolte, 1974, no. 120.

Bristol Museum, ex Coll. Bowford. H. 12.1. Thomas, 1976, no. 13.

Royal Ontario Museum. H. with handle 13.1. M.D. body 6.5. Hayes, 1975, no. 22.

Metropolitan Museum of Art. Neuburg, 1949, pl. VI, top row, right.

Coll. Cohn. H. 15.0, D. rim 5.0, D. shoulder 6.8. von Sladern, 1981, no. 7.

Type III. F. vi.

Staatliche Museum, Berlin, ex Coll. von Koller, no. 81. H. 10.6. Fossing, 1940, 95, fig. 64.

Bibliothèque Nationale, Cabinet des Médailles, Paris, no. 55.09.

Ashmolean Museum, no. 1973.320.

Metropolitan Museum of Art, no. 91.1.1983.

Metropolitan Museum of Art, ex Coll. Greau, no. 17.194.601.

Type III. G. i.

Kanellopoulos Museum, Athens, no. 656.

Coll. Oppenländer. H. 11.4. Nolte, 1974, no. 218. [Three other parallels cited: Schlossmuseum, Gotha, no. AG 445; National Museum, Carthage; Röm.-Germ. Zentralmuseum, Mainz]

Victoria and Albert Museum, no. 984-1868.

Type IV. A. i.

Ex Coll. vom Rath. Kisa, 1908, II, 403, pl. II:1, opposite p. 404. Formerly in Berlin, presumed destroyed in World War II; cf. A. Greifenhagen, JGS, IV (1962), 61.

Coll. Oppenländer. H. 9.0. Nolte, 1974, no. 180.

Okayama Municipal Gallery of Oriental Arts, Okayama. H. 7.9. Sugiyama, 1980, no. 112.

Private Coll. Japan? H. 10.5 Sugiyama, 1980, no. 111.

Type IV. A. ii.

National Museum, Athens. Coll. Stathatos. H. 12.5. Rolley, 1963, no. 186. pl. XXXIX.

Museum Narodowe, Warsaw. H. 12.7, M.D. body 3.6. Filarska, 1952, no. 26, pl. V:4.

Coll. Oppenländer. Ex Coll. de Clercq. H. 13.3. Nolte, 1974, no. 182; de Ridder, 1909, no. 244.

Coll. Oppenländer. H. 13.7. Nolte, 1974, no. 188.

British Museum. H. 12.5, H. neck 3.7, M.D. body 3.6. Harden, 1981, no. 327. Not illustrated.

British Museum. H. 9.5, H. neck 3.1, M.D. body 3.0. Harden, 1981, no. 328.

British Museum. P.H. 5.4. Harden, 1981, no. 329. Not illustrated.

British Museum. H. 12.0, H. neck 3.5, M.D. body 3.6. Harden, 1981, no. 331.

British Museum. H. 8.8, H. neck 3.0, M.D. body 3.3. Harden, 1981, no. 332.

Bristol Museum, ex Coll. Bowford. H. 13.5. Bowford, 1976, no. 16.

Royal Ontario Museum. P. H. 11.4, D. rim 2.7. Hayes, 1975, no. 29.

Newark Museum. H. 13.0, H. neck 4.0, D. rim 3.3. Auth, 1976, no. 14.

Newark Museum. H. 8.8, D. rim 2.5. Auth, 1976, no. 268.

Type IV. A. ii contd.

Freer Gallery of Art, Washington, D.C. H. 12.9.
Ettinghausen, 1962, fig. 28.

Private Coll. H. 12.0. Neuburg, 1962, pl. II:c.

Private Coll. H. 12.0, M.D. body 3.5. Dörig, 1972, no. 317.

Type IV. A. iii.

Heracleion Museum, Crete. Four examples.

Museum Narodowe, Warsaw. H. 13.9, M.D. body 4.0. Filarska,
1952, no. 29, pl. VI:3.

Staatliche Museum, Berlin. H. 13.7, M.D. body 3.7. Platz-
Horster, 1976, no. 14.

Coll. Oppenländer. H. 12.2. Nolte, 1974, no. 191.

Coll. Oppenländer. H. 12.5. Nolte, 1974, no. 192.
[References to others in the Badisch. Landesmus., Karlsruhe;
Mus. du Verre, Lüttich; Röm.-Germ. Zentralmus., Mainz; and
Thermenmus., Rome.]

Coll. Oppenländer. H. 7.8. Nolte, 1974, no. 195.

Thorvalden Museum, Copenhagen, no. 10. H. 12.4. Fossing,
1940, 112, fig. 84.

Basel Art Market. H. 10.0. Münzen und Medaillen, 1968, no.
133.

Ex Coll. Constable-Maxwell. H. 13.7, M.D. body 3.8.
Constable-Maxwell, 1979, no. 9.

Royal Ontario Museum. H. 11.7, M.D. body 3.8. Hayes, 1975,
no. 30.

Coll. Wolkenberg. H. 11.5. Wolkenberg, 1965, no. 26, cover.

Coll. Cohn. H. 14.0, D. rim 2.5, M.D. body 4.8. von
Saldern, 1981, no. 23.

Private Coll. H. 9.8. Neuburg, 1962, pl. III:c.

Okayama Municipal Gallery of Oriental Arts, Okayama. H.
10.7. Sugiyama, 1980, no. 109.

Private Coll. Japan? H. 13.5. Sugiyama, 1980, no. 110.

Type IV. A. iv.

Coll. Oppenländer. H. 11.4. Nolte, 1974, no. 199.
[Reference to two similar pieces in the Brooklyn Museum.]

Coll. Oppenländer. H. 7.9. Nolte, 1974, no. 200.

Bibliothèque Nationale, Cabinet des Médailles, Paris.

British Museum. P.H. 6.4. M.D. body 3.6. Harden, 1981, no. 342.

Ex Coll. Constable-Maxwell. H. 10.2, M.D. body 3.8.
Constable-Maxwell, 1979, no. 6.

Royal Ontario Museum. H. 12.4, M.D. body 3.9. Hayes, 1975,
no. 27.

Yale University Art Gallery. H. 14.3. Matheson, 1980, no. 33.

Metropolitan Museum of Art. Ex Coll. Grèau. Perrot and
Chipiez, 1885, pl. VII:3.

Newark Museum. H. 15.0, D. rim 2.8. Auth, 1976, no. 15.

Newark Museum. H. 11.3, D. rim 2.3. Auth, 1976, no. 269.

Johns Hopkins University, Baltimore. Baltimore, 1944, 8,
fig., fourth from right.

Coll. Cohn. H. 12.2, D. rim 2.5, M.D. body 3.5. von
Saldern, 1980, no. 20.

Coll. Cohn. H. 12.0, D. rim 2.2, M.D. body 3.3. von
Saldern, 1980, no. 21.

Coll. Cohn. H. 12.2, D. rim 2.2, M.D. body 3.5. von
Saldern, 1980, no. 22.

Okayama Municipal Gallery of Oriental Arts, Okayama. H.
11.8. Sugiyama, 1980, no. 108.

Private Coll. Japan? H. 9.8. Sugiyama, 1980, no. 107.

Type IV. B. i.

Coll. Lydia Mela. Ioannina Museum. H. 8.0. Andreiomenou,
1973, 653, pl. 619:d, right.

Type IV. B. i contd.

- Coll. Oppenländer. H. 8.0. Nolte, 1974, no. 208.
- Ex Coll. Artiñano, Madrid. Vigil Pascual, 1969, 77, fig. 43.
- Coll. Armand Baar, Liège. Malaise, 1971, no. 155, fig. 70.
- Coll. Armand Baar, Liège. Malaise, 1971, no. 156, fig. 71.
- Ex Coll. Rath. Formerly in Staatliche Museum, Berlin; presumed destroyed in World War II. Kisa, 1908, II, 403, pl. II:2, opposite p. 402.
- Royal Ontario Museum. H. 10.2, M.D. body 3.8. Hayes, 1975, no. 33.
- Metropolitan Museum of Art. Neuburg, 1949, pl. III: 6, left.
- Newark Museum. H. 11.5, D. rim 2.0, M.D. body 4.6. Auth, 1976, no. 277.
- Private Coll. Japan? H. 11.2. Sugiyama, 1980, no. 105.

Type IV. B. ii.

- Coll. Baar, Liège. Malaise, 1971, 148, no. 154, fig. 69.
- London Art Market. H. 10.2. Sotheby's, 21 May, 1984, no. 6.

Type IV. B. iii.

- Coll. Oppenländer. H. 14.6. Nolte, 1974, no. 209.
- Yale University Art Gallery. H. 15.3. Matheson, 1980, no. 27.
- Corning Museum of Glass. H. 14.0, M.D. body 4.5. Goldstein, 1979, no. 272.
- Newark Museum. H. without handle 13.1, H. with handle 13.5, D. rim 3.0. Auth, 1976, no. 24.
- Newark Museum. H. 13.5, D. rim 2.7 to 3.0. Auth, 1976, no. 282.
- Newark Museum. H. 14.0, D. rim 2.8 Auth, 1976, no. 283.
- Newark Museum. H. 14.5, D. rim 3.0 Auth, 1976, no. 284.

Type IV. B. iv.

Walters Art Gallery.

Coll. Cohn. H. 12.8, D. rim 2.6, M.D. body 5.3. von Saldern, 1981, no. 5.

Tokyo National Museum. H. 14.5, Sugiyama, 1980, no.97.

Private collection. Japan? H. 10.8. Sugiyama, 1980, no.98.

British Museum. H. 14.5, M.D. body 5.0, D. end-knob 1.3. Harden, 1981, no. 353.

Ex Coll. Constable-Maxwell. H. 12.4, M.D. body 6.4. Constable-Maxwell, 1979, no. 11.

Newark Museum. H. 13.5, D. rim 2.6 to 2.8. Auth, 1976, no. 285.

Carnegie Museum of Natural History, Pittsburgh. H. 14.3. Oliver, 1980, no. 14.

Carnegie Museum of Natural History, Pittsburgh. H. 13.3. Oliver, 1980, no. 15.

Coll. Cohn. H. 14.5, D. neck 3.0, M.D. body 5.0. von Saldern, 1981, no. 4.

Type IV. B. v.

Univerisity Museum, American University of Beirut. Barawki, 1967, pl. V, top row, left.

Museum Narodowe, Warsaw. P.H. 14, M.D. body 4.5. Filarska, 1952, no. 30, pl. VI:4.

Royal Ontario Museum. H. 16.3, M.D. body 4.8. Hayes, 1975, no. 36.

Corning Museum of Glass. P.H. 13.2, M.D. body 5.6. Goldstein, 1979, no. 269.

Yale University Art Gallery. P.H. 15.3. Matheson, 1980, no. 28.

Newark Museum. P.H. 14.0, D. rim 2.5 to 2.9. Auth, 1976, no. 286.

Private Collection. P.H. 14.4. Neuburg, 1962, fig. 18.

Type IV. B. vi.

Graeco-Roman Museum, Alexandria, no. 24355. Gift of King Fouad I, 1936. H. 14.2, D. rim 3.0, D. mouth 1.0.

Amman Museum.

Haaretz Museum, Tel Aviv. H. 14.8. Neuburg, 1962, fig. 20.

Coll. Oppenländer. P.H. 12.0. Nolte, 1974, no. 207.

Coll. Oppenländer. H. 12.5. Nolte, 1974, no. 210. [References to pieces in Badisches Landesmus., Karlsruhe and Mus. du Verre, Lüttich.]

Coll. Oppenländer. H. 14.5. Nolte, 1974, no. 220. [Reference to piece in Brooklyn Museum.]

Coll. Oppenländer. H. 16.0. Nolte, 1974, no. 221. [Reference to similar piece in Nat. Coll. of Fine Arts, Washington.]

British Museum. H. 14.5, M.D. body 4.5, D. end-knob 0.7. Harden, 1981, no. 354.

British Museum. P.H. 8.0, M.D. body 4.5. Harden, 1981, no. 355A.

Victoria and Albert Museum. Honey, 1946, pl. 1:F; Neuburg, 1949, fig. 11, middle; Davis, 1966, fig. 8.

Bristol Museum, ex Coll. Bonford. H. 15.0. Thomas, 1976, no. 18.

Ex Coll. Constable-Maxwell. P.H. 15.3, M.D. body 4.8. Constable-Maxwell, 1979, no. 17.

Royal Ontario Museum. H. 14.8, M.D. body 6.0. Hayes, 1975, no. 34.

Royal Ontario Museum. H. with handle 16.5, M.D. body 5.1. Hayes, 1975, no. 35.

Royal Ontario Museum. H. 14.7, M.D. body 4.5. Hayes, 1975, no. 37.

Corning Museum of Glass. P.H. 12.6, M.D. body 4.7. Goldstein, 1979, no. 270.

Corning Museum of Glass. H. 14.6, M.D. body 5.8. Goldstein, 1979, no. 271.

Type IV. B. vi contd.

Yale University Art Gallery. P.H. 12.5. Matheson, 1980, no. 29.

Yale University Art Gallery. P.H. 12.5. Matheson, 1980, no. 30.

Yale University Art Gallery. P.H. 13.0. Matheson, 1980, no. 31.

Newark Museum. P.H. 14.2, D. rim 3.0. Auth, 1976, no. 26.

Newark Museum. P.H. 14.4, D. rim 3.0. Auth, 1976, no. 27.

Newark Museum. H. 17.6, H. neck 7.5, D. rim 2.6. Auth, 1976, no. 279.

Newark Museum. H. 16.0, D. rim 2.3. Auth, 1976, no. 280.

Newark Museum. H. 15.0, D. rim 2.2. Auth, 1976, no. 281.

Toledo Museum of Art, no. 23.159. Art in Glass, 1969, 19, left.

Private Coll., Japan? Sugiyama, 1980, no. 20.

Type IV. B. ix.

Coll. Oppenlander. H. 10.0. Nolte, 1974, no. 206. [References to others in Brooklyn Museum and Mus. du Verre, Lüttich.]

Royal Ontario Museum. H. with handles 11.9, M.D. body 5.1. Hayes, 1975, no. 39.

Idemitsu Art Gallery, Tokyo. H. 13.7. Sugiyama, 1980, no. 19.

Type IV. B. x.

British Museum. H. 10.0, M.D. body 5.0, D. base 3.0. Harden, 1981, no. 367.

Newark Museum. H. 11.7, D. rim 2.5 to 2.9, D. base 3.3. Auth, 1976, no. 38.

Toledo Museum of Art, no. 23.95. H. 12.0. Grose, 1978, cover, left.

Type IV. B. x contd.

Ex Coll. Sobernheim. Sobernheim, 1952, no. 146.

Type IV. B. xi.

Museum Haaretz, Tel-Aviv. Israeli, Ancient Glass.

Carnegie Museum Of Natural History, Pittsburgh. H. 13.5.
Oliver, 1980, no. 12.

Type IV. C. i.

Cairo Museum. Room 49, case G.

Ioannina Museum, Coll. Andromache Mela, no. Eur. 13. H. 8.5,
D. rim 2.2. Andreioæenou, 1973, 656, pl. 624:d, right.

Basel Art Market. H. 8.9. Münzen und Medaillen, 1968, no.
134.

Victoria and Albert Museum. H. 12.0. Fossing, 1940, 117,
no. 91.

Bristol Museum, ex Coll. Bowford. H. 12.0. Thomas, 1976,
no. 19.

Newark Museum. H. 8.2, D. rim 2.4. Auth, 1976, no. 22.

Carnegie Museum of Natural History. H. 8.0. Oliver, 1980,
no. 11.

Type IV. C. ii.

Museum Haaretz, Tel Aviv. Israeli, Ancient Glass.

Kanellopoulos Museum, Athens, no. 412.

Ashmolean Museum, no. 1933.1181. H. 10.5. Fossing, 1940,
118; Harden, 1981, 136.

Royal Ontario Museum. H. 8.8, M.D. body 3.8. Hayes, 1975,
no. 31.

Royal Ontario Museum. H. 10.1, M.D. body 3.6. Hayes, 1975,
no. 32.

Newark Museum. H. 9.8, D. rim 2.5 to 2.7, D. base 2.0.
Auth, 1976, no. 23.

Type IV. C. ii contd.

Newark Museum. H. 11.9, D. rim 2.6, M.D. body 4.6. Auth, 1976, no. 278.

Toledo Museum of Art, no. 23.333. Mentioned in Hayes, 1975, 14.

Toledo Museum of Art, no. 23.334. Mentioned in Hayes, 1975, 14.

Type IV. C. iii.

Coll. Oppenländer. H. 8.0. Nolte, 1974, no. 219.

British Museum. H. 9.0, M.D. body 3.7. Harden, 1981, no. 374.

Royal Ontario Museum. P.H. 8.9. M.D. body 3.8. Hayes, 1975, no. 26.

Metropolitan Museum of Art, no. 17.194.784. Neuburg, 1949, pl. VII:19, middle row, second from left.

Metropolitan Museum of Art, no. 17.194.773. Neuburg, 1949, pl. VII:19, middle row, second from right.

Newark Museum. H. 9.6, D. rim 1.6. Auth, 1976, no. 20.

Type IV. C. iv.

Staatliche Museum, Berlin. P.H. 8.7. Fossing, 1940, 116, fig. 88.

Staatliche Museum, Berlin. P.H. 7.6, M.D. body 3.6. Rohde, 1980, no. 12.

Metropolitan Museum of Art. Neuburg, pl. VI:18, top row, second from left.

Appendix 3: Summary of types.**Dates**

Type II. A. i. Alabastron of white glass, with horizontal rim-disc and rounded body, with zigzag or festoon decoration of purple glass.	525-500 B.C.
Type II. A. ii. Alabastron of white glass, with horizontal rim-disc and rounded body, decorated with inverted festoon pattern.	525-500 B.C.
Type II. A. iii. Alabastron of white glass, with horizontal rim-disc and rounded body, with plain trail decoration.	475-450 B.C.
Type II. A. iv. Alabastron of white glass, with horizontal rim-disc and cylindrical body, decorated with zigzag pattern of purple glass.	500-450 B.C.
Type II. A. v. Alabastron of white glass, with horizontal rim-disc and cylindrical body, with decoration of blue glass.	500-450 B.C.
Type II. A. vi. Alabastron of dark glass, with inward sloping rim-disc and rounded body, decorated with herringbone pattern.	525-500 B.C.
Type II. A. vii. Alabastron of dark glass, with inward sloping rim-disc and rounded body, decorated with inverted festoon pattern.	550-500 B.C.
Type II. A. viii. Alabastron of dark glass, with inward sloping rim-disc and rounded body, decorated with zigzag pattern.	525-450 B.C.
Type II. A. ix. Alabastron of dark glass, with inward sloping rim-disc and rounded body, with plain trail decoration.	500-475 B.C.
Type II. A. x. Alabastron of dark glass, with horizontal rim-disc and rounded body, without decoration.	525-500 B.C.
Type II. A. xi. Alabastron of dark glass, with horizontal rim-disc and cylindrical body, decorated with zigzag pattern at mid-body.	500-450 B.C.

Appendix 3: Summary of types.

Dates

Type II. A. xii. Alabastron of dark glass, with horizontal rim-disc and rounded or cylindrical body, with plain trail decoration.	500-450 B.C.
Type II. A. xiii. Alabastron of dark glass, with horizontal rim-disc and cylindrical body, decorated with zigzag pattern all over body.	460-390 B.C.
Type II. A. xiv. Alabastron of dark glass, with horizontal rim-disc and cylindrical body, with spiralling trail decoration all over body.	460-390 B.C.
Type II. C. i. Amphoriskos of white glass, with obtuse-angled junction between neck and shoulder, decorated with zigzag pattern.	530-500 B.C.
Type II. C. ii. Amphoriskos of white glass, with almost right-angled junction between neck and shoulder, decorated with zigzag pattern.	475-450 B.C.
Type II. C. iii. Amphoriskos of dark glass, with obtuse-angled junction between neck and shoulder, decorated with wavy zigzag pattern.	525-500 B.C.
Type II. C. iv. Amphoriskos of dark glass, with obtuse-angled junction between neck and shoulder, decorated with spirals on neck and regular zigzag pattern beginning at shoulder.	500-475 B.C.
Type II. C. v. Amphoriskos of dark glass, with obtuse-angled junction between neck and shoulder, decorated with regular zigzag pattern beginning at shoulder.	500-450 B.C.
Type II. C. vi. Amphoriskos of dark glass, with obtuse-angled junction between neck and shoulder, and with handles having a central depression, decorated with regular zigzag pattern.	500-450 B.C.

Appendix 3: Summary of types.

Dates

Type II. C. vii. Amphoriskos of dark glass, with almost right-angled junction between neck and shoulder, decorated with regular zigzag pattern.	480-425 B.C.
Type II. C. viii. Amphoriskos of dark glass, with almost right-angled junction between neck and shoulder, decorated with irregular zigzag pattern.	425-400 B.C.
Type II. C. ix. Amphoriskos of dark glass, with almost right-angled junction between neck and shoulder, decorated with plain or spiralling trails.	425-400 B.C.
Type II. D. i. Aryballos of white glass, with obtuse-angled junction between neck and shoulder, decorated with zigzag pattern.	475-450 B.C.
Type II. D. ii. Aryballos of dark glass, with obtuse-angled junction between neck and shoulder, decorated with wavy zigzag pattern.	525-450 B.C.
Type II. D. iii. Aryballos of dark glass, with obtuse-angled junction between neck and shoulder, decorated with spiralling trail pattern.	450-400 B.C.
Type II. D. iv. Aryballos of dark glass, with almost right-angled junction between neck and shoulder, decorated with zigzag pattern.	525-425 B.C.
Type II. D. v. Aryballos of dark glass, with almost right-angled junction between neck and shoulder, and with small body, decorated with zigzag pattern.	450-425 B.C.
Type II. D. vi. Aryballos of opaque red glass, with almost right-angled junction between neck and shoulder, decorated with zigzag pattern.	450-400 B.C.
Type II. D. vii. Footed aryballos with almost right-angled junction between neck and shoulder, decorated with zigzag pattern.	450-400 B.C.

Appendix 3: Summary of types.

Dates

Type II. E. i. Oinochoe of white glass, with obtuse-angled junction between neck and shoulder, decorated with wavy zigzag pattern.	525-500 B.C.
Type II. E. ii. Oinochoe of white glass, with almost right-angled junction between neck and shoulder, decorated with regular zigzag pattern.	475-425 B.C.
Type II. E. iii. Oinochoe of dark glass, with obtuse-angled junction between neck and shoulder, decorated with wavy zigzag pattern.	525-480 B.C.
Type II. E. iv. Oinochoe of dark glass, with almost right-angled junction between neck and shoulder, and with low-swung handle, decorated with regular zigzag pattern.	450-425 B.C.
Type II. E. v. Oinochoe of dark glass, with almost right-angled junction between neck and shoulder, and with high-swung handle, decorated with regular zigzag pattern.	500-450 B.C.
Type II. E. vi. Oinochoe of dark glass, with almost right-angled junction between neck and shoulder, decorated with plain trail pattern.	450-400 B.C.
Type III. A. i. Alabastron with broad horizontal rim-disc, downward tapering neck and wide body, decorated with feather pattern.	350-300 B.C.
Type III. A. ii. Alabastron with broad horizontal rim-disc, downward tapering neck and wide body, decorated with festoon pattern.	350-300 B.C.
Type III. A. iii. Alabastron with broad horizontal rim-disc, cylindrical or upward tapering neck and wide body, decorated with feather pattern.	350-300 B.C.

Appendix 3: Summary of types.Dates

Type III. A. iv. Alabastron with broad horizontal rim-disc, cylindrical or upward tapering neck and wide body, decorated with inverted festoon pattern.	325-300 B.C.
Type III. A. v. Alabastron with broad horizontal rim-disc, cylindrical or upward tapering neck and wide body, decorated with festoon pattern.	325-300 B.C.
Type III. A. vi. Alabastron with broad horizontal rim-disc, short neck and wide body, decorated with zigzag or feather pattern.	350-300 B.C.
Type III. A. vii. Squat alabastron with broad horizontal rim-disc, decorated with zigzag or feather pattern.	350-300 B.C.
Type III. A. viii. Miniature alabastron.	350-275 B.C.
Type III. A. ix. Alabastron with narrow horizontal rim-disc and narrow body, decorated with zigzag pattern.	350-300 B.C.
Type III. A. x. Alabastron with narrow horizontal rim-disc and narrow body, decorated with feather pattern.	350-300 B.C.
Type III. A. xi. Alabastron with narrow horizontal rim-disc and narrow body, decorated with festoon pattern.	350-300 B.C.
Type III. B. i. Amphoriskos with almost right-angled junction between neck and shoulder, and with handles from shoulder to mid-neck, decorated with feather pattern.	350-300 B.C.
Type III. B. ii. Amphoriskos with almost right-angled junction between neck and shoulder, and with handles from shoulder to rim, decorated with zigzag pattern.	350-250 B.C.
Type III. B. iii. Miniature amphoriskos.	350-275 B.C.
Type III. C. i. Aryballos with rounded body and no handles.	375-325 B.C.

Appendix 3: Summary of types.	<u>Dates</u>
Type III. C. ii. Large lentoid aryballos with tall neck, vertical handles and stand-rolls.	330-300 B.C.
Type III. C. iii. Large lentoid aryballos with tall neck, ring handles and stand-rolls.	330-300 B.C.
Type III. C. iv. Large lentoid aryballos with tall neck and ring handles joined to stand-rolls by twists.	330-300 B.C.
Type III. C. v. Small lentoid aryballos with ring handles joined by twist.	350-250 B.C.
Type III. C. vi. Small lentoid aryballos with ring handles and stand-rolls.	350-250 B.C.
Type III. D. i. Two-handled jar.	330-300 B.C.
Type III. E. i. Hydricke with sharply curving ovoid body.	330-300 B.C.
Type III. E. ii. Hydricke with "bottle-shaped" body.	320-280 B.C.
Type III. F. i. Large oinochoe with ovoid body.	350-275 B.C.
Type III. F. ii. Miniature oinochoe.	350-275 B.C.
Type III. F. iii. Large oinochoe with angular body.	325-275 B.C.
Type III. F. iv. Large oinochoe with "bottle-shaped" body, decorated with feather pattern.	350-275 B.C.
Type III. F. v. Large oinochoe with "bottle-shaped" body, decorated with inverted festoon pattern.	350-275 B.C.
Type III. F. vi. Large oinochoe with piriform body.	350-275 B.C.
Type III. G. i. Thick-walled fusiform unguentarium with large body and upturned handles.	325-275 B.C.

Appendix 3: Summary of types.	<u>Dates</u>
Type III. G. ii. Thin-walled piriform unguentarium with strap handle.	330-300 B.C.
Type IV. A. i. Alabastron with tall neck and cylindrical body.	250-150 B.C.
Type IV. A. ii. Alabastron with tall neck and convex body.	150-50 B.C.
Type IV. A. iii. Piriform alabastron with feather pattern decoration.	100-50 B.C.
Type IV. A. iv. Piriform alabastron with festoon pattern decoration.	100-50 B.C.
Type IV. B. i. Small amphoriskos with tall neck, small body and butt-end.	250-150 B.C.
Type IV. B. ii. Bag-shaped amphoriskos.	150-50 B.C.
Type IV. B. iii. Amphoriskos with short neck, large body, vertical handles and end-knob, decorated with feather pattern.	100 B.C.-10 A.D.
Type IV. B. iv. Amphoriskos with short neck, large body, vertical handles and end-knob, decorated with festoon pattern.	100 B.C.-10 A.D.
Type IV. B. v. Amphoriskos with tall neck, large body, vertical handles and end-knob, decorated with feather pattern.	100 B.C.-10 A.D.
Type IV. B. vi. Amphoriskos with tall neck, large body, vertical handles and end-knob, decorated with festoon pattern.	100 B.C.-10 A.D.
Type IV. B. vii. Amphoriskos with tall neck, large body, vertical handles and disc-base.	100 B.C.-10 A.D.
Type IV. B. viii. Amphoriskos with tall neck, large body, vertical handles and rounded bottom.	100 B.C.-10 A.D.
Type IV. B. ix. Amphoriskos with ovoid body, S-shaped handles and disc-base, decorated with feather pattern on neck and body.	100 B.C.-10 A.D.

Appendix 3: Summary of types.

Dates

Type IV. B. x. Amphoriskos with ovoid body, S-shaped handles and disc-base, decorated with festoon pattern on neck and feather pattern on body.

100 B.C.-10 A.D.

Type IV. B. xi. Amphoriskos with piriform body, S-shaped handles and disc-base.

100 B.C.-10 A.D.

Type IV. B. xii. Amphoriskos with inverted ovoid body.

100 B.C.-10 A.D.

Type IV. C. i. Thick-walled fusiform unguentarium with small body and upturned handles.

250-150 B.C.

Type IV. C. ii. Thick-walled fusiform unguentarium with small body, without handles.

250-150 B.C.

Type IV. C. iii. Thin-walled piriform unguentarium with upturned handles.

300-200 B.C.

Type IV. C. iv. Thin-walled piriform unguentarium without handles.

300-200 B.C.

Type IV. D. i. Oinochoe with fusiform body.

250-150 B.C.

Appendix 4: Geographical Distribution of Types.

In the following tables the number of catalogued core-formed glass vessels with a known provenance are recorded. The tables are arranged vertically by types of core-formed glass vessels and horizontally by ten large geographical divisions. The Roman numerals refer to the number of examples of a given type that were found within a given geographical division. The Arabic numbers, placed in parentheses, refer to the number of sites within the geographical division that have yielded core-formed glass vessels. For instance, two (ii) examples of type II.A.i alabastra have been found on Rhodes, both of which came from a single (1) site, in this case Camiros. In those cases when a core-formed glass vessel has only a general provenance, the vessel is included in the count of vessels of that type but does not contribute to the number of sites represented within a geographical division. For example, of the three (iii) type II.A.iv alabastra known to have come from Cyprus, only one has a specific findspot and thus the number of sites is listed as one (1).

Since the few catalogued examples of all type I vessels and type II.B kohl tubes are included in this work only to update Dan Barag's thorough studies, these types are omitted from the following tables. Also omitted are types II.D.i, III.A.viii, III.B.i, III.B.iii, III.C.vi, III.F.iii, IV.B.xii and IV.D.i, since no example of any of these types has even a general provenance.

Appendix 4 contd.

Area	Type				
	II.A.i	II.A.ii	II.A.iii	II.A.iv	II.A.v
Rhodes	ii (1)			xi (1)	
Aegean and Greek Main- land	i (1)		i (1)	iii (3)	
Thrace and Black Sea	ii (1)		ii (2)	iii (3)	
North and Central Italy		i (1)			
South Italy and Sicily	i (1)	i (1)		ii (2)	
Spain and West					
North Africa				i (1)	iii (1)
Levant					
Cyprus				iii (1)	
Central Turkey					i (1)

Appendix 4 contd.

Area	Type				
	II.A.vi	II.A.vii	II.A.viii	II.A.ix	II.A.x
Rhodes	i (1)	viii (3)	vii (2)	ii (1)	i (1)
Aegean and Greek Main- land	i (1)	iii (3)	vii (5)		ii (2)
Thrace and Black Sea	i (1)	i (1)	vi (4)		
North and Central Italy	i (1)	ii (2)	i (1)		
South Italy and Sicily		ii (1)	x (7)	i (1)	ii (2)
Spain and West	i (1)		iv (1)	ii (2)	
North Africa	ii (2)		vi (2)		
Levant	i (1)				
Cyprus			v (2)		
Central Turkey					

Appendix 4 contd.

Area	Type				
	II.A.xi	II.A.xii	II.A.xiii	II.A.xiv	II.C.i
Rhodes	vii (2)	ii (2)	x (3)	i (1)	iii (2)
Aegean and Greek Main- land	v (4)	ii (2)	iv (4)	i (1)	x (5)
Thrace and Black Sea	iv (3)	ii (2)	vii (2)	iii (1)	iii (2)
North and Central Italy	i (1)	i (1)	vi (2)		ii (2)
South Italy and Sicily	i (1)	i (1)	iii (3)		iii (2)
Spain and West	i (1)		iv (2)		
North Africa					iv (1)
Levant	i (1)		i (1)	i (1)	
Cyprus	i (1)		i (1)		i (1)
Central Turkey			i (1)		i (1)

Appendix 4 contd.

Area	Type				
	II.C.ii	II.C.iii	II.C.iv	II.C.v	II.C.vi
Rhodes		i (1)	iv (3)		v (1)
Aegean and Greek Main- land	i (1)	vii (5)	vii (6)		
Thrace and Black Sea		iii (1)	iv (4)		
North and Central Italy				i (1)	
South Italy and Sicily			i (1)	i (1)	
Spain and West			i (1)	iii (1)	i (1)
North Africa			viii (2)		
Levant		i (1)			
Cyprus					
Central Turkey		i (1)			

Appendix 4 contd.

Area	Type				
	II.C.vii	II.C.viii	II.C.ix	II.D.ii	II.D.iii
Rhodes	xviii (2)	i (1)	i (1)	vii (2)	
Aegean and Greek Main- land	xx (13)	ii (1)	i (1)		i (1)
Thrace and Black Sea	x (6)	i (1)		i (1)	
North and Central Italy	iii (3)				
South Italy and Sicily	iii (3)				
Spain and West	xviii (6)			i (1)	
North Africa	iii (2)		ii (1)		
Levant	vi (5)			i (1)	
Cyprus	iii (1)		i (1)		
Central Turkey	i (1)				

Appendix 4 contd.

Area	Type				
	II.D.iv	II.D.v	II.D.vi	II.D.vii	II.E.i
Rhodes	v (1)				i (1)
Aegean and Greek Main- land	xiv (8)			i (1)	i (1)
Thrace and Black Sea	ii (1)	ii (1)			i (1)
North and Central Italy	iii (2)	i (1)		i (1)	i (1)
South Italy and Sicily	ii (2)				
Spain and West	viii (5)	iv (2)	i (1)		
North Africa	iv (2)				
Levant	ii (2)				
Cyprus					
Central Turkey					

Appendix 4 contd.

Area	Type				
	II.E.ii	II.E.iii	II.E.iv	II.E.v	II.E.vi
Rhodes	i (1)	iii (2)	v (2)	viii (2)	
Aegean and Greek Main- land	v (4)		viii (7)	iv (2)	
Thrace and Black Sea	ii (2)			iv (2)	
North and Central Italy	i (1)		iii (2)		
South Italy and Sicily		iii (3)			
Spain and West			ii (2)		
North Africa		i (1)	i (1)	iii (1)	ii (1)
Levant				i (1)	
Cyprus	i (1)				
Central Turkey	i (1)		i (1)	iii (1)	

Appendix 4 contd.

Area	Type				
	III.A.i	III.A.ii	III.A.iii	III.A.iv	III.A.v
Rhodes		i (1)	i (1)		
Aegean and Greek Main- land	iii (2)	i (1)	vii (3)	i (1)	
Thrace and Black Sea	i (1)		vi (3)		
North and Central Italy	v (3)		i (1)		
South Italy and Sicily			iv (2)	iii (3)	i (1)
Spain and West	i (1)				
North Africa			i (1)		ii (1)
Levant				ii (1)	
Cyprus					
Central Turkey			i (1)		

Appendix 4 contd.

Area	Type				
	III.A.vi	III.A.vii	III.A.ix	III.A.x	III.A.xi
Rhodes					
Aegean and Greek Main- land	ii (2)		vi (3)	i (1)	
Thrace and Black Sea	iii (1)			i (1)	
North and Central Italy			iii (2)	i (1)	
South Italy and Sicily		i (1)		ii (2)	
Spain and West					
North Africa			ii (2)	i (1)	
Levant					
Cyprus		i (1)	i (1)	i (1)	i (1)
Central Turkey					

Appendix 4 contd.

Area	Type				
	III.B.ii	III.C.i	III.C.ii	III.C.iii	III.C.iv
Rhodes					
Aegean and Greek Main- land	iii (2)			i (1)	
Thrace and Black Sea			i (1)		
North and Central Italy	ii (1)				
South Italy and Sicily	ii (2)		i (1)		
Spain and West		ii (1)			
North Africa	i (1)				i (1)
Levant					
Cyprus	ii (1)				
Central Turkey					

Appendix 4 contd.

Area	Type				
	III.C.v	III.D.i	III.E.i	III.E.ii	III.F.i
Rhodes					
Aegean and Greek Main- land			iii (2)		
Thrace and Black Sea				i (1)	
North and Central Italy		i (1)	vii (2)	i (1)	i (1)
South Italy and Sicily	i (1)		i (1)	i (1)	ii (2)
Spain and West					ii (2)
North Africa			ii (2)		
Levant					
Cyprus			iii (2)		
Central Turkey					

Appendix 4 contd.

Area	Type				
	III.F.ii	III.F.iv	III.F.v	III.F.vi	III.G.i
Rhodes					
Aegean and Greek Main- land	i (1)	i (1)			i (1)
Thrace and Black Sea				i (1)	
North and Central Italy		i (1)	i (1)		i (1)
South Italy and Sicily	ii (2)	v (4)	i (1)		
Spain and West	iii (1)	iii (2)			
North Africa					
Levant					
Cyprus	i (1)				i (1)
Central Turkey					

Appendix 4 contd.

Area	Type				
	III.G.ii	IV.A.i	IV.A.ii	IV.A.iii	IV.A.iv
Rhodes		i (1)			i (1)
Aegean and Greek Main- land	i (1)	iii (3)	ii (2)	v (5)	ii (2)
Thrace and Black Sea				iii (3)	
North and Central Italy			i (1)	ii (2)	
South Italy and Sicily			ii (2)	i (1)	ii (2)
Spain and West		i (1)	v (2)	i (1)	
North Africa			iv (3)	ii (2)	
Levant			i (1)	iv (2)	v (1)
Cyprus			iv (1)	xii (2)	xiii (2)
Central Turkey		i (1)		i (1)	

Appendix 4 contd.

Area	Type				
	IV.B.i	IV.B.ii	IV.B.iii	IV.B.iv	IV.B.v
Rhodes					
Aegean and Greek Main- land	iii (3)	i (1)	i (1)	i (1)	ii (1)
Thrace and Black Sea				i (1)	
North and Central Italy		i (1)			
South Italy and Sicily	i (1)				
Spain and West		i (1)			
North Africa	ii (2)				
Levant	iii (1)		ii (1)		iii (2)
Cyprus	i (1)	i (1)			
Central Turkey					

Appendix 4 contd.

Area	Type				
	IV.B.vi	IV.B.vii	IV.B.viii	IV.B.ix	IV.B.x
Rhodes					
Aegean and Greek Main- land	iv (2)				
Thrace and Black Sea	iv (3)				
North and Central Italy					
South Italy and Sicily			i (1)		
Spain and West					
North Africa	ii (2)				
Levant	viii (4)			ii (1)	i (1)
Cyprus	xix (5)	ii (2)		iii (1)	xiii (2)
Central Turkey					

Appendix 4 centd.

Area	Type				
	IV.B.xi	IV.C.i	IV.C.ii	IV.C.iii	IV.C.iv
Rhodes					
Aegean and Greek Main- land			iii (3)		
Thrace and Black Sea	i (1)	i (1)			
North and Central Italy					i (1)
South Italy and Sicily			i (1)		ii (2)
Spain and West			i (1)	iv (1)	
North Africa	ii (1)		i (1)		
Levant		i (1)	i (1)		i (1)
Cyprus	xi (4)	ii (1)	ii (1)		
Central Turkey					

Appendix 5: The Use of Core-Formed Glass Vessels in Antiquity.

It is universally held that core-formed glass vessels were used as containers of some sort of perfumed oil. They shared this function with similarly shaped pottery, metal and stone vessels. The long necks and narrow openings of these vessels were designed to prevent the accidental spilling of the precious perfumed liquid.

Our knowledge of the manufacture of perfumes in the first millennium B.C. is extensive, being based on numerous references in Greek and Roman authors, including long discussions by Theophrastus, Pliny and Athenaeus. For a general discussion of perfume in antiquity, see R. J. Forbes, Studies in Ancient Technology, III (Leiden, 1955), 1-49. For a list of references to perfume in Ptolemaic Egypt, see T. Reil, Beiträge zur Kenntnis des Gewerbes in Hellenistischen Ägypten (Dresden, 1913), 144-148.

Unlike modern perfumes, which are based on distilled alcohol, ancient perfumes consisted of various aromatic substances mixed with oils or resins. The preferred oil was the Egyptian or Syrian balanos, though the oil of unripe olives and bitter almonds was also recommended. The aromatic substances used to impart the fragrance to the perfume include a wide variety of vegetable matter, the most popular being flowers, especially the Egyptian iris.

While many of the preferred ingredients of ancient perfumes were obtained from Egypt and the East, it is clear that all areas of the Mediterranean produced perfumes. Rhodes, Pergamon, Cyzicus, Athens, Aegina, Delos, Corinth, Chaeronia, Elis, Capua, Naples, Cyrene, Alexandria, Sidon, Tarsus, Cyprus and Cilicia are all attested as centers of manufacture of perfume during the second half of the first millennium B.C.

However, nowhere in our ancient sources is the manufacture of perfumes connected with the manufacture of perfume containers. While the manufacturers of perfume containers obviously served the same market as the producers of the perfumes themselves, there is no reason to believe that there was any concerted effort to link the two industries. Logically there are three ways by which perfume and perfume containers were distributed in antiquity. Either perfume was sold in bulk to the manufacturers of perfume containers who redistributed it in their vessels, or containers were shipped to the perfume makers and the primary distribution occurred in these containers, or both perfume and perfume containers were distributed independently, whether directly to the consumer or through a middleman. The

Appendix 5, contd.

latter scenario is the most probable, given the absence in our sources, especially in the extensive Ptolemaic records, of any mention of inter-industry commerce. The known low prices of Attic pottery lekythoi of the fifth century B.C. suggest that those perfume containers were sold without perfume; see K. De Vries, "Attic Pottery in the Achaemenid Empire," AJA 81 (1977), 545 and n. 10.

It is not possible to associate any particular type of core-formed glass vessel with a particular type of perfume since traces of the original contents of the vessels are almost never recovered, and in those rare instances when some of the original contents are preserved and analyzed, the analyses have never been able to pinpoint specific ingredients. For a report of the analysis of a residue from a type III.B.iii amphoriskos in the Newark Museum, see Auth, 1976, 37, no. 24. That analysis revealed that the vessel had originally contained an olive-based perfume or soap. For a discussion of analyses of other, mostly Egyptian perfume residues, see A. Lucas and J.R. Harris, Ancient Egyptian Materials and Industries, 4th edition (London, 1962), 85-90. Although it might be tempting to assume that various contemporary types of core-formed glass vessels were used to contain different types of perfumes, there is no archaeological or philological support for this hypothesis. Given the lack of the conception of trademarks or copyrights in antiquity, it is more likely that core-formed glass vessels were purchased, either already containing perfume or empty, as luxury items in themselves and were subsequently used to hold whatever perfume their owners had on hand.

While there are occasional references to lead or alabaster perfume containers in early authors, for example in Theophrastus' Concerning Odors (66) or Alexis' The New Tenant (Athenaeus, Deipnosophistai, XV.691e), there is no mention of a glass perfume container among the scanty ancient Greek references to glass. The earliest reference to a glass perfume container occurs in an epigram of Martial (3, 55, 2, (1)), who is certainly referring to a blown glass vessel.

Core-formed glass vessels can be recognized on a few scenes on Attic red-figure vases and on Etruscan incised mirrors. Fossing (1940, 138-139) lists eleven examples of illustrations of core-formed glass vessels. To his list Freyer-Schauenburg (1973, 162-163) added a white-ground pyxis in the Metropolitan Museum and a lekythos of the Calliope Painter in Syracuse. A further addition to the catalogue of depictions of core-formed glass vessels is a scene on a squat lekythos by the Eretria Painter in the Ackland Art Museum of the University of North Carolina at Chapel Hill; see H.A.

Appendix 5, contd.

Shapiro, Art, Myth and Culture. Greek Vases from Southern Collections (New Orleans Museum of Art, 1981), 128-133, with further references.

It is important to note that all ancient illustrations of core-formed glass vessels depict women at their toilet. In Greece during the classical period the use of perfume by men was suspect, as a passage in Xenophon (Symposium, II, 3-4) reveals. In contrast to the Greek practice, it appears that Eastern men did make extensive use of perfume; see De Vries, op. cit., 545, n. 9. From the large number of perfume containers that have been found throughout the Mediterranean and the East in tombs of men and in tombs of women it would seem that perfume commonly played an important role in funeral rites, regardless of the sex of the deceased.

Core-formed glass vessels have been uncovered in habitation levels, in sanctuaries and in tombs. It is, of course, from tombs that the majority of core-formed vessels are found. One can be fairly certain that all or nearly all of the complete core-formed vessels which are now without provenances were originally placed in ancient tombs.

The archaeological record indicates that core-formed glass vessels were also frequently dedicated in ancient sanctuaries. The excavations at the Demeter Sanctuary in Cyrene have produced an extraordinary amount of core-formed glass. More than 525 fragments of core-formed glass vessels have come from that sanctuary, almost all of which must have been given as votive offerings in the late sixth and early fifth centuries B.C. Although there must have been some special conditions that caused the inhabitants of Cyrene to dedicate such a large number of core-formed glass vessels in their extra-mural sanctuary of Demeter, we may suspect that the Cyrenean custom was not unique and that future excavation and fuller publication of finds from other sanctuaries will reveal additional large collections of core-formed glass.

It would seem that almost any female member of the Greek pantheon could receive a votive offering of core-formed glass. Core-formed glass vessels have been found in many sanctuaries on the Greek mainland and in Magna Graecia, including that of Athena at Halieis and Motta, of Hera at Argos, Paestum and Croton, of Demeter and Kore at Acrocorinth and Selinus, of Poseidon (and Amphitrite?) at Isthmia, of Pan and the Nymphs at Vari and Phyle, of Artemis Brauronia, of Aphaia on Aegina, and of the Kabiri in Boiotia. Clearly core-formed glass vessels, presumably filled with precious perfume, were thought to be pleasing to a number of different divinities.

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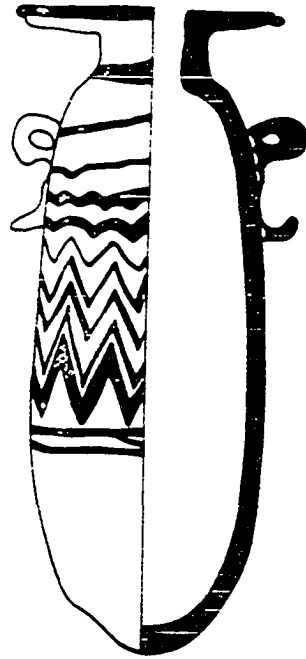
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II.A.iv.7



II.A.iv.8



II.A.iv.14

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II.A.v.2



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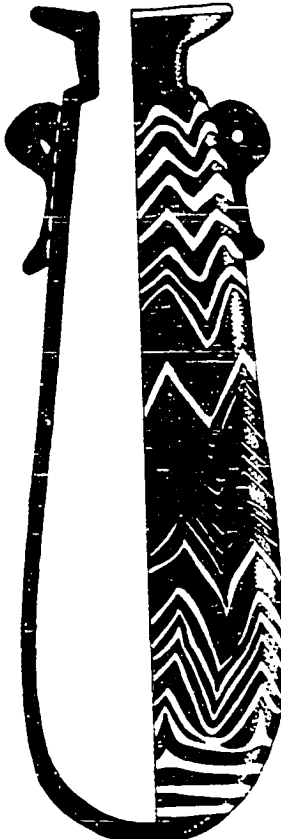
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II.A.v.4



II.A.vi.1



II.A.vi.1



II.A.vii.6



II.A.vii.6



Il.A.vii.5



Il.A.viii.38



Il.A.viii.40



Il.A.viii.37



Il.A.viii.39

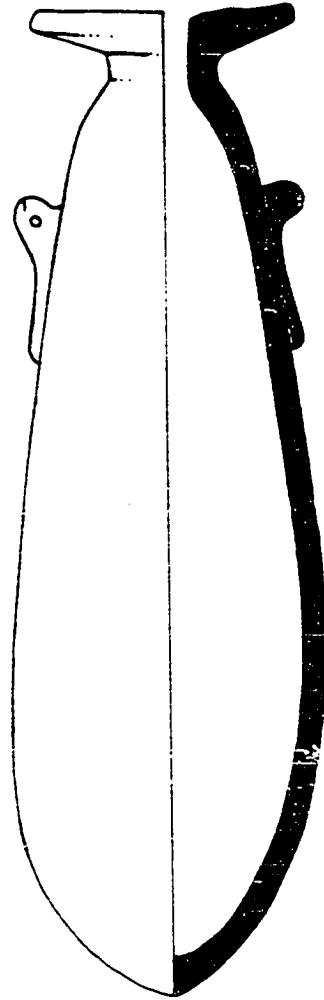


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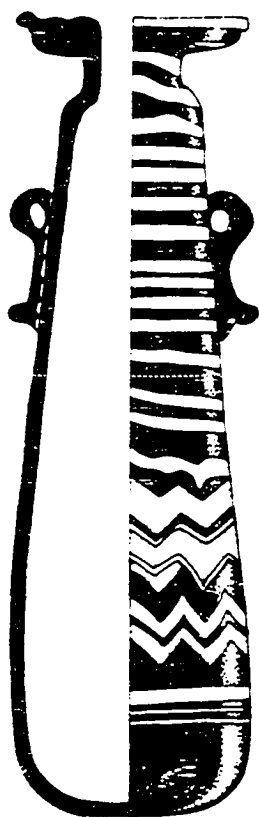
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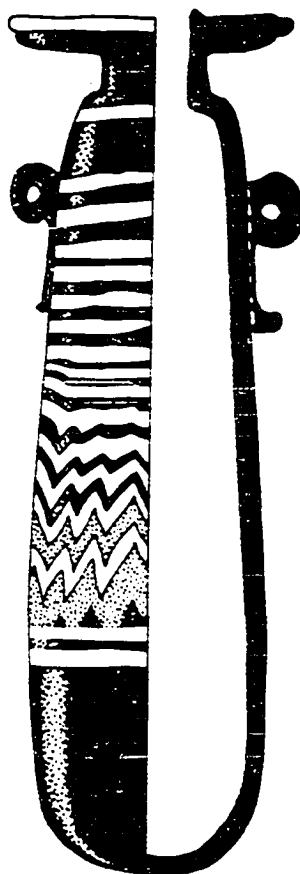
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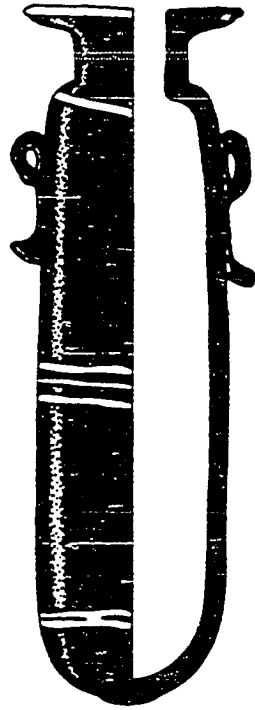
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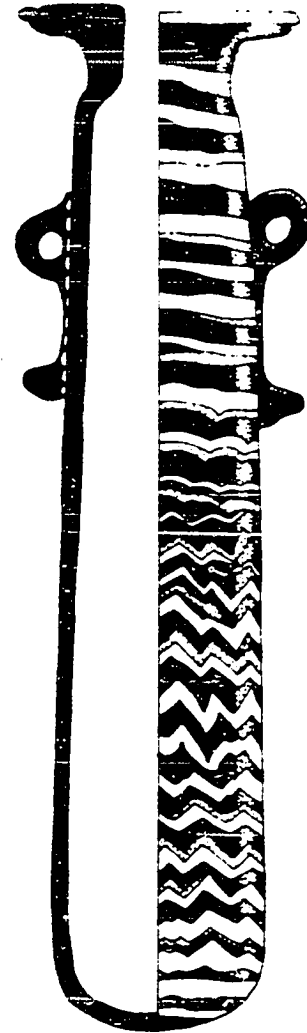
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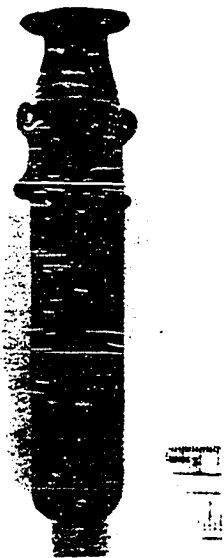
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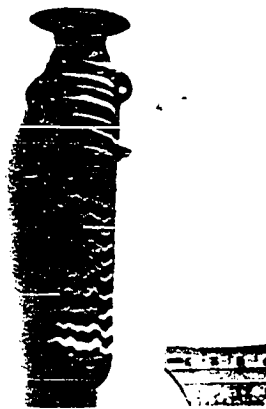
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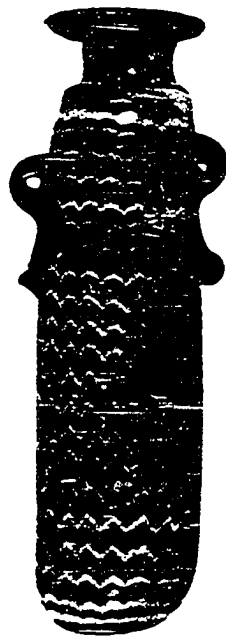
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II.A.xiii.8



II.A.xiii.9





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II.B.3



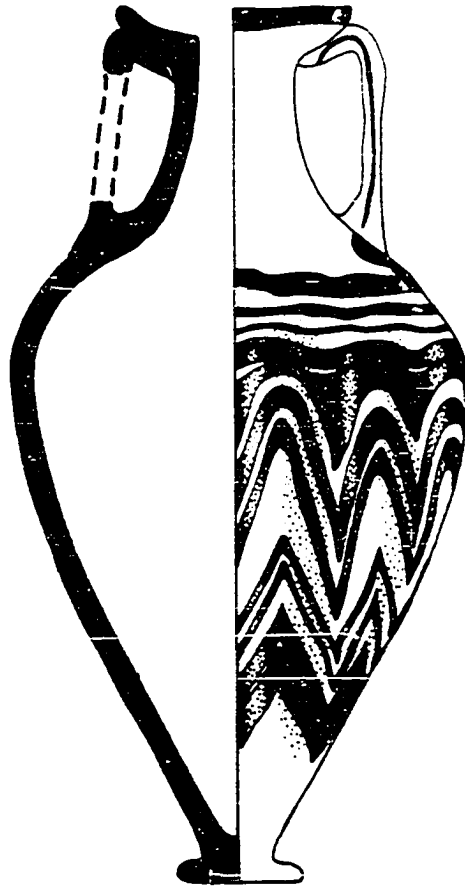
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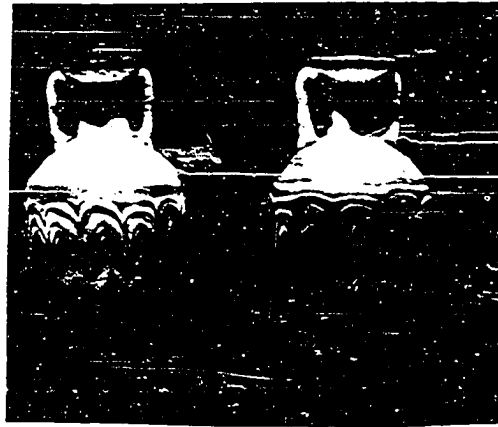
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II.C.i.7



II.C.i.8



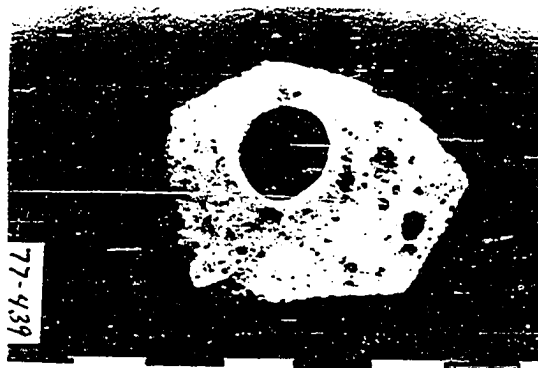
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R-II.C.i.11



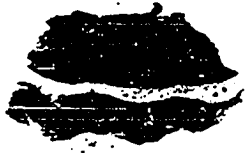
II.C.i.22



L-II.C.i.13
R-II.C.i.12



II.C.i.23



13485

II.C.i.24

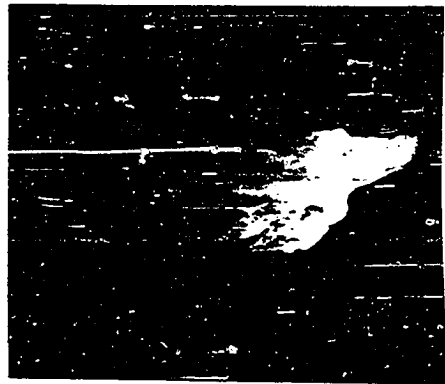


13486

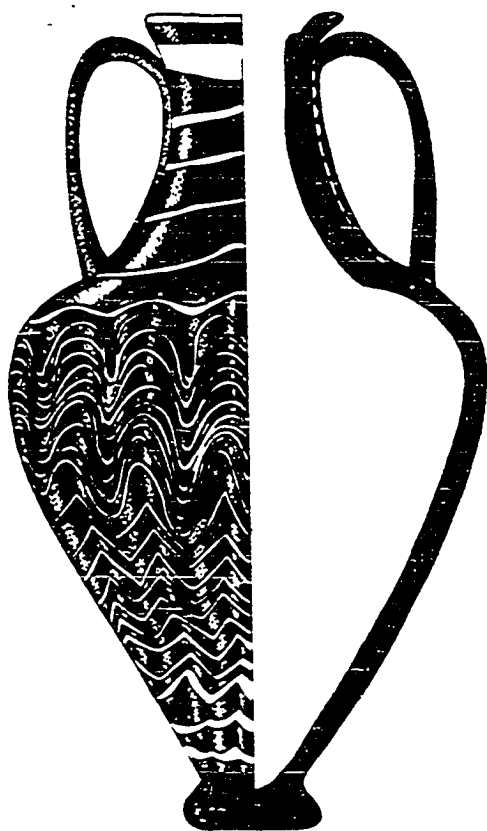
II.C.i.25



II.C.i.27



II.C.i.28



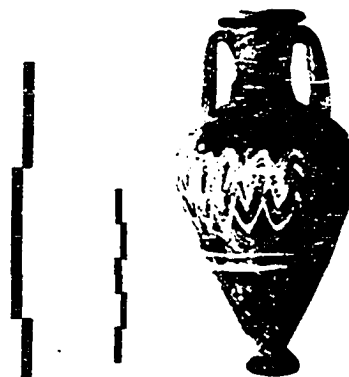
Il.C.iii.4



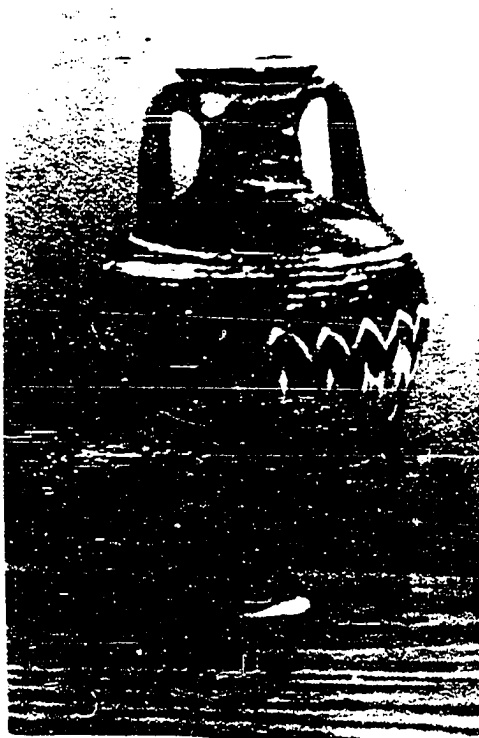
Il.C.iv.7



Il.C.iii.6



Il.C.iv.8



Il.C.iv.9



76-464

Il.C.iv.19



76-455

Il.C.iv.21

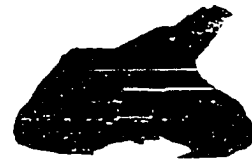


76-604

Il.C.iv.20



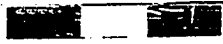
Il.C.iv.23



Il.C.iv.24

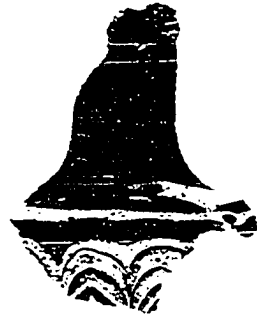


71-490



Il.C.v.3

77-447



Il.C.v.4



Il.C.v.5



Il.C.vi.5



Il.C.vii.13



Il.C.vii.14



II.C.vii.25



II.C.vii.26



II.C.vii.28



II.C.vii.33

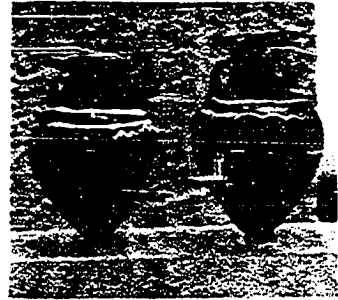


11.755

Il.C.vii.75



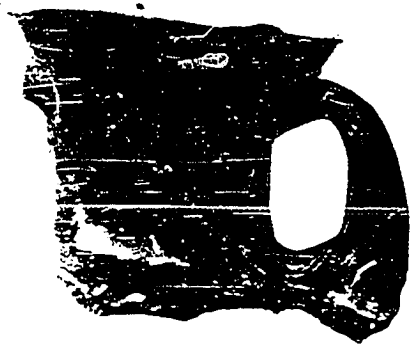
Il.C.vii.76



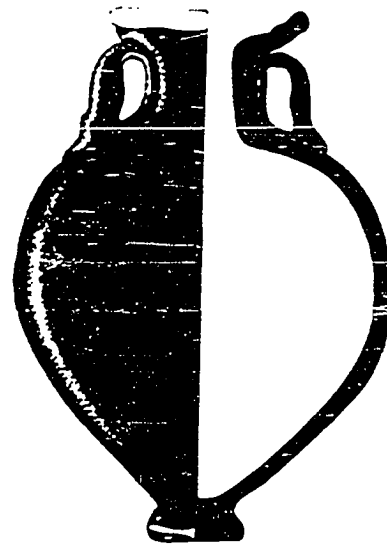
L-Il.C.vii.37
R-Il.C.vii.36



Il.C.vii.83



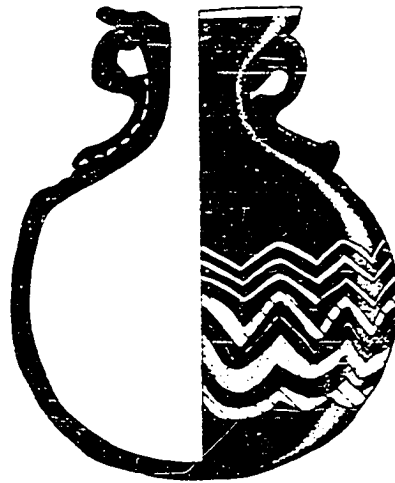
Il.C.vii.86



Il.C.ix.2



II.D.ii.5



II.D.ii.6



II.D.iv.6



II.D.iv.8



L-II.D.iv.12
M-II.D.iv.14
R-II.Div.13



II.D.iv.15



II.D.iv.16



77-543



II.D.iv.36



74-74



II.D.iv.38



71-12



II.D.iv.37

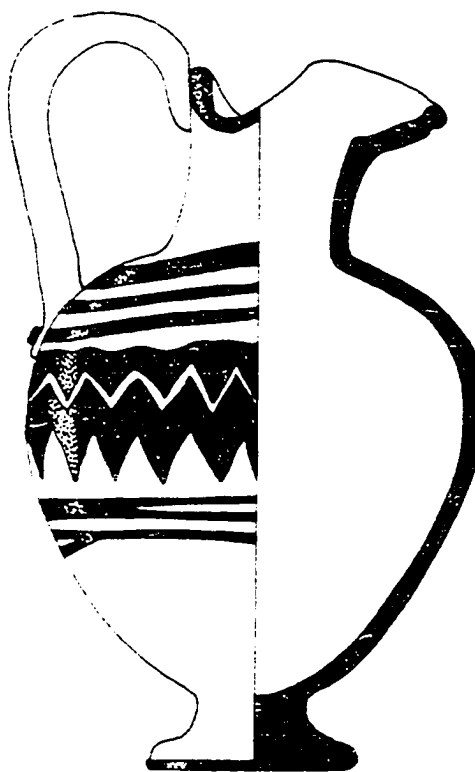


71-786

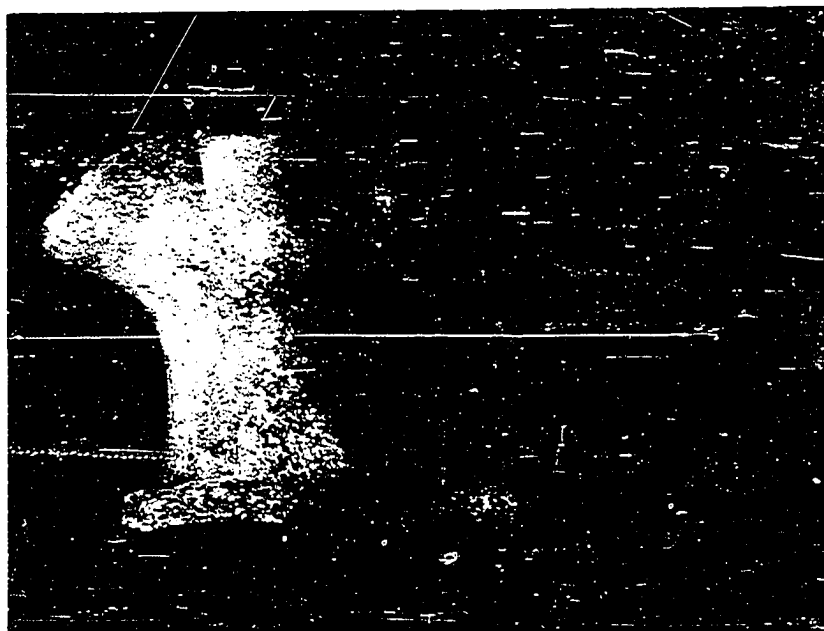
II.D.vi.1



II.E.i.1



II.E.ii.3



II.E.ii.11



II.E.iii.1



II.E.iv.5



II.E.iv.4



II.E.iv.21



II.E.v.5



II.E.v.6



II.E.v.7



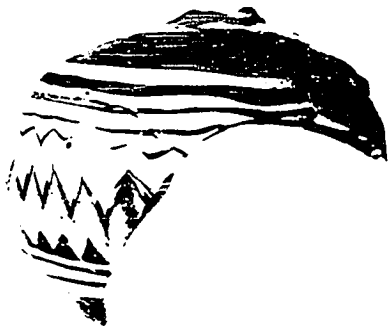
II.E.v.8



II.E.v.10



II.E.v.12



II.E.v.17



76-371

II.E.v.17



II.E.v.18



II.E.v.19

459



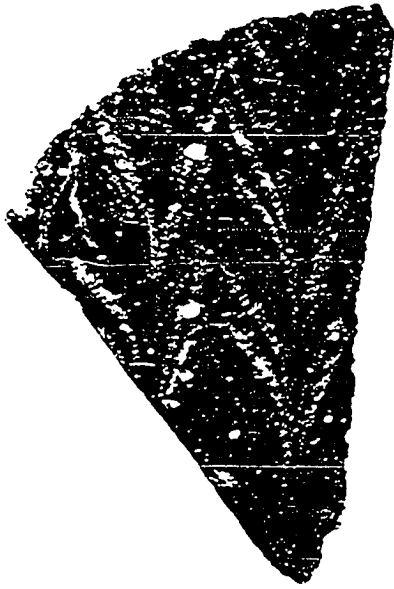
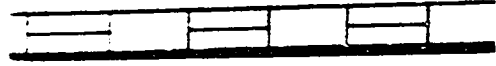
II.E.v.20



II.E.v.21



II.E.v.22



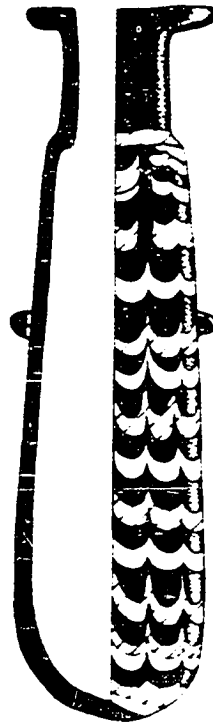
III.A.iii.2



III.A.iii.22



III.A.iv.1



III.A.v.2



III.A.vi.1



III.A.vi.2



III.A.vii.3



III.A.ix.13



III.B.ii.2



III.B.ii.3



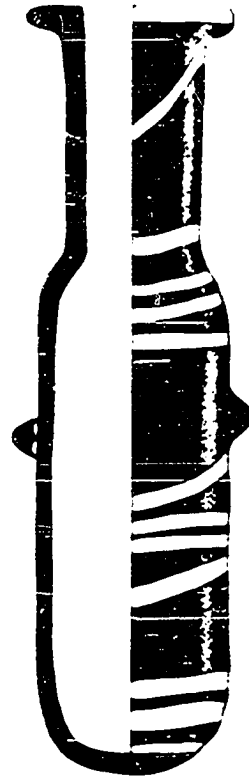
III.E.i.3



III.E.i.15



IV.A.i.6



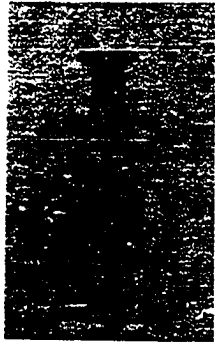
IV.A.i.7



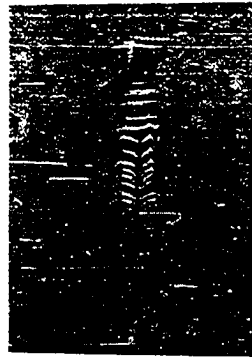
IV.A.ii.17



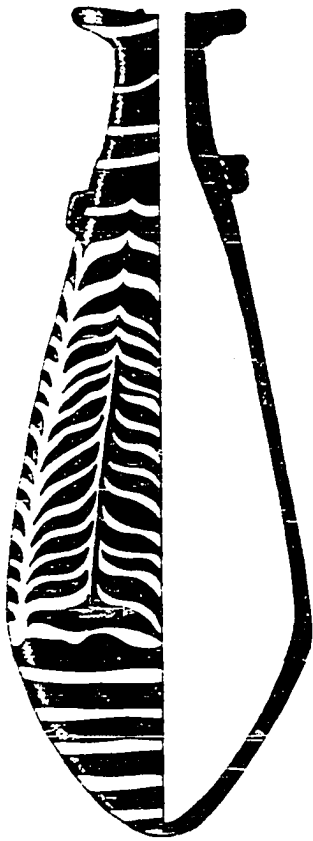
IV.A.ii.20



IV.A.iii.20



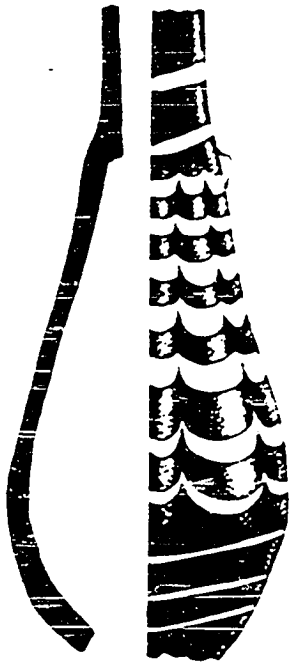
IV.A.iii.23



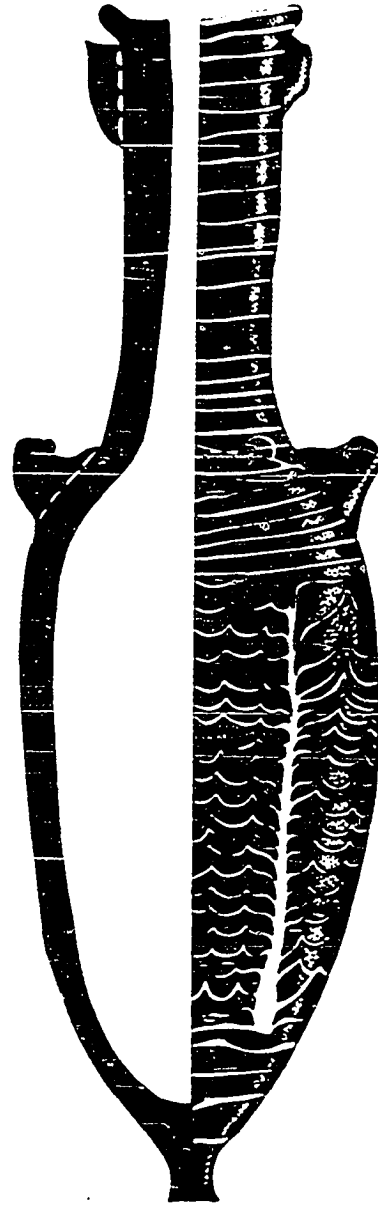
IV.A.iii.24



IV.A.iii.25



IV.A.iv.2

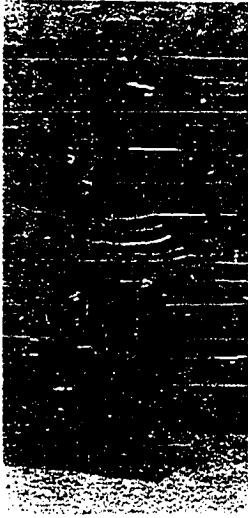


IV.B.vi.38



IV.B.iii.1





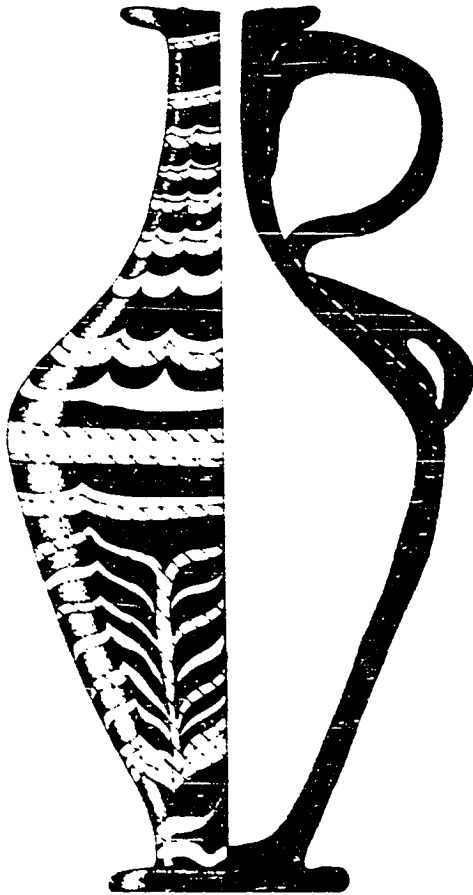
IV. B. vi. 32



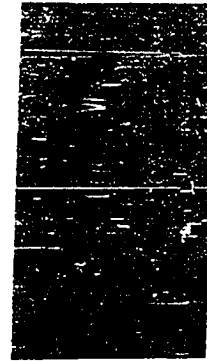
IV. B. vii. 1



IV. B. xi. 9



IV. B. x. 8



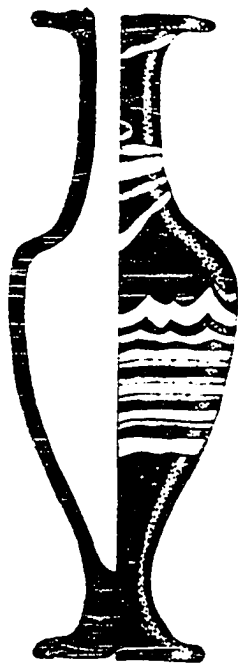
IV. C. i. 3



IV.C.ii.2



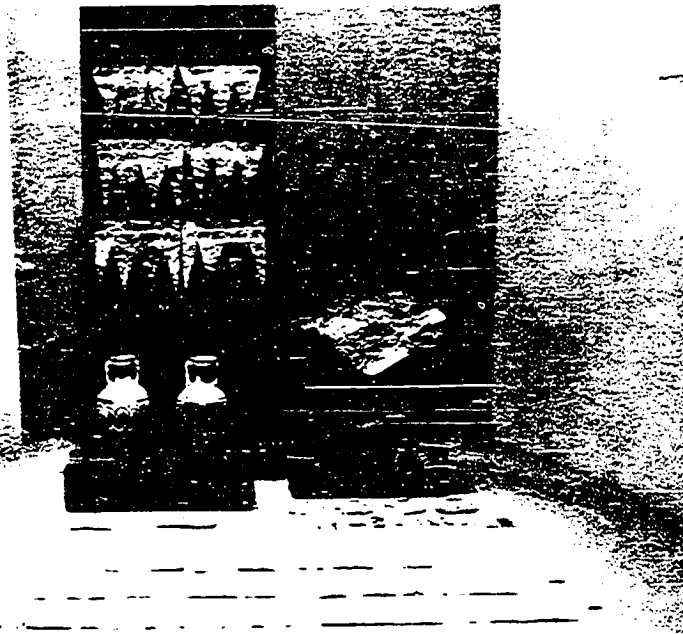
IV.C.ii.10



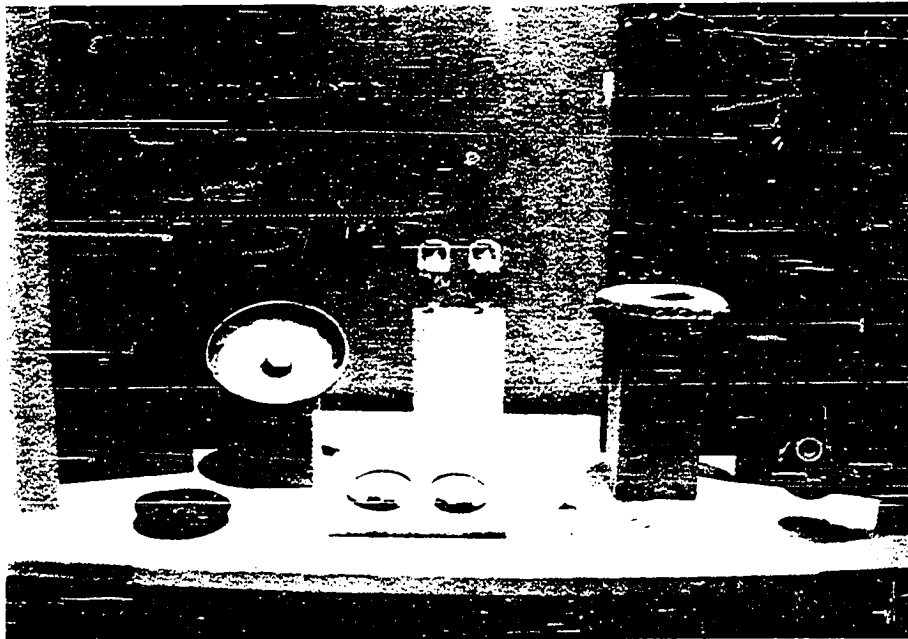
IV.C.ii.11



IV.D.i.1



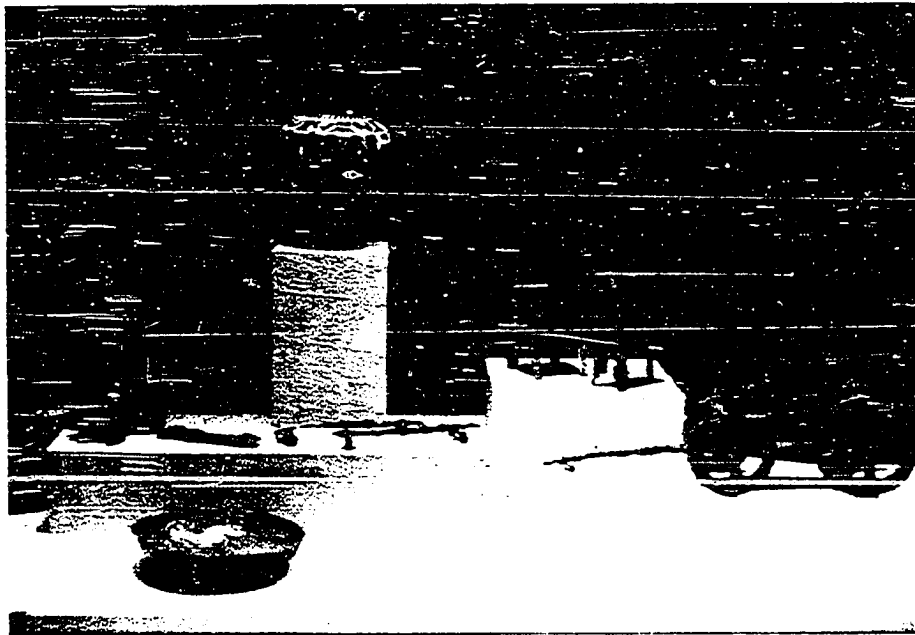
SINDA - Grave 52



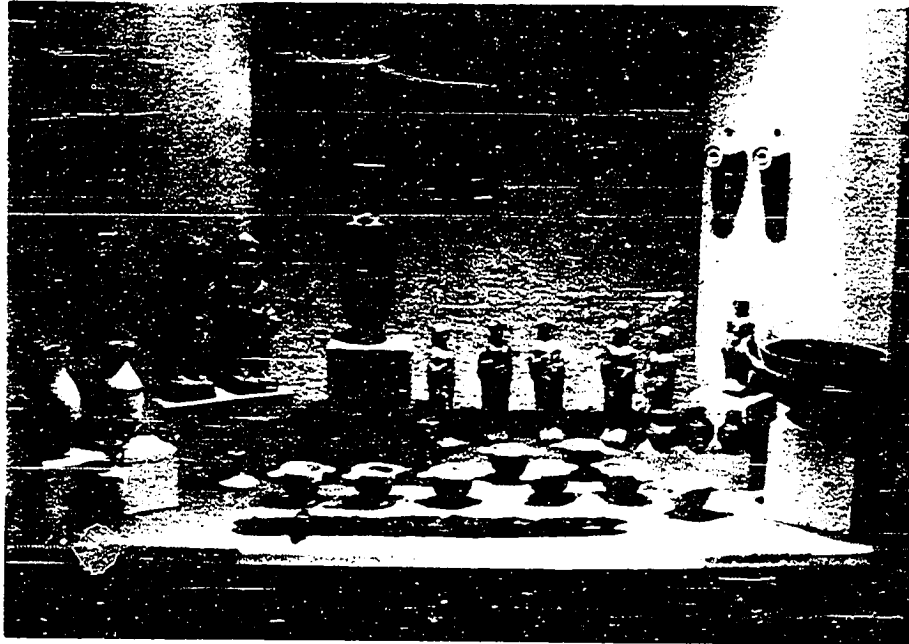
SINDA - Grave 67



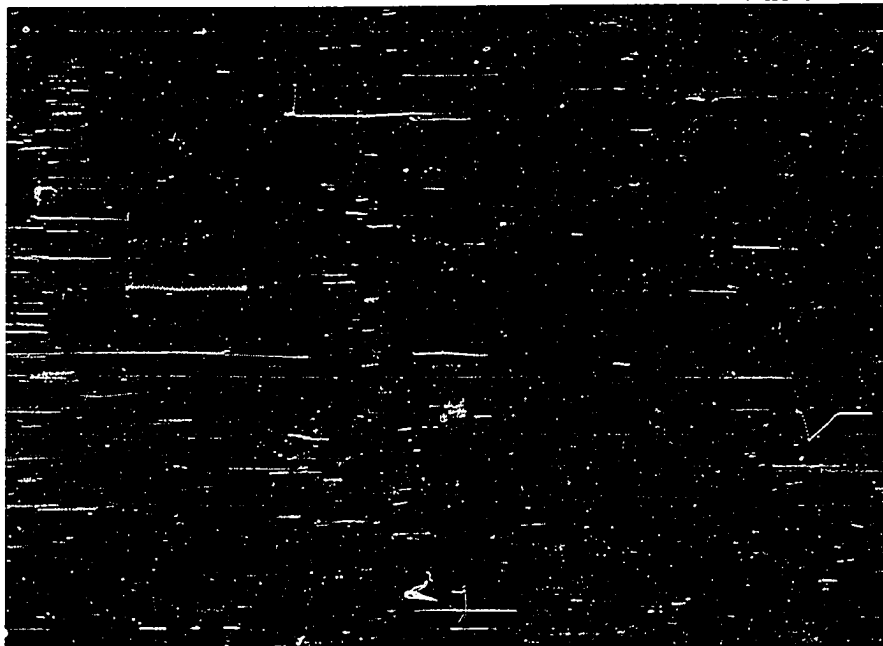
SINDA - Grave 67



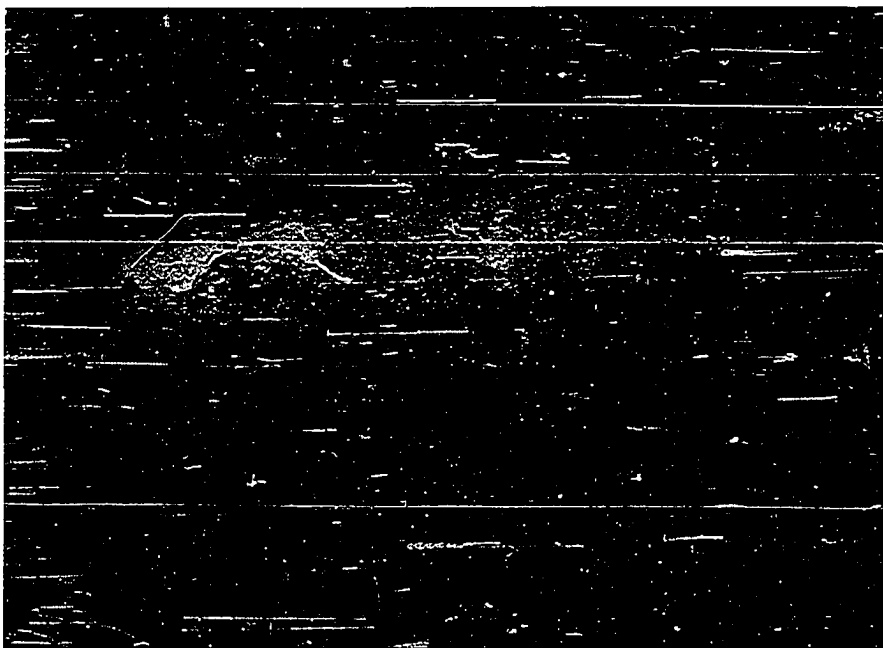
SINDA - Grave 67



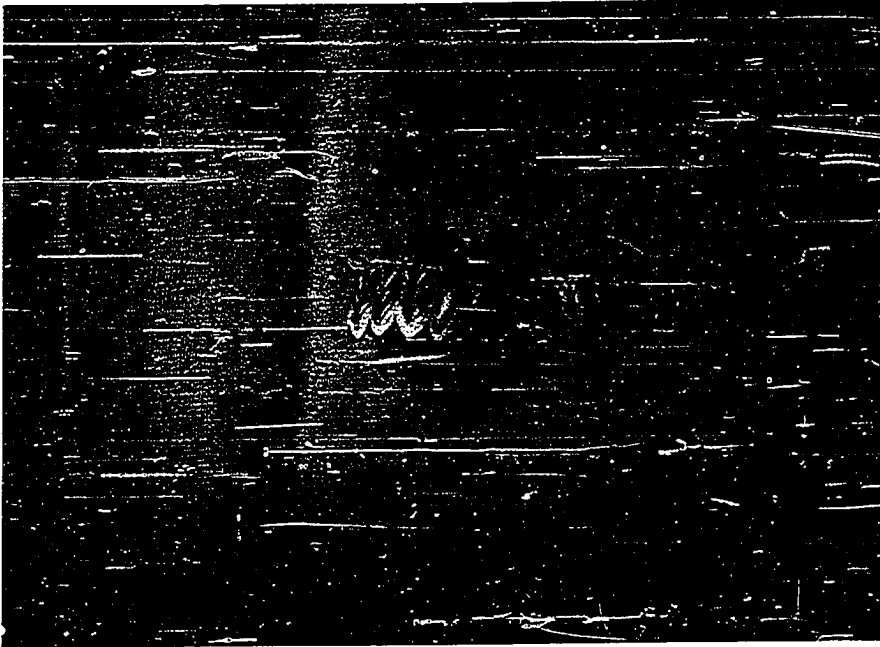
SINDA - Grave 40



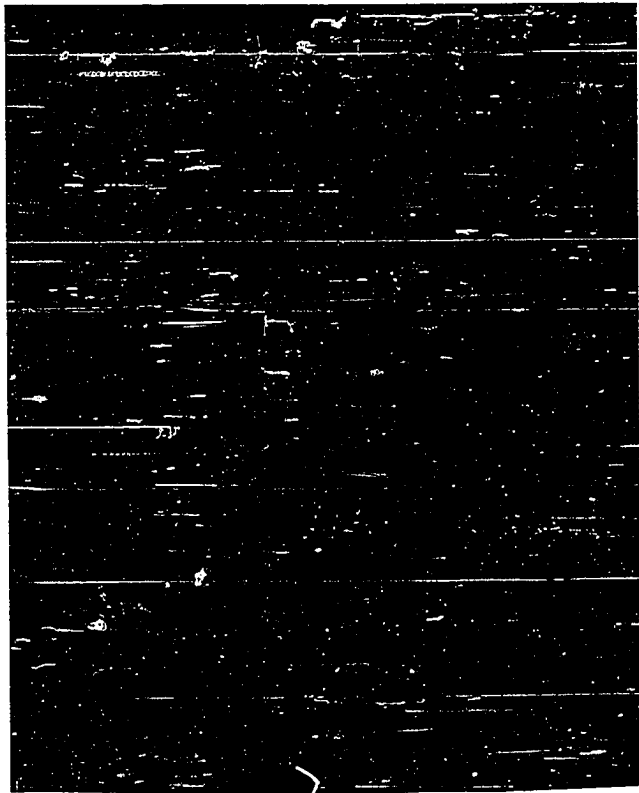
II.A.v.3



II.A.x.3



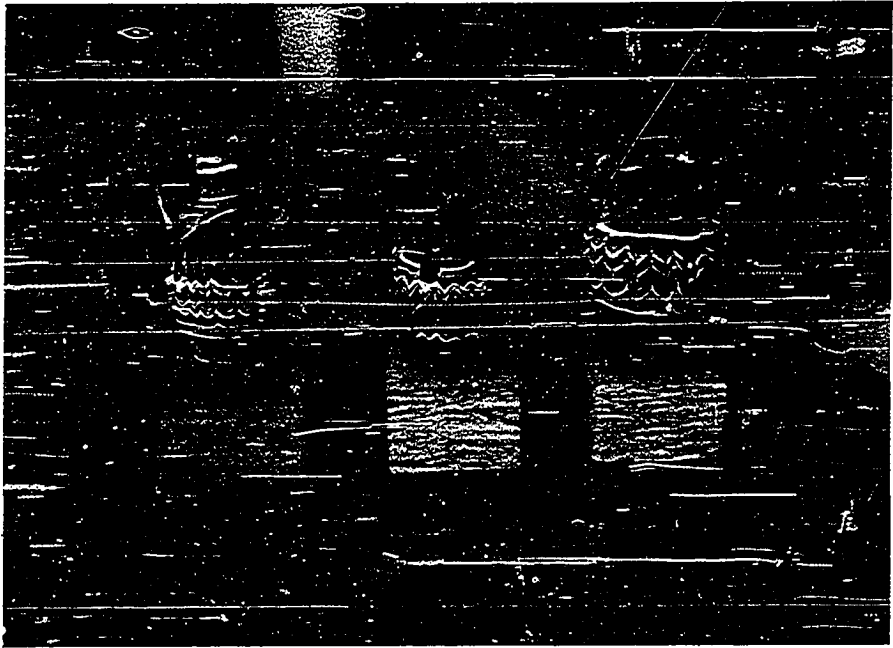
II.D.11.10



II.E.v.17



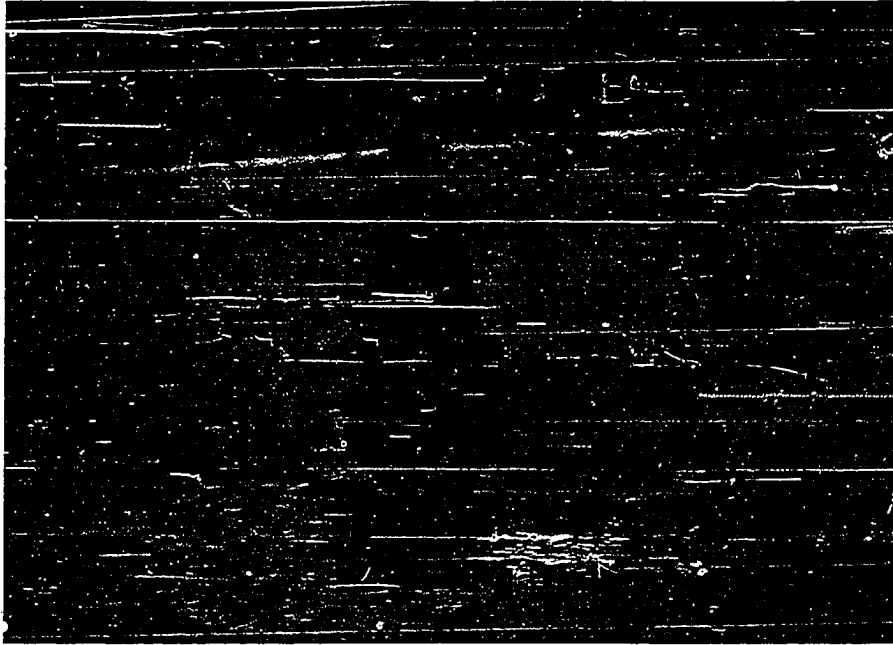
III.A.ix.12



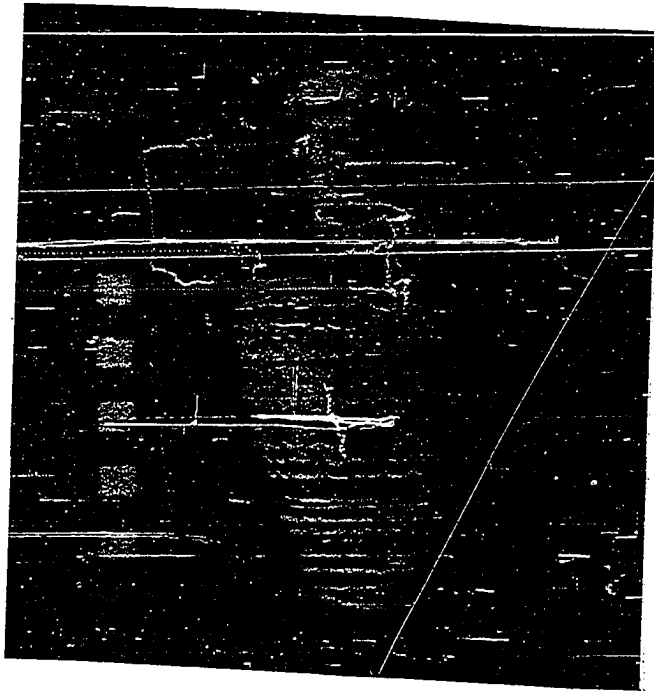
III.B.ii.2

III.E.i.3

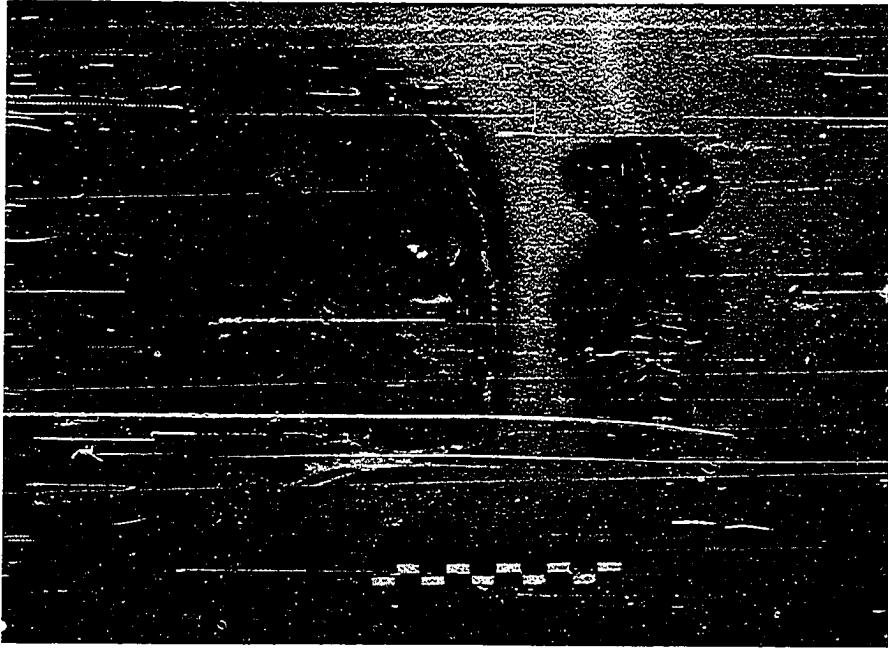
III.B.ii.3



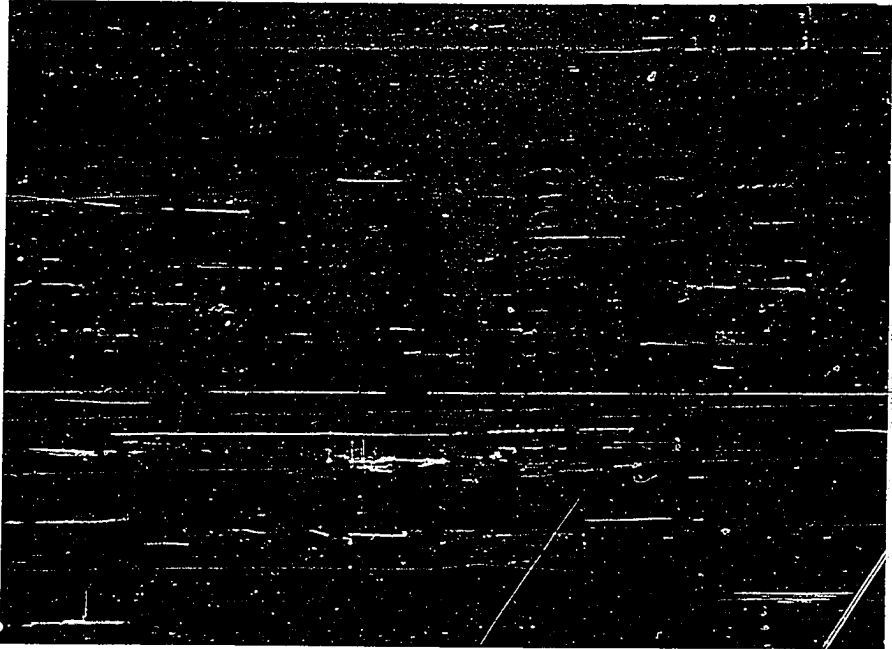
IV.A.iii.24



IV.B.vi.29



IV.B.x.7



Left to right: IV.A.iv.19
IV.A.iv.21
IV.A.iv.22
IV.A.iii.21
IV.A.iv.20
IV.A.iv.18
IV.B.x.6