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# Pottery of the Egyptian New Kingdom

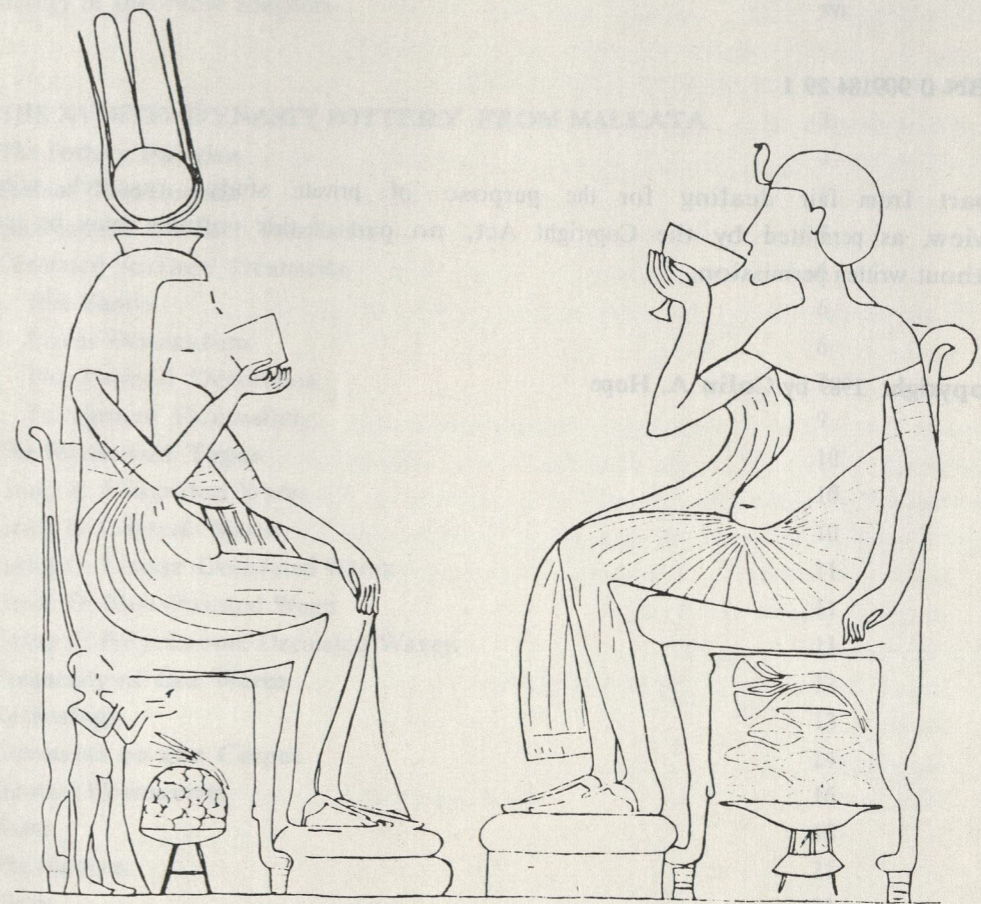
## *Three Studies*



*Colin A. Hope*  
*Victoria College*  
*Archaeology Research Unit*  
*Occasional Paper No. 2*

POTTERY OF THE EGYPTIAN NEW KINGDOM:

THREE STUDIES



COLIN A. HOPE

Victoria College  
Archaeology Research Unit  
Occasional Paper No. 2

Published in 1989 by Victoria College Press  
 a Division of VICTRACC Ltd  
 221 Burwood Highway  
 Burwood Victoria 3125  
 Australia

ISBN 0 909184 29 1

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*Cover Illustration*

Pottery manufacture in the mid-XVIIIth dynasty tomb of Kenamun at Thebes (No. 93)  
 (after R. Holthoer *New Kingdom Sites. The Pottery*. (Lund 1977) fig. 24)

*Title Page Illustration*

Akhenaton and Queen Tiye drinking; from the tomb of Huya at Amarna.  
 (after L. Lesko *King Tut's Wine Cellar*. (Berkeley 1977) 39).

12/19/91 (Anu Valtion Gilt) Victoria College Press - P04/59-1447 871 7/92

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**PREFACE**

The three studies which form this volume were prepared at the request of the International Group for the Study of Ancient Egyptian Pottery for inclusion in *An Introduction to Ancient Egyptian Pottery*. Due to the delay in finalising that volume and in submitting completed chapters for publication in fascicle form it was decided, with much regret, to withdraw those published herein. The original date of preparation of each study is indicated in its respective first footnote, as are the dates of revisions. From these it will be apparent why withdrawal was first considered. The decision was made as a result of discussions concerning the topic for a second Occasional Paper to be published by the Archaeology Research Unit of the Victoria College in 1989. This offered the opportunity of finally making available the three studies in question without further delay and thus avoiding the necessity of extensive revisions which would have been required if much more time were to elapse before their publication. It must be emphasised that they are of an introductory nature.

Every attempt has been made to standardise the terminology which was employed during the years in which the studies were prepared and to remove duplications, though this has not been possible in every case. The line drawings and photographs which illustrate each study have been placed at the end of the text of each one and not combined, hence numbering is not consecutive throughout the volume.

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## ACKNOWLEDGEMENTS

I am extremely grateful to Ian Edwards, Co-Ordinator of the Archaeology Research Unit of the Victoria College for accepting these three essays for publication as Occasional Paper No. 2, and Dr Arpad Phillip of VICTRACC Ltd for his co-operation and support in making the publication possible. My colleague Dr R. G. Jenkins of the Department of Classical and Near Eastern Studies, University of Melbourne, kindly devoted much of his time to printing the camera-ready manuscript of this volume, without which it would have had quite a different appearance. I am indebted to him for all of his help, advice and patience. Dr Robert Merrillees kindly read the manuscript and offered useful comments and additional bibliographical references while others were provided by Dr Greg Whightman; I am grateful to them both. For aiding me in the preparation of the illustrations I am indebted to Johnathan Howell, Bruce Parr and Photographic Services, the Museum of Victoria.

I wish to extend my thanks to all who have provided me with information on objects in museums or galleries and from excavations as yet unpublished, for the supply of photographs and for permission to reproduce them herein. For their understanding and assistance I thank Janine Bourriau, current editor of *An Introduction to Ancient Egyptian Pottery*, and Dr Dorothea Arnold, her predecessor in that task.

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Abbreviation:

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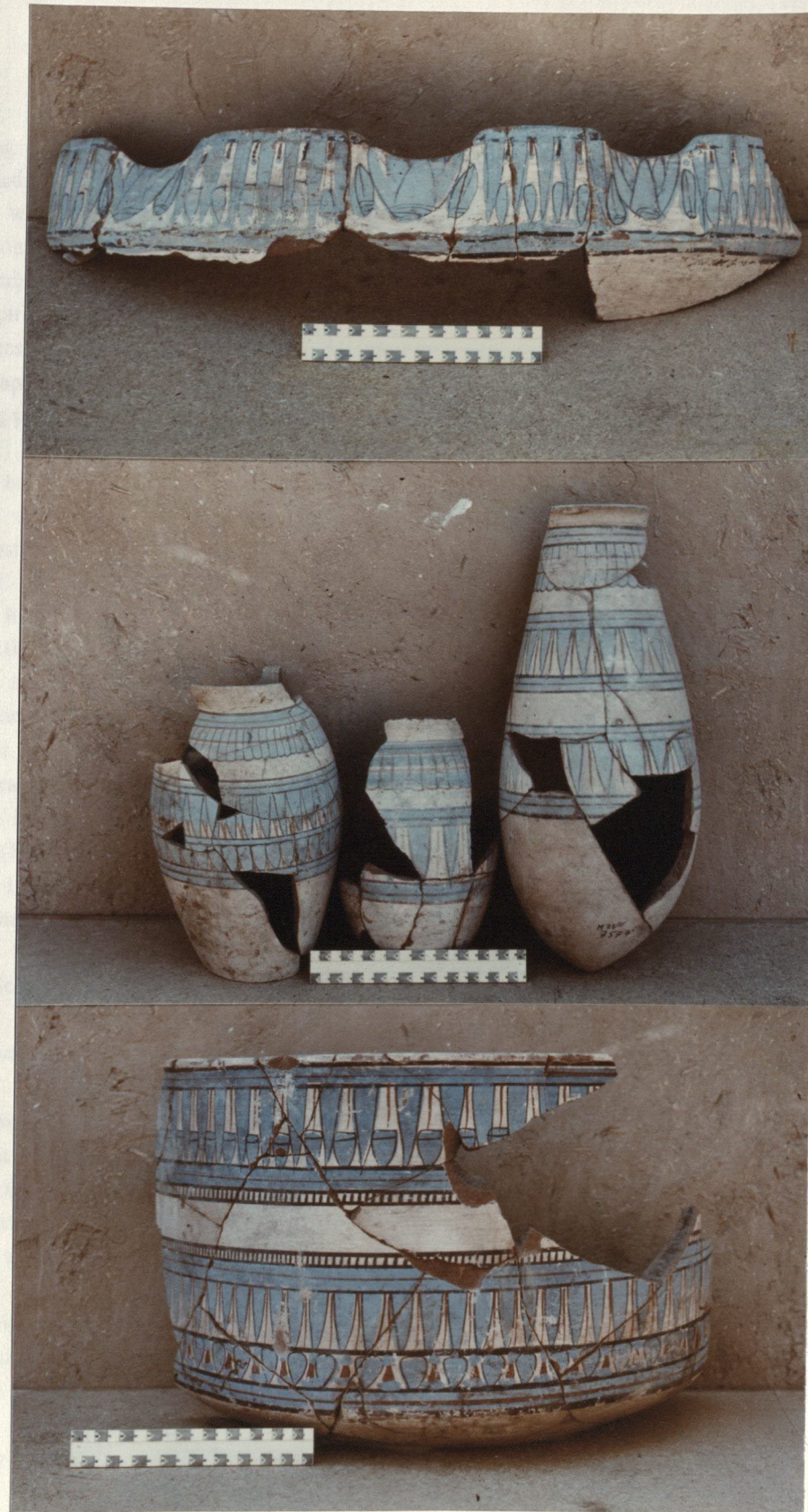
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**Chronology of the New Kingdom 1552-1069 BC**

(after O'Connor in B.G.Trigger, B.J.Kemp, D.O'Connor and A.B.Lloyd, *Ancient Egypt: A Social History* (Cambridge 1983), table 3.1.)

<b>XVIIIth Dynasty</b>		<b>XIXth Dynasty</b>	
Ahmose	1552-1527	Ramesses I	1305-1303
Amunhotep I	1527-1506	Seti I	1303-1289
Tuthmosis I	1506-1494	Ramesses II	1289-1224
Tuthmosis II	1494-1490	Merenptah	1224-1204
Hatshepsut	1490-1468	Amenmesses	1204-1200
Tuthmosis III	1490-1436	Seti II	1200-1194
Amenhotep II	1438-1412	Siptah	1194-1188
Tuthmosis IV	1412-1402	Twosret	1194-1186
Amenhotep III	1402-1364		
Amenhotep IV/ Akhenaton	1364-1347	<b>XXth Dynasty</b>	
Smenkhkare	1351-1348	Setnakht	1186-1184
Tutankhamun	1347-1337	Ramesses III	1184-1153
Ay	1337-1333	Ramesses IV	1153-1146
Horemheb	1333-1305	Ramesses V	1146-1142
		Ramesses VI	1142-1135
		Ramesses VII	1135-1129
		Ramesses VIII	1129-1127
		Ramesses IX	1127-1109
		Ramesses X	1109-1099
		Ramesses XI	1099-1069

**THE XVIIIth DYNASTY POTTERY FROM MALKATA**



During the years 1971-1974 the University Museum, University of Pennsylvania, conducted three seasons of excavations at the Malkata palace complex of Amenhotep III on the west bank of the Nile at Luxor (pl. 1).<sup>1</sup> The areas which were examined lie mainly on the periphery of the complex (Kemp & O'Connor 1974; O'Connor 1980; Kemp forthcoming), the central areas having been excavated by the Egyptian Expedition of the Metropolitan Museum of Art (Hayes 1959, 244-59; Smith 1981, 281-95 with references).<sup>2</sup> It is the pottery from the recent work at the site which is used for this chapter, together with that collected to the west of the site, which was the dumping place used by the inhabitants for unwanted or broken vessels (pl. 1).

As I have indicated elsewhere (Hope 1978, 62-4 & 1980, 72-77), all available evidence suggests that the site of Malkata was occupied only during the late XVIIIth dynasty, and most of the pottery can be dated more specifically to the last decade of the reign of Amenhotep III (Hayes 1951, 36-7; Kemp & O'Connor 1974, 128-30; O'Connor 1980).<sup>3</sup> It provides us, therefore, with an extensive body of well-dated material to use as the basis of a discussion of the pottery of the late XVIIIth dynasty. That it typifies the ceramics of that period can be seen from a comparison of the illustrations provided here with those published in excavation reports of material of a similar date from other sites in the Nile Valley, primarily Amarna (Peet & Woolley 1923; Frankfort & Pendlebury 1933; Pendlebury 1951; Hope forthcoming). Comparative material from Egypt may be found from the following sites, as well as many others: Abydos (Randall-MacIver & Mace 1902; Garstang 1909; Peet & Loat 1913), Gurob (Petrie 1890 & 1891; Loat 1904), Harageh (Engelbach 1923), Qau (Brunton 1930), Rifeh (Petrie 1907), Saqqara (Firth & Gunn 1926; Quibell & Hayter 1927), and Sedment (Petrie & Brunton 1924). From regions to the south see material from Aniba (Steindorff 1937), Soleb (Schiff-Giorgini 1971) and sites recorded by the Archaeological Survey of Nubia (Reisner 1910; Firth 1915 & 1927; Emery & Kirwan 1935). This indicates a great deal of uniformity in the ceramic repertoire throughout the Nile Valley.

For the purposes of the present discussion the material from the various excavation areas at Malkata will be treated *en masse* without any description of the characteristics of the material from those individual areas. During the recording of the pottery a basic division was made into undecorated and decorated wares to facilitate a comparison of the two; the same distinction is employed here.

The discussion which follows outlines the main fabric types which were used, the surface treatments employed, the wares produced and the figures and plates illustrate the most common shapes made in the wares. Some general comments on technology, function and ceramic specialisation are included; a short discussion of the relative frequency of the different ware families is provided.

### The Pottery Fabrics

Only a brief *resumé* of the main fabric types is given here. These were identified with the aid of a 1 x 10 magnification hand-lense, and examples of each were submitted to chemical and petrographical analysis. They are all New Kingdom versions of the well-known range of Egyptian pottery fabrics.<sup>4</sup> The designations employed here for the main fabric groups is that suggested by the International Group for the Study of Egyptian Pottery and termed the "Vienna System" (Bourriau 1981a, 14-15; Nordstrom 1985).

The most common material used was Nile silt clay. Of the Nile silt fabrics the following have been identified at Malkata: Nile B2 (abundant fine-medium sand and fine straw temper)<sup>5</sup>, C (abundant medium-coarse sand and fine-medium straw temper)<sup>6</sup> and D (abundant fine-medium sand, fine straw and lime temper). However, during the recording of the large number of sherds to be dealt with it did not prove possible to distinguish between these types in all cases, a problem which is encountered frequently in classifying Nile silt fabrics (Hope, Blauer & Riederer 1981, 162; Bourriau & Aston 1985a, 33). They have, therefore, been amalgamated in most cases. It can be noted here that Nile silt fabric B2 appears to have been used for small - medium sized bowls and small jars, while fabrics C and D occur with larger bowls and jars. Nile silt C tempered with much coarse straw was used for the handmade bread dishes. These distinctions are not invariable.

The Marl clays were used less frequently than the Nile silt clays. Of the standard types the following are encountered:

#### Fine Marl A

variant 3 - a homogeneous, dense matrix with small-medium sized grains of sand and limestone and some voids from burnt out straw or decomposed limestone.

It is usually fired greenish-grey (5Y 6/2)<sup>7</sup> to pale yellow (5Y 7/3) and may have pinkish cores; the surface may display several fired colours.<sup>8</sup>

variant 4 - it has proved necessary to divide this fabric into two sub-types:

4.1 A dense-bodied, fine marl, tempered with small grains of sand, mica and calcareous inclusions; the former are more frequent than the latter. It is normally fired light red (2.5YR 6/6-8), may have light grey cores and naturally occurring white-cream surfaces (2.5Y 7/2). A characteristic of this fabric is the fine white speckling of the fracture by the oxidised calcareous grains.<sup>9</sup>

4.2 In a dense matrix there are coarse fragments of limestone and sand; it is fired red (2.5YR 4-5/6) and may have grey-brown cores. It is harder than the preceding sub-type.

Marl D This fabric shows a great deal of variation in grain size, density of the matrix and amount of inclusions, but contains equal amounts of siliceous and calcareous inclusions. It is fired red (2.5YR 4-5/6) with grey-brown cores, and the section shows numerous white (oxidised) calcareous grains which vary in size and shape.<sup>10</sup>

Of these Fine Marl A, variant 4.1 was used for certain bowls, amphorae and jars and variant 4.2 for amphorae and some jars and is rare. Marl D was used in the manufacture of amphorae, lentoid flasks, tankards and occasionally broad neckless jars. Fine Marl A, variant 4 and Marl D are common; they may result from either natural or artificial mixing of different raw materials (Hope, Blauer & Riederer 1981, 162-164; Kaplan 1978, 58). Examples of Marl D resemble Fine marl A variant 4.1!<sup>11</sup>

### Surface Treatments

Under this heading are grouped all secondary treatments applied to the vessel once it had been shaped, other than simple smoothing of the surface by the potter with his hands or a yielding tool. These treatments have been divided into two categories: the undecorated and the decorated. For this purpose slips or washes are defined as all-over coatings and are regarded as deliberate attempts to alter the basic surface colour of the fired fabrics and reduce their porosity. They were usually applied to both the interior and exterior of open forms and to the exterior of closed forms. Variations on this scheme are found on bowls which may be coated either on the interior or the exterior, though the entire surface is covered. Certain small jars have slips on the exterior and the interior of the neck. Similarly, burnishing or polishing, when it occurs, is found over all of the surface, except in a few cases where only the rim top was burnished. In this case it is possible to speak of decorative burnishing. Decoration, on the other hand, does not entirely cover the surface and employs definite motifs and designs. The slips were often used as a base over which the decoration was applied. They were applied before the vessel was fired (Lucas 1962, 370-371; Nordström 1972, 46), except in the case of the white washes/coatings which were applied after firing.

#### Undecorated Surface Treatments

a) Plain, uncoated surfaces, occasionally burnished (with amphorae).

b) Red-slipped surfaces which may be burnished. The colour of the slip is derived from an iron ochre (No11 1981, 120 & 134) and the burnish covers that area which is slipped. There are examples where the burnish covers only one part of the slipped surface on bowls, e.g., bowls slipped red inside and outside but only burnished outside, etc. There is a complete duplication of shapes occurring in both red-slipped

and red-slipped and burnished wares so that it is not necessary to separate the two here.

- c) Cream-slipped surfaces. The cream is derived from a fine calcareous marl mixed with water (Lucas 1962, 370 & 382; Hope 1978, 71 note 5): rare on undecorated pottery, except with amphorae.
- d) Cream-slipped and burnished surfaces; the burnishing always covers all of the slipped area.
- e) White-washed surfaces. These result from a mixture of a white colouring agent, probably gypsum (Lucas 1962, 348-349; Noll 1981, 120 & 134) with water.<sup>12</sup>
- f) White-coated surfaces. These are distinguished from e) by the thickness of the white layer, but are probably of the same composition as e).
- g) Red-slipped and white coated surfaces. These are a combination of a thick white coating over a red slip. The red slip occurs on both surfaces while the white coating is either on one or both of the surfaces.

#### Decorated Surface Treatments

##### a) Rim Bands

Various types of decorative rim bands were used, namely:

- 1. a red band on the rims of bowls which are otherwise plain
- 2. a band of decorative burnish on the rims of vessels which have a red slip either inside or outside
- 3. a white rim band on bowls which are red-slipped inside and outside.

Rim bands, mostly black, are more typical of the Second Intermediate Period and early XVIIIth dynasty, though they are known, for example, at Amarna, Deir el-Medineh (Nagel 1938, *passim*) and Saqqara (Bourriau & Aston 1985a, 35) of late XVIIIth-XIXth dynasty date. Types 1-2 were effected before firing while type 3 was applied after firing.

##### b) Linear Decoration

The motifs employed consist mainly of simple lines, either straight or undulating, on the body of the vessel and tickings either on the rim top or outer edge. These are executed in monochrome black, brown or dark red; very rarely there are overlaid red dots on black lines. One fragment carries a series of red lines and panels of crosshatching (fig. 8f). The motifs were applied over different types of surface:

- 1. uncoated
- 2. a cream slip
- 3. a red burnished slip
- 4. a combination of 2 and 3 with a cream slip on the exterior and a red slip, sometimes burnished, on the interior - only on bowls.

It is possible that decoration of this type is derived from the practice of decorating the body of jars with bands of colour during the first half of the XVIIIth dynasty and also the red and black designs found on vessels from the late Second Intermediate Period to mid-XVIIIth dynasty (Bourriau 1981b; Hope 1987b; Holthoer 1977, 55-7). The latter are, on the whole, more complex than those found during the late XVIIIth dynasty. They may be derived ultimately from the Bichrome ware common in Palestine and Cyprus at a slightly earlier date (Epstein 1966; Amiran 1969, 152ff; Bourriau 1981a, nos 261-4). This type of decoration is not encountered in any quantity at Malkata (only 76 sherds); it is known at Amarna (Peet & Woolley 1923, pl. XII.1; Rose 1984, 145 & 151 and 1986, 110) and at Deir el-Medineh (Nagel 1938 *passim*). The pigments which were used were ochres of iron and were applied before firing (Noll 1981, 119-20 & 133-34).

##### c) Blue-Painted Decoration<sup>13</sup>

This type of decoration is characterised by the predominant use of a pale blue pigment with red and black for details and a wide range of motifs. The designs were applied over different types of surface:

- 1. an uncoated surface; this is very rare indeed with Nile silt fabrics.<sup>14</sup>
- 2. a cream-slipped surface; this is the most common basic treatment.
- 3. a red slip on those parts to receive painted decoration and cream under the decorated areas; the cream is either a slip or the natural surface. It is rare.

The red and black pigments are the same as those employed in the preceding type of decoration, while the blue is peculiar to the pottery of the New Kingdom, being a cobalt aluminate spinell. This was first identified by Riederer (1974, 104-106) and then by Noll and Hangst (1975); it is discussed in detail by Noll (1978 & 1981) and Bachmann (Bachmann, Everts & Hope 1980). So far as is known, there is no source of cobalt in the Nile Valley and it is probable that it was brought from either the Eastern Desert (Riederer 1974) or the Oases of Dakhleh and Kharga (Bachmann, Everts & Hope 1980; Kaczmarczyk & Hedges 1983, 52-3; Kaczmarczyk 1986; Segnit 1987).<sup>15</sup> During the New Kingdom cobalt was also used as a colourant in faience and glass (Lucas 1962, 188-89; Kaczmarczyk & Hedges 1983, 41-54 and chapter 5 *passim*).<sup>16</sup> Its use on the pottery of the period, in preference to the common blue frit, may have resulted from the fact that the colour of the latter was at its best when applied in thick layers which have poor adhesive qualities, while the former adheres well in thin layers (Noll 1981, 135).<sup>17</sup> Noll believes that the blue pigment was applied to the vessels after firing (1981, 130-32) while the present author and Bachmann have suggested that

it was applied before firing (Bachmann, Everts & Hope 1980). The decoration was probably applied to the vessel on the wheel and possibly by the potter himself. The use of cobalt aluminate blue pigment shows a high level of technical competence on the part of the Egyptian potters of the day.

Whilst the range of floral motifs which was used is extensive, the main source of inspiration was the blue lotus flower. Other categories of motifs include linear, fauna, humans, deities and hieroglyphs. It is evident that the ultimate origin of this type of decoration lies in the practice of festooning floral garlands or collars around jars and amphorae on festive occasions and, indeed, the decoration of many large jars and amphorae incorporates these collars into the decorative design (e.g., Bachmann, Everts & Hope 1980, pl. 21a; Boston 1982, nos 81 & 83). The decoration normally comprises a series of horizontal panels which are clearly separated from one another and delineated by bands and/or lines of colour. The designs are finite with few all-over motifs and there is little sense of movement. Exceptions to this can be seen on vessels decorated with motifs which are not placed vertically or which have a distinct directionalism. Examples of this may be seen in decoration incorporating marshscapes with humans and animals (Boston 1982, no. 74), animals (*ibid.*, no. 77), birds (Hayes 1959, fig. 150), fish and spirals, in which a horizontal sense of movement is created by the direction in which the motifs face or incline (see also Boston 1982, no. 72). Decoration is restricted to the upper parts of jars and the interior and upper exterior of bowls, where it has most visual effect. The decorative scheme is often quite crowded.

In addition to painting, certain relief techniques of decoration were employed. These comprise the modelling of the vessel wall and the use of applied decorative elements.<sup>18</sup> The former consists mainly of modelling inverted lips on bowls (fig. 9c & title page to this chapter), ridges in the sides or necks of jars (fig. 11a; pls 8a, 9a & 10a) and faces of the goddess Hathor in the necks of large jars (figs 10c & 11b; Hayes 1959, fig. 150; Guidotti 1978). Applied decoration takes the form of ledges (pl. 10a), small discs added to the rim (figs 11d & 12d; pl. 9b), clumps of flowers (of which there is only one possible example upon a lid) and mouldmade faces of Hathor on the rims or necks of jars (fig. 13c) and bowls<sup>19</sup>. The most common use of applied decoration is in the application of gazelle or ibex heads to the necks of a certain type of small amphora (fig. 11e); the body of the animal may be painted upon the shoulder of the vessel (chapter III, fig. 7 no. 5 & pl. 8b).<sup>20</sup>

Modelled and applied decoration are encountered more often upon vessels made in Nile silt fabrics. It should be noted that on many vessels a combination of painted decoration and the actual shape of the vessel, or part thereof, is used to simulate the source of inspiration of the painted motif. At Malkata this is mainly the open blue lotus flower and it can be seen at work in the goblets (fig. 9g) and the necks of various jars and handled vessels (figs 10d, 11a, 13b and painted examples of 3g-h).<sup>21</sup> A similar process can be detected in the so-called feminoform vases (figs 13c). In general, the painted decoration can be seen to emphasise the characteristics of

the vessel contour.

The blue-painted pottery from Malkata is chronologically the first large deposit known so far, though the earliest examples appear to date to the reigns of Amenhotep II and Tuthmosis IV (Hope 1987b, 110-11). The quantity from this site is only equalled by that from Amarna (Hope forthcoming) and, to a lesser extent, Deir el-Medineh.

#### d) Polychrome Decoration

This term has been used to distinguish a type of decoration which employed a wider range of colours than the blue-painted pottery. In addition to blue, red and black, green, yellow and white are also to be found. The full range of colours is not always employed. The green is a frit (Lucas 1962, 344-45), the yellow orpiment (*ibid.*, 349-50) and the white gypsum or calcium carbonate (*ibid.*, 349).<sup>22</sup> White was used as a base for motifs executed in the other colours (chapter III, pl. 7a). Furthermore, this type of decoration can be distinguished from the blue-painted family by the thickness of the application of the pigments and its use of blue frit instead of cobalt aluminate blue.<sup>23</sup> The pigments are now quite fragile; they were applied to the vessel after firing.

Polychrome decoration was applied to vessels the surfaces of which had been treated in the following ways:

- a) White-coated on the area to be decorated only, the entire surface having first received a cream slip and burnish; this is the most common treatment
- b) White-coated in the manner of a), the entire surface having been red slipped and burnished first
- c) White-coated over all of the surface
- d) Smoothed but uncoated

The motifs are predominantly floral with abstract and linear elements occurring; again, it appears imitative of floral garlands or collars. This type of decoration closely resembles that on some jar sealings (Fairman 1951, 145-146; Hayes 1951, fig. 24; Hope 1978, 16-21). Examples from Malkata come mostly from amphorae and preserve decoration in a continuous band on the shoulder only (chapter III, pl. 7a); handles from these vessels seem to have been painted red, yellow or green. There are a few sherds from the site which indicate that imitations of actual collars were painted upon amphorae. These preserve representations of the ties which were used to hold the collars in place, painted in red. An unusual handled vessel similar to the type illustrated on fig. 11e, now in the Cleveland Museum of Art (no. 20.1977) and possibly from Malkata, is decorated with two polychrome, floral collars and an applied gazelle head (Boston 1982, no. 81). However, the representation of such collars on pottery is more characteristic of the Ramesside Period (Bell 1987). Included with examples of polychrome decoration are all post-firing painted motifs, such as bands of colour executed in monochrome, which are rare. For additional

comments see chapter III. The earliest occurrences of this type of decoration within the XVIIIth dynasty date from the reigns of Tuthmosis III to Tuthmosis IV (Hope 1987b, 111-12).

### The Ware and Types

As defined here, a ware is a combination of a particular fabric and surface treatment, while the types are the shapes known to occur in those wares. The figures and plates which illustrate this study have been arranged to indicate a selection of the commonest shapes occurring in the ware groups to be listed and for convenience figure and plate references are given with each of the wares. Where a shape occurs in more than one ware, rather than duplicate the drawing, it is illustrated once only and included amongst the ware group in which it is most commonly encountered.

#### Group A: Uncoated Wares

1. Nile silt wares with brown surfaces
  - a) Nile silt B2-D: figs 1c-r; 2a, f, j; 3a, f-h; 4a-c; 5a, d; 8a(?); pls 2a-b, 4a, 6b
  - b) Nile silt C with much straw: fig. 1a-b
2. Marl clay wares with cream - greyish-green or reddish surfaces
  - a) Fine marl A, variant 3: figs 5f-i; 6a; 7a-b
  - b) Fine marl A, variant 4.1: figs 5f, j; 6a; 7a-b; pl. 7a
  - c) Fine marl A, variant 4.2: figs. 3d, 7a or 8a. Fragments only survive from large, wide amphorae with mouldmade bases; the surface is burnished.

#### Group B: Coated Wares

1. Nile silt B2-D wares
  - a) red-slipped and/or burnished: figs 1c-d, g-m, p-r; 2b, d-i; 3a-h; 5c, e; 7a-b; pls 2a, 3a-b, 4b-5b
  - b) cream-slipped: figs 4d-e; 5a-b; 7a-b; pl. 6a
  - c) white-washed: figs 2i-j; 3g-h; 4a-b; pl. 5c
  - d) white-coated: figs 1c-d, g-m; 2c, f-g; 3a, d, f; 4f; 5d. It is sometimes difficult to distinguish from c) when there has been surface erosion.
  - e) red-slipped and/or burnished with a white coating: fig. 1g, k, m
2. Marl clay wares, cream-slipped and burnished
  - a) Marl D: figs 5k; 6b-h; 7a-c; 8a; pls 6c, 7b-c
  - b) Marl A, variant 4.2: fig. 7a-b

#### Group C: Linear Decorated Wares

1. Nile silt fabric B2 with decorative rim bands
  - a) red-painted and/or burnished on an uncoated surface: fig. 1c-d, g-m
  - b) burnished band on a red-slipped surface: figs 1k-m; 3d
  - c) white band on a red-slipped surface: fig. 1l-m
2. Nile silt fabric B2 with painted designs
  - a) cream-slipped: fig. 8b-c & i
  - b) red-slipped: fig. 8b & c
  - c) red- and cream-slipped: fig. 8b
3. Marl wares with painted designs
  - a) fine marl A, variant 4.1, uncoated : figs 8d & g-h
  - b) fine marl A, variant 4.2, red-slipped and burnished: fig. 8f

#### Group D: Blue-Painted Wares

1. Uncoated marl clay wares
  - a) Fine marl A, variant 3: figs 9a; 11a; 13c; pl. 10a
  - b) Fine marl A, variant 4.1: figs 6a; 10b; 11a; 13c; pls 8b, 9a(right), 10a-b
2. Coated Nile silt fabrics B2-D
  - a) Cream-slipped: figs 2j; 3g-h; 9a-12f; 13a-c; title page to this chapter; pls 8a, 9a(left) & 9b
  - b) Red-slipped and/or burnished with decoration on cream: figs 12h-l. The type shown on fig. 12g presents a variation upon the norm, having a red burnished slip on the exterior and a cream slip on the interior; the decoration is on the exterior. Examples of this scheme are known from Amarna; the motifs employed upon this bowl are uncommon.

#### Group E: Polychrome Decorated Wares

1. Uncoated fine marl A, variant 4.1: fig. 7b/8a. There are only a few sherds in this ware from amphorae with a straight shoulder.
2. Marl D cream-slipped and burnished with decoration on a white surface: figs 7a-b; ?6f; chapter III pl. 7a. As surviving fragments of this ware preserve few morphological details other than the shape of the shoulder, it is difficult to determine with certainty the original complete shape from which they came or the range of shapes made in this ware.
3. Coated Nile silt fabric B2
  - a) red-slipped and burnished with decoration on a white ground: fig. 13d. The complete shape probably resembled that of fig. 3f.

b) white-coated: fig. 13c

In order to illustrate certain shapes that are represented at Malkata by fragments only, parallel pieces have been drawn and reproduced herein. They are:

Fig. 11e - Petrie Museum, University College London, UC 8695 (unprovenanced; see Bourriau 1987, pl. XXVI.2)

Fig. 13a - British Museum 59265, from Amarna (Hope forthcoming)

Fig. 13c - Petrie Museum, University College London, UC 8696; (unprovenanced; see chapter II pl. 2; Hope 1987a, illustration 57).

#### Frequency of the Wares

A total of 144,440 sherds were recorded and classified from the University Museum excavations. While they were recorded in terms of their specific wares, they may be grouped into four main ware families on the basis of the presence or absence of decoration and the type of decoration employed. These families are: Undecorated Wares (Groups A-B), Linear Decorated Wares (Group C), Blue-Painted Wares (Group D) and Polychrome Decorated Wares (Group E). The following frequency has been determined:

Undecorated	96.19%
Linear Decorated	0.053%
Blue-Painted	3.70%
Polychrome Decorated	0.053%

All rim sherds were, additionally, recorded in terms of the vessel form from which they originated, rim type, diameter and percentage surviving. It is possible, therefore, to determine the minimum number of vessels which the rim sherds attest. Of the total number of sherds recorded 17,588 were rim sherds (12.2%) and these, plus other diagnostic sherds, attest the presence of at least 4,991 vessels. In relation to the ware families the following figures apply:

Undecorated	4,616	(92.48%)
Linear Decorated	35	(0.70%)
Blue-Painted	321	(6.43%)
Polychrome Decorated	19	(0.38%)

These figures show clearly the relative infrequency of decorated pottery at the site. Comparable, though not identical, figures have been obtained at Amarna during recent work (Rose 1984, 145 & 151, 1986 *passim* & 1987a, fig. 9.3). These results indicate that even during the New Kingdom, perhaps the period of Pharaonic history during which decorated pottery was manufactured in larger quantities than in any other, such material was far from common. Of the decorated ware families, the blue-painted family is the most frequent, while linear decorated and polychrome are rare indeed. It is possible that polychrome decorated vessels were slightly more common in funerary

contexts, the fragility of the pigments making them unsuitable for repeated handling in domestic contexts (Bell 1987). Whilst it must be acknowledged that the Malkata palace complex served specific ceremonial functions connected with Amenhotep III's jubilee festivals (Kemp 1989, 213-217 & forthcoming) and this may ultimately account for the large number of amphorae found at the site, the proportions of the ware families (i.e., undecorated vs decorated) may not have been unduly altered by this factor. However, they can be taken as representative only of major urban centres and more specifically those which were major centres of administration with royal residences (see below).

#### Technology

The bulk of the pottery from Malkata was either wholly or partially made on a simple wheel.<sup>24</sup> Handmade pottery is rare; examples are restricted to the bread dishes (fig. 1a-b). Small bowls and jars were thrown from a single piece of clay, while larger bowls, jars and complex shapes were made in sections and luted together. Thickening of the vessel wall resulting from the junction of such sections can be observed frequently. Though by no means invariably, these junctions proved to be lines of weakness along which the break pattern runs (pl. 11b) (Holthoer 1977, 43). The larger the vessel the more sections that were required; jars of the types shown on figs 3g-4b, 6a & 10d-11b and amphorae, figs 7a-8a, were built up from as many as four sections.<sup>25</sup>

Wide bowls and restricted shapes with a wide maximum diameter show varying numbers of impressions from string which had been wound around them to provide support during drying (figs 1l-m & p; pl. 2b). Large jars often show scraping marks over the lower body and base, reflecting secondary shape modification; this feature is absent on small jars. Bases were generally string cut (bowls) or thrown (bowls and small jars). The former has left spirals of differing tightness on the underside of the base, while the latter has left a loose spiral visible mainly on the interior. With larger vessels the base was made from a separate piece, which was often not smoothed onto the wall of the lower body on the interior. Many amphorae have mouldmade bases (fig. 7a-c; pl. 11a) which are extremely rough on the interior. Invariably, handles, spouts (which are rare) and ring-bases were added separately (compare Arnold 1976, 27-34).

Large jars occasionally show the practice of combining handmade sections, or sections formed without using the centrifugal forces of throwing, with others thrown upon the wheel (Holthoer 1977, 43). The handmade sections may comprise the upper body, the lower body or the lower body and base. As the same type of clay was used throughout, irrespective of the manufacturing technique employed, there was no question of variable shrinkage.



### Comments on the Corpus

Many of the shapes illustrated are either innovations of the late XVIIIth dynasty (reign of Amenhotep III onwards) or display features which are not encountered with frequency before that period. The ceramic phase characterised by these shapes extends in general from the reign of Amenophis III until the end of the XXth dynasty with but few major changes.<sup>26</sup> It would appear to have begun to develop during the reigns of Amenhotep II and Tuthmosis IV, which are transitional from the ceramic horizon of the early and mid-XVIIIth dynasty to that of the late XVIIIth dynasty.<sup>27</sup> Characteristic shapes of this period are: figs 1p-r (pls 2a-3b); 2c, h, j; 3b (pl. 4c), d-h (pls 2a, 5a-b); 4a-b (pl. 5c), f; 5d-e (pl. 6b); 6a (pl. 7a), g-h; 7a-8a (pl. 7b-c) and the majority of the blue-painted types, figs 9a-13b and pls 8a-10b. Of the latter the shapes shown on figs 9e-g; 11a-b, d-e; 12b-c and 13b would appear to occur only during the late XVIIIth dynasty, while figs 9c-f (chapter title page) and 11a (pls 8a-9a) are known to me only from Malkata. During the late XVIIIth dynasty larger vessels were manufactured than previously: e.g., figs 2j; 3g-h (pl. 2a); 4a-b (pl. 5c); 6a (pl. 7a); 7c (pl. 7b); 9e-f (chapter title page) and 10d-11b (pls 8a-9a)<sup>25</sup>. Pronounced concave and convex necks were in vogue: e.g., figs 3d-4b and 10d-e. Such forms as the one-handed jar (fig. 6e-f), the tankards (fig. 6b) and the lentoid flasks (fig. 6c-d) became more common.

In addition to these morphological features the period is also characterised by the frequency of the fabric designated Marl D. Although this fabric, with its typical cream burnished slip, occurs first during the reigns of Amenhotep II and Tuthmosis IV (Daressy 1902, no. 24009; Brack & Brack 1977, 67-68, pls 15 & 63), it did not become common until the reign of Amenhotep III. One-handed tankards and lentoid flasks made in this fabric may occur only from that reign onwards.

Bowls of the types shown on fig. 1c-d and g-r often show burning to different degrees on both sides, or only one, presumably indicating their use in cooking. Figure 1r and pls 3a-b illustrate the most common cooking bowls. Those shown on figs 1c-d & g-h often have burning around the rim with patches extending inside, possibly a result of their use as lamps. Figure 4d illustrates a rare form, the so-called spinning bowl (Nagel 1938, 183-188) and figs 4e and 6c-d are examples of lentoid flasks, also rare at the site. The stand, fig. 5d (pl. 6b), often shows burning on the inside/outside of the top, from its use as supports for such lamps. This type of stand, together with the fragmentary types fig. 2c and fig. 5e, may have served as cult stands (compare Hulin 1984). The large lid or cover illustrated on fig. 4f displays, on some examples, patches of soot staining or burning on the interior, resulting perhaps from their use as covers to bowls in which incense was burnt. There is only one example preserved to its full height, but fragments show that the type could be perforated near the bottom also. The perforations were made either by the finger or with a stick when the clay was moist. A few parallels to this form are

known (Davies 1930, pl. 59; Hulin 1984, 165 & fig. 12.1; Nagel 1938, fig. 71.14a-b; Petrie 1890, pl. XX.30 & 1891, pl. XII.47-8). Like the Malkata examples, those cited from Amarna (Hulin 1984) had received a white gypsum coating, as had examples from that site of fig. 2c and other stands. Other vessel forms found at Amarna had also been similarly coated, all coming from religious contexts, and it would appear that the addition of a gypsum coating rendered a vessel suitable for cult purposes (Hulin 1984; Rose 1984, 140-42 & 1986, 111). The find contexts of vessels so coated found at Malkata are ambiguous on this point. For the range of vessels known to have received a white coating at Malkata see above under Group B1d of the section 'The Wares and Types'.

The amphora type shown on fig. 8a is a Palestinian import (compare Amiran 1969, pl. 43.6) and is attested by fragments from several vessels (see chapter III, pl. 5b). That it was imitated by the Egyptian potters is indicated by the occurrence of shoulder sherds without the distinct convexity of the amphora type shown on fig. 7a but from vessels wider than fig. 7b, similar rim types and a few lower body and base fragments from very wide-bodied amphorae, all made in Egyptian fabrics. It is uncertain whether the Egyptian potters actually copied the base type also.<sup>28</sup> Figure 6e-f show the occurrence of the tall-necked, one-handed vessel at the site, a shape known from the mid-XVIIIth dynasty (reign of Hatshepsut onwards) and which was represented by several examples from the tomb of Tutankhamun (Carter 1933, 149 & pls 1c & 50; Lesko 1977, 23ff). Bourriau has correctly pointed out that it was not a Syrian manufacture imported into Egypt (1981a, 244; Boston 1982, no. 61), though it may have been inspired by foreign imports (e.g., 'spindle' bottles from Cyprus/Syria and Cypriot juglets and tankards). Polychrome decorated examples are known from Amarna (Bourriau 1981a, no. 244; Hope forthcoming) and the tomb of Kha of the reign of Amenhotep III (chapter III, pl. 7c; Schiaparelli 1927?).

Of the blue-painted types those shown on figs 9a-c (chapter title page), 10a-e and forms similar to 3g-h are the commonest, while those on figs 6a, 11e and 13a (pl. 10b) are quite common. This type of decorated pottery occurs in a wide range of contexts at Malkata, from the palace of the king and the mansions of the nobility to the homes of the workmen at site J, indicating its use by all levels of society at the site. The blue-painted types include vessels of almost every function, though their use in cooking was uncommon. The decoration of some of the types is more elaborate on one side of the vessel than the other (e.g., fig. 11e; also chapter III, fig. 7 nos 5-7 & pl. 8b), the two sides sometimes being divided by a vertical line. It is possible that such vessels had an ornamental value and were placed so as to display the more elaborate side.

The form illustrated on fig. 13c is of interest. It is undoubtedly of the type discussed by Keimer which imitates the female form (Keimer 1949). The head is represented by the applied face at the rim, the hair by wavy vertical lines on the neck and the breasts by applied bosses on the shoulder. None of the fragments from Malkata of this type preserves anything resembling the pubic triangle as was noted by

Keimer (op. cit.). The applied face at the rim may represent Hathor; the decorative scheme of the vase discussed by Keimer certainly relates it to the cult of that goddess. This type may be connected with the types shown on figs 10e and 11b, both of which may have a close association with that deity (Guidotti 1978; Boston 1982, no. 69).

#### General Comments

The pottery from a site such as Malkata clearly originated from several sources and attests aspects of ceramic specialisation during the late XVIIIth dynasty. The majority of the pottery was undoubtedly manufactured locally at the site or in its near vicinity. The existence of a potters' workshop at Malkata is indicated by the discovery of kiln wasters amongst sherds found at the workmen's village, Site J. However, as hieratic docketts and jar sealings show, commodities were brought to the site from many parts of the country particularly in connection with the celebration of the jubilee festivals of Amenhotep III (Hayes 1951; Leahy 1978; Hope 1978) and it is likely that their containers were manufactured in the areas where the commodities were produced. Such containers were the amphorae (figs 7a-b), found in large quantities at the site, which may have been manufactured primarily in the Fayum and Delta regions (see chapter III). Additional types may have been the one-handled jars (fig. 6e-f), tankards (fig. 6b) and lentoid flasks (fig. 6c-d), which are made in the same ware as most of the amphorae (cream slipped and burnished, Marl D) and which were used in the transport and storage of beverages, precious oils and cosmetics (Bourriau 1981a, nos 143, 148 & 244). However, the possibility that such containers were transported empty from their place of manufacture to urban centres where they were needed, must not be ignored, as is indicated by Papyrus Harris I (73.2; Erichsen 1933).

The manufacture of blue-painted pottery may well have been a specialised activity and the work of only a few potters. This is indicated by the standardisation of the designs and motifs which were applied to particular shapes.<sup>29</sup> It is as though the scheme and details of the decoration to be applied to each shape had been agreed upon by the potters/painters. Although variations and elaborations upon the standard design do exist, they are comparatively minor and more might have been expected if many different hands had been at work. The distribution of this ware family shows a distinct clustering of find spots around the main urban centres, but to date it has been found only in quantity at Thebes and Amarna. It seems possible that it was only manufactured in these two areas and distributed therefrom, either directly or indirectly. The same group of potters may have been responsible for its manufacture at Malkata and Amarna and, on the abandonment of the latter, returned to Thebes to continue their production throughout the remainder of the XVIIIth dynasty. However, the recent discovery of a sizeable deposit of blue-painted pottery in the tomb of Maya at Saqqara, contemporary with the reigns of Tutankhamun and Horemheb (Aston & Aston 1988), raises the possibility that a manufacturing centre was also located at

Memphis on the abandonment of Amarna. This is supported by previous discoveries at Memphis, Saqqara (Hope 1980, 88-90; Kanawati et al. 1984, pls 41 & 45; el-Khouli & Kanawati 1988, pl. 41; Martin 1976, 1977, 1978) and Giza (Hope 1987b, note 63). It is highly likely that blue-painted pottery was manufactured at Memphis even earlier. Until the new material from Saqqara is published its similarity to the Malkata and Amarna material cannot be assessed<sup>30</sup>.

The use of a special blue pigment in the colour scheme may further support the idea of a restricted manufacture, as the raw ingredients would not have been widely available. The use of this colourant (cobalt aluminate spinell) in the manufacture of glass and faience may show that blue-painted pottery was produced in close proximity to these two materials, perhaps in the royal workshops (Kaczmarczyk & Hedges 1983, 253-54), and that it was distributed thence through the system of barter.

## Notes

1. I wish to thank the directors of the expedition for inviting me to publish the pottery from their excavations. In the recording of the pottery the author was assisted by Lisa L. Leahy, Dr M. A. Leahy, Dr C. L. Hansen and Gayle Weaver, while in the drawing he was aided by Michael Coultas, Angela Milward-Jones and Dr M. A. Leahy. Kenneth Clarke kindly undertook refiring experiments on several sherds from the site. I am grateful to Dr D. M. Dixon for permission to include drawings of UC 8695-6 from the Petrie Museum and Mr T. G. H. James and the Trustees of the British Museum for permission to include the drawing of BM 59265. For their comments upon various parts of this study I am grateful to Dr M. F. Oakeshott, Janine D. Bourriau and Anthony J. Mills. This discussion of the pottery from Malkata was prepared in 1978 and revised in 1984, 1985 and 1988.
2. Material from these excavations is being prepared for publication by Christine Keller for the Metropolitan Museum of Art. Photographs of some of the decorated pottery can be seen in Hayes 1959, fig. 150.
3. For a detailed discussion of the criteria for this dating see Hope 1980, 72-77. Material of a non-XVIIIth dynasty date has also been found, i.e., late Predynastic, Middle Kingdom, Late Period and Ptolemaic-Roman Periods. Foreign pottery, other than the Canaanite amphorae referred to in the text of this article, includes one Mycenaean IIIB sherd from Qasr el-Aguz, two sherds from Cypriot base-ring juglets, one sherd from a Cypriot white ware jug and several sherds from one Pangrave bowl. I am grateful to Dr R. S. Merrillees for identifications of the Cypriot material.
4. For an account of the wares used in the manufacture of amphorae found at the site see chapter III, Hope 1978, 66-68 and generally Hope, Blauer & Riederer 1981.
5. Hope 1978, 66 type AI; Hope, Blauer & Riederer 1981, 160 type II.
6. Hope, Blauer & Riederer 1981, 160 types III-IV.
7. Colour references are to the Munsell Soil Colour Chart, 1971 edition.
8. Hope 1978, 68 type BbI; Hope, Riederer and Blauer 1981, 161 type VI & 163.
9. Hope 1978, 67 type BaI; Hope, Blauer & Riederer 1981, 161 type V & 162-63.
10. Hope 1978, 67 type BaI & 68; Hope, Blauer & Riederer 1981, 161 type IV & 162-64.
11. Amphorae sherds found in the New Kingdom cemetery at Saqqara have all been classified as Marl D by Bourriau (Bourriau & Aston 1985a, 38).

12. It is possible that included here are sherds or vessels which do not, in fact, have a deliberately added white wash, but a white surface which has resulted from the decomposition of salts on the surface of the vessel during evaporation of water.
13. For discussions of this family of wares see Brissaud 1979; Boston 1982, 88-89; Hayes 1959, 247-248; Hope 1977, 1980, 1987b & forthcoming.
14. There are only a few sherds from Malkata attesting this type of decoration on vessels made in uncoated Nile Silt fabrics, all from shallow bowls not illustrated here. The bowls appear to have been coated entirely with blue. It is attested at Amarna by at least one bowl which carries a blue band on the interior now in the Petrie Museum, University College London, UC 24609 (Hope, Blauer & Riederer 1981, 142; Hope forthcoming).
15. The possibility of the source of cobalt being the evaporite minerals of the Dakhleh and Kharga oases is being investigated by the author and Dr E. R. Segnit at the Archaeology Research Unit, Victoria College, Melbourne.
16. I am grateful to Dr A. Kaczmarczyk for information on the use of cobalt in the manufacture of glass and faience during the New Kingdom.
17. Experiments carried out by the author with the co-operation of Dr N. Seeley at the Institute of Archaeology, University of London, with blue frit also indicate this to be the case.
18. Two vessels from Amarna attest the practice of cutting out sections of the vessel wall to create designs (Peet & Woolley 1923, pls XLIV.4 & LIV type lxxxii/256; Hope forthcoming); they are deep bowls which may have been ornamental rather than functional. Both are in the Oriental Institute, Chicago University, nos 12017-18. It is possible that the fragmentary bowl illustrated on fig. 11d attests a similar type at Malkata.
19. Fragments from the Metropolitan Museum of Art excavations at the site attest the practice of decorating the sides of some bowls with applied, mouldmade, Hathor heads and there are fragments from such bowls from Amarna (see Boston 1982, no. 82). One jar fragment in the Metropolitan Museum of Art from Malkata is decorated with applied bunches of grapes, no. 11.215.477.
20. Some examples of this type of amphora, occasionally in large sizes, from Amarna have the body of the animal modelled separately and applied to the shoulder; see discussions in chapter III, Boston 1982, nos 70 & 81 and Hope forthcoming. There is also a fragment from a ceramic box (?) from Malkata which is decorated with a recumbent gazelle applied to one of its sides (now in the Oriental Institute, no. 12.180.34). A sherd recently discovered in the New Kingdom cemetery at

Saqqara preserves the head of a cow applied as part of the decoration (Martin G. T., 'The Tomb of Tia and Tia: Preliminary Report on the Saqqara Excavations, 1983', *Journal of Egyptian Archaeology* 70 (1984), 8 & pl. V.2).

21. From Amarna are several goblets in the form of white lotus flowers as well as blue lotus flowers; see discussion in Boston 1982, no. 76 & Hope forthcoming
22. These identifications have been confirmed by analyses carried out by Dr J. Riederer and Dr H. G. Bachmann for the author; see also Noll 1978 & 1981.
23. This is indicated by an analysis carried out by Dr Bachmann in 1979; see Hope 1987b note 56.
24. For sections from one type of wheel used during the XVIIIth dynasty, as depicted in the tomb of Kenamun at Thebes, see Hope 1981 & 1982a-b.
25. The largest known vessel from the period is a blue-painted jar from Amarna now in the Ashmolean Museum, Oxford, no. 1926.109 (Hope forthcoming). Its dimensions are: extant height = 90.0cms and maximum diameter = 71.0 cms; the neck is damaged. The girth of the jar is such that it would have required several sections to make up its circumference at the maximum diameter.
26. However, see comments in the chapters II and III.
27. For comments on the ceramics of these reigns see the author in *Journal of Egyptian Archaeology* 71 (Reviews Supplement), 4-5 and Hope 1987b.
28. See comments in chapter III, Amphorae of the New Kingdom.
29. For an outline of the analytical procedure and descriptive terminology which was developed for dealing with the blue-painted and polychrome decorated pottery of the XVIIIth dynasty see Hope, C. A., 'Towards a Typology of Decoration', in *Bulletin de Liaison du Groupe International d'Etude de la Céramique Egyptienne* VI(1981), 41.
30. Some of the finds from Giza attest types and motifs that are not found in the south. These include twenty-three blue painted vessels housed in the Cairo Museum (Hope 1987b, note 63) from excavations carried out in the vicinity of the Sphinx in 1924, possibly by either Gauthier or Baraize. They are mostly jars with wide bi-conical bodies, round bases and concave necks with modelled rims; one is of similar shape but has two handles and originally carried a gazelle or ibex at the neck. A small jar of typical late XVIIIth dynasty date recently found at Sakkara is exceptional in carrying elaborate hieroglyphic motifs (el-Khouli & Kanawati 1988, pl. 41 no. S88.9).

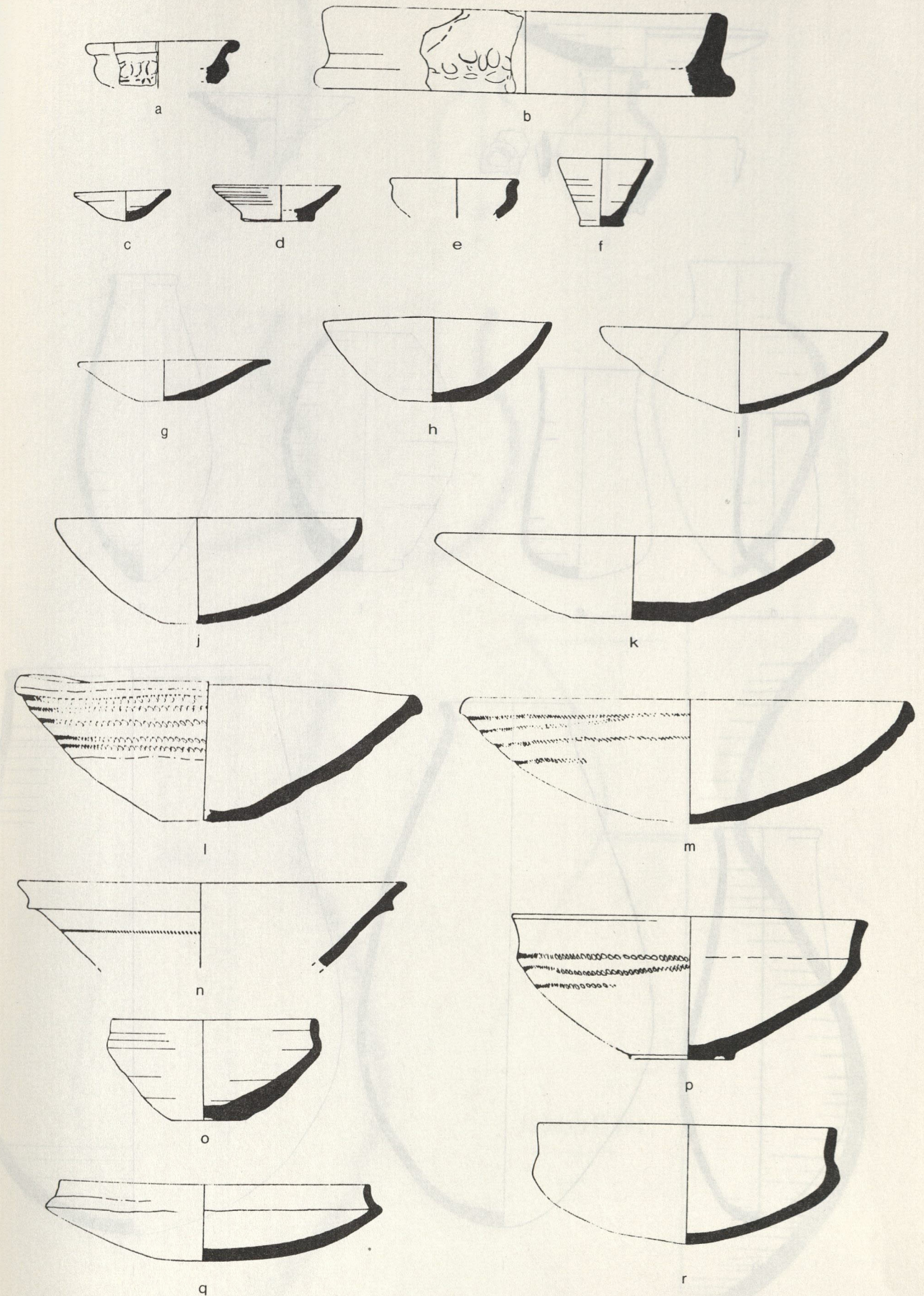


Figure 1: Uncoated and Coated Nile Silt Types.

Scale 1:5

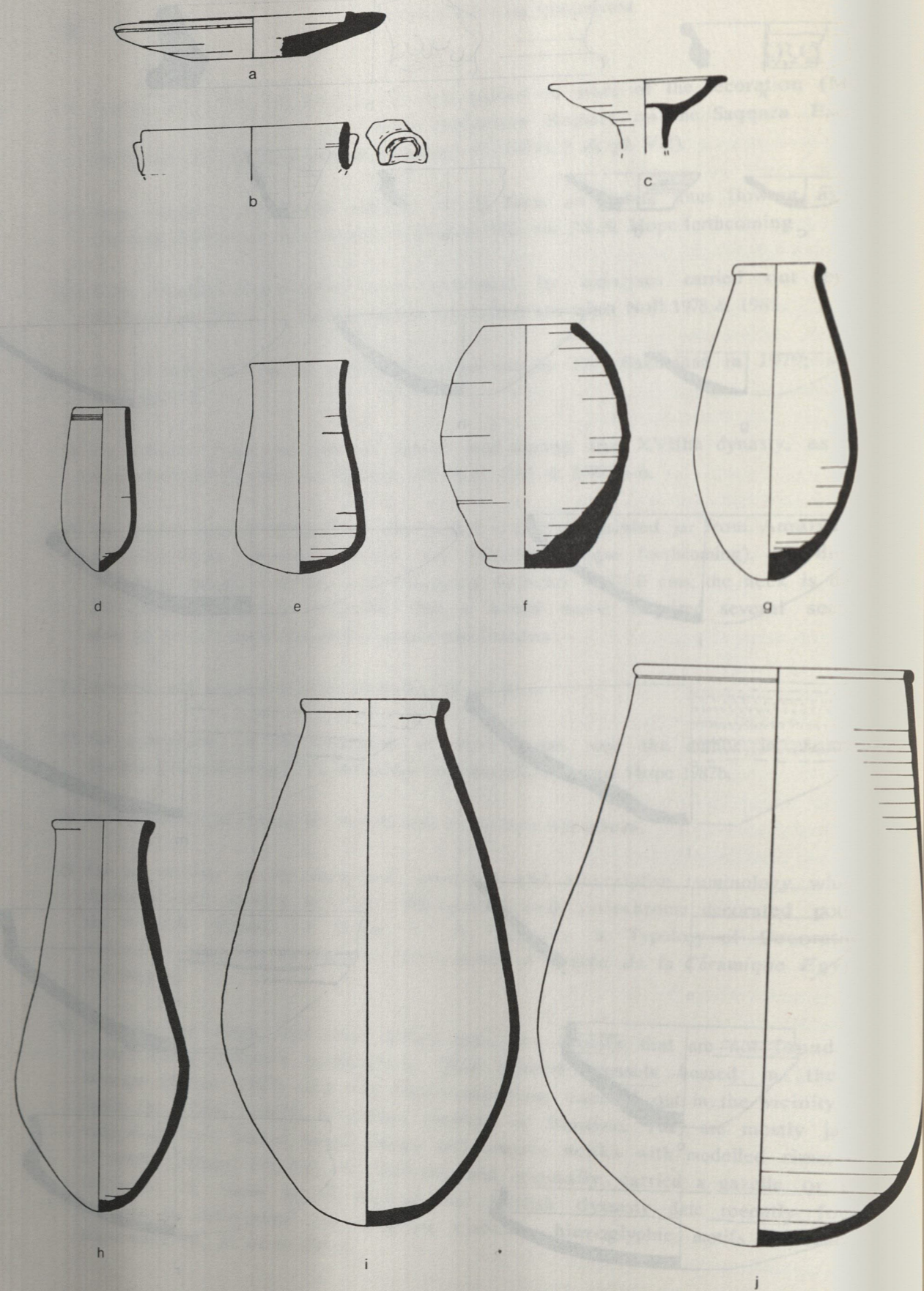


Figure 2: Uncoated and Coated Nile Silt Types.

Scale 1:5

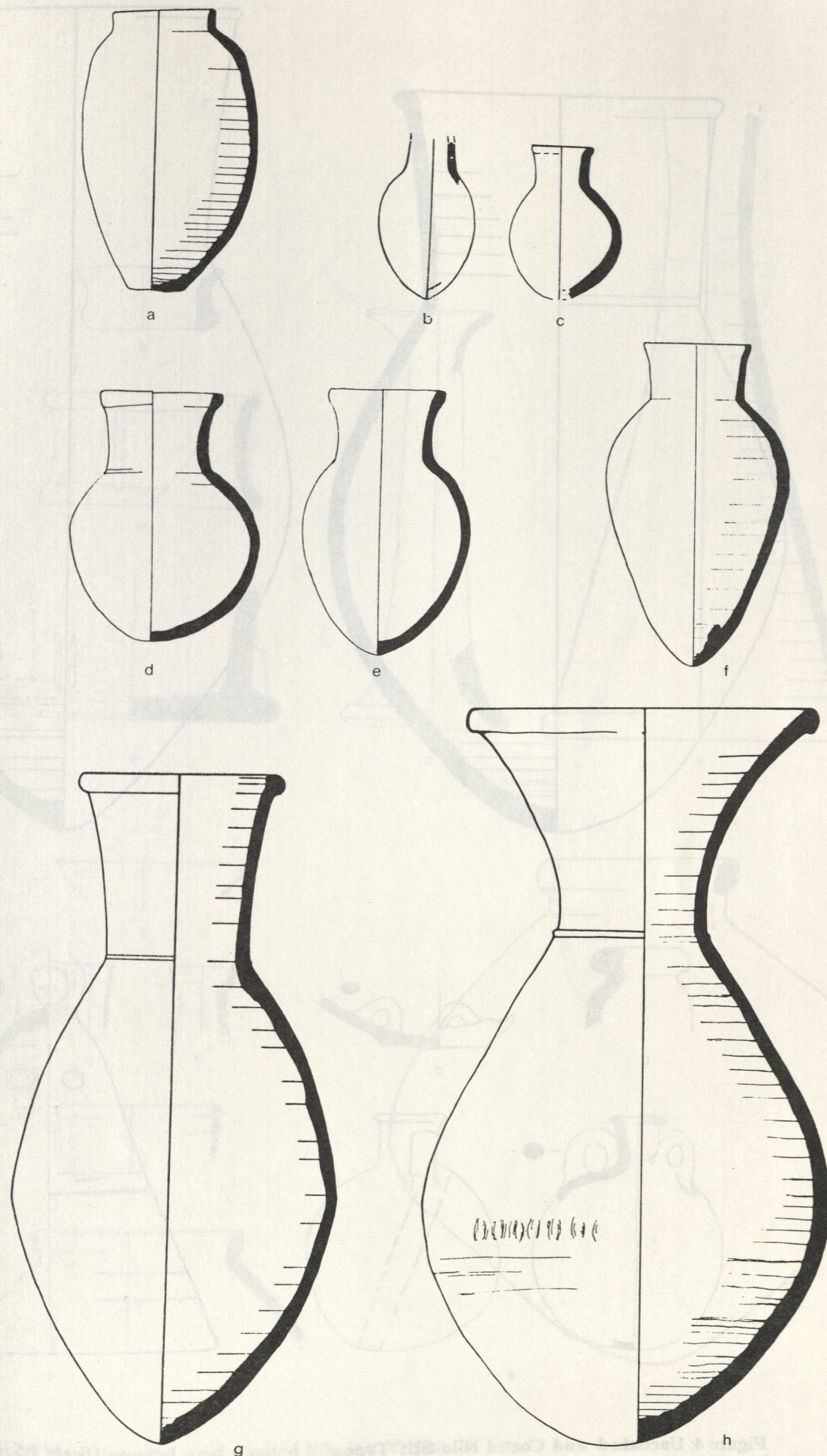
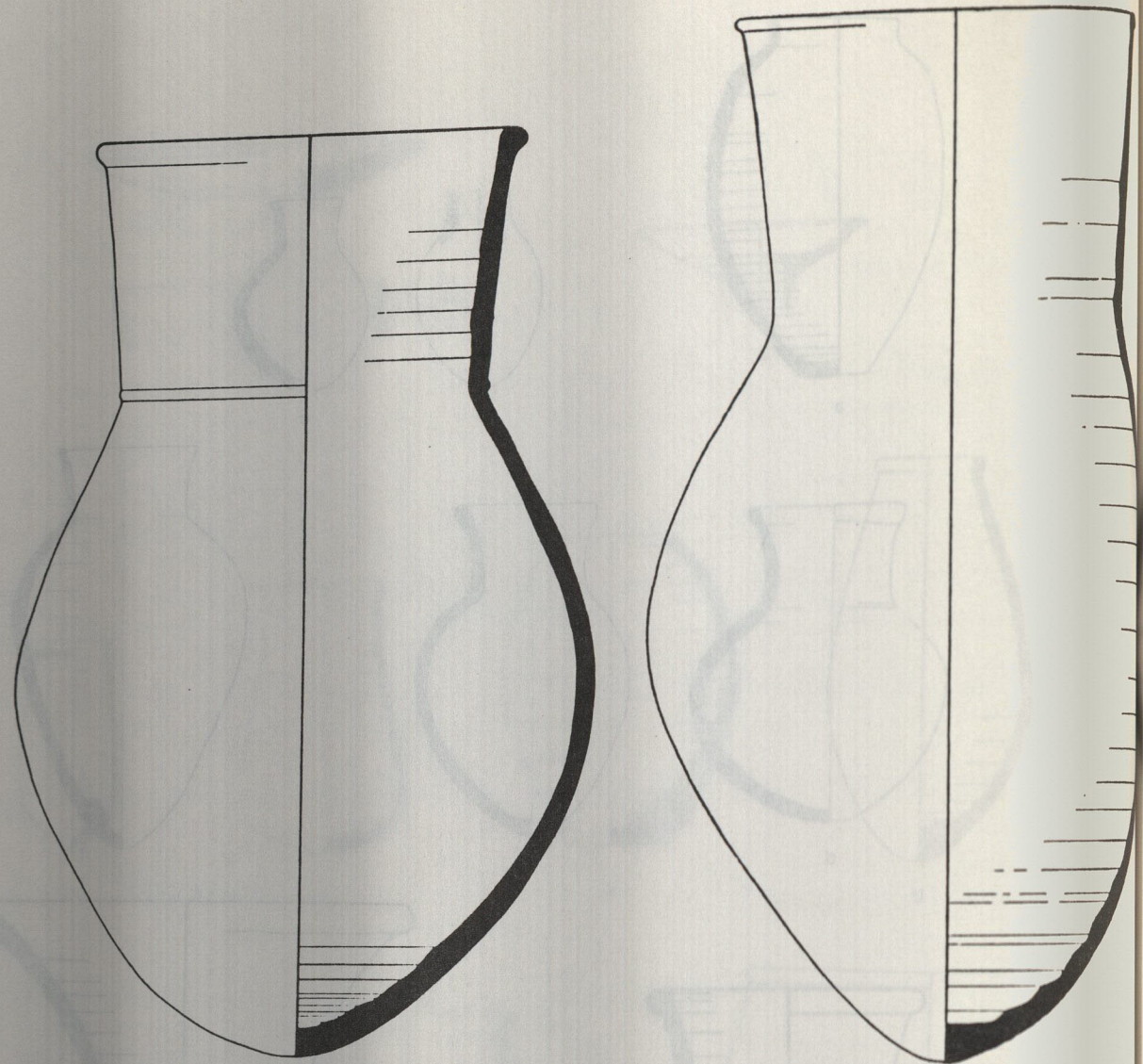


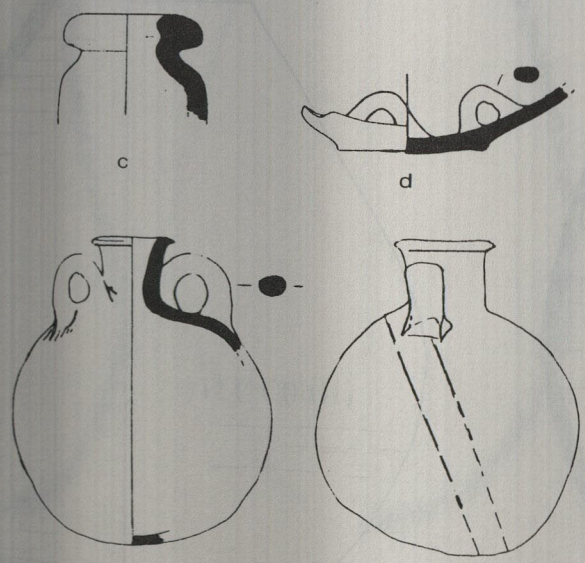
Figure 3: Uncoated and Coated Nile Silt Types.

Scale 1:5



a

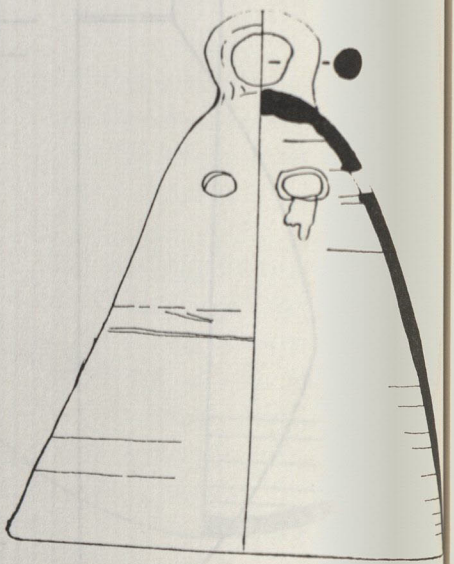
b



c

d

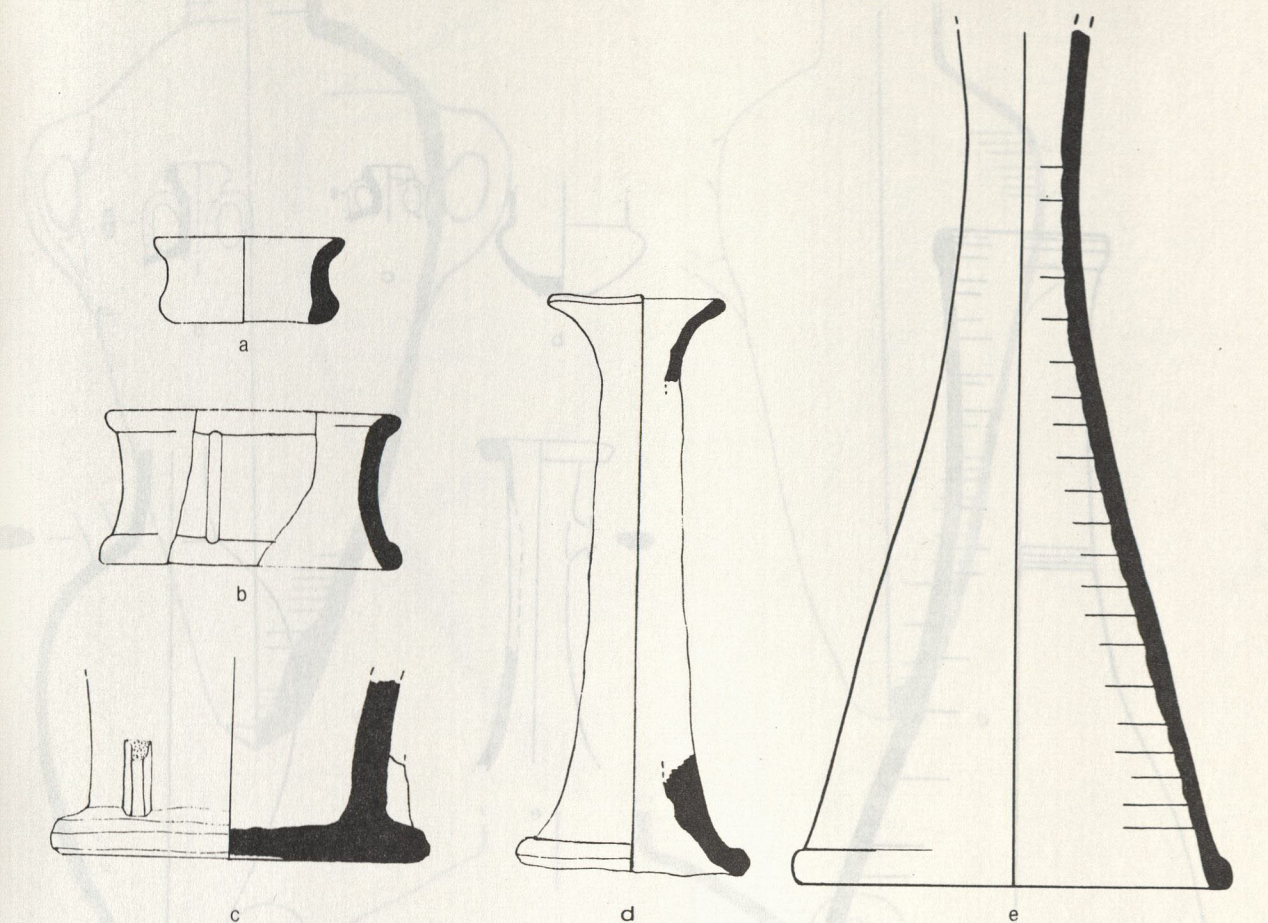
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f

Figure 4: Uncoated and Coated Nile Silt Types.

Scale 1:5



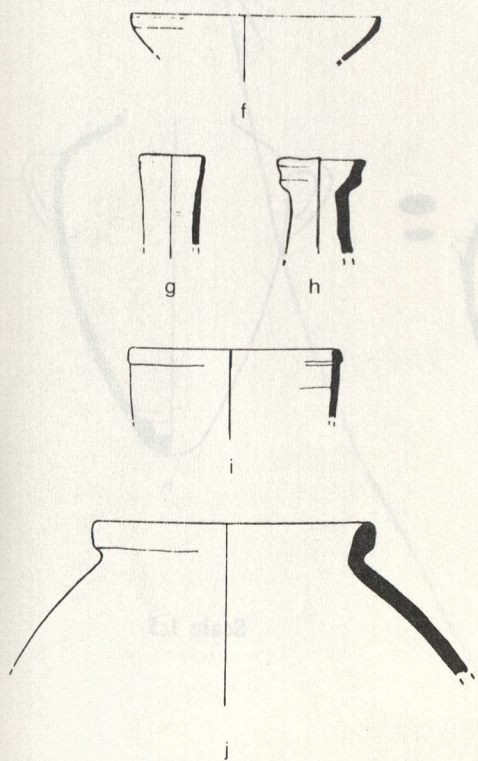
a

b

c

d

e



f

g

h

i

j

k

Figure 5: a-e Uncoated and Coated Nile Silt Types  
f-k Uncoated and Coated Marl Clay Types.

Scale 1:5

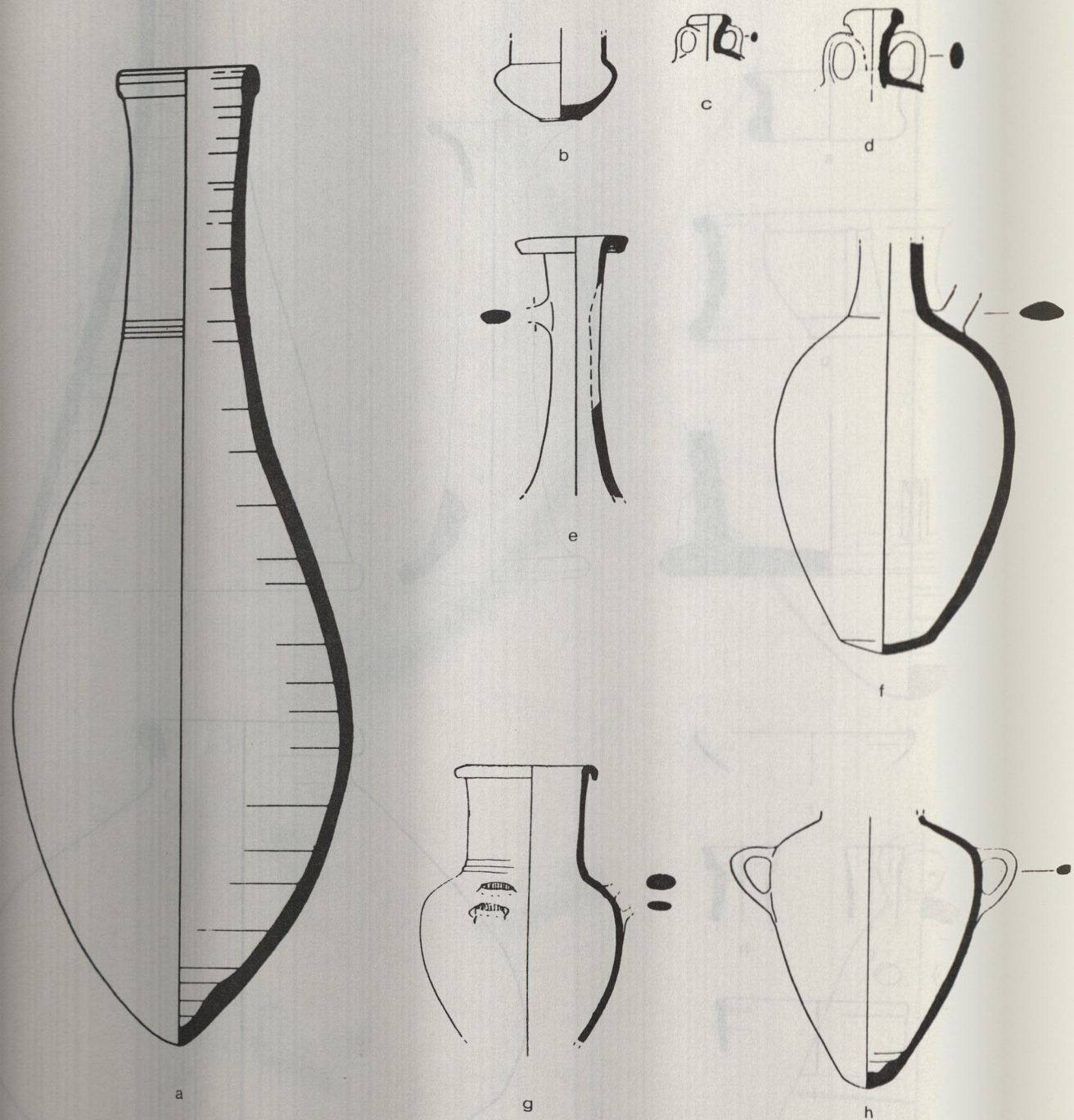


Figure 6: Uncoated and Coated Marl Clay Types.

Scale 1:5

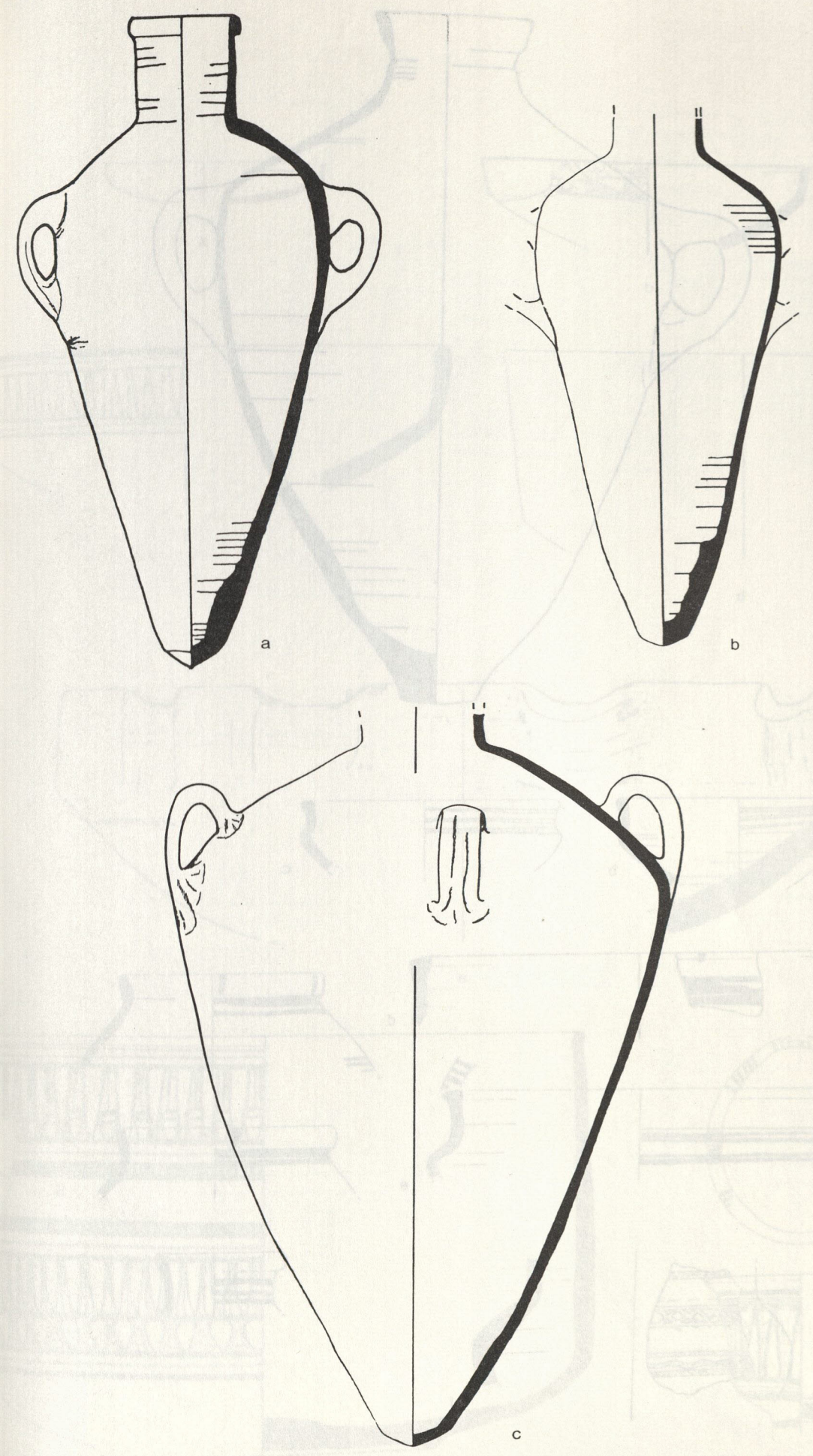


Figure 7: Uncoated and Coated Marl Clay Types.

Scale 1:5

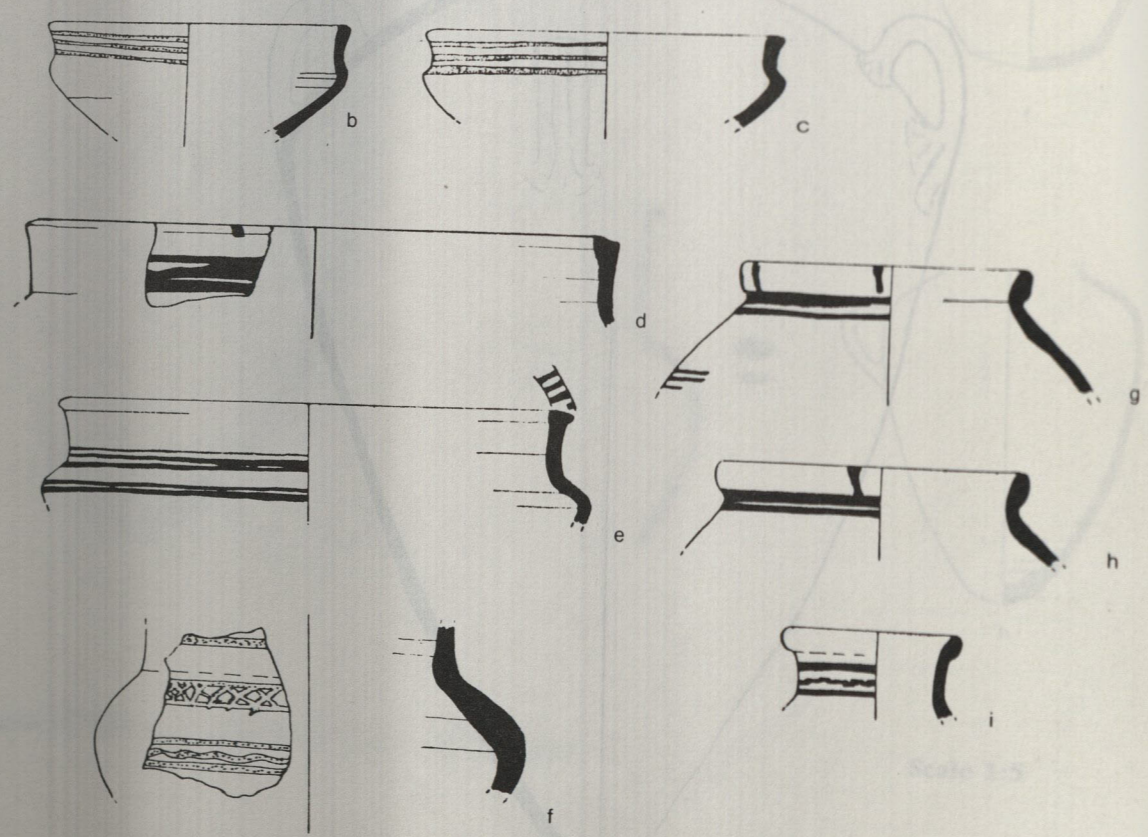
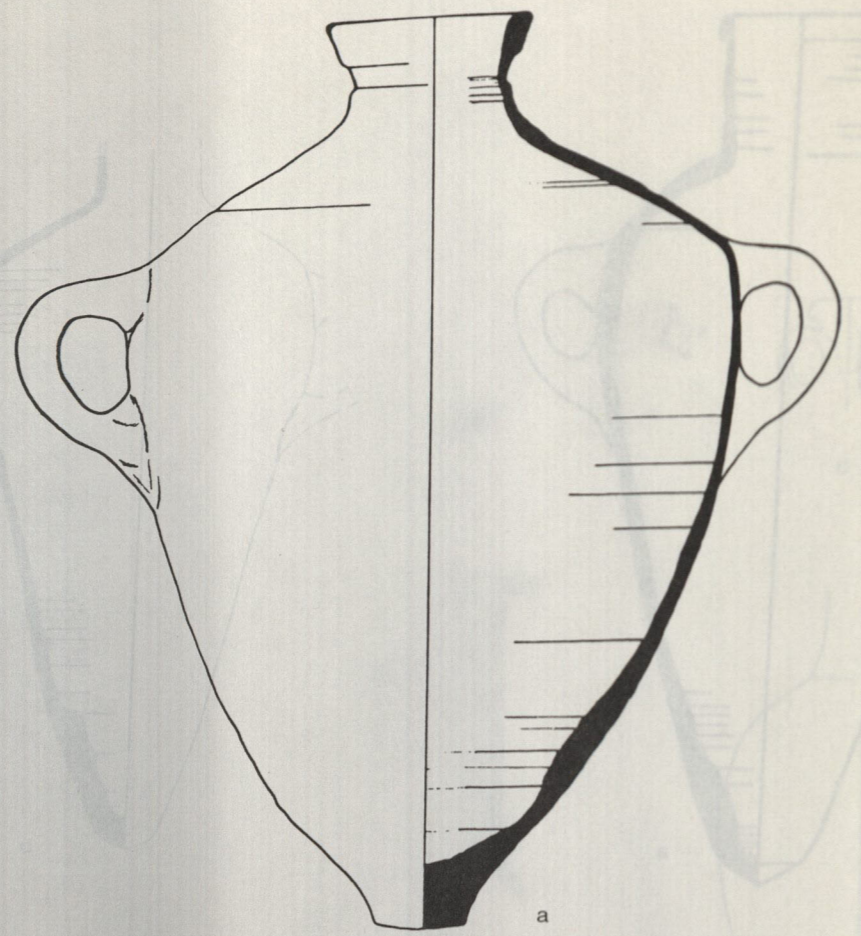


Figure 8: a Uncoated and Coated Marl Clay Type  
 b-i Linear Decorated Nile Silt and Marl Clay Types. Scale 1:5

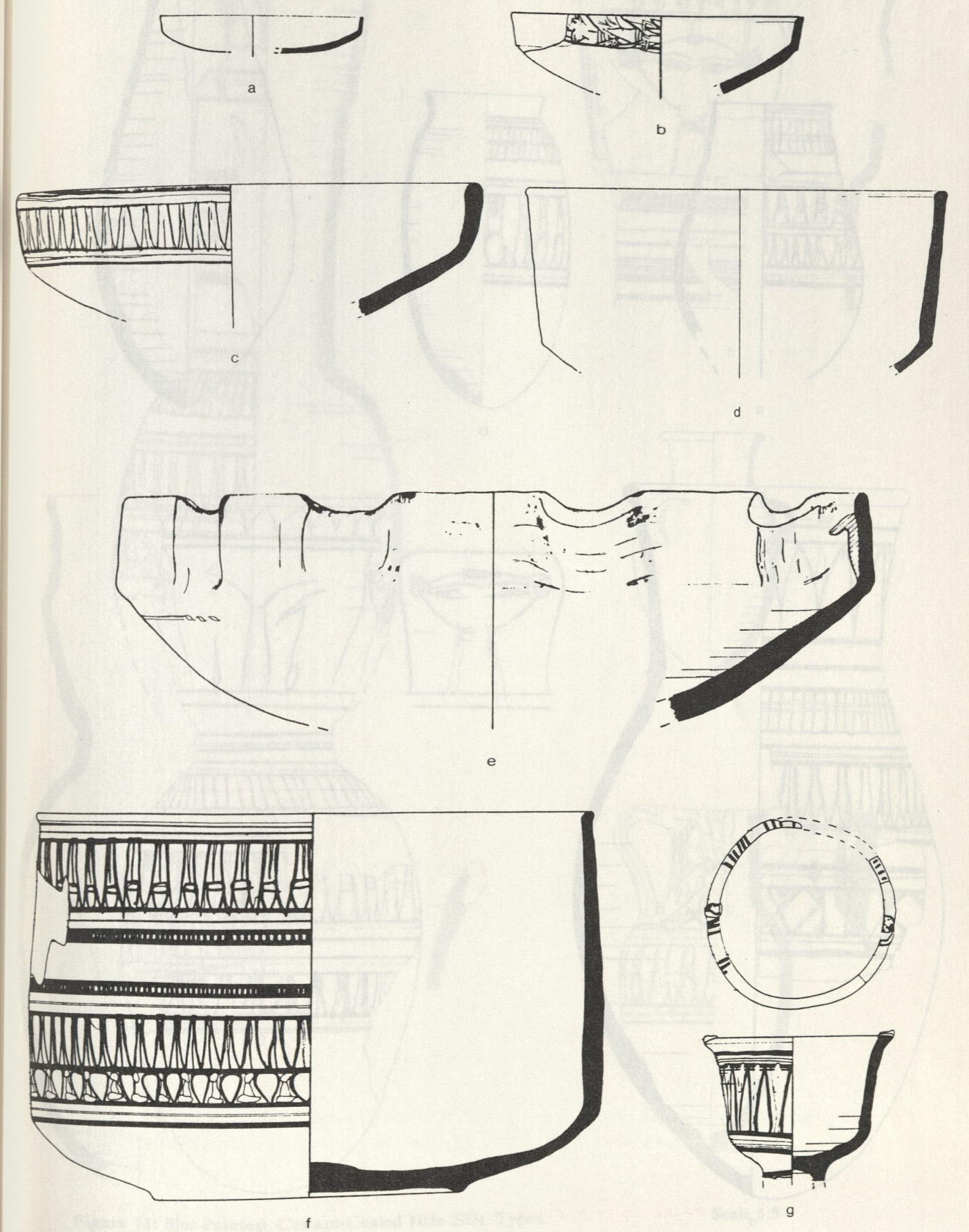


Figure 9: Blue-Painted Cream-Coated Nile Silt Types. Scale 1:5



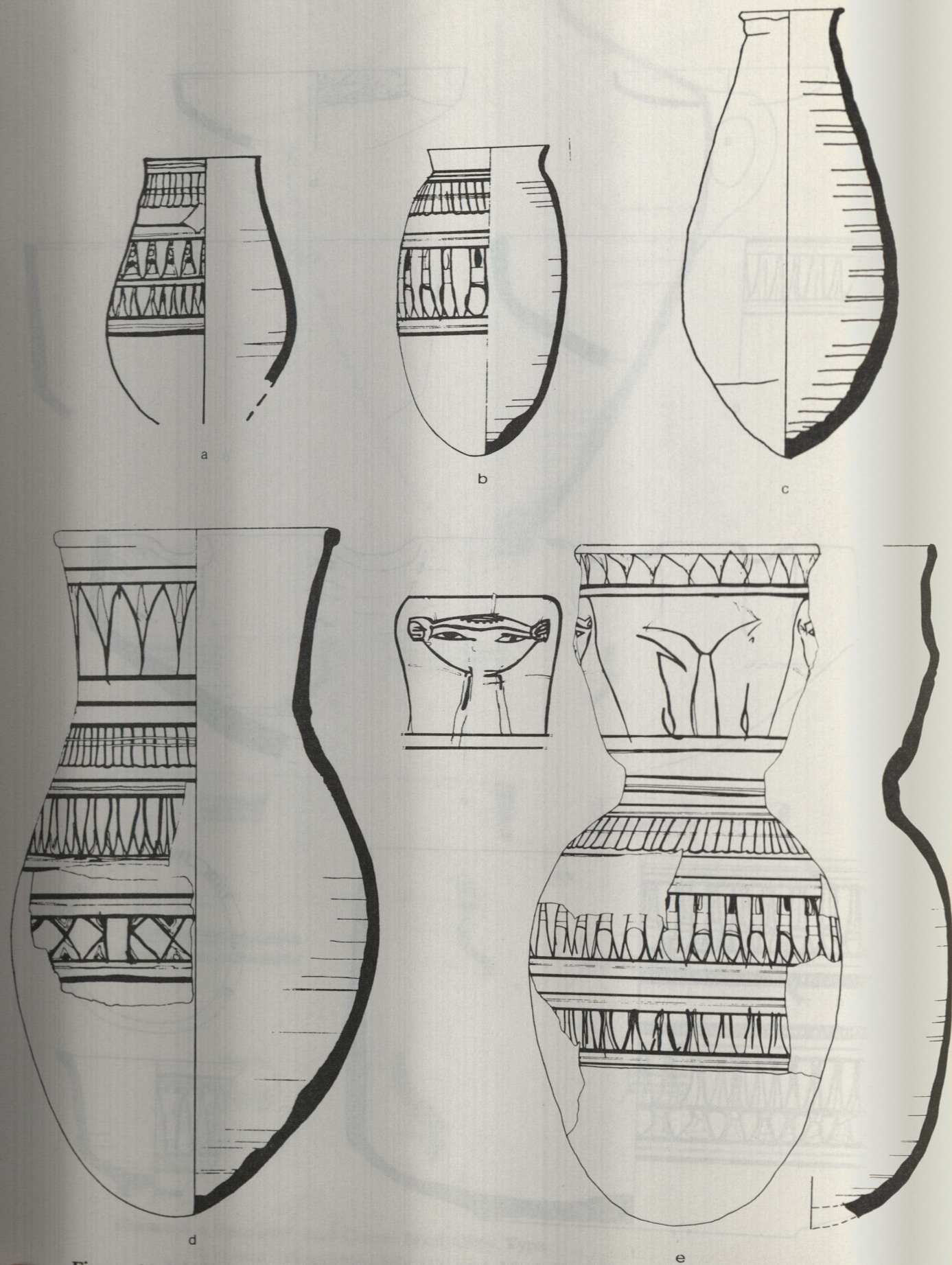


Figure 10: Blue-Painted Cream-Coated Nile Silt Types.

Scale 1:5

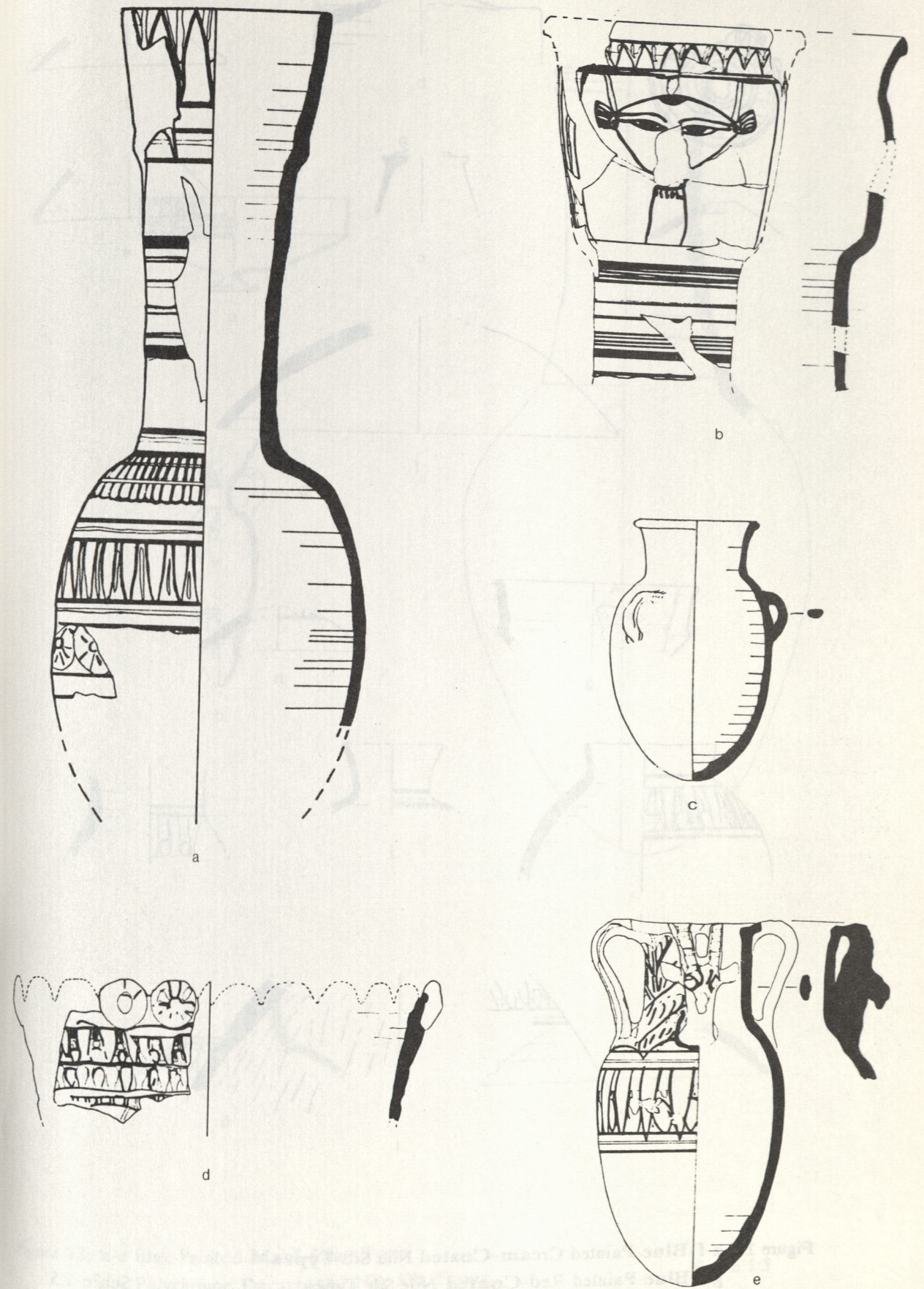


Figure 11: Blue-Painted Cream-Coated Nile Silt Types.

Scale 1:5

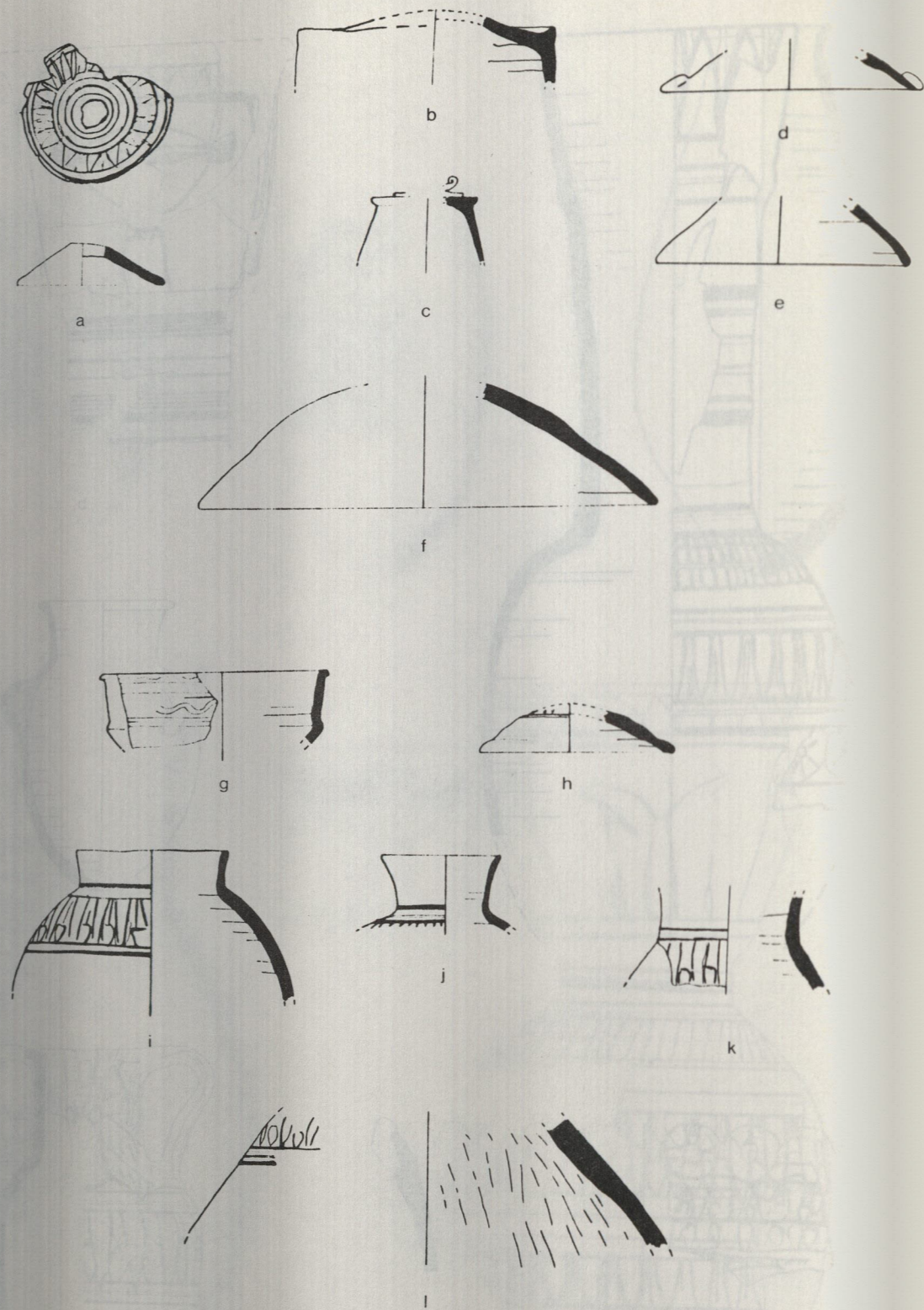


Figure 12: a-f Blue-Painted Cream-Coated Nile Silt Types  
 g-l Blue-Painted Red-Coated Nile Silt Types.

Scale 1:5

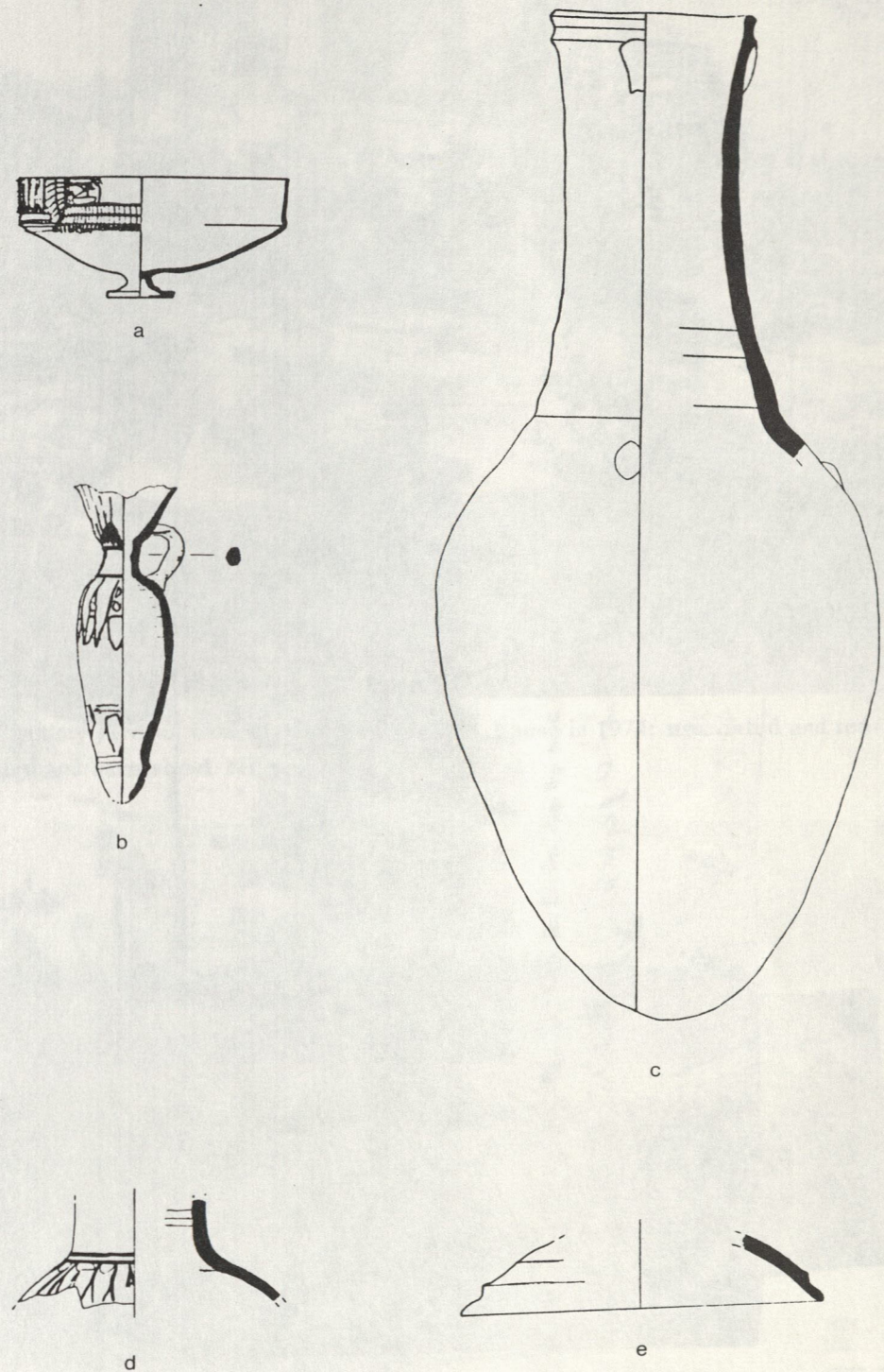


Figure 13: a-c Blue-Painted Marl Clay Types  
 d-e Polychrome Decorated Nile Silt Types.

Scale 1:5



Plate 1: Composite Aerial View of the Malkata Palace Complex and the Birket Habu. The palace can be seen in the photographs numbered 11/31-11/33 and the temple of Medinet Habu is clearly visible to its north. The area to the west of the palace contains the ancient dumps. A section of an ancient road can be seen to the south of the palace.



Plate 2a: The pottery yard at the Malkata excavation house in 1974: uncoated and red-coated and burnished Nile silt vessels.

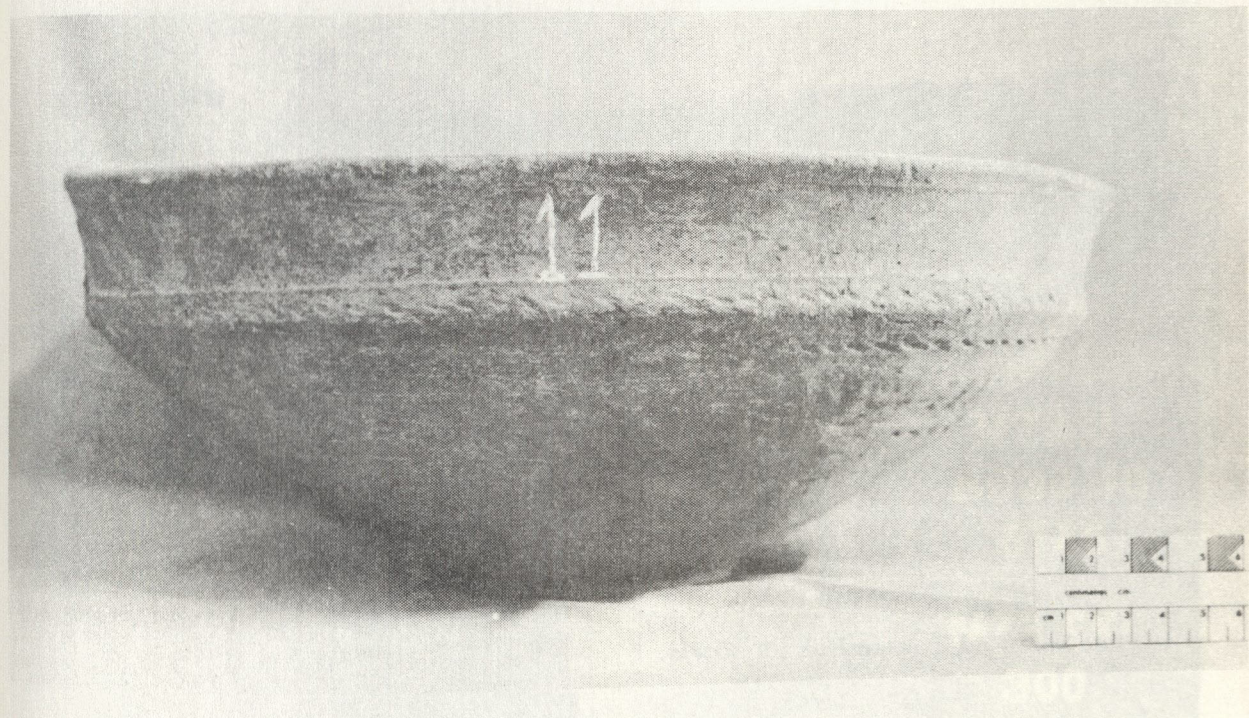
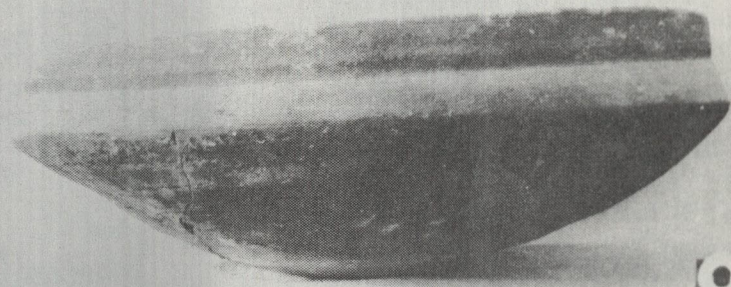
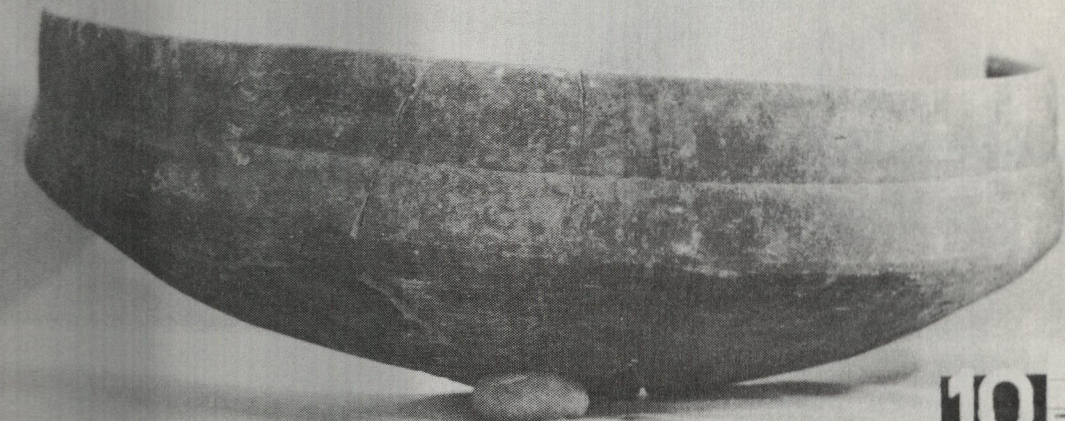


Plate 2b: Uncoated Nile silt bowl with string impressions (fig.1p).

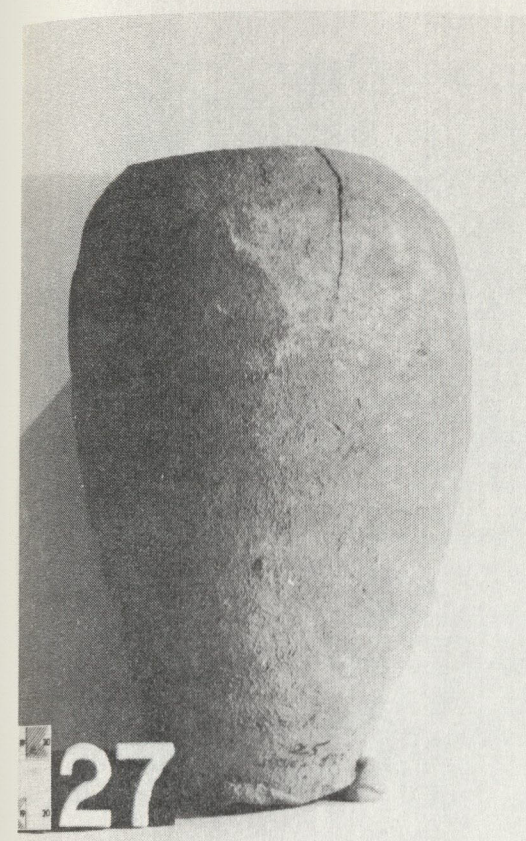


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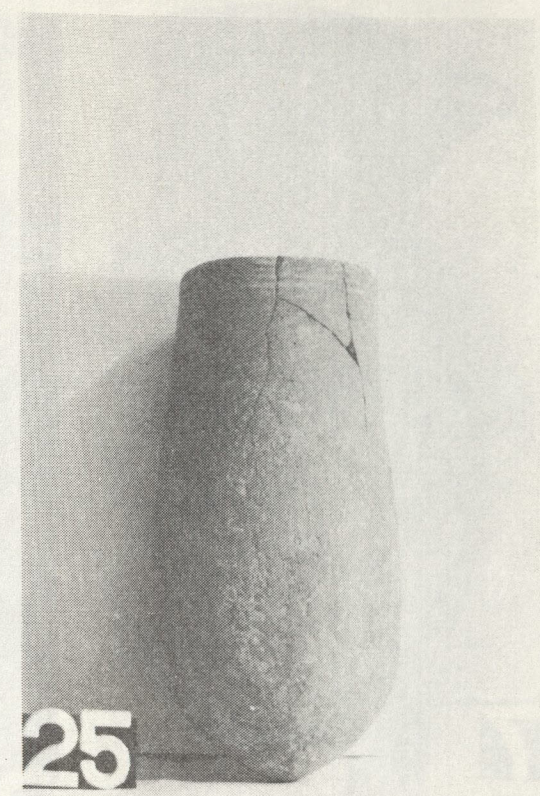
10

Plate 3a-b: Red-coated Nile silt bowls.



27

Plate 4a: Uncoated Nile silt jar.



25

Plate 4b: Red-coated Nile silt jar (fig.2d).



M73 J  
BB39 10  
6746  
M73 EX1  
300

Plate 4c: Red-coated Nile silt jars (figs 2i and 3b).

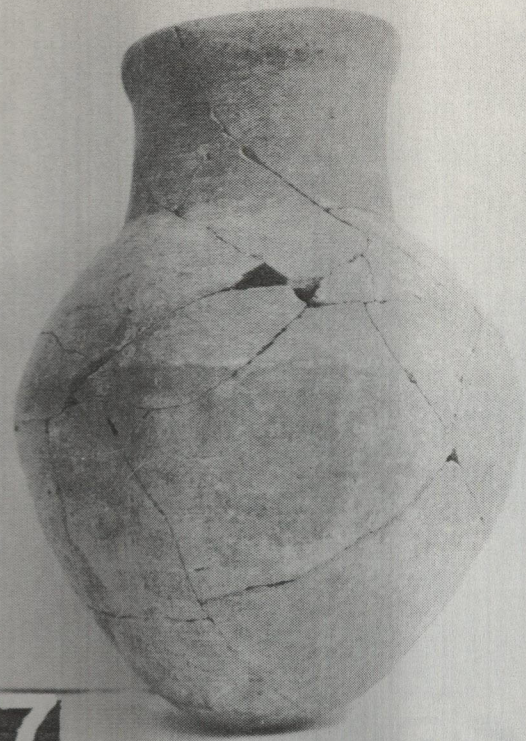


Plate 5a: Red-coated Nile silt jar (fig. 3d).

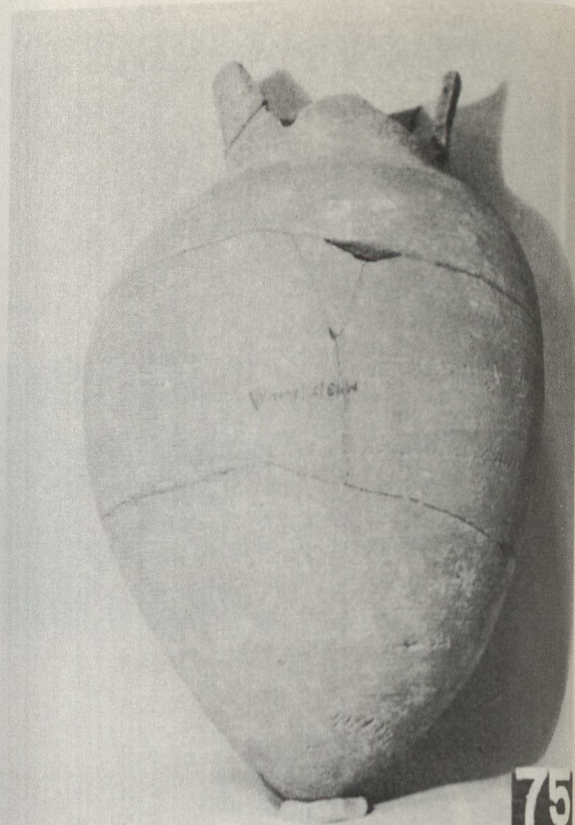


Plate 5b: Red-coated Nile silt jar.

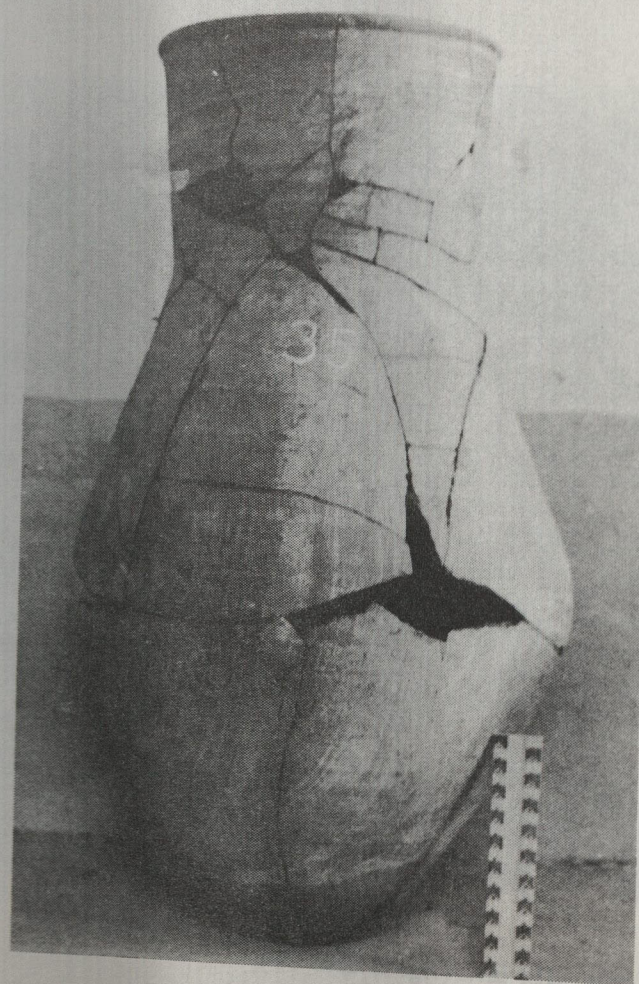


Plate 5c: White-washed Nile silt jar (zir)(fig.4b).

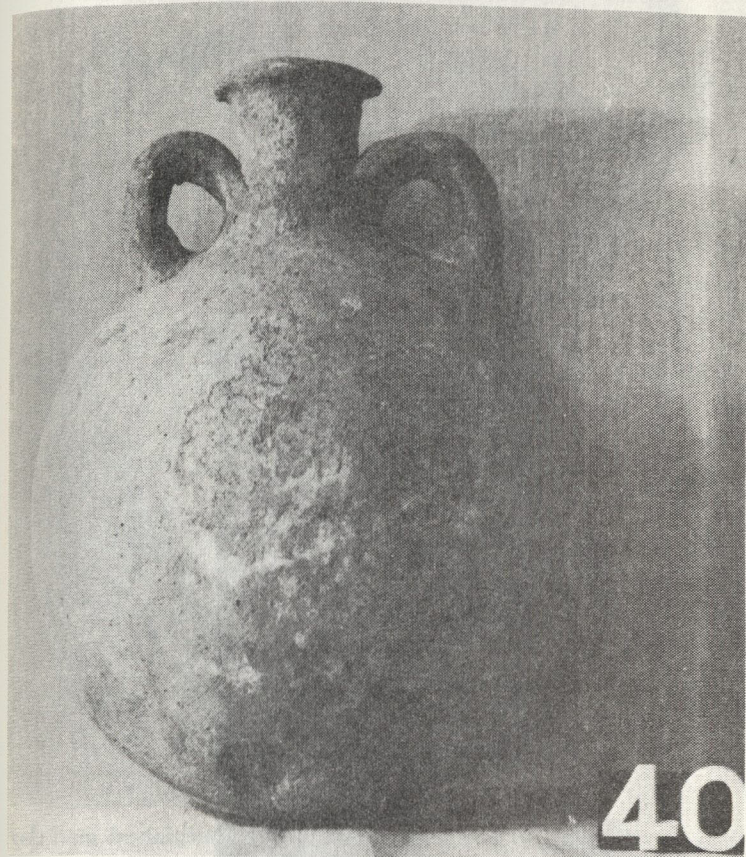


Plate 6a: Cream-coated Nile silt lentoid flask (fig.4e).

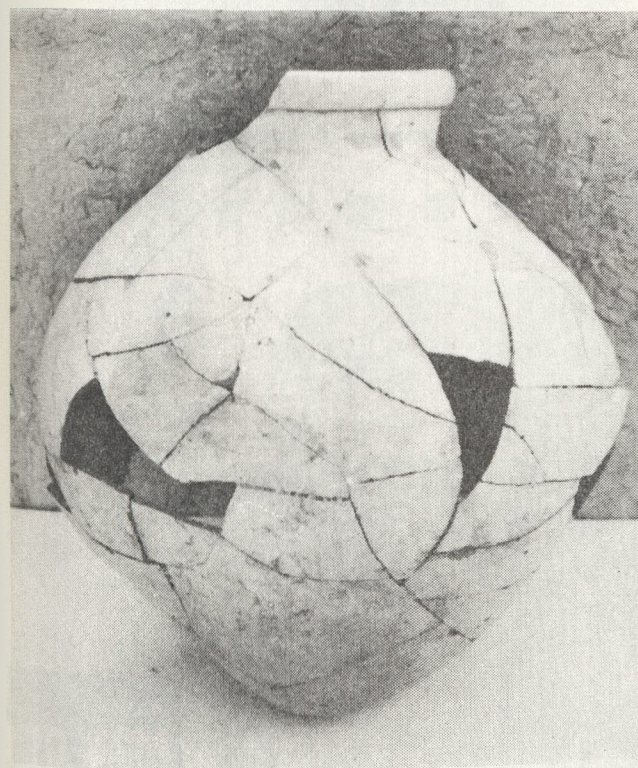


Plate 6c: Cream-coated and burnished Marl clay jar (fig.5k).

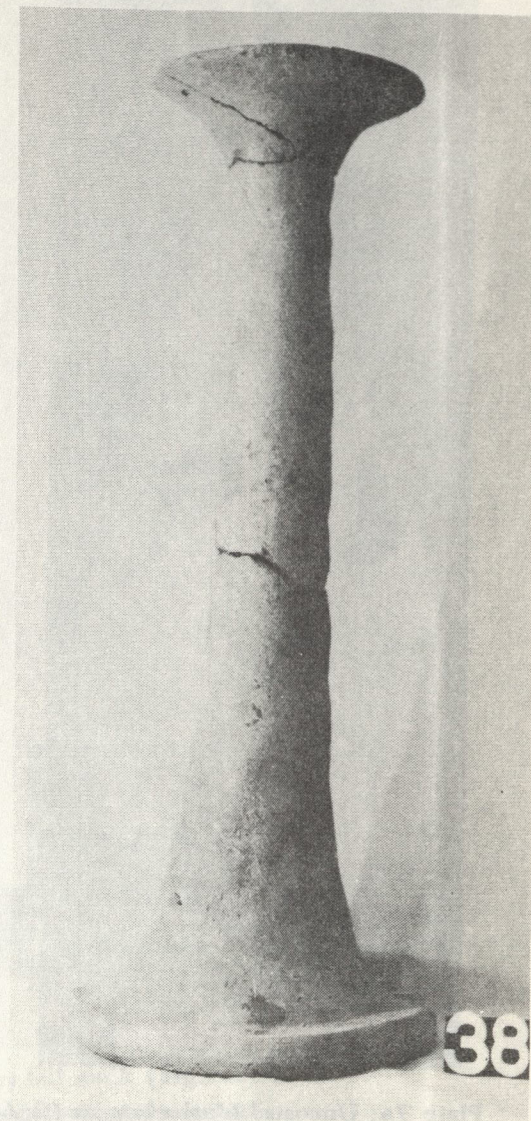


Plate 6b: Uncoated Nile silt stand (fig.5d).

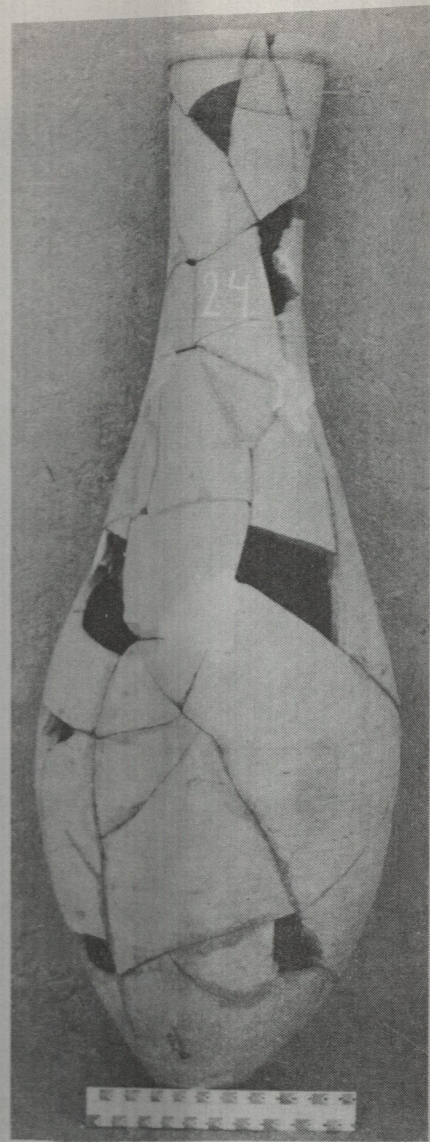


Plate 7a: Uncoated Marl clay jar (fig.6a).

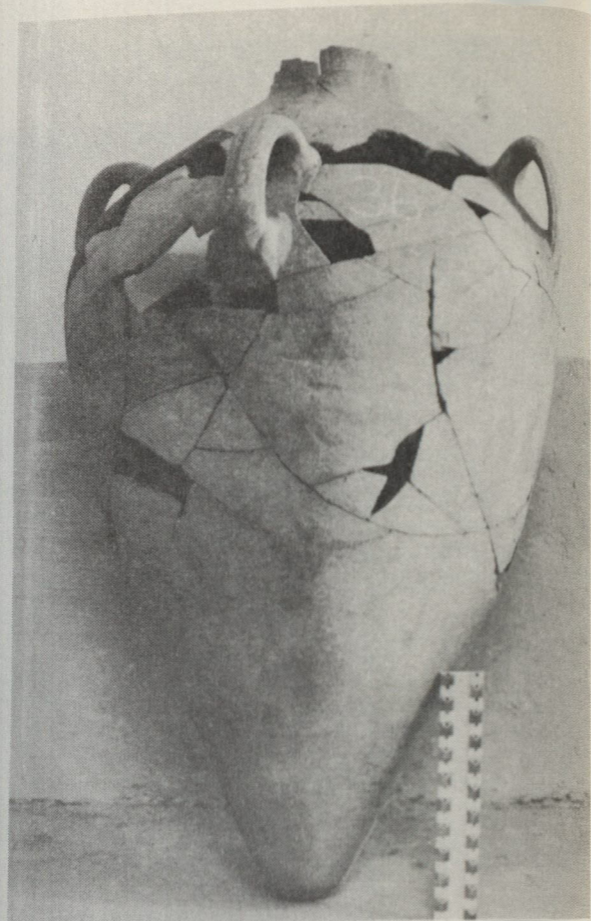


Plate 7b: Cream-coated and burnished marl clay amphora with four handles (fig.7c).



Plate 7c: Cream-coated and burnished marl clay amphora (fig.7a).



Plate 8a: Blue-painted, cream-coated Nile silt jar with very tall neck (fig.11a).



Plate 8b: Neck fragments from blue-painted marl clay jars of similar shape to 8a or fig. 13c.

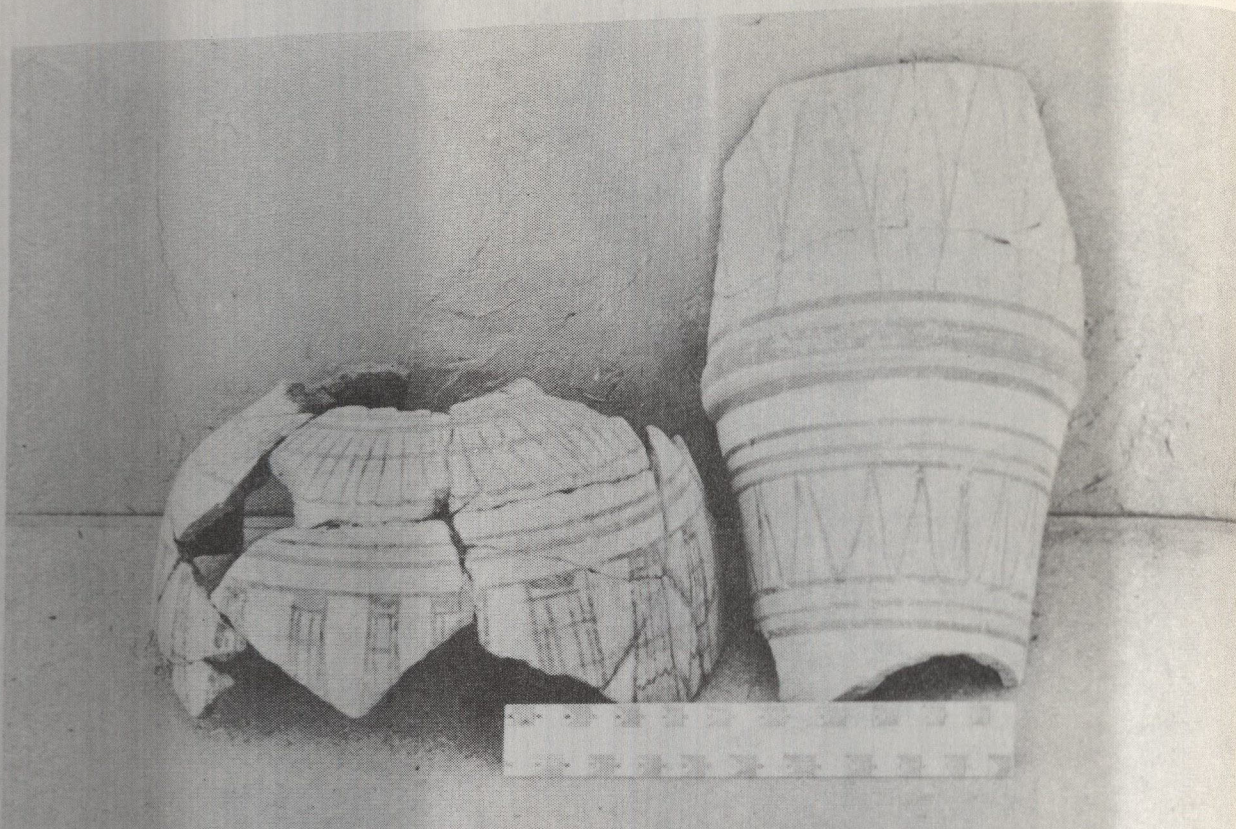


Plate 9a: Fragments from blue-painted, tall-necked jars similar in shape to plate 8a in cream-coated Nile silt (left) and uncoated marl clay (right).

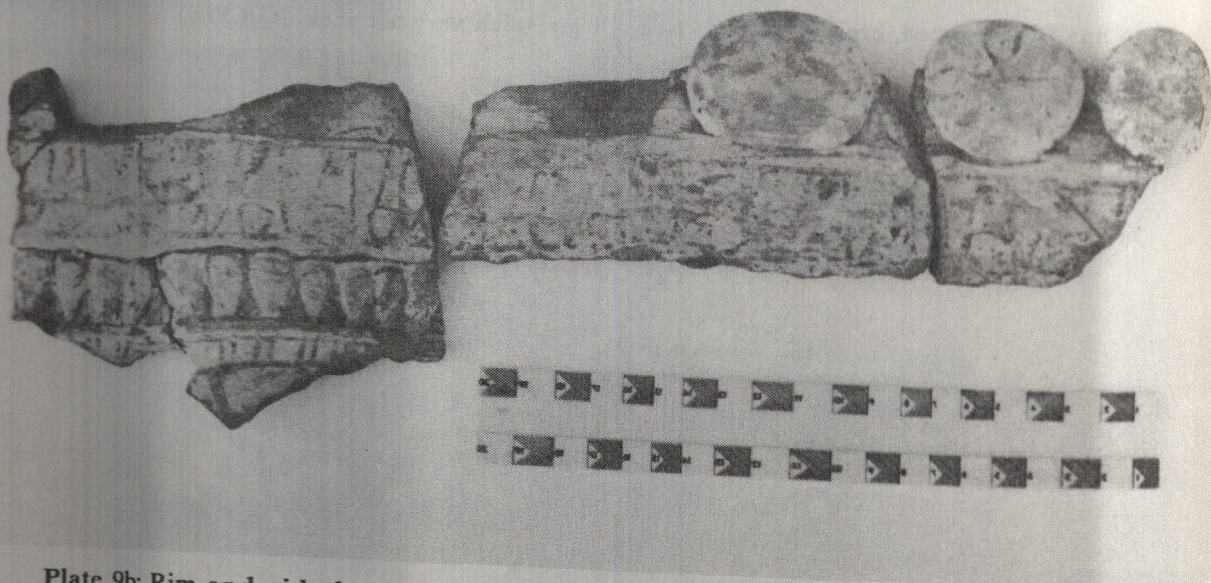


Plate 9b: Rim and side fragments from a deep bowl decorated in painted, applied and modelled techniques: cream-coated Nile silt (fig.11d).

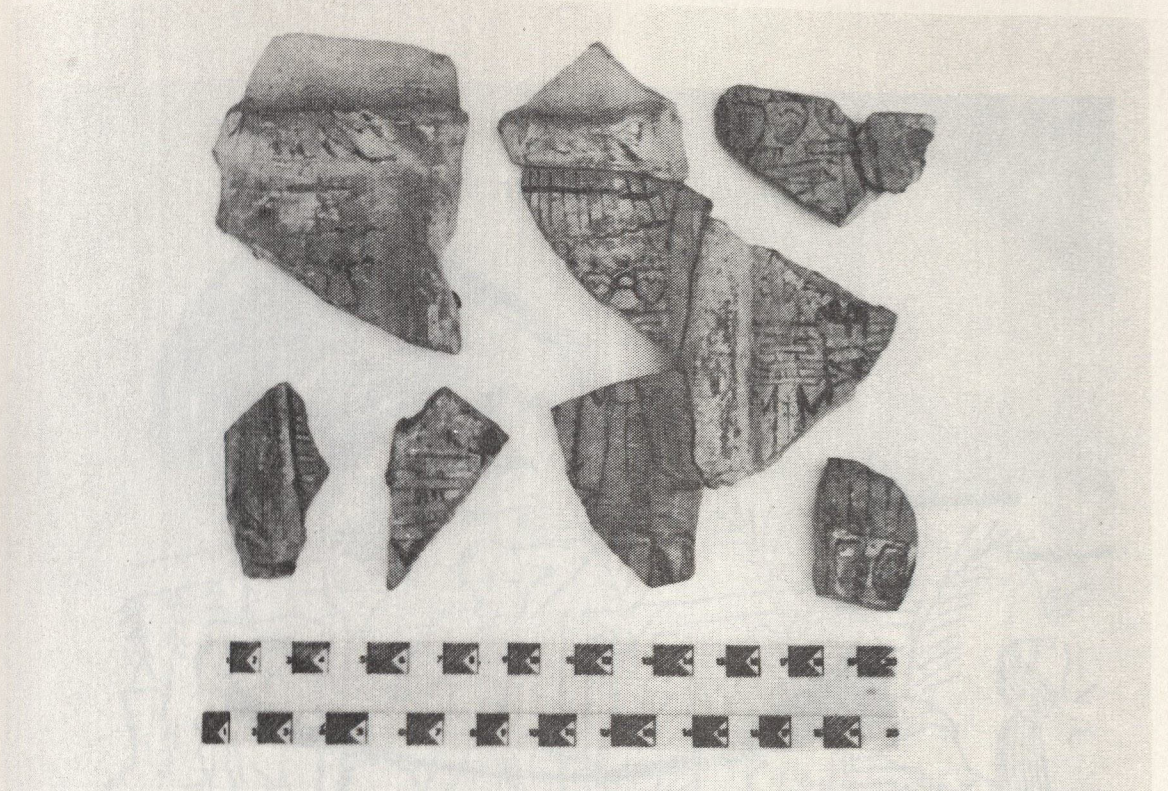


Plate 10a: Fragments from the body of a restricted jar (?) decorated in painted, modelled and applied techniques: uncoated marl clay.

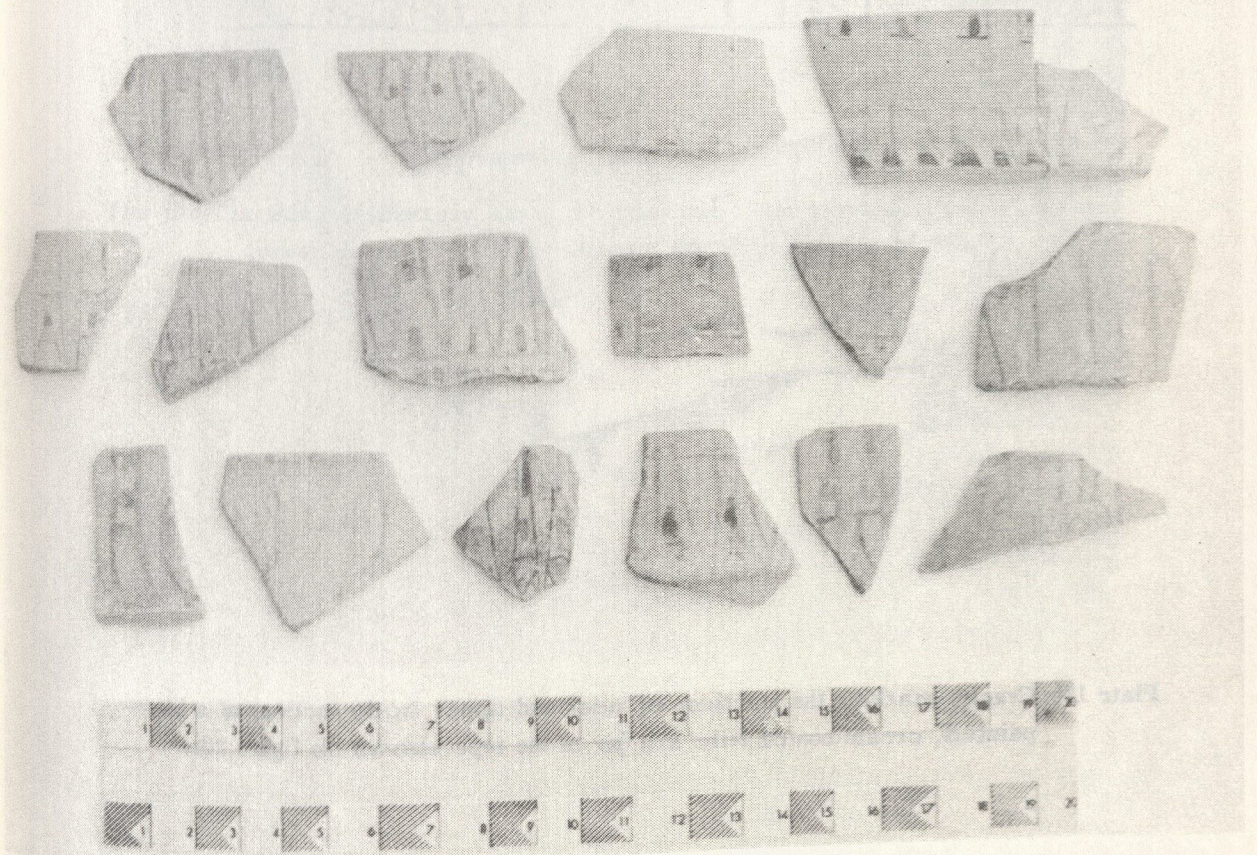


Plate 10b: Rim sherds from blue-painted, uncoated marl clay footed bowls (fig.13a).

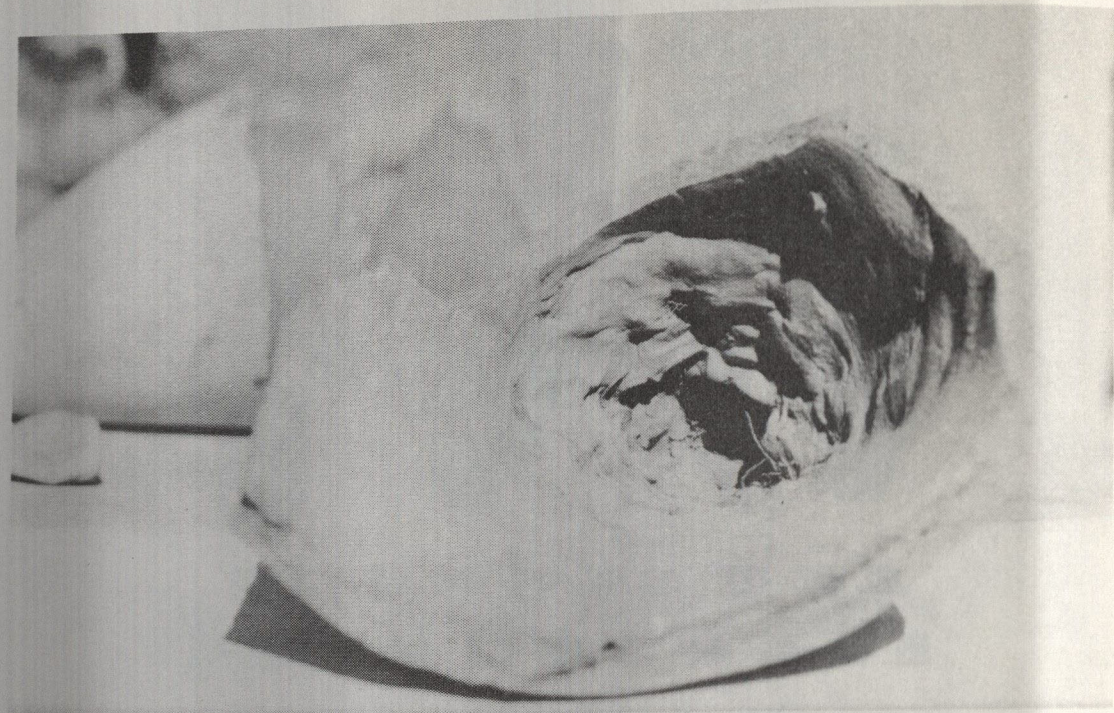


Plate 11a: Interior of mouldmade amphora base.

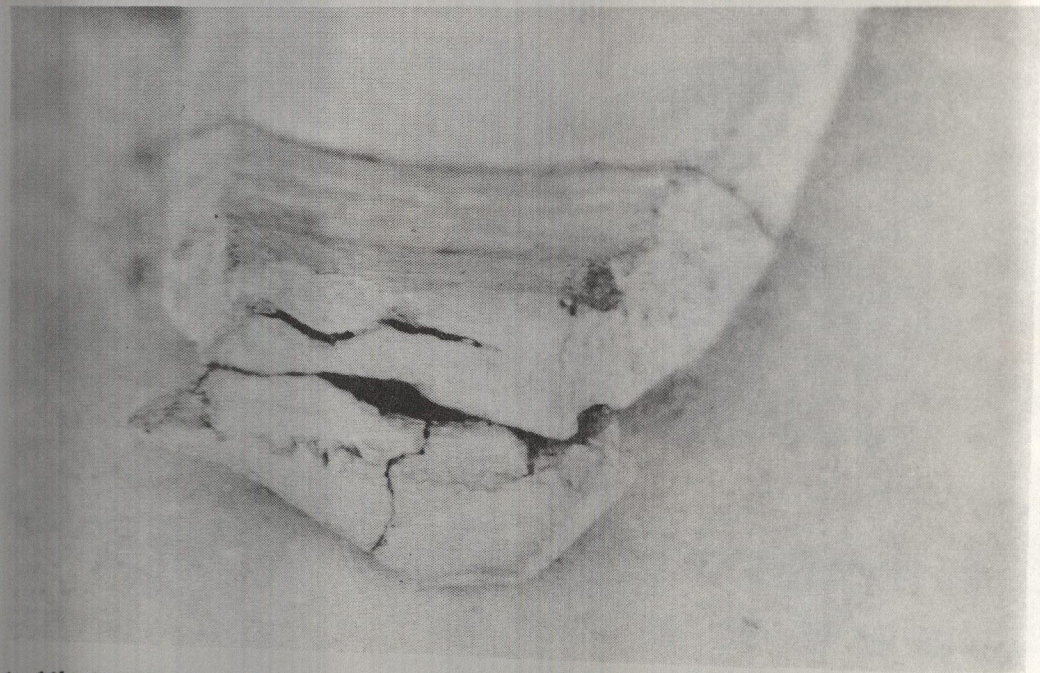
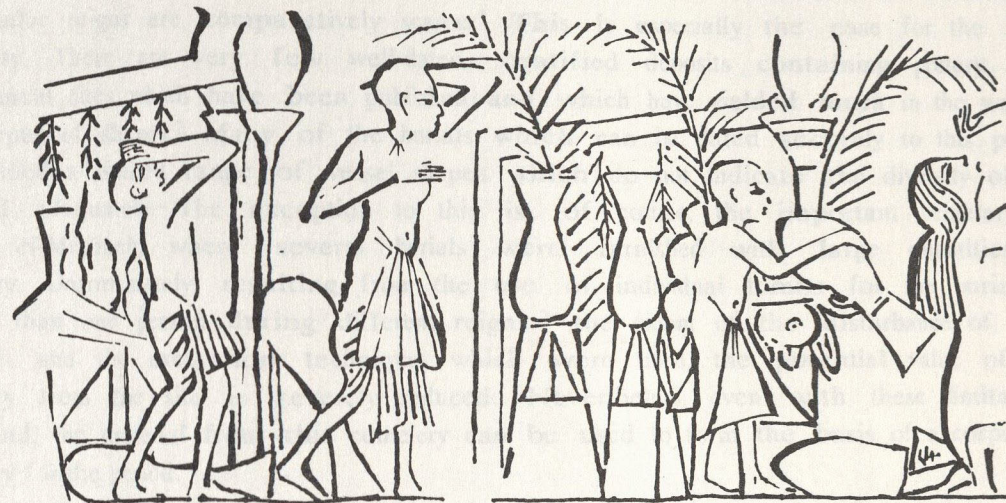


Plate 11b: Cracks marking the junction of neck and upper body sections of a blue-painted, cream-coated Nile silt jar of the type shown on figure 10e.

## POTTERY OF THE RAMESSIDE PERIOD



The ritual breaking of pottery jars at the funeral of the priest of Ptah, Ptahmose.  
(drawn from E. Brunner-Traut, *Die alten Aegypter*, pl.58).



Despite the length of the Ramesside Period, approximately 230 years, the extent of the activity throughout Egypt by its rulers and the number of sites which attest occupation during it, deposits of pottery which can be ascribed with certainty to particular reigns are comparatively scarce.<sup>1</sup> This is especially the case for the XXth dynasty. There are very few well-dated, stratified deposits containing pottery from settlement sites which have been published and which have yielded much in the way of a corpus of shapes.<sup>2</sup> Many of the burials which can be dated securely to this period contained a limited range of vessel shapes which do not indicate the diversity of the period adequately. The exception to this is, of course, the important cemetery of Deir el-Medineh, where several burials were furnished with large quantities of pottery. Unfortunately, resulting from the use of individual tombs for the burial of more than one person during different reigns,<sup>3</sup> the extent of the disturbance of most burials and the excavation techniques which were used, the potential value of the pottery from the site is severely reduced. Nevertheless, even with these limitations in mind, the material from this cemetery can be used to form the basis of a corpus of pottery for the period.

For the purposes of the present study the Deir el-Medineh pottery has been used to this end, supplemented with material from other locations within Luxor and the sites of Gurob, Matmar, Qau, Sedment, Tell el-Yahudiyeh and Tell el-Retebeh. While some of the pottery from these sites can be ascribed to particular reigns,<sup>4</sup> there is insufficient material available to enable significant distinctions to be made between the two dynasties which make up the period, or ceramic phases proposed with certainty. What little evidence there is would suggest the possibility of dividing the ceramics into two phases:

- a) up to, and including, the reign of Ramses II
- b) the XXth dynasty

Distinctions between these two phases are not major. It should be noted that the transition to b) was gradual, taking place throughout the late XIXth dynasty, which appears as a transitional phase. The pottery of phase a) is, in most cases, indistinguishable from that of the late XVIIIth dynasty (Bourriau 1981a, 72-3; Hope 1985, 4-5). Pottery of the Third Intermediate Period shows the continuity of the ceramic traditions of phase b) into that period (Jacquet-Gordon, forthcoming).

The range of vessels which was produced during the XIXth and XXth dynasties would appear to have been fairly homogeneous throughout Egypt, as was the case in the late XVIIIth dynasty, and regional variations have not, as yet, been clearly identified (but see comments in Bell 1987 in relation to polychrome decorated amphorae). The

ceramic repertoire is extensive, with a wide range of surface treatments and decorative techniques, very much in the tradition of the preceding period. The inventiveness of the New Kingdom potters continued unabated, at least throughout the XIXth dynasty.

This survey of the pottery is based entirely upon published material and many of the comments made herein should be regarded as preliminary, in need of verification from the study of carefully recorded material from controlled excavations. Certain types of vessel have been excluded. The amphorae of the period are dealt with in the study in this volume of those of the New Kingdom as a whole (chapter III). The changes in both morphology and decoration which certain sub-categories of this form underwent during the Ramesside Period, which distinguish them from those of the XVIIIth dynasty, are a notable feature of ceramic development in the New Kingdom. However, one blue painted amphora has been included (fig. 16e, pl. 3a) because of the uniqueness of its shape and decoration. Special funerary manufactures such as canopic jars, imitation stone vases and mourner vases are not dealt with herein.

#### Classification

The majority of the Ramesside Period pottery was wheelmade,<sup>5</sup> exceptions being the bread dishes illustrated on fig. 1a-b, which were handmade. No further discussion is provided here and the reader is referred to the general comments in chapter I (page 13). The following remarks on fabrics, surface treatments and decoration should also be read in conjunction with those provided in the latter, where further details are provided.

#### Pottery Fabrics

The range of fabrics which was used for the pottery of this period is largely that of the preceding late XVIIIth dynasty, encompassing fine to coarse Nile silts (types B2 - D), desert marls (Fine Marl A, variant 3) and what may be mixtures of the two (Fine Marl A, variant 4<sup>6</sup> and Marl D). The main limitation in using material published before the present descriptive terminology was devised lies in the realm of fabric identification. Descriptions, where provided, are very cursory and the distinctions between different types elementary. The various Nile silt fabrics are rarely isolated except in very general terms, such as fine or normal, and even this was not done consistently. Marl clay (Fine Marl A, variant 3) is not reported with any frequency except in relation to amphorae; at Deir el-Medineh it is implied by the term *terre verdâtre*. The possible mixed clay fabrics can be identified on the basis of references to fired colours, the two firing either pink with white surfaces (Fine Marl A, variant 4.1) or red with numerous white inclusions resulting from the oxidisation of carbonates in the clay body (Marl D). The former can be recognised amongst Nagel's descriptions of the fabrics at Deir el-Medineh (1938 *passim*) as his

*terre rose* and *terre rose homogène*, while the latter has been identified frequently by reference to the shapes known only to have been made from it in the late XVIIIth dynasty. There is a degree of uncertainty, therefore, in some of the identifications. The publications of the British School of Archaeology in Egypt distinguish between the marl clay and the possible mixed clay fabrics by reference to the modern pottery manufacturing centres where similar types are used: i.e., Qena (for the marls) and Ballas (for the mixed clay types, primarily that fired pink with white surfaces: Fine Marl A, variant 4.1). They also employ such terms as 'white clay' and 'pink'. The scarcity of marls and mixed clay types, as indicated in the published reports, may be the result of recording only complete vessels or large fragments, insufficient knowledge on the part of the early excavators and disinterest or disinclination, for whatever reason, in establishing precise distinctions between the materials used, rather than a reflection of the actual situation. However, in the recent publication of pottery from the Ramesside tomb chapels of Paser and Ra'ia at Saqqara, the predominance of Nile silt fabrics was noted (Bourriau & Aston 1985a, 50).

In addition to the now well-known range of pottery fabrics which was used during the New Kingdom, Nagel comments upon the occurrence of a black fabric, which is in all probability a low-fired Nile clay fabric. Its use was very infrequent and restricted to the vessels illustrated on figs 19e and 20j-k of this study.

#### Surface Treatments

The basic surface coatings cover all of the surface to which they were applied, which in the case of the bowls was either the interior, exterior, or both, and the jars, the exterior. The following surface treatments are attested:

- a) Uncoated, smoothed surfaces.
- b) Red-coated surfaces, occasionally burnished; applied before firing.
- c) Cream-coated surfaces which may be burnished, especially when used for amphorae; applied pre-firing, not common. Cream coated surfaces occur mainly on vessels with painted decoration; they are occasionally more pink or white than cream.
- d) White-coated surfaces applied after firing. It has been suggested that the use of this type of coating rendered a vessel suitable for cult purposes, especially in the case of bowls and stands (chapter I, 14).
- e) Black-coated surfaces (fig. 11a), greyish-yellow coated surfaces (fig. 11b) and yellow coated surfaces (fig. 20j-k) applied before firing?; extremely rare.
- f) A red- and cream-coated surfaces: red inside and cream outside, with the blue-painted bowl fig. 16c only; both applied pre-firing.

## Decoration

### Decorative Techniques

The main techniques used in the execution of the decoration and the motifs employed can be summarised as follows:

1. Modelling: manipulation of the vessel wall to form undulations of the rim, grooves (Brissaud 1979, pl.Vb), produce faces of the Bes-image and Hathor in the neck or upper body and imitate the shape of the lotus flower. The latter is encountered mainly with stemmed goblets (fig. 20j-k) and rarely on the body of jars (Brissaud 1979, pl. Va).
2. Application of elements: faces of Hathor, which may have been made in moulds or hand formed, bosses sometimes representing breasts, roughly formed knobs which may be, depending on their location, degenerate Hathor heads, arms/legs on the Bes-image vases, figures of gazelles, calves and ducks, papyrus clumps, lotus flowers and ledges.
3. Incision: undulating lines and short strokes in the top of the rim.
4. Painting: a wide range of abstract, floral, faunal, human and hieroglyphic motifs is encountered.

Of these techniques nos 1-3 were executed before firing, while no. 4 was effected both before and after firing.

### Decorative Classes

Three main decorative classes can be distinguished on the basis of the stage at which the decoration was applied, the motifs and colour range used. The basic division is into pre-firing (A-B) and post-firing (C) application. They are:

#### A. Linear Decoration

Vessels decorated with mainly painted, linear motifs executed either in red and black or brown,<sup>7</sup> or only red, black or brown, which may occur in combination with modelled, incised or applied decoration. The latter occur also on their own. Despite the occasional use of other types of motif this class is here termed linear decorated. Three sub-categories are distinguished:

- a) Decoration employing only modelled, incised or applied techniques: figs 11d-j, 13p & 14a-b.

- b) Painted rim bands of differing widths, occasionally combined with modelled, applied or incised decorative elements: figs 11k-13d & 13k-o.
- c) Painted motifs other than rim bands, occurring with applied and/or incised motifs: figs 13e-j, q-s & 14d-15a. Incorporated amongst the motifs which were employed are floral (figs 13g, 13j, 14d-e), faunal (figs 13i & 14d) and human motifs (figs 13f & 14a-b). The type shown on fig. 13f, with applied Hathor head and painted, undulating lines representing hair, belongs to a vessel type common from the mid- to late XVIIIth dynasty; fig. 16a shows its occurrence with blue, red and black painted decoration. The complete vessel possessed a tall, thin neck with a ledge below the rim and an ovoid body with a round base; there are two bosses on the upper part of the body (chapter I, fig. 13c). An example of Ramesside Period date incorporates other painted human and floral motifs (pl. 2). This type of feminoform vase is well-illustrated by the vessel published some years ago by Keimer (1949).<sup>8</sup> Figure 14h is decorated with red painted bands.

#### B. Blue-Painted Decoration

Vessels employing the full range of decorative techniques dominated by painted motifs in blue, red and black/brown, applied pre-firing. However, incised or modelled motifs are not common. The designs are characterised by the use of an extensive range of floral motifs supplemented by faunal, linear, abstract and human motifs; hieroglyphs and depictions of deities also occur. This class of decoration is characteristic of the New Kingdom and employed cobalt-blue pigment in its decoration (chapter I, 7-8).

#### C. Polychrome/Post-firing Decoration

This incorporates various aspects of the preceding two classes. There are two main subdivisions:

- a) Bowls with white painted rim bands, either uncoated or on a red coating, and those with a white coating
- b) Vessels with a white coating over which is applied decoration, either linear or floral, using the colours blue, red, green, yellow and black. The blue pigment which was used appears to be frit. Not all examples of this sub-class utilise the full range of colours. Incised and modelled motifs are absent and applied elements are very rare. It is typical of the decorated amphorae of the period (Bell 1987); other forms have mainly linear motifs. The two goblets shown in fig. 20j-k have a yellow coating rather than a white coating.

Some examples of sub-class Ca) are decorated with white crosses (fig. 19n-o) and spots (fig. 19d & p). The use of white spots is rare and recalls their use on vessels of the Second Intermediate Period (Bourriau forthcoming). The decorative scheme of some vessels includes both pre-firing and post-firing elements. This takes the form of pre-firing modelled or applied decoration with either a post-firing coating (white)

or decoration (rim bands). In some cases vessels with pre-firing decoration in the form of red rim bands received white rim bands over the red ones (fig. 13a-d) or white coatings obscuring them (fig. 20a-c). One jar received polychrome decoration on its body having already blue-painted motifs on its neck and shoulder (chapter III, 91 & pl. 8a centre).

### The Wares and Types

Figures 1 - 20 of this study illustrate the main types known from the Ramesside Period arranged according to probable ware divisions. Forms occurring in uncoated wares are presented first, followed by the coated and then the decorated wares. The latter are grouped according to the decorative groups outlined above and the presence of a surface coating. The following list indicates the main types which are encountered:

#### A: Nile Silt Wares

1. Undecorated
  - a) Uncoated: figs 1a-6f
  - b) Red-coated, sometimes burnished: figs 7a-8g
  - c) Cream-coated: fig. 8h-l & pl. 1b
  - d) White-coated: figs 9a-10c & pl. 1a; for additional types of stands see Nagel 1938, 112.
  - e) Black-coated and burnished: fig. 11a
2. Decorated Class A
  - a) Uncoated: figs 11d-13d
  - b) Red-coated: figs 13k-14c; footed vessels similar to fig. 13j are known and there are fragments from large stands with applied decoration also (Nagel 1938, 148 nos 30 & 32).
  - c) Cream-coated: fig. 14d-h & pl. 1c
3. Decorated Class B
  - a) Uncoated: fig. 15b-e
  - b) Red-coated: fig. 16d-i & pl. 3a
  - c) Cream-Coated: figs 17a-18d, 21a-d & pl. 3b; there is a large quantity of sherd material from Deir el-Medineh which cannot be incorporated here. A four-handled vessel is of particular interest as it is decorated with a Hathor-headed sistrum and flowers merging from a footed bowl (Nagel 1938, 131 no. 1922.8).
  - d) Red- and cream-coated: fig. 16c
4. Decorated Class C
  - a) Uncoated: fig. 19a-h
  - b) Red-coated: fig. 19i-r; 19q has two white bands on the upper body.
  - c) White-coated: fig. 20a-d & f-i; 20i has traces of two blue bands on the neck. There are fragments from large stands with applied

decoration (Nagel 1938, 148 nos 28-9 & 31).  
d) Yellow-coated: fig. 20j-k

#### B: Marl Clay Wares

1. Undecorated
  - a) Uncoated: fig. 6g
  - b) Cream coated, sometimes burnished: fig. 6h-i
  - c) Red coated: fig. 11c
  - d) Yellow coated: fig. 11b; if this identification is correct the type is very rare indeed, the shape normally occurring in Nile silt wares, see fig. 2a.
2. Decorated Class A
  - a) Uncoated: fig. 13e-j & pl. 2
  - b) Red coated: fig. 15a
3. Decorated Class B
  - a) Uncoated: figs 15f-k & 16a-b
4. Decorated Class C
  - a) Uncoated: fig. 20c.

All of those listed above were made in Fine Marl A, variant 4.1 except fig. 6h-i which were made in Marl D. Also made in the latter fabric are examples of the tall-necked, one-handled bottle (compare chapter I, fig. 6e-f).<sup>9</sup> Examples of this shape with polychrome, post-firing decoration (Class Cb) are known (Petrie 1890, pl. XXI.43).

As mentioned previously, the marl clays seem to have been used primarily in the manufacture of amphorae, which are not illustrated or discussed herein. Other forms known to have been made in marl clays (Fine Marl A, variant 3) include examples of figs 3j, 6d, 13f and 13i. Body sherds from large jars made in marl clay fabrics, the exact shape not being identifiable, have been observed on the surface of the New Kingdom cemetery at Saqqara. This meagre list is the result of the limitations of available published material.

In relation to the occurrence of vessels decorated with the Bes-image (Charvát 1980) it has not proved possible to incorporate distinct types into the corpus presented here. The descriptions of such vessels which are provided in accounts of the pottery from Deir el-Medineh, where they were not uncommon, do not enable their precise classification. They all seem to have been made from Nile Silt fabrics, with faces modelled into the upper part and arms or legs, when they occur, applied to or, less commonly, modelled into the body (pl. 1a). From the descriptions and illustrations provided (Nagel 1938 *passim*) it would appear that they were frequently covered with a pale over-all coating (pl. 1a), but whether this was applied before or after firing

is uncertain. Examples of this type of vessel are known to occur without the coating and also with blue-painted decoration, an example of which is illustrated here (fig. 21a). For illustrations of a range of these vessels see Nagel 1938, fig 120 and 127. Whether all of these actually depict Bes himself, or a similar deity, is uncertain.<sup>10</sup> Plate 1a illustrates an intact, unprovenanced example in the Petrie Museum, undoubtedly of Ramesside Period date, made in Nile silt fabric B2 with a post-firing white wash, which has arms modelled into the body of the jar rather than applied to it.

### General Comments

A comparison of the illustrations provided here of the pottery of the Ramesside Period with those of the pottery from Malkata (chapter I), Amarna (*City of Akhenaten* I-III & Hope forthcoming) and other material of late XVIIIth dynasty date, indicates the similarity of the ceramic products of the two periods. Only in a limited number of cases can distinctions be made. Those which can be comparatively minor and relate to vessel proportions, frequency and aspects of decoration. Few new forms were introduced (but see comments in chapter III). Furthermore, those changes which can be isolated do not coincide with particular reigns but represent a gradual development. As Bourriau and Jacquet-Gordon point out in relation to the pottery of the Second Intermediate Period and the Third Intermediate Period to Ptolemaic Period, and is true for most of Egyptian history, changes in the ceramic repertoire of the Ramesside Period do not conveniently coincide with historic events or dynastic changes.

Vessels which on present evidence do seem to be innovations of the period under review are the deep, carinated bowls (figs 2i, 3g, 7g, 12g & r, 19e), which may be connected with the development of the bowls with pronounced ledges (figs 3e, 9d, 20d & f-g). The latter have antecedents in the late XVIIIth dynasty, examples of which are known from Amarna now in East Berlin (information courtesy Professor Holthoer). The group of bowls which are decorated in imitation of ducks (figs 15e, 20d & f-g) seem to be peculiar to Deir el-Medineh. However, the identification of fragments without the modelled decoration, or of duck heads alone, as definitely coming from this type of bowl would not be an easy matter. In this connection two such fragments, each consisting of a duck's head, can be mentioned. They are both of late XVIIIth dynasty date, one from Malkata (Cairo JE 92522) and the other from Amarna (Nicholson Museum, Sydney, 62.1028); they both bear traces of blue paint. If they do originate from this type of bowl then they attest its manufacture at an earlier date. In addition to these pieces others are recorded from Qantir and identified as coming from 'duck bowls' (Aston 1987a, 4). The use of a duck's head as a handle on a lid is attested at Saqqara (Bourriau & Aston 1985a, 37 & pl. 35 no. 32). Neither the incense bowls (fig. 9e) nor the wide, stemmed bowls (figs 7i & 15k) seem to occur before this period, though they are undoubtedly related to the lotiform chalices of the late XVIIIth dynasty (Boston 1982, no. 76 & Hope forthcoming)<sup>11</sup> and possibly what Holthoer has termed 'simple burners' (1977, pl. 23). The stemmed bowls with small, applied

'cups' at their rims (fig. 4a) recall similar types of the Second Intermediate Period. It is possible that the tall-necked, one-handed bottle fairly common during the second half of the XVIIIth dynasty (chapters I, fig.6e-f & III, pl. 7c) was no longer manufactured after the reign of Ramesses II (Boston 1982, no. 61).

Changes in the morphology and proportions of certain vessels during the period can be seen in the general tendency for the height of necks of jars to increase in relation to the total height (figs 5h, 8g & 14h), reflected also in the necks of some lentoid flasks (fig. 14f). One-handed tankards tend to become more slender with narrower bases as the period progresses (fig. 6i; Petrie 1891, pls XVIII.43, 62 & XIX.20). Jars with convex necks, in small and medium sizes, of the shapes shown on figs 8f-g, 9l, 14h, 16b & h, and 18a appear to become more frequent (Bourriau & Aston 1985a, 51 & pl. 36), as do wide-mouthed jars, fig. 5a & c, and their blue-painted counterparts, figs 17i-k. The addition of handles to certain bowls, while not common, is also encountered more frequently (fig. 12h-i). Figure 16e (pl.3a) attests the occurrence of a form characteristic of the blue-painted pottery from Malkata and Amarna (chapter I; Boston 1982, nos 70 & 81; Hope forthcoming). This is the only example which can be dated to the Ramesside Period; it is from Gurob tomb 602 (Brunton & Engelbach 1927, type 82w). The use of a foot with this vessel is unique. It is possible that examples occur at Qantir (Aston 1987a, 4). Finally, it can be noted that the jars decorated with the Bes-image, discussed above, are encountered with greater frequency than in earlier periods.<sup>12</sup>

The continued use of decoration in red and black or monochrome black or brown is of note. The range of motifs executed is much reduced from those of the Second Intermediate Period and early XVIIIth dynasty, a process noted in the late XVIIIth dynasty also. Its characteristic forms, the piriform jar (Holthoer 1977, pls 35-8), tankard (ibid., pls 20-1) and small, carinated jar (ibid., pls 30-2), have ceased to receive this type of decoration. The occurrence of a goblet (fig. 14e) decorated with these colours is unusual as they generally received blue-painted designs. The decoration of the stemmed bowl shown on fig. 13i is also atypical in the same manner; the incorporation of horses in its decorative scheme is exceptional. In his publication dealing with the representation of horses on the pottery of the New Kingdom, Nagel stated his belief that they all dated to the XIXth dynasty and were of Theban manufacture (Nagel 1931). The present author has disagreed with this date attribution and suggested a mid-XVIIIth dynasty date for many examples (Hope 1987b). The decoration of the bowl fig. 14d may be unique in its depiction of ducks amidst papyrus with their nests, in which are shown eggs and ducklings (Nagel 1938, fig. 76.80B). The frequent use of red or white rim bands on bowls also reflects the survival of a much older tradition, though not at Deir el-Medineh only (Aston 1985, 21; Aston & Aston 1987, 28; Bourriau & Aston 1985a, 35). The furnishing of bowls with crenated rims also seems to have been in fashion at Deir el-Medineh.

The occurrence of a decoration of monochrome concentric circles on the lentoid flasks figs 13h and 14f is unexpected. This shape was first manufactured in Egypt

during the mid-XVIIIth dynasty, possibly the reign of Tuthmosis III, invariably with such decoration (Brunton 1930, pl. XXX no. 256; Hankey & Tufnell 1973, 109; Petrie & Brunton 1924, pl. LXIII; ?Garstang 1901, pls XVIII & XX). The form became common from the reign of Amenhotep III onwards (Hayes 1959, 276), but normally undecorated. Only one example possibly of that reign carries a decoration of concentric circles (Garstang 1901, pl. XXVIII); a few others received blue-painted decoration (examples from Malkata and Amarna; Hope forthcoming). Its manufacture was probably inspired by Syro-Palestinian prototypes which are also decorated with concentric circles (Amiran 1969, 166-167), under the influence of which examples were also made in Cyprus (Merrillees 1985), rather than similarly ornamented Mycenaean types which appear to post-date the earliest manufacture of Egyptian versions (Furumark 1972, 616 shapes 186-189; Hankey 1973; Merrillees & Winter 1972, 117-1118). A lentoid flask is depicted in the possession of Syrian merchants in Theban tomb no. 62 (Davies & Faulkner 1947; Helck 1962, 419 note 10 with references).

The end of the production of blue-painted pottery may be placed within the XXth dynasty, after the reign of Ramses III. It is not possible to fix the date more precisely as yet. Several deposits of this type of decorated ware are of importance in this respect: that from the tomb of Inherkha'w, no. 359 at Deir el-Medineh, from the dumps in the Valley of the Kings and from Mit Rahineh. Inherkha'w was probably buried towards the end of the XXth dynasty (Černý 1973, 308) and the painted pottery from his tomb can be seen, along with that of his ancestor Kaha of the reign of Ramses II, in Nagel 1938, figs 8-29. The material from the two burials was mixed, but that from the tomb of Kaha can be identified tentatively in part as those vessels which had been burnt (Nagel 1938, 14). Very little of the blue-painted pottery was burnt and, given the predilection for linear motifs on vessels of this decorative type from the tomb, it may be postulated that they originated from the burial of Inherkha'w and date to the end of its period of manufacture. Recent examination of the sherd dump outside the tomb of Ramesses IV in the Valley of the Kings has documented the occurrence of a small number of sherds from bowls decorated with blue, red and yellow bands (Aston & Aston 1987, 28). Their relative infrequency is of significance.<sup>13</sup> During the course of excavations at the temple of Ramesses II at Mit Rahineh fragments of blue-painted pottery were found in what the excavators believed were strata of the post-Ramesside Period (Anthes 1965, 160). However, these strata were not sealed and the sherds probably represent the disturbance of earlier, underlying deposits. Other than these pieces blue-painted pottery is not recorded from any context later than the XXth dynasty. In distinction to the blue-painted pottery of the XVIIIth dynasty that of the Ramesside Period possesses slightly different motifs in some cases. In general there is a tendency to replace floral motifs with simple bands of colour (Bourriau & Aston 1985a, 36) and to introduce more linear and abstract motifs (figs 16b, d, f-i; 17i-k & 18a-d).<sup>14</sup> There are very few parallels to the decorative schemes used on these vessels from the late XVIIIth dynasty. The use of the pendant lotus flower flanked by buds or leaves (fig. 18b & d) became more common, particularly below floral collars (Boston 1982, no. 79; Bell 1987). The polychrome chequer motif seen on fig. 20g is rare during the XVIIIth

dynasty but occurs on decorated amphorae of the Ramesside Period (Bell 1987, *passim*).

The decoration upon two small jars from Deir el-Medineh published by Brissaud is of interest here also. One has panels of vertical grooves modelled into the neck and body (Brissaud 1979, pl.Vb) and the body of the other is modelled and painted to simulate a slightly open blue lotus flower (*ibid.*, pl. Va). The latter possesses a small stump/knob base, which is a very rare feature. The jar with modelled grooves is paralleled by two similar pieces found in the Khendjer Pyramid cemetery at Saqqara (Jequier 1933, 48 & fig. 39), both now in Cairo (JE 56405-6). Such grooves are a rare decorative device; they also occur on a few vessels from Malkata and Amarna (Hope forthcoming), upon two goblets from the tomb of Maya (Aston & Aston 1988, 34) and upon two unprovenanced vessels: a large goblet (West Berlin 14413) and a large amphora decorated with a recumbent gazelle at the neck and shoulder (Boston MFA 64.9: chapter III, pl. 9).

Finally, some observations on the decoration of feminoform vases may be made. Figure 18d illustrates a type of blue-painted jar well-known from the late XVIIIth dynasty but which differs from it both in details of shape and decoration. The pronounced bi-conical shape of the body is a Ramesside feature (compare Guidotti 1978, pl. 1), as is the linear decoration on the body. The small size of the face and the use of undulating lines on the neck, representing hair, in addition to the depiction of the wig, are unusual features. Such lines and the small face size are usually reserved for feminoform vases of different shape (figs 13f & 16a, pl. 2; also Boston 1982, no. 69). Another feature normally found upon the latter, but occurring on this vessel also, is the representation of breasts by applied bosses. Here they are also perforated as though destined to facilitate the pouring of liquids, a feature of much earlier and smaller vases (compare Boston 1982, nos 50 & 69). It is possible that the inverted, open lotus flower flanked by leaves is intended to depict the pudendum, as suggested by Keimer in his study of a feminoform vase of slender type (Keimer 1949). The vessel, from either tomb 359 or 360 at Deir el-Medineh, represents a confusion of the features of the two types of feminoform vessels manufactured during the XVIIIth dynasty when the two were carefully differentiated in the majority of cases.<sup>15</sup> Both types were probably associated closely with the cult of the goddess Hathor (Guidotti 1978; Keimer 1949). Bruyère has noted that pottery decorated with Hathor and Bes motifs occurred more frequently in the village at Deir el-Medineh than in its cemeteries (Bruyère 1937, 114 & 116 note 1).

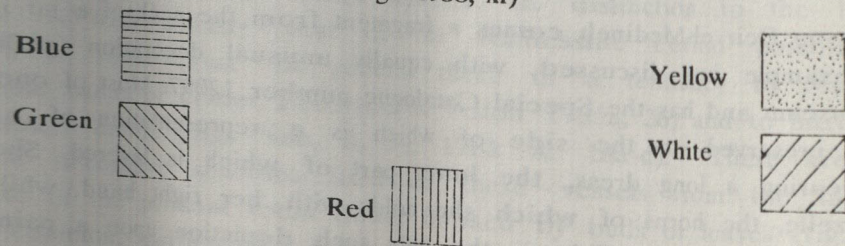
Also from Deir el-Medineh comes a fragment from the neck of a jar of the same shape as the example just discussed, with equally unusual decoration (pl.3b).<sup>16</sup> It is in the Cairo Museum and has the Special Catalogue number 12097. Most of one modelled Hathor head is preserved, to the side of which is a representation of a standing female figure wearing a long dress, the lower part of which is layered. She is accompanied by a gazelle, the horns of which she holds with her right hand, while in the left she grasps a floral bouquet. This is the only such depiction upon a painted vessel known to me. The dress is un-Egyptian and resembles that worn by Syrian envoys in tombs of

the New Kingdom (e.g., James 1985, 23; Vercoutter 1956, 287-288 documents 191-194) and by figures normally identified as Syrian musicians (Smith 1981, 307; Smith & Redford 1976, 132; Vercoutter 1956, 288-289). Whether the figure is to be identified as a Syrian lady or goddess is uncertain; the association with the gazelle is interesting as this animal was connected with the cult of the Syrian god Reshep (Fulco 1976), but also that of Anukis. Above this figure is a depiction of a seated cat, which occasionally occurs together with the representation of Hathor heads on pottery (fig. 21; also Guidotti 1978), and an open blue lotus flower. Originally, the vessel probably possessed two such sets of motifs, framing the Hathor head. The fragment is decorated in a combination of painted, modelled and applied techniques, executed before firing. Figures of cats do not occur on painted pottery from Malkata or Amarna, nor are any known to me from other XVIIIth dynasty contexts. However, on a fragment of a bowl from Deir el-Medineh inscribed with the name of Amenhotep III there is a depiction of a Hathor head flanked by seated cats; it is otherwise undecorated (Guidotti 1978, fig. 5). The use of a cat motif on painted pottery would appear to be peculiar to Deir el-Medineh and to the Ramesside Period.

For this reason I would ascribe the elaborately decorated bowl illustrated on fig. 21 to the XIXth dynasty. It was found in a deposit with the magnificent Bes vase shown on the same figure (also Brissaud 1979, pl. IV) and other vessels against an exterior wall of the chapel of tomb 1348 at Deir el-Medineh (Bruyère 1937, 110-116). Bruyère suggested a late XVIIIth dynasty date for this jar (followed by Guidotti 1978, 110), though the decoration of other pieces from the deposit, such as the bowls (Bruyère 1937, fig. 48) would indicate a later date. The decoration of the Bes-vase is the most elaborate of its type, not only for the representation of the image on the front, but in the motifs on the rear of the neck. Here are depicted a crowned serpent, possibly representing the goddess Meretseger, and Bes the Musician playing tambourines and a double-flute.<sup>17</sup>

Dating from the Ramesside Period, blue-painted pottery is most frequently encountered from the region of Thebes, with a certain quantity known from the Memphite region. Though it has been found at other sites, such discoveries are on a comparatively small scale. It seems possible that its centres of manufacture were restricted to these two areas and that examples were distributed therefrom.<sup>18</sup>

**Colour Conventions used in the Figures**  
(after Nagel 1938, xi)



## NOTES

1. I would like to thank the Rev. G. Garner, former director of the Australian Institute of Archaeology, for allowing me unlimited access to the Institute's library, which greatly facilitated the preparation of this study. For permission to reproduce drawings from various publications by Petrie and the British School of Archaeology in Egypt, I am indebted to the Department of Egyptology, University College London. Similarly, for permission to include a large number of drawings taken from Nagel's study of the Deir el-Medineh pottery I am most grateful to L'Institut Français d'Archéologie Orientale, Cairo. For general comments on the pottery of this period see Brissaud 1979. The present study was originally prepared at short notice in 1981 and revised in 1982, 1984 & 1988.
2. It is hoped that material from recent excavations in Egypt at such sites as Memphis (Bourriau 1984 & 1986; Bourriau & Aston 1985b), Qantir (Aston 1987a), and Tell el-Dab'a for example, will rectify this situation and further enable attempts at defining the characteristics of Ramesside pottery to be placed upon firmer ground. Pottery of the period has also been found recently at Karnak North and in the New Kingdom cemetery at Saqqara (Bourriau & Aston 1985a; Aston 1985 and in *Journal of Egyptian Archaeology* 72 (1986), 20-1).
3. The material from tombs 359/360 illustrates this well (Nagel 1938, 14ff). The pottery is amongst the most important from the cemetery and comprises some 245 vessels or fragments. Apart from the names of the two owners of the tombs, Kaha and Inherkha'w, those of several other persons occur on the pottery, including Kaha's father. The other names cannot be identified with certainty as belonging to members of the same family. See note 4 and page 56.
4. Dated groups which have been used are as follows:  
Ramses II: Deir el-Medineh tombs 356, 357, 360 & 1164; Gurob tombs 1, 7, 409, 605 & 606  
Seti II: burnt deposit at Gurob  
Siptah & Twosret: foundation deposits from their mortuary temples  
Ramses III: foundation deposit at Tell el-Retebeh  
Tomb 359 at Deir el-Medineh can be dated to the successors of Ramses III, though distinguishing its original contents from those of tomb 360 is difficult (chapter III, notes 7 & 17). Tomb 1159A belongs to the early part of the XXth dynasty. Nagel believed that the pottery from Kom 2 and Kom Sud at Deir el-Medineh could be dated to the early XIXth dynasty and the first half of the XXth dynasty respectively (Nagel 1938, 138 & 146), on the basis of associated inscribed ostraca. The corpus of types presented here is based primarily upon material from the groups listed above.
5. For surviving wheel parts see Hope 1981 & 1982a-b; the pieces described probably originate from the type of wheel depicted in the tomb of Kenamun (Holthoer 1977,

- 19; also cover illustration of this volume).
6. For a discussion of variants of this type identified by the author, see the chapter on the pottery from Malkata.
  7. Also termed bichrome decoration elsewhere: Bourriau & Aston 1985a, 39-40.
  8. For a discussion of this vessel see now Boston 1982, no. 69 and Hope 1987b, 114 & pl. XXXVIIIb. See also comments in chapter I.
  9. See comments on this type of vessel in chapter I.
  10. On this problem see Romano, J., 'The Origin of the Bes-image', *Bulletin of the Egyptological Seminar* 2 (1980) 39-56 and Boston 1982, nos 281 & 420.
  11. These chalices are discussed in Nagel 1938, 199-206.
  12. See also comments in Bourriau & Aston 1985a, 51 for Ramesside features at Saqqara.
  13. I am grateful to Edwin C. Brock for drawing my attention to this material.
  14. Compare Bourriau & Aston 1985a, pls 35.41-4 & 36.45; Petrie 1890, pl. XXI.41,46 & 50.
  15. An earlier example of a similar confusion is attested by fragments from Amarna in the Petrie Museum, University College London (UC 24544). They come from the neck of a jar similar in shape to fig. 18d, which has a large Hathor head modelled into the wall, flanked by red and black undulating lines. There is no trace of blue decoration; they attest the existence of a rare variant on the standard blue-painted Hathor-headed jar.
  16. I am grateful to Dr Mohammed Saleh for permission to publish a photograph of this piece.
  17. The drawing of the decoration on the rear of the neck of this vessels given by Bruyere was reproduced in Hope 1987a (43, ill. 55), there incorrectly identified as on a stand. For comments on painted Bes-vases see Boston 1982, no. 75 & Bourriau 1981, no. 140 for a representation of Bes playing a double flute, also Hope forthcoming.
  18. On this aspect of specialised manufacture see comments in the chapter on the pottery from Malkata.

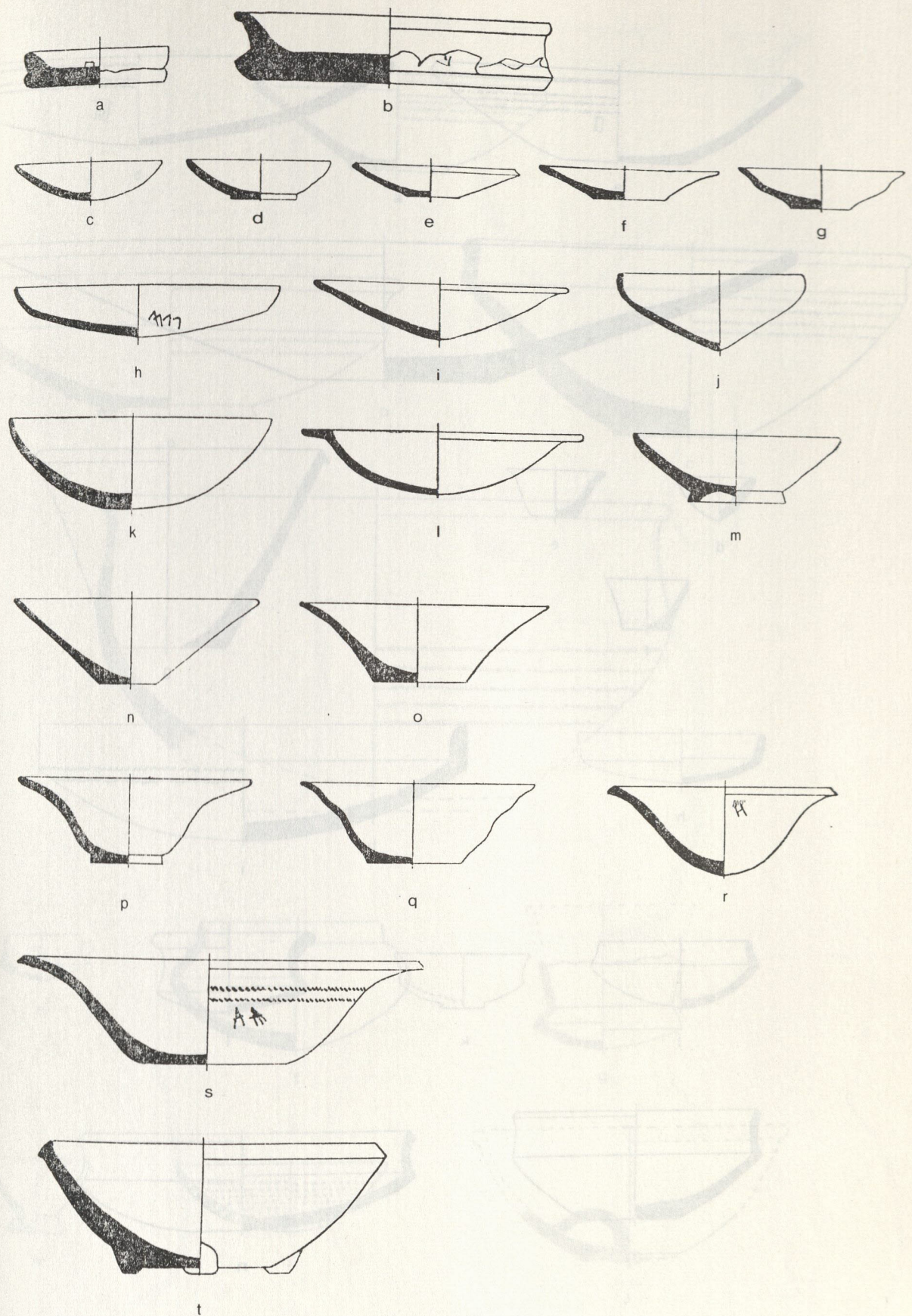


Figure 1: Uncoated Nile Silt Types.

Scale 1:5



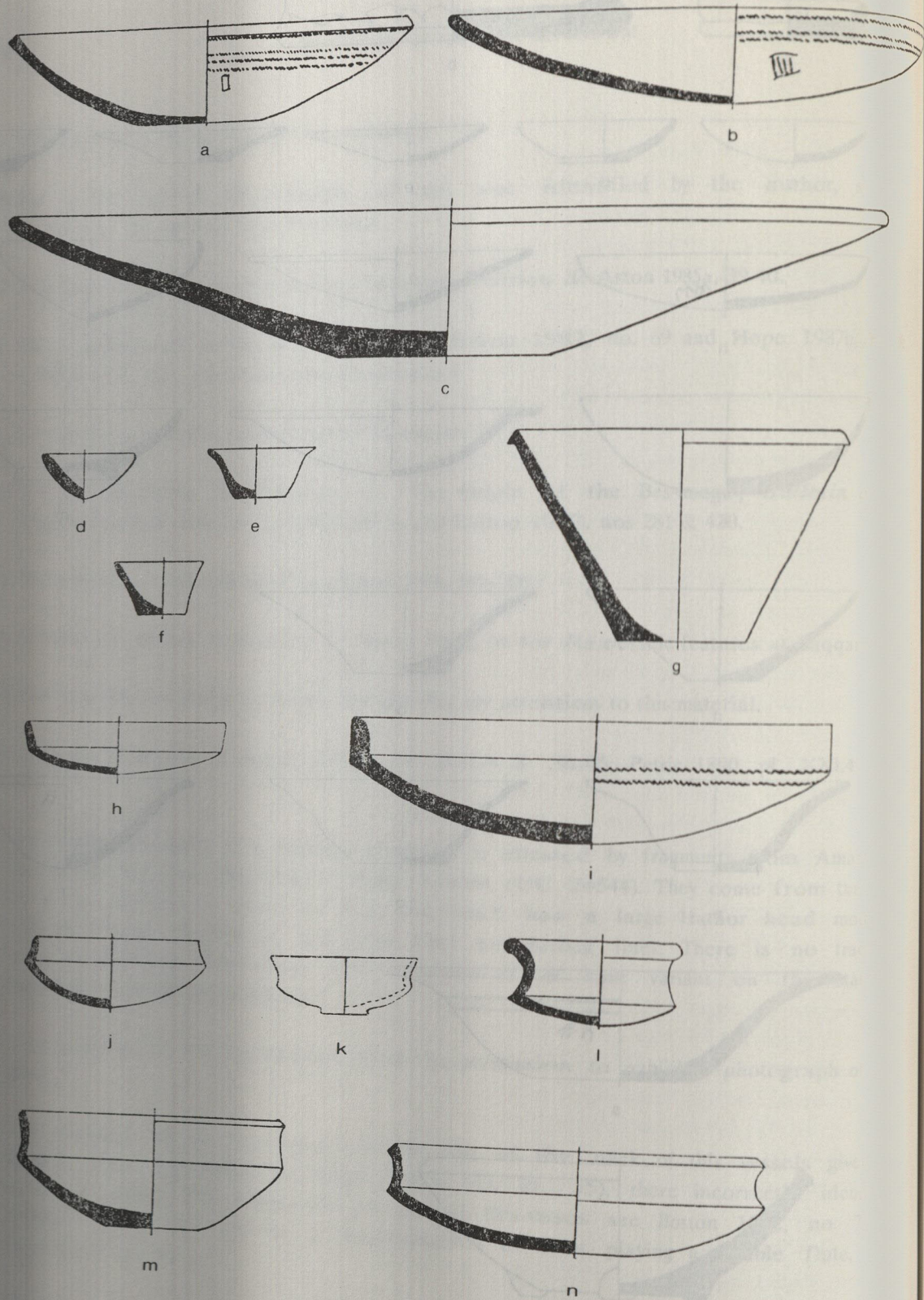


Figure 2: Uncoated Nile Silt Types.

Scale 1:5

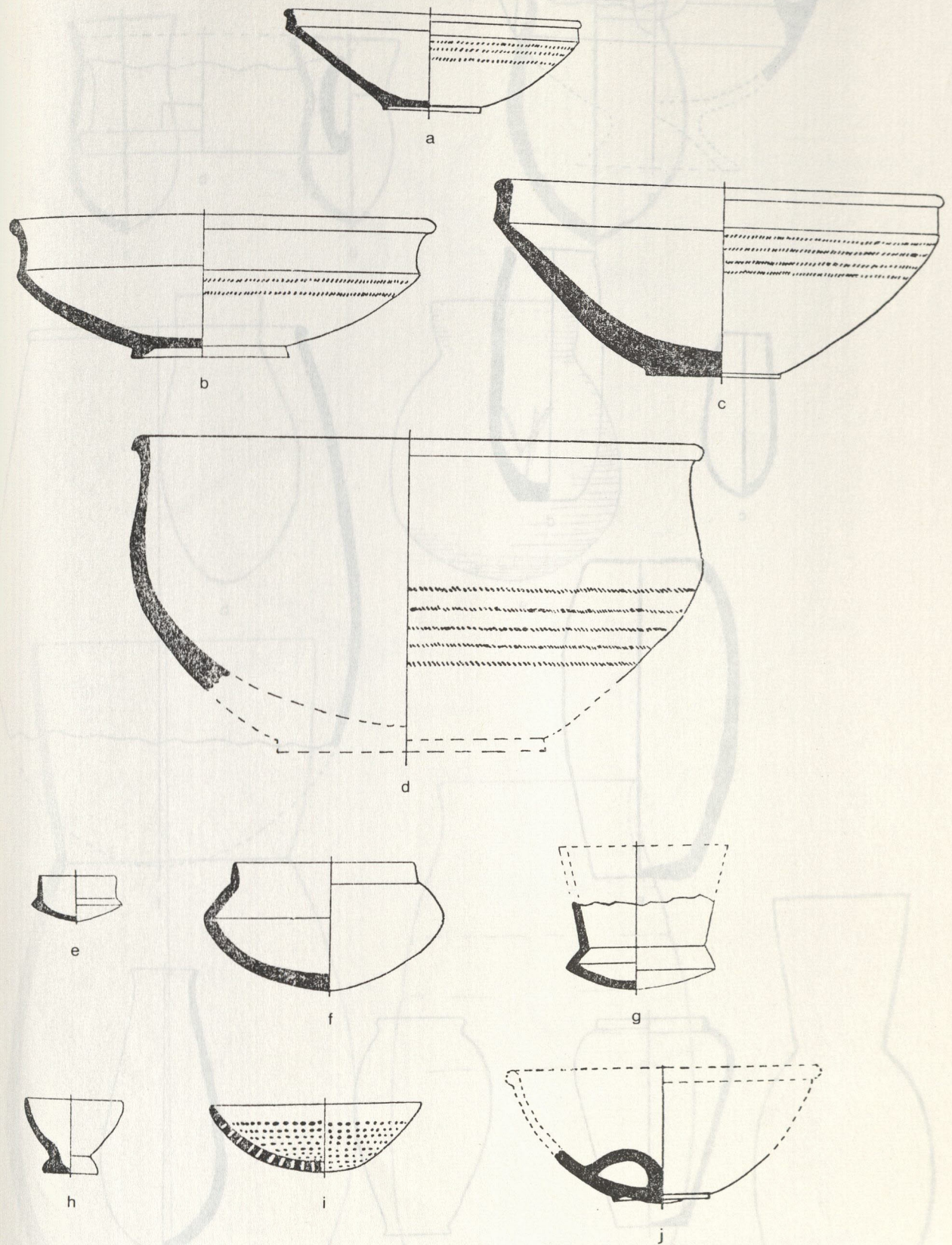


Figure 3: Uncoated Nile Silt Types.

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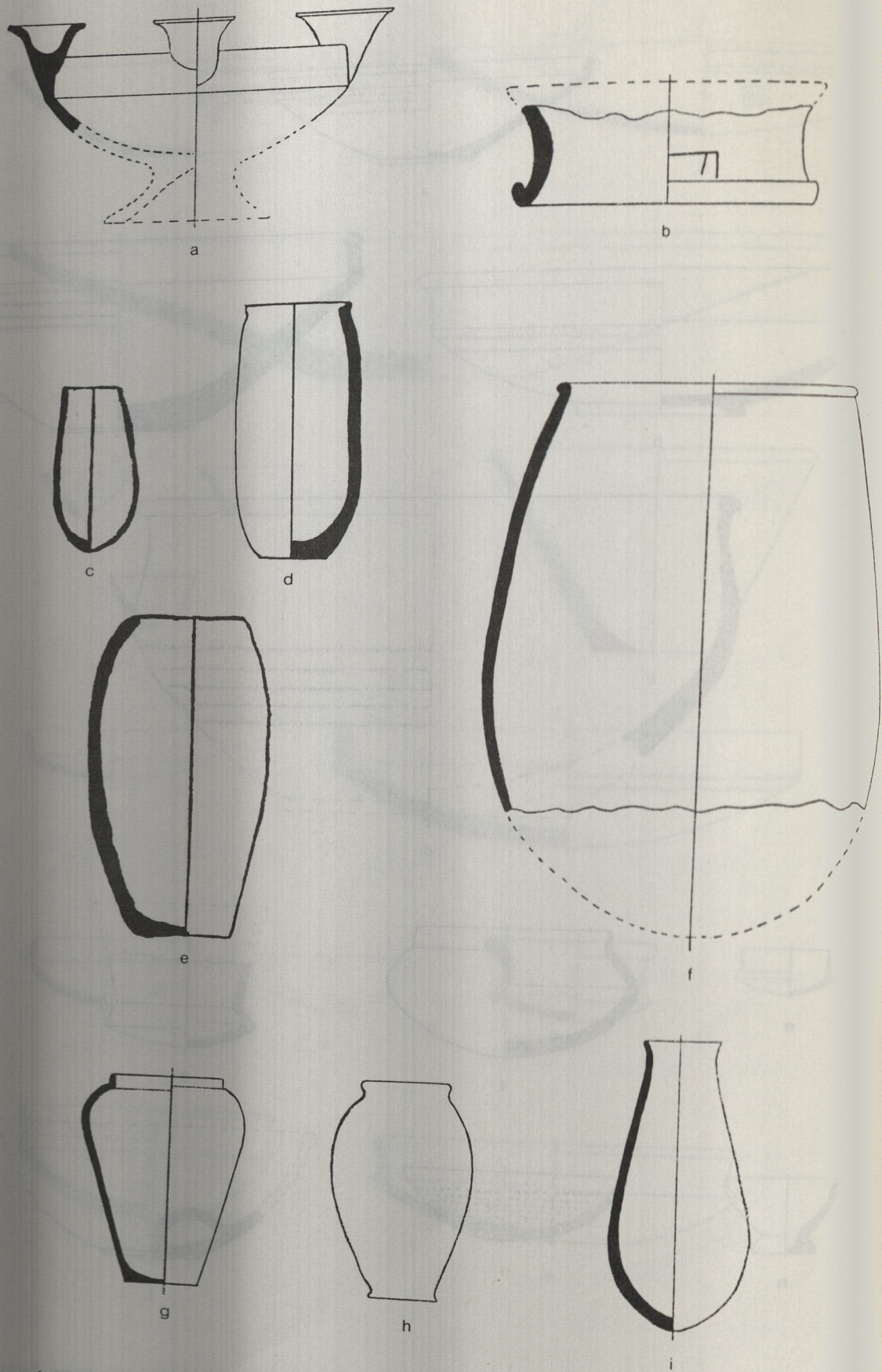


Figure 4: Uncoated Nile Silt Types.

Scale 1:5

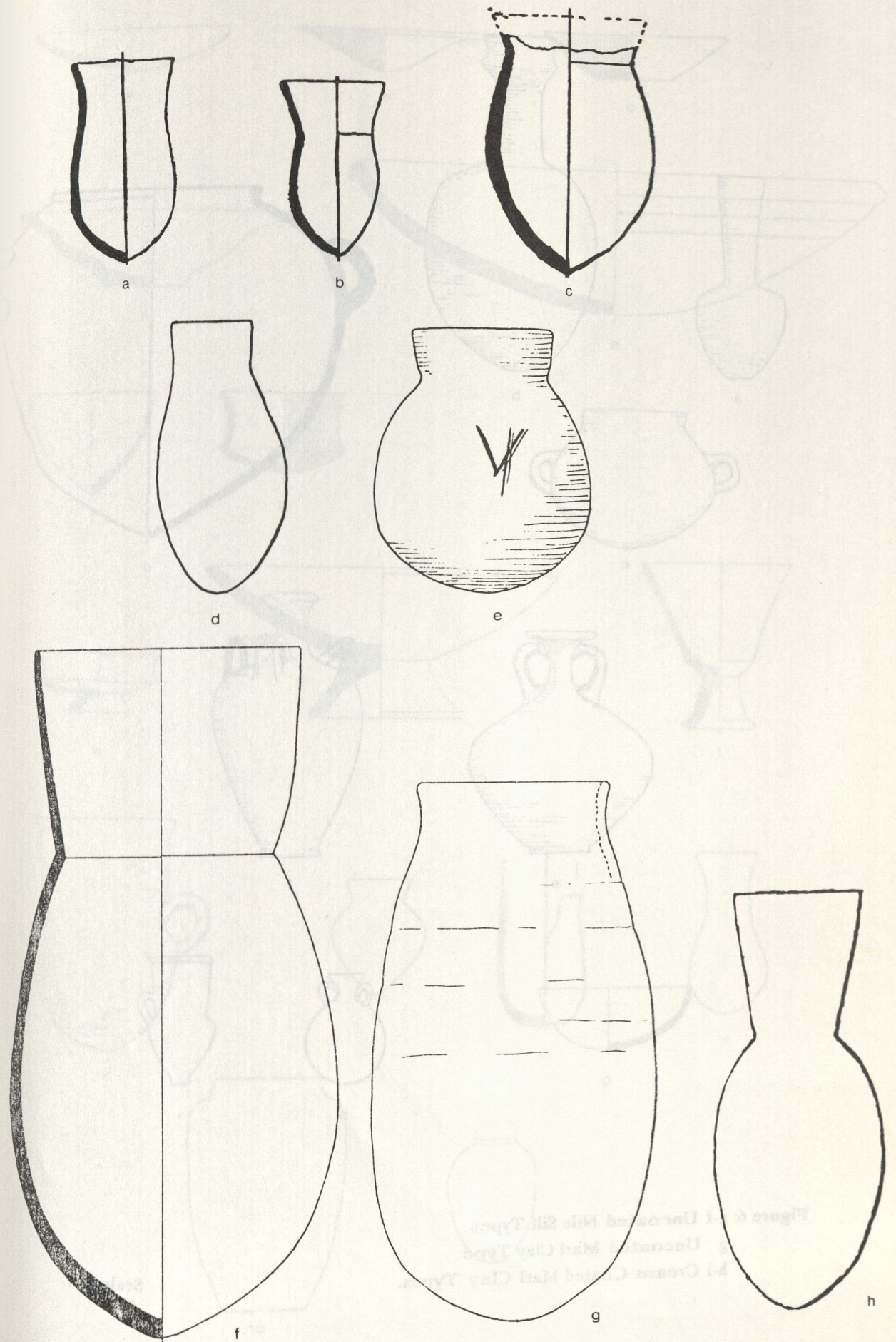


Figure 5: Uncoated Nile Silt Types.

Scale 1:5

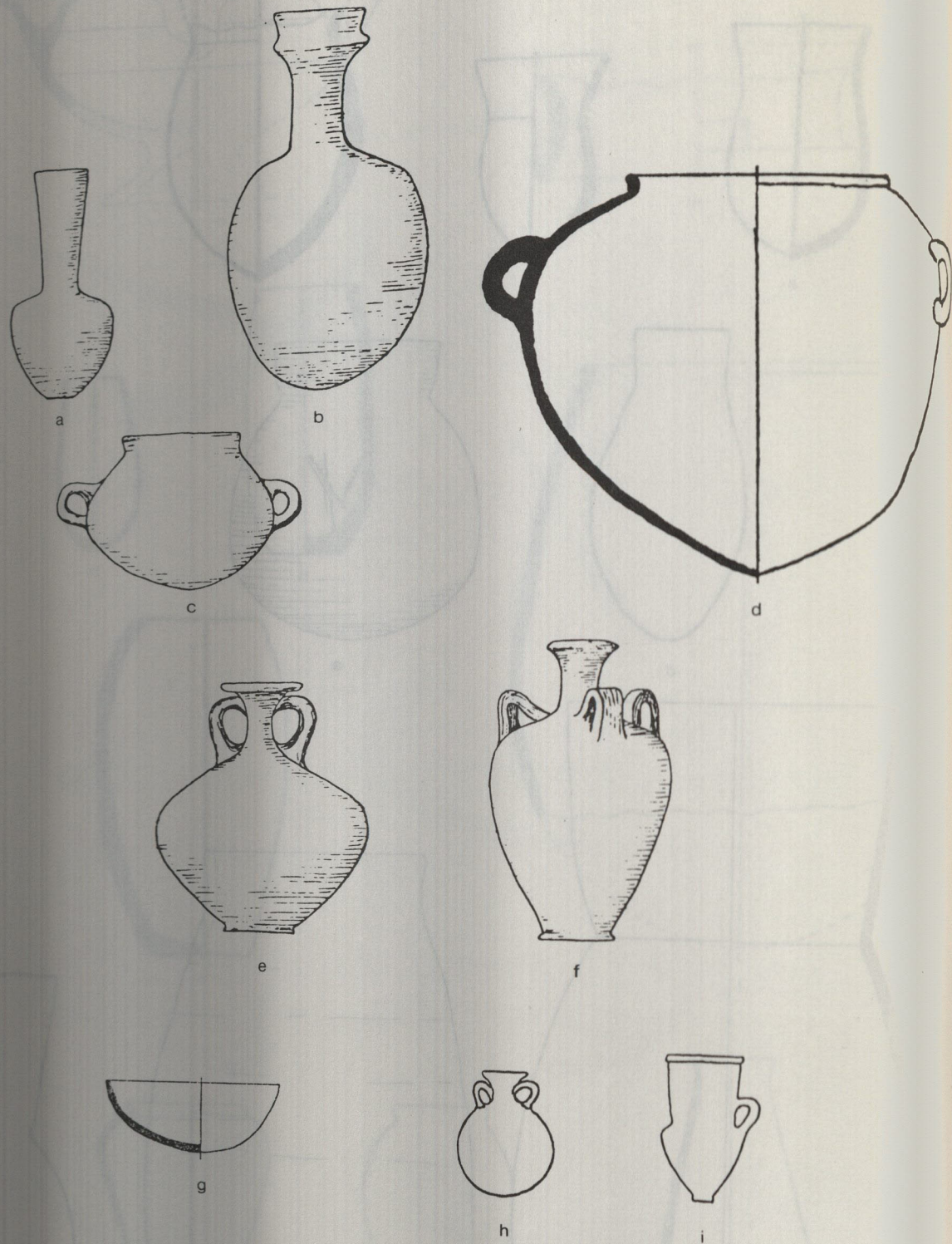


Figure 6: a-f Uncoated Nile Silt Types.  
 g Uncoated Marl Clay Type.  
 h-i Cream-Coated Marl Clay Types.

Scale 1:5

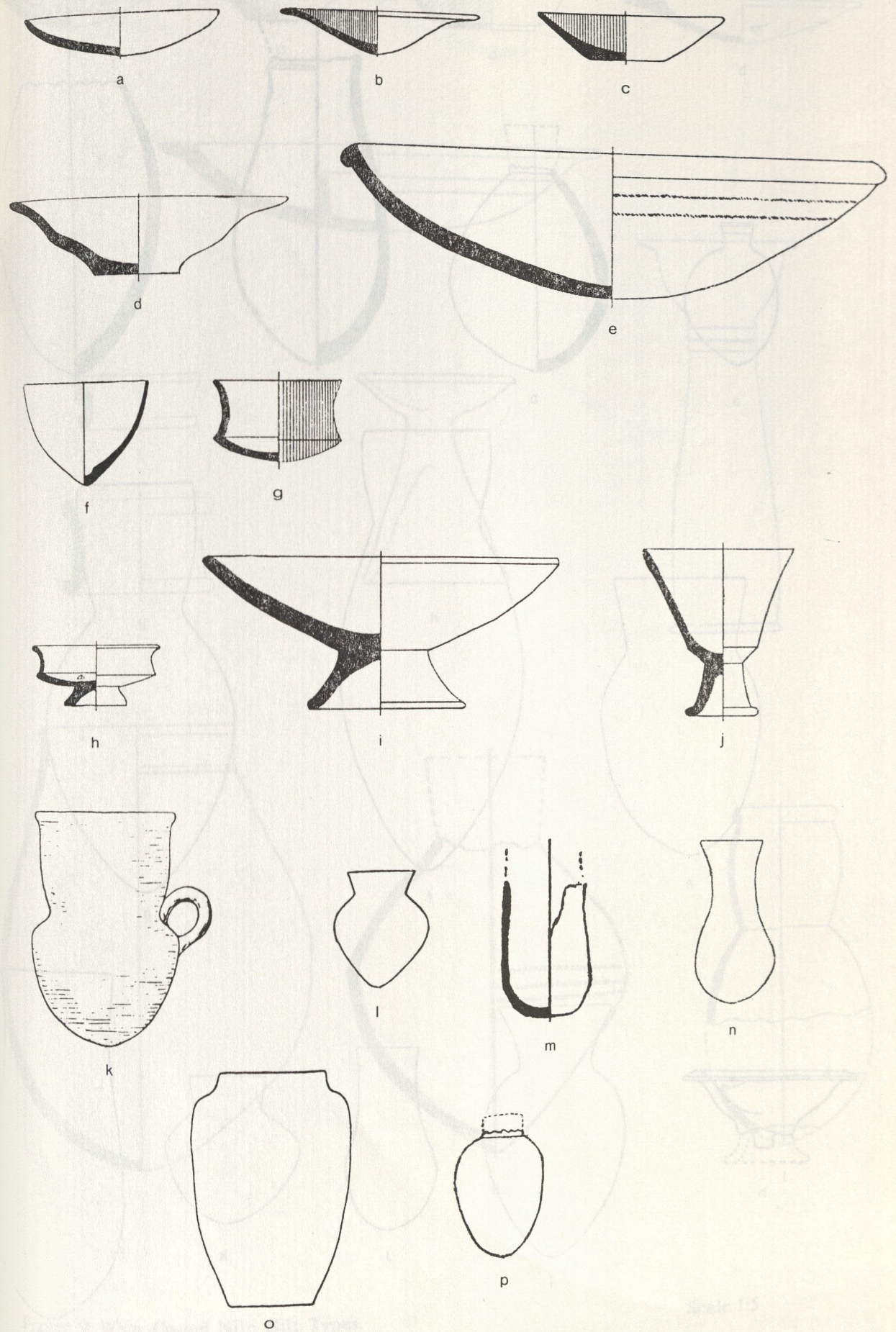


Figure 7: Red-Coated Nile Silt Types.

Scale 1:5

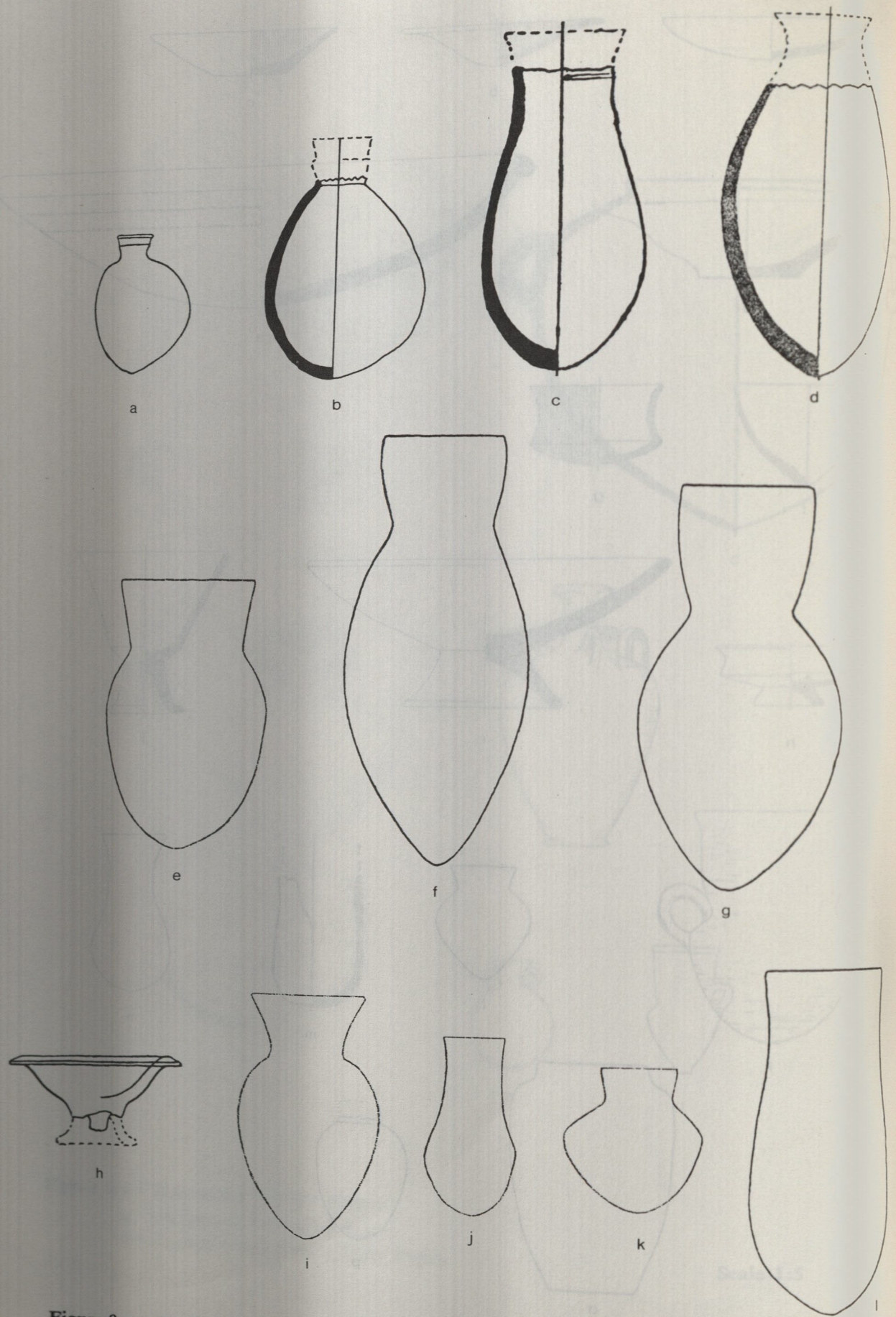


Figure 8: a-g Red-Coated Nile Silt Types.  
h-l Cream-Coated Nile Silt Types.

Scale 1:5

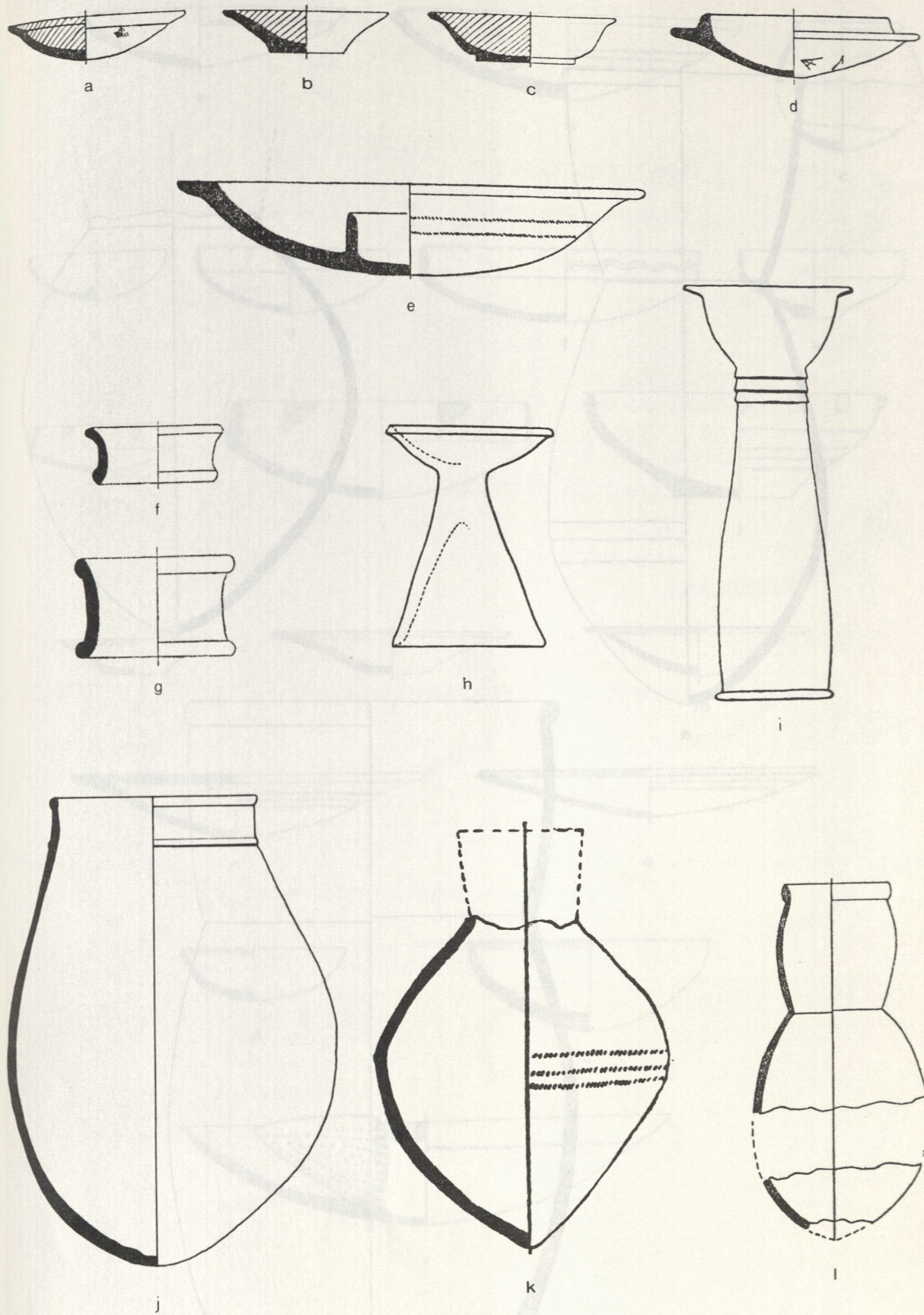


Figure 9: White-Coated Nile Silt Types.

Scale 1:5

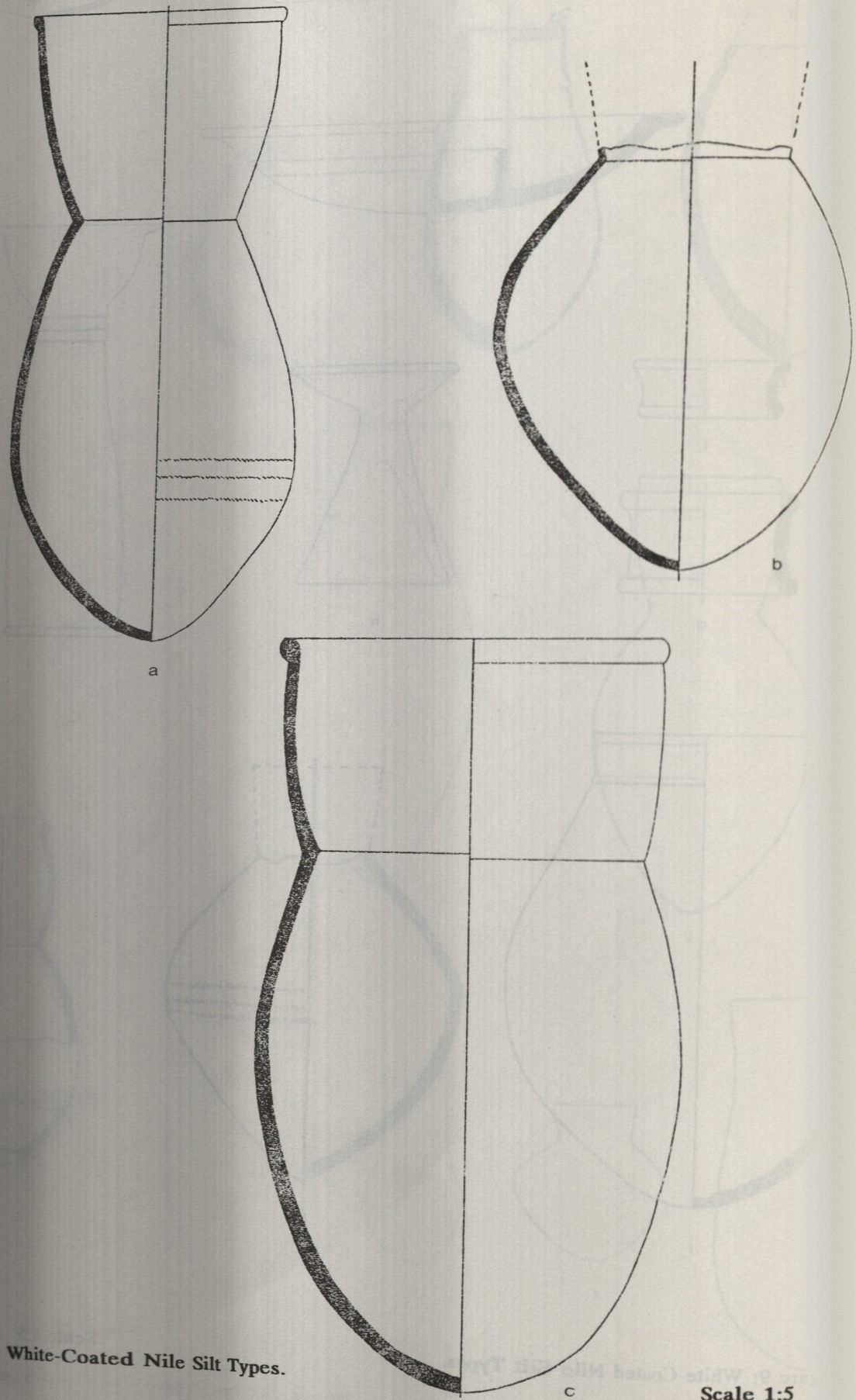


Figure 10: White-Coated Nile Silt Types.

Scale 1:5

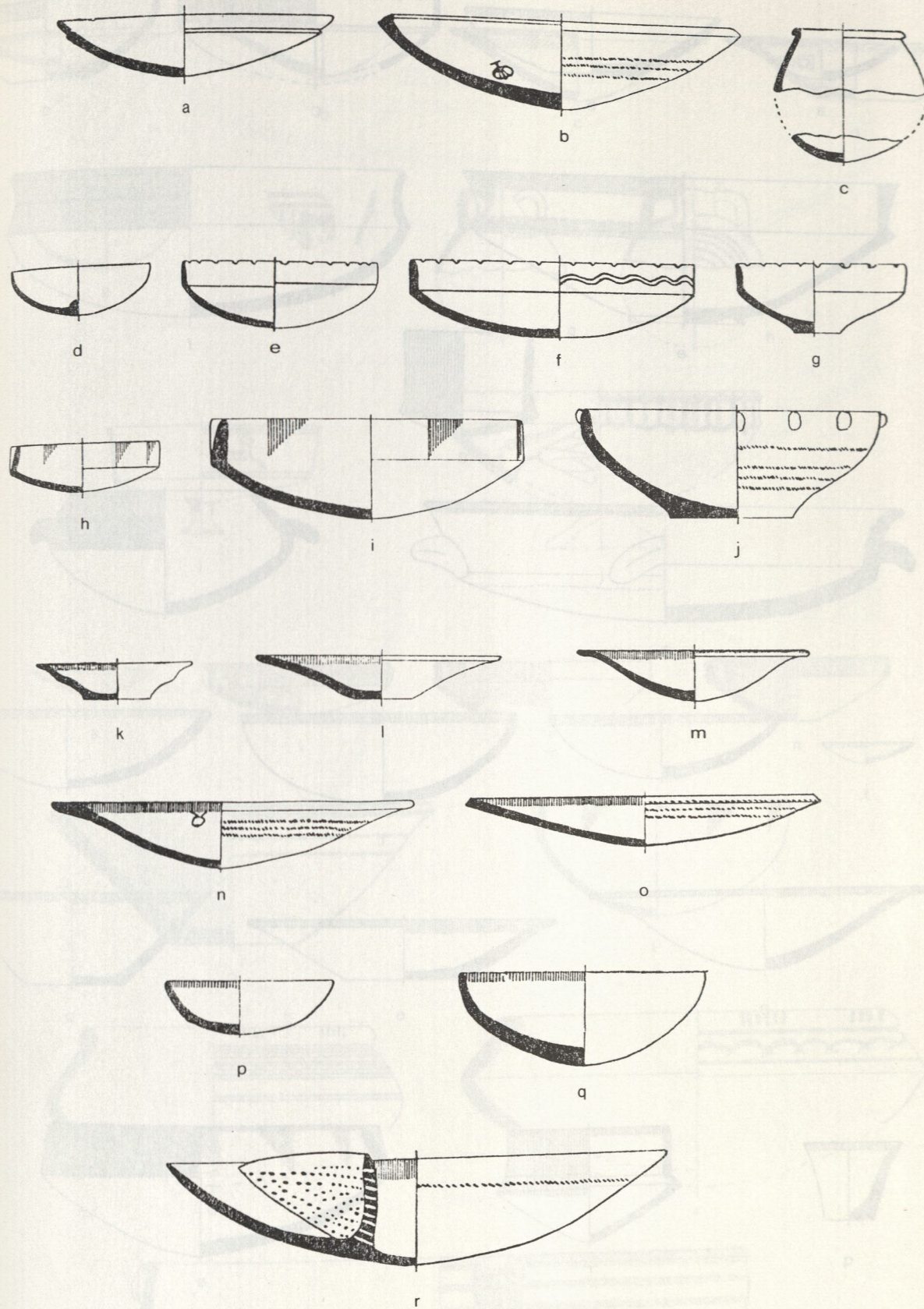


Figure 11: a Black-Coated (?) Nile Silt Type.  
 b-c Miscellaneous Coated Marl Clay Types.  
 d-r Linear Decorated Uncoated Nile Silt Types.

Scale 1:5

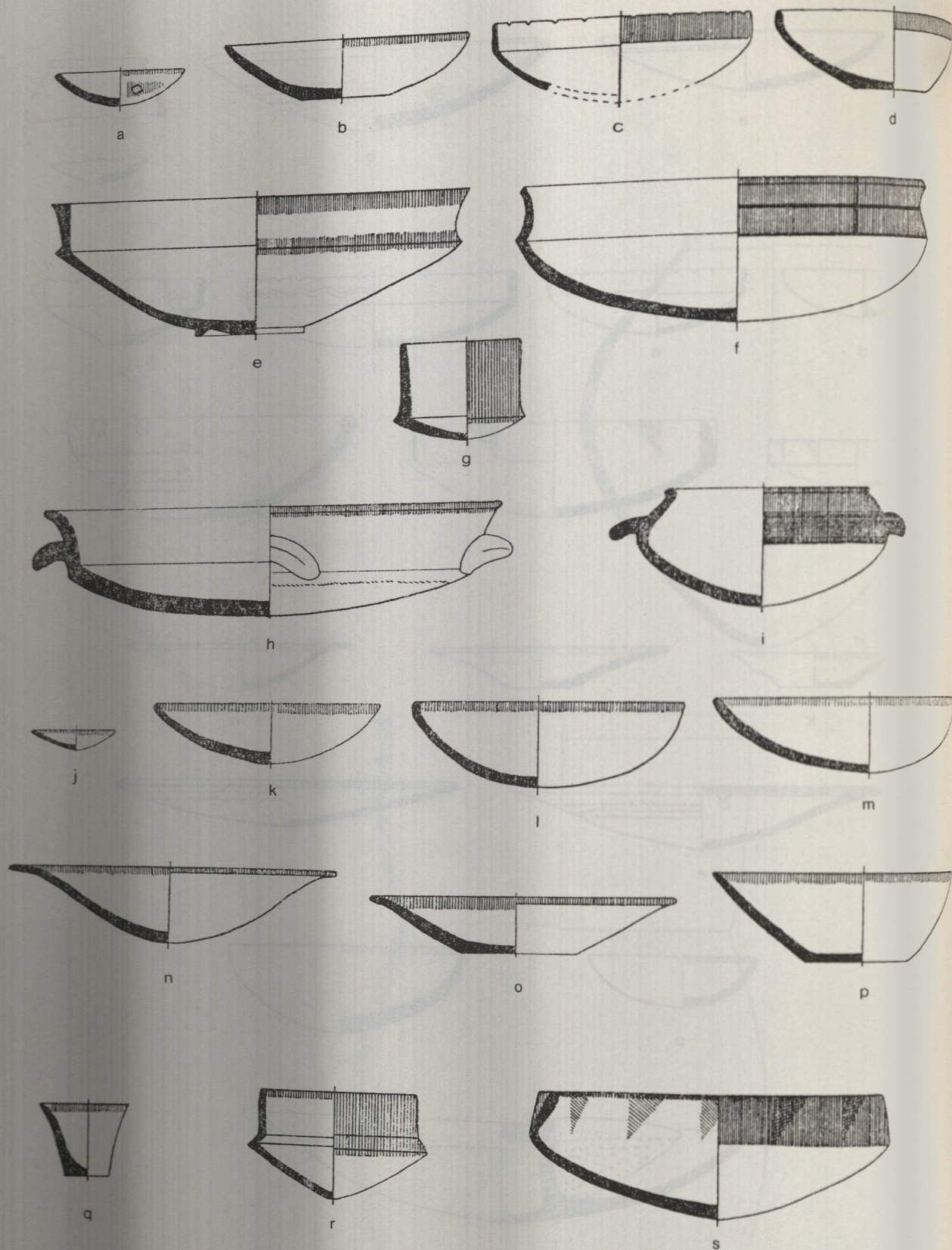


Figure 12: Linear Decorated Uncoated Nile Silt Types.

Scale 1:5

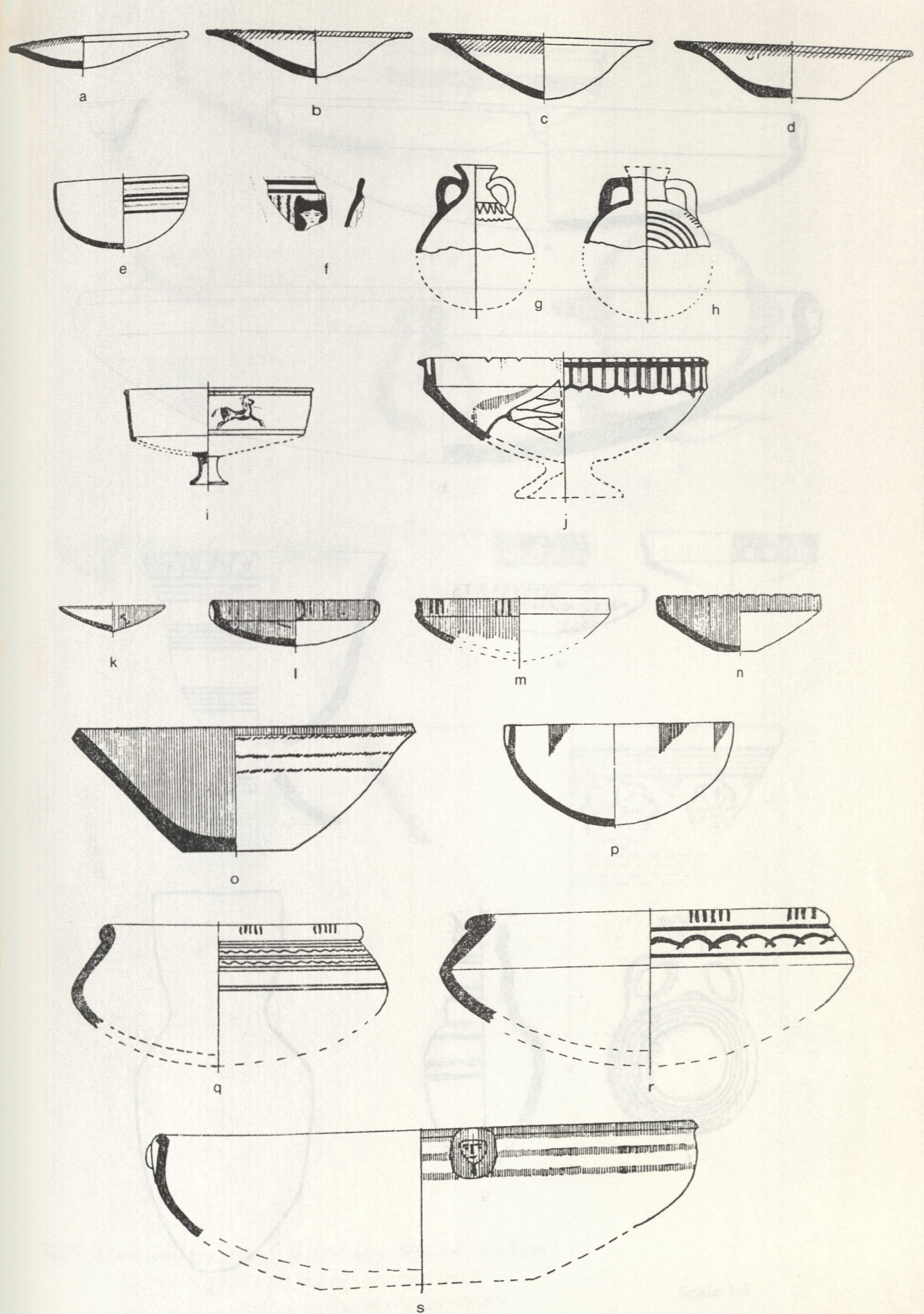


Figure 13: Linear Decorated Types. a-d Uncoated Nile Silt.  
e-j Uncoated Marl Clay. k-s Red-Coated Nile Silt.

Scale 1:5

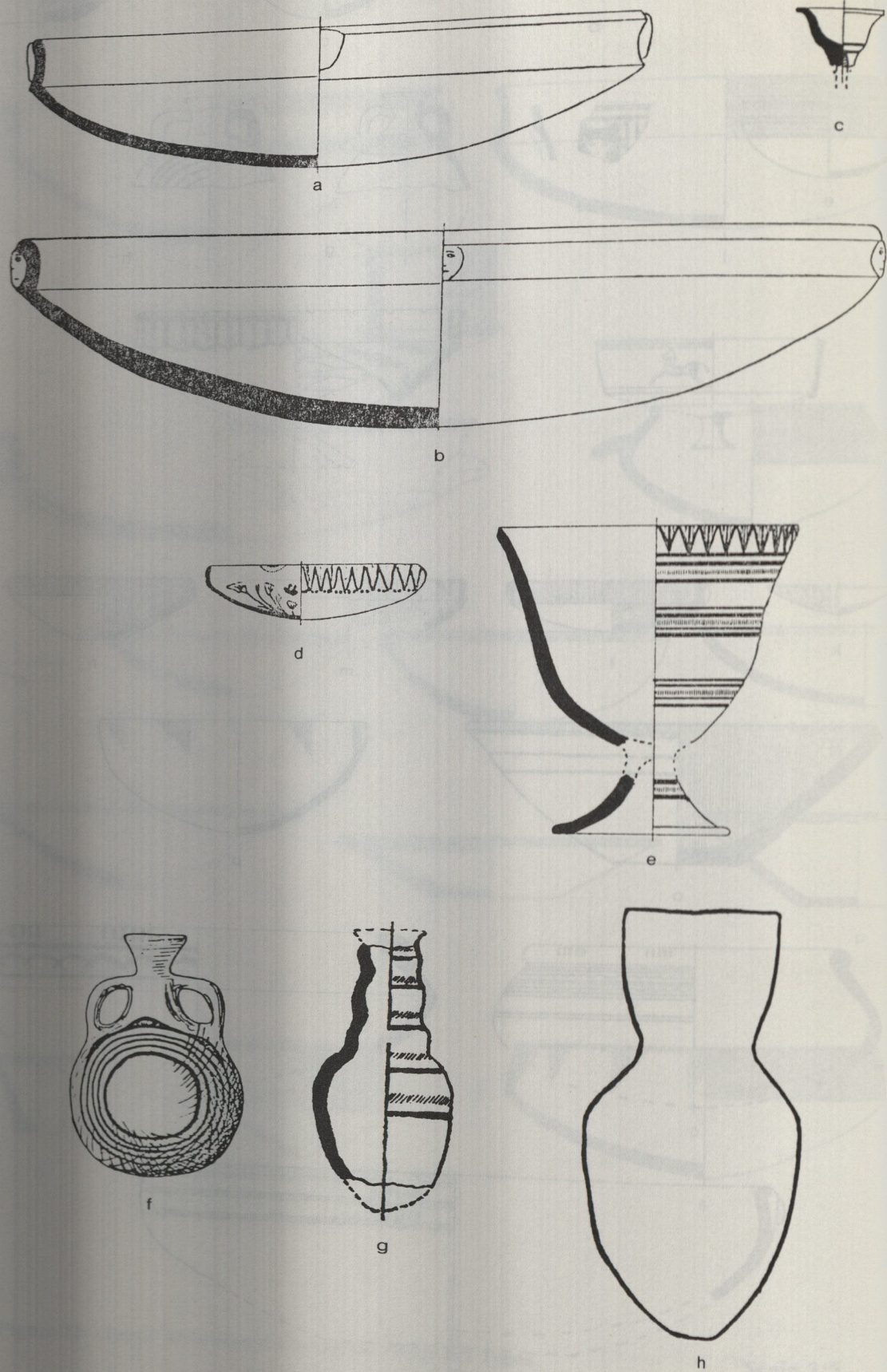


Figure 14: Linear Decorated Types. a-c Red-Coated Nile Silt.  
d-h Cream-Coated Nile Silt.

Scale 1:5

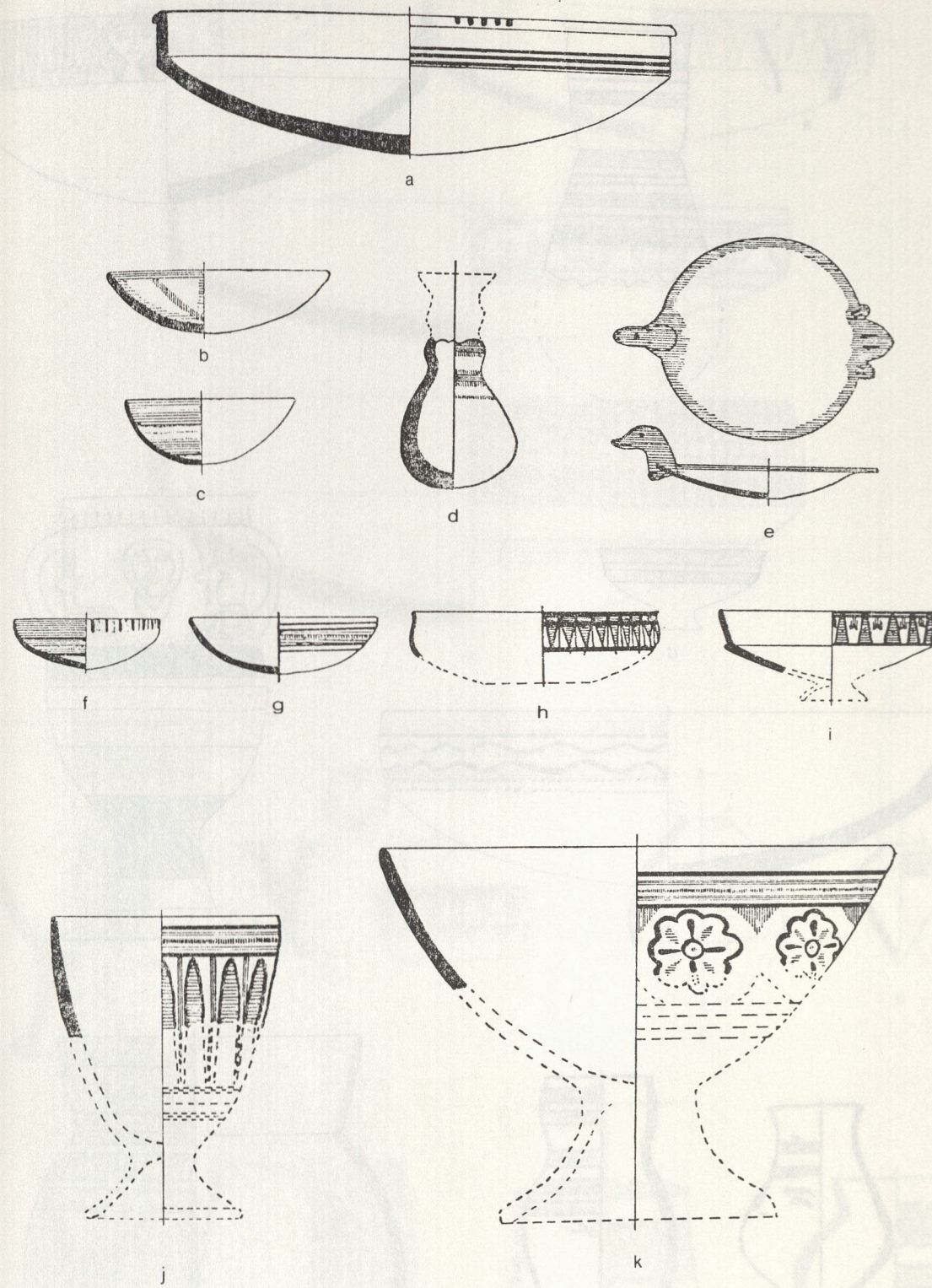


Figure 15: a Linear Decorated Red-Coated Marl Clay Type.  
b-e Blue-Painted Uncoated Nile Silt Types.  
f-k Blue-Painted Uncoated Marl Clay Types.

Scale 1:5

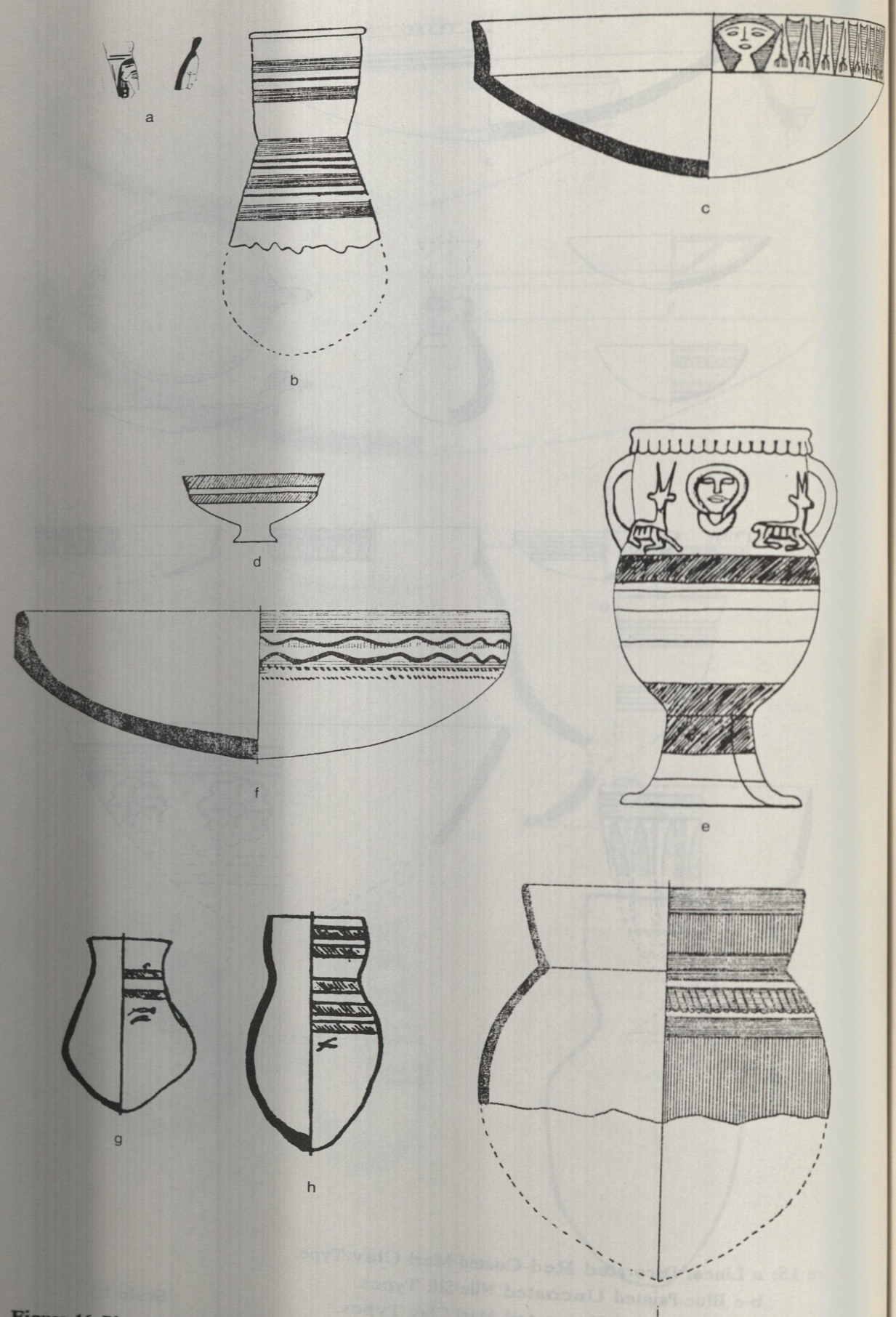


Figure 16: Blue-Painted Nile Silt Types. a-b Uncoated Marl Clay.  
 c Red- and Cream-Coated Nile Silt.  
 d-i Red-Coated Nile Silt.

Scale 1:5

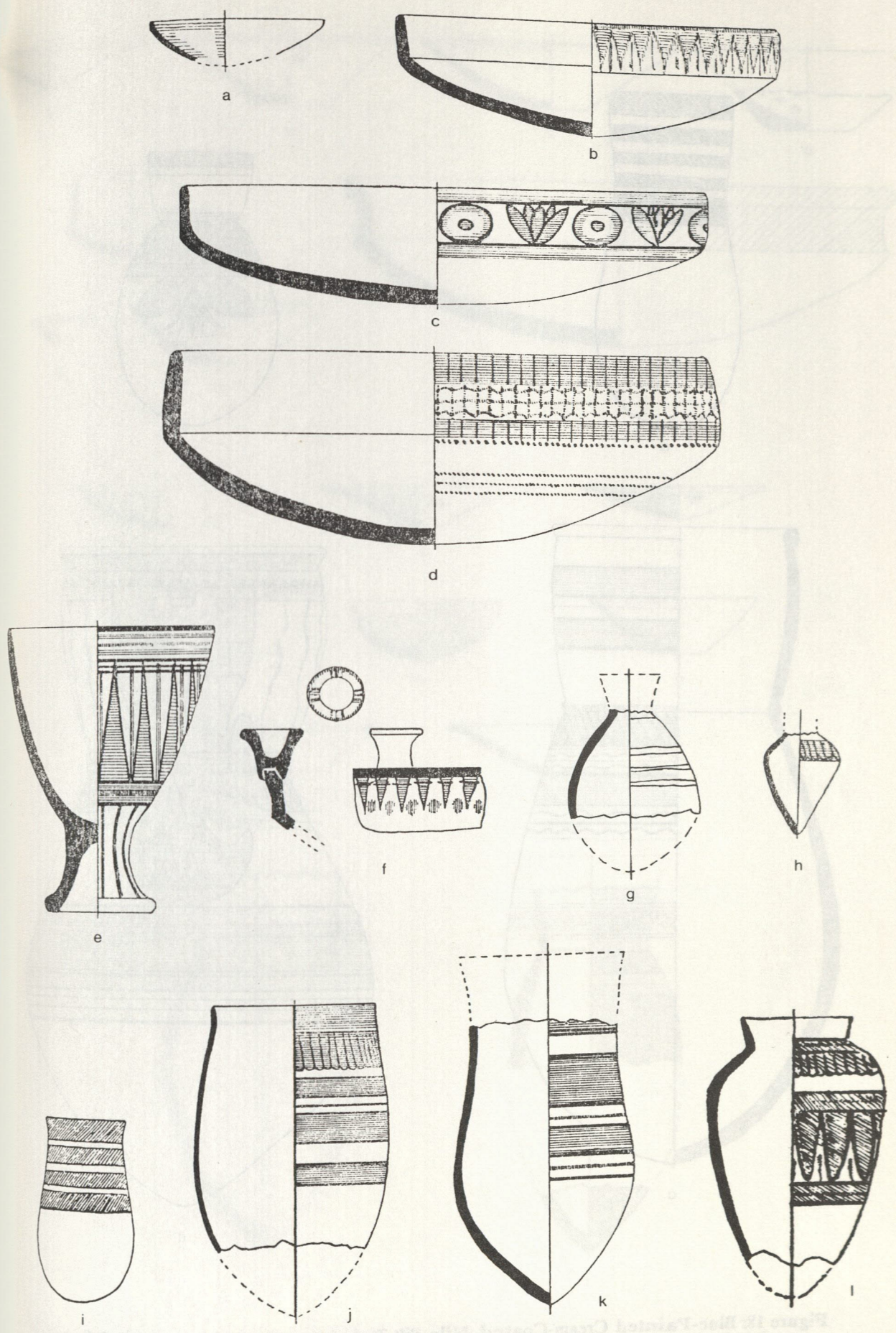


Figure 17: Blue-Painted Cream-Coated Nile Silt Types.

Scale 1:5



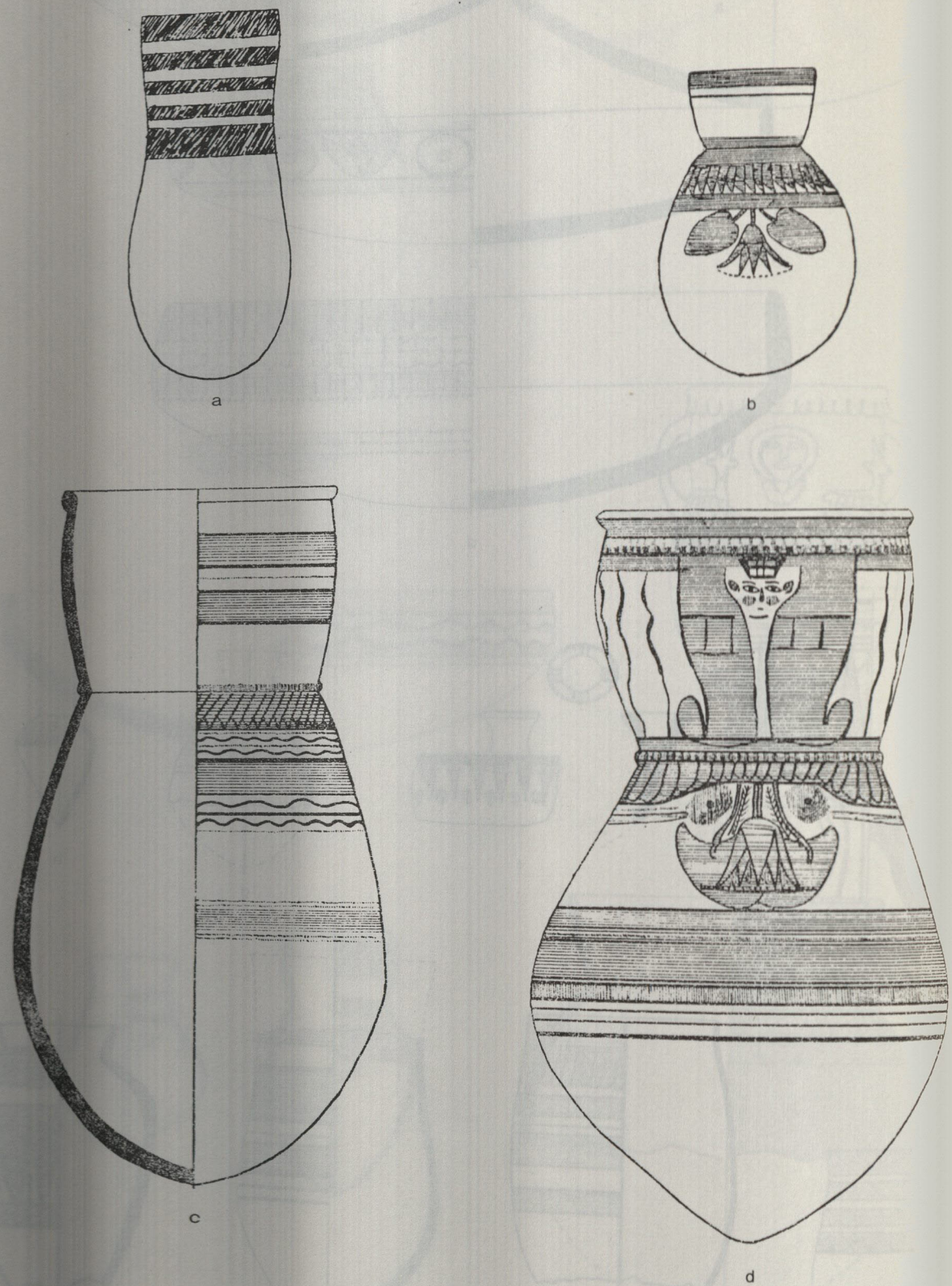


Figure 18: Blue-Painted Cream-Coated Nile Silt Types.

Scale 1:5

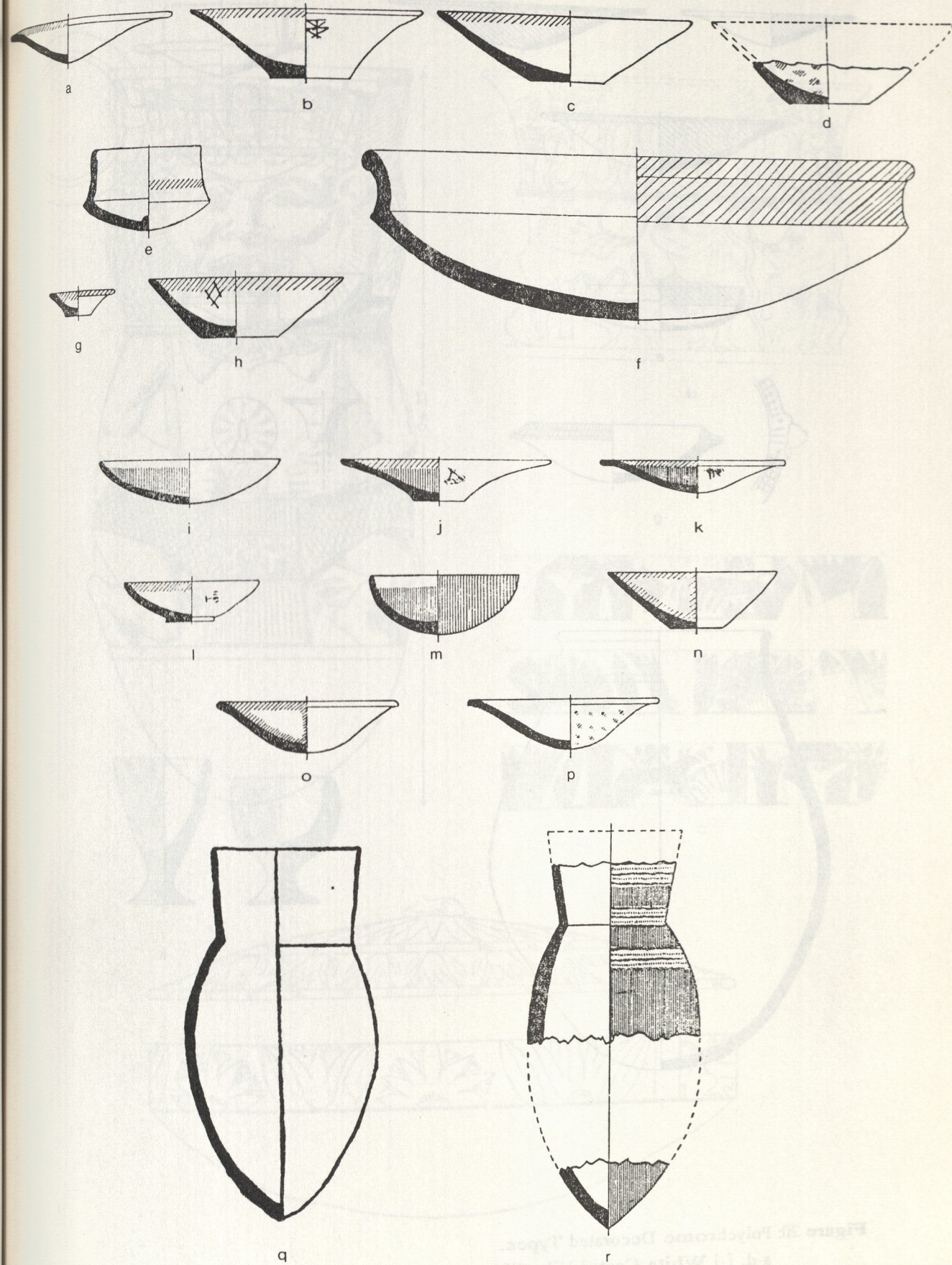


Figure 19: Polychrome Decorated Types.

a-h Uncoated Nile Silt. i-r Red-Coated Nile Silt.

Scale 1:5

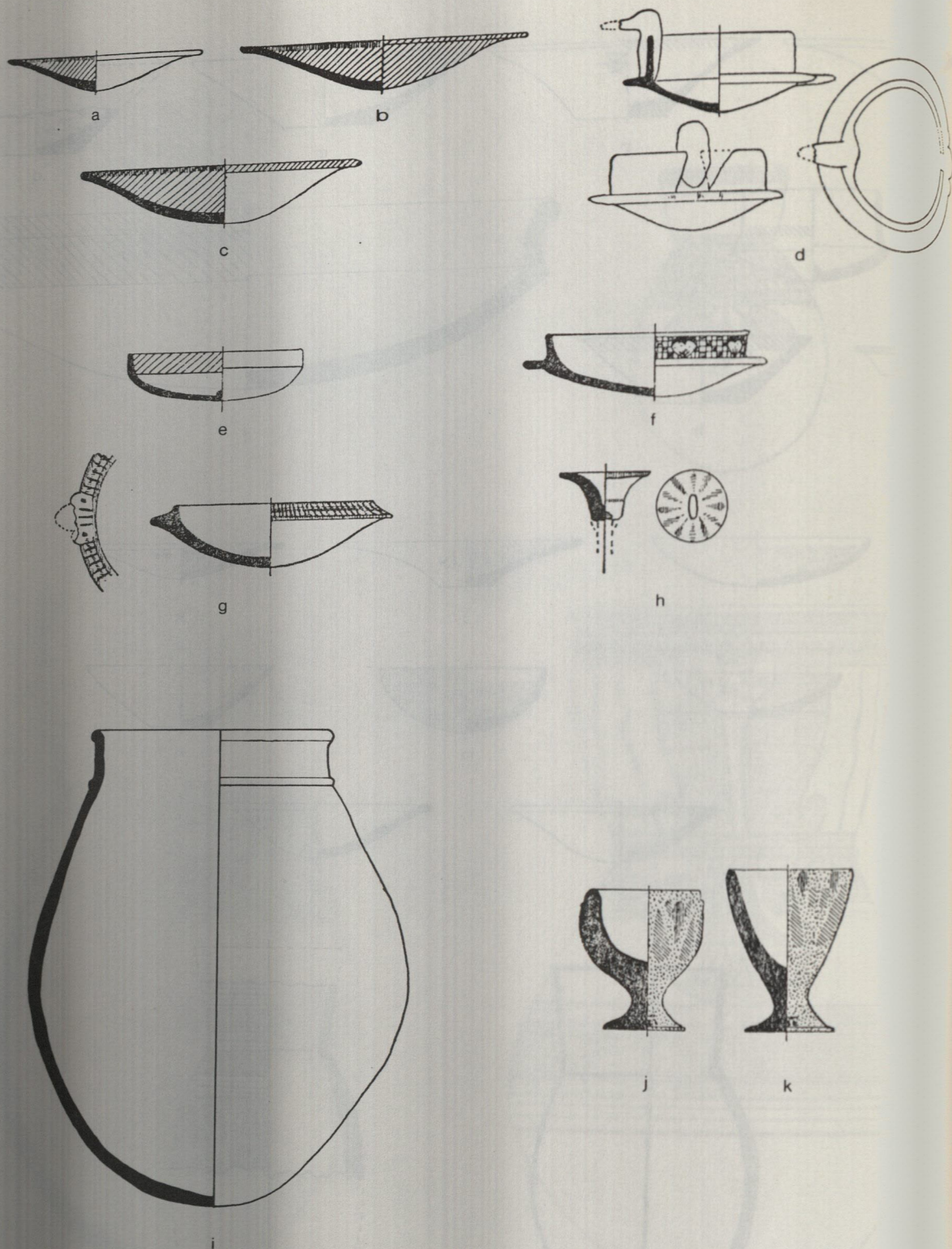


Figure 20: Polychrome Decorated Types.  
 a-d, f-i White-Coated Nile Silt.  
 e Uncoated Marl Clay. j-k Yellow-Coated Nile Silt.

Scale 1:5

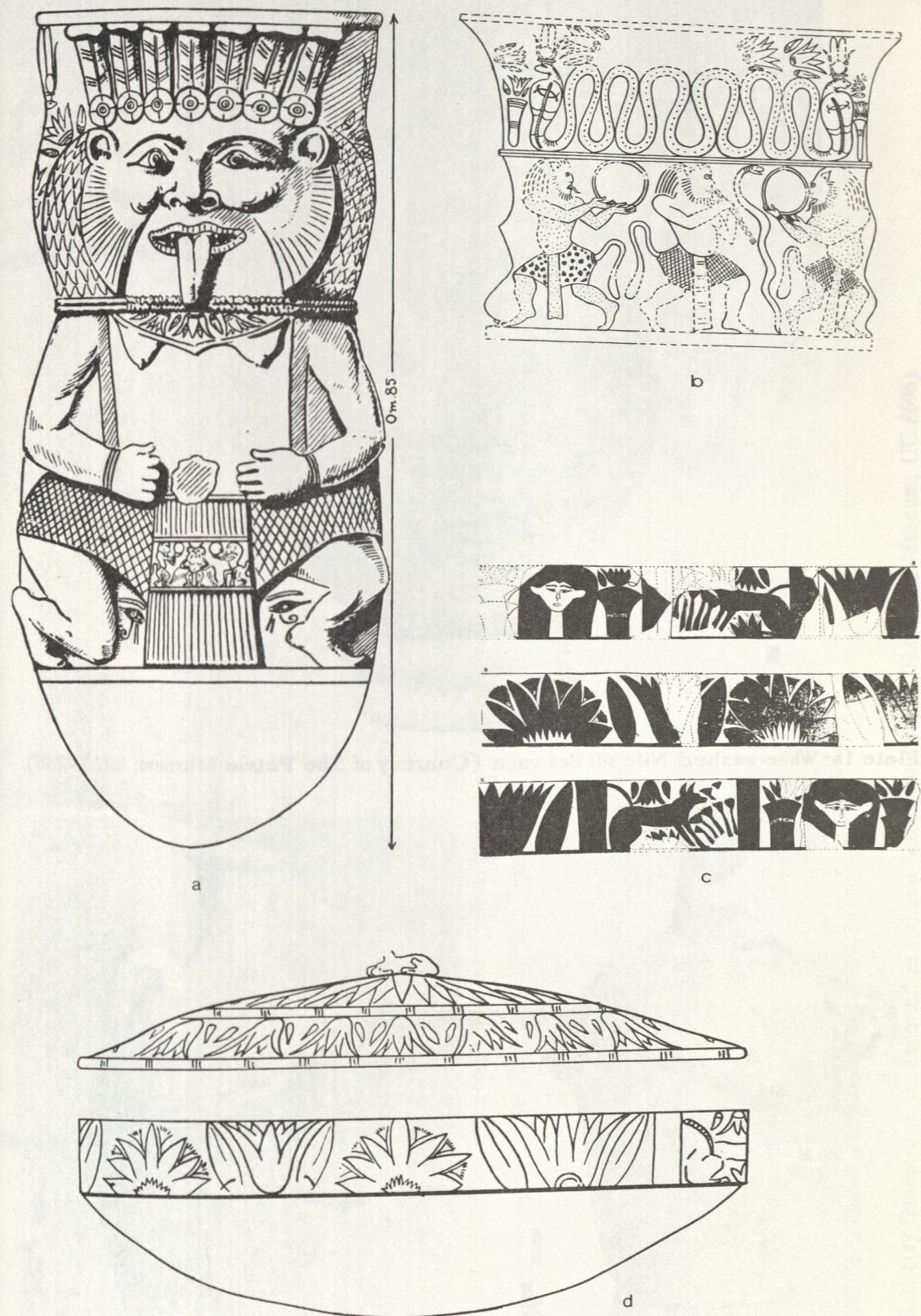


Figure 21: Blue-Painted Cream-Coated Nile Silt Vessels; Deir el-Medineh tomb 1138.  
 a Bes-Image Vase. b Decoration on neck of Bes-Image Vase.  
 c Decoration on the side of the large bowl shown in d.  
 d Large Bowl and Lid.

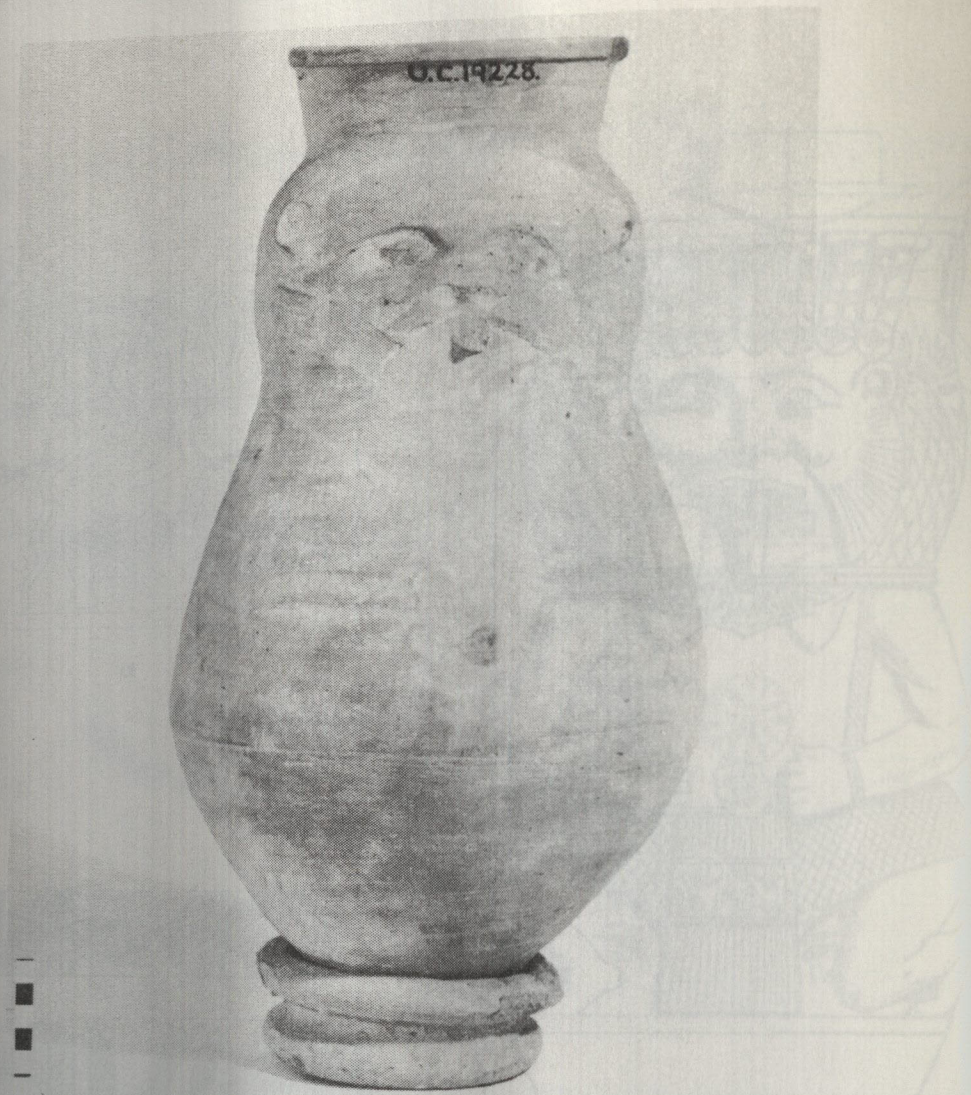


Plate 1a: White-washed Nile silt Bes vase (Courtesy of The Petrie Museum; UC 19288).

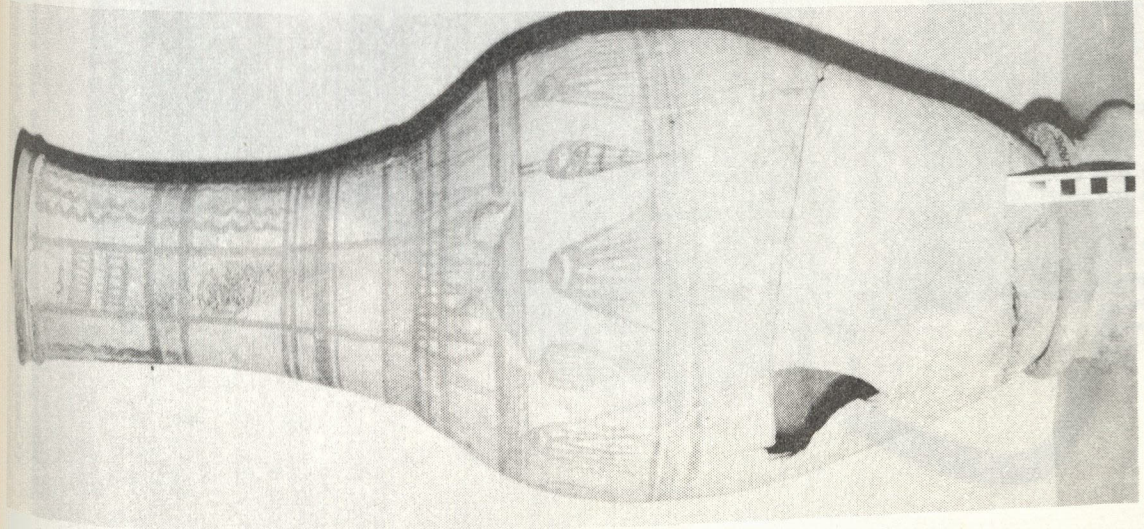
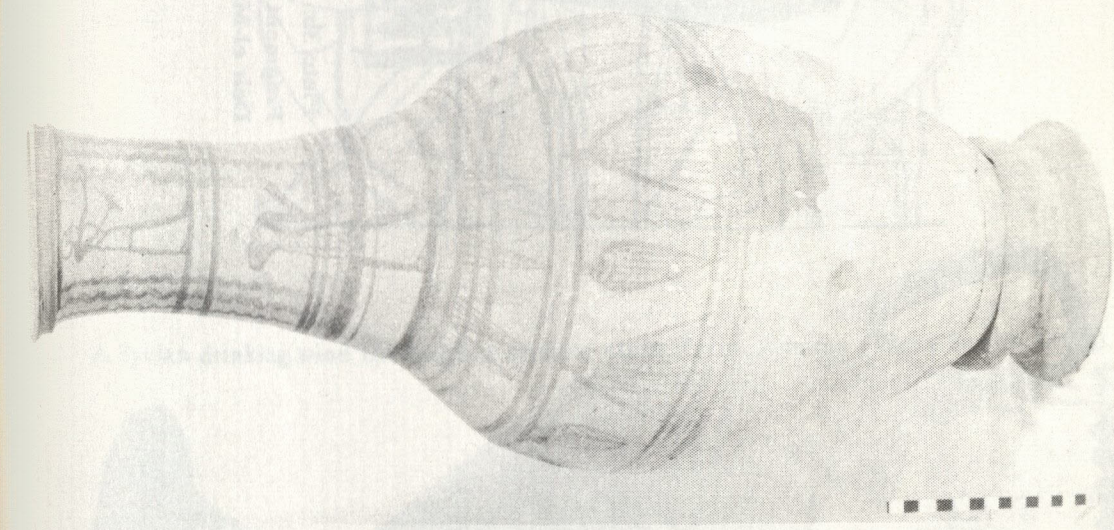
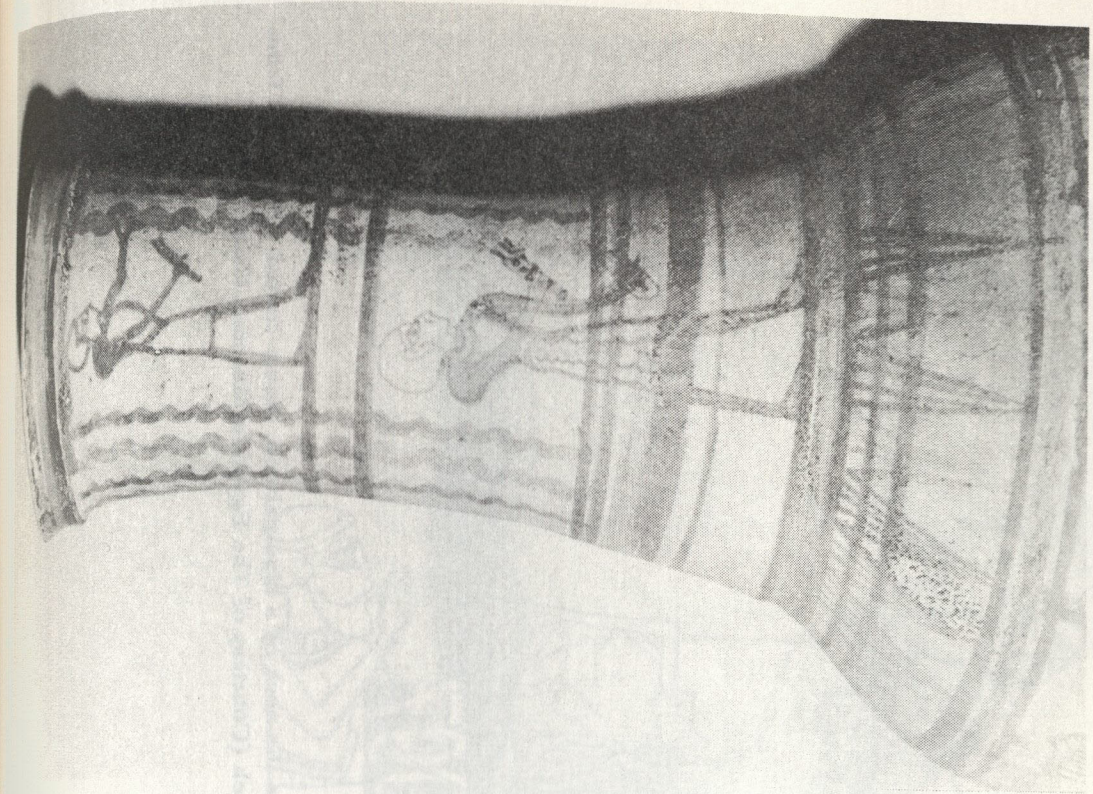


Plate 2: Marl clay feminoform jar decorated in red and black (Courtesy of The Petrie Museum; UC 8696).

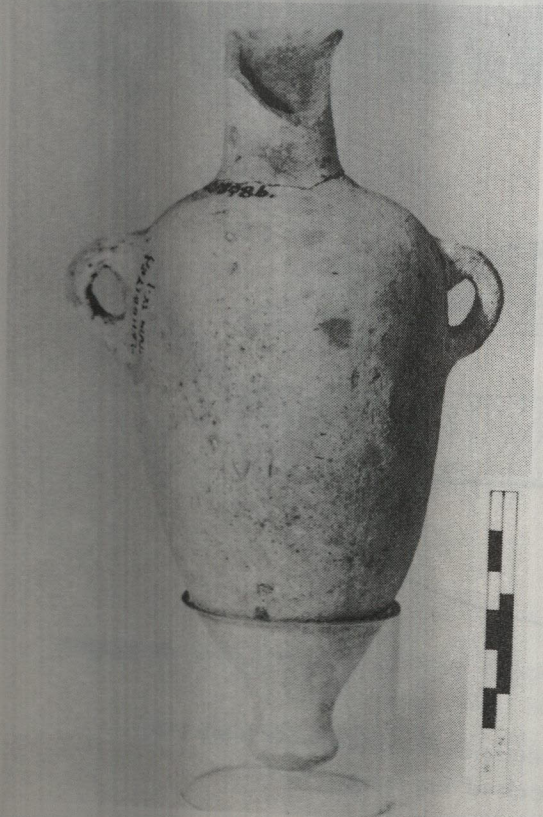


Plate 1b: Cream-coated Nile silt amphora (Courtesy of The Petrie Museum; UC 18986).



Plate 1c: Linear decorated cream-coated Nile silt amphora (Courtesy of The Petrie Museum; UC 18991).

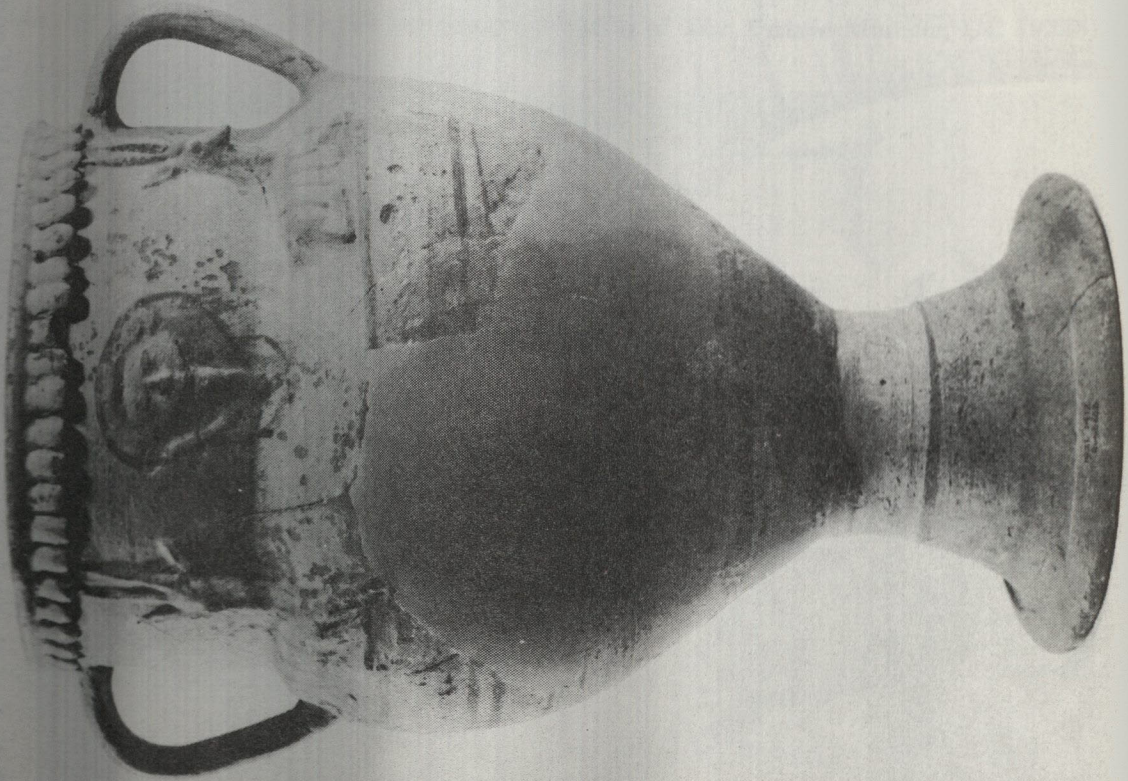


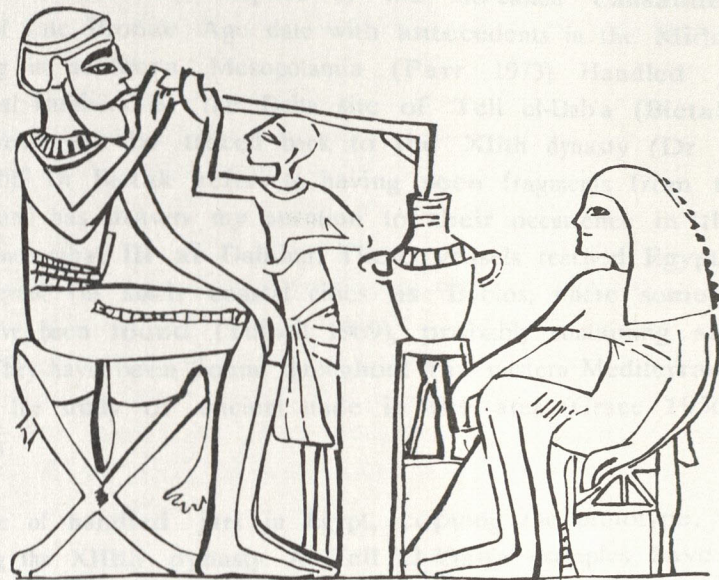
Plate 3a: Blue-painted red-coated Nile silt amphora (fig. 16c); Gurob tomb 602 (Courtesy of the Ashmolean Museum; 1921.1.412).



Plate 3b:

Fragment from the neck of a blue-painted, cream-coated Nile silt jar from Deir el-Medineh (Courtesy of The Egyptian Museum, Cairo; 12097).

## AMPHORAE OF THE NEW KINGDOM



A Syrian drinking wine through a syphon; stela from Amarna (West berlin 14122).



An important element in the ceramic repertoire of the New Kingdom is the type of vessel commonly termed amphora<sup>1</sup>: a necked jar with between two and four handles. These vessels were undoubtedly inspired by the so-called 'Canaanite Jar', a Syro-Palestinian form of Late Bronze Age date with antecedents in the Middle Bronze Age, possibly originating in southern Mesopotamia (Parr 1973). Handled jars have been found in substantial numbers at the Delta site of Tell el-Dab'a (Bietak 1981, *passim*) where their occurrence can be traced back to the XIIIth dynasty (Dr Bietak, personal communication, 1980).<sup>2</sup> Dr Bietak refers to having seen fragments from these vessels on other Delta sites and has drawn my attention to their occurrence in the settlement at the pyramid of Amenemhat III at Dahshur. These vessels reached Egypt as part of the trade with the Levant via such coastal cities as Byblos, where some of the earliest Canaanite Jars have been found (Tufnell 1969), probably containing such commodities as wine and oil. They have been found throughout the eastern Mediterranean and are an important item in the study of ancient trade in the area (Grace 1956; Amiran 1969, 140-142; Bass 1986).

The manufacture of handled jars in Egypt, copying the prototype, would seem to have begun during the XIIIth dynasty. At Tell el-Dab'a examples have been found of this date made from a coarse, sand-tempered paste or Nile silt (Dr Bietak, personal communication, 1980). Their manufacture at this site continued throughout the Second Intermediate Period. No examples have been found in Middle or Upper Egypt contemporary with those from the Delta. Their occurrence in the Delta is undoubtedly a result of the presence of Asiatics in that region and the close trading connections with the Levant (Bietak 1981 & 1984; Holladay 1985, 44-7). The absence of such vessels in other parts of the country may be the result of the fact that the surviving pottery is mostly from cemeteries, with little known from settlements (Miss Bourriau, personal communication, 1980). However, during the New Kingdom locally made amphorae became very common throughout Egypt, especially from the reigns of Hatshepsut and Tuthmosis III onwards, and are depicted frequently in the reliefs decorating tombs and temples.

The import of amphorae from the Levant into Egypt, for their contents, continued for an as yet undetermined length of time. They are encountered throughout the XVIIIth dynasty during which time their morphology had undergone several changes. Although the Egyptian-made counterparts developed quite distinctive traits, the potters of the XVIIIth dynasty remained sensitive to the continuing influence of the originals and local development echoed that of the Syro-Palestinian versions. The popularity of this form can be understood quite readily; the ease with which they could be manoeuvred is apparent and the Egyptians quickly appreciated the advantage of adding handles to their vessels - something which does not seem to have been done since the Archaic Period.

In the present study a distinction has been made between those handled vessels the morphology of which relates them to the Canaanite Jar and of those which cannot. The shapes of the latter resemble vessels without handles, which were a part of the standard ceramic repertoire in Egypt. The popularity of handles was such that they were added to numerous types of vessels. Foremost amongst these are broad, often bi-conical, necked jars (compare Holthoer 1977, pls 30-2 with pls 20-1 & 23) and certain other necked jars (e.g., *ibid.*, pl. 22 AO2-4 & AT 1; Petrie 1891, pl. XXII.5).

For the purposes of establishing the development of the amphora in the New Kingdom, its diversity of form and the nature of its manufacture, only securely dated vessels have been used. This has been established by reference to find contexts, hieratic docketts on the vessels themselves, stamps impressed into the fabric of the vessels and attached jar sealings. Docketts which provide the name and regnal date of an individual ruler are of particular value in this process, while others datable on palaeographic grounds have also been used. Though numerous examples have, therefore, been omitted, those which remain are sufficiently numerous to provide a reasonably secure basis for the study. Some unusual vessels, the exact date of which within the New Kingdom cannot be established, have been included to illustrate the existence of variations which would otherwise not have been indicated. All miniature vessels have been omitted.

### Classification

#### Ware Types

During the course of the preparation of this study it has not proved possible to examine personally all of the vessels which are included or to which reference is made. The present location of many of these vessels is unknown and the published descriptions of the wares from which they were made are either too cursory or vague to be of much use. While such terms as *white-faced*, *white-polished* and *drab*, are encountered with reference to amphorae, probably referring to slipping, they cannot be related to the known wares with absolute certainty. Therefore, it is not possible to establish a series of types<sup>3</sup> and the accompanying figures (1-7) are arranged chronologically. The present description of the wares which were employed is based largely upon material from Malkata, supplemented by observations on inscribed amphorae sherds from Amarna, Buhen and Thebes (Mortuary Temples of Seti I, Ramesses II & Twoset) now in the Petrie Museum, University College London, and sherds from the New Kingdom cemetery at Saqqara. The time span encompassed by this selection is from the late XVIIIth dynasty to the end of the XIXth dynasty.<sup>4</sup> As all of the fabrics, styles and wares used for the amphorae are described in the section on the pottery from Malkata in this volume (also, Hope 1978, 66-68 & table 4; Hope, Blauer &

Riederer 1981; Nordström 1985), they are given in brief only here.

#### Nile Silt Wares

Nile silt fabrics B2, C and D were used and for the purposes of the present study they are grouped together. The surface treatments include: a plain surface, compacted or burnished surfaces, a red coating, a red coating with painted designs, a cream coating, a cream burnished coating and a cream burnished coating with painted designs. The use of Nile silt wares is not uncommon and they predominate in the manufacture of the decorated amphorae of category 3b.

#### Marl Wares

A series of marl clay fabrics was used, ranging from fine to coarse, which were fired cream to green; they belong to types Fine Marl A variants 2-3 and are here grouped together. They have been found with plain surfaces, burnished surfaces, cream coated surfaces, and cream coated and burnished surfaces. Their use for amphorae was not common.

#### Mixed Clay Wares

Two fabrics were used which are possibly to be identified as either natural or artificial mixtures of Nile silt and marl clays:

I Marl D: a fairly dense, red-fired fabric, often with grey-brown cores, with numerous white inclusions of various sizes and an appreciable amount of sand

II Fine Marl A, variant 4: a compact, pink-fired fabric with minute white inclusions, some sand, and a naturally occurring white surface, which may be indistinct or not highly developed

The former occurs with plain surfaces, burnished surfaces, cream coatings, cream burnished coatings, and decorated surfaces over either a cream burnished coating or with an intervening white layer. The second fabric is found with plain surfaces which may be decorated, burnished surfaces or, rarely, with a white coated and decorated surface. The first is extremely common with vessels of categories 1a-2b, while the latter is uncommon.

The most common ware group used for the large and small amphorae of categories 1a-2b is that employing the mixed clay fabric I, with over 80% of the sherds examined during the course of this study having been made from it. This situation pertains to the period when amphora manufacture was at its peak; prior to this the situation is uncertain. This fabric is fairly dense and when coated and/or burnished it becomes

quite impermeable. The use of either a surface coating and/or burnishing for amphorae, irrespective of the fabric used, was obviously deemed advantageous by the Egyptian potters. Amphorae with plain surfaces are extremely rare, being represented by less than 8% of the inscribed sherds from the recent excavations at Malkata; the remainder had some type of surface modification (Hope 1978, 77 table 4). Out of 975 body sherds from amphorae found at Malkata site K, 942 were either cream-coated or cream-coated and burnished; the remainder were red-coated and burnished. The data from Amarna concerning amphorae wares and their frequency have been discussed in detail by Rose (Rose 1984, 1986 & 1987a-b) and Renfrew (1987).

One final fabric type must be referred to here. It is not Egyptian; it may be termed "Canaanite" ware and consists of a coarse fabric with large white inclusions which have frequently caused surface pitting. This may be fired greyish brown or orange (pl. 5b) and usually has light coloured surfaces, often having resulted from the action of salts (a "bloom"). Examples of this type of fabric from Malkata have been subjected to analysis and an origin in the coastal plain of Israel has been suggested (but see Nicholson & Rose 1985, 148). It is a common ware for Canaanite Jars in the Levant (compare Tufnell 1969, 15)<sup>5</sup> and has been identified amongst amphorae sherds from Amarna (Rose 1984, 137 & 142; Nicholson & Rose 1985, fabric IV.2 & 3; Renfrew 1987, 94 & 96), Buhen, Deir el-Ballas (Bourriau & Lacovara 1984), Memphis (Bourriau & Aston 1985b, 19; Bourriau 1986, 23), Qantir (Aston 1987a, 4), Saqqara (Aston 1986, 26; Aston 1987b, 20) and the Valley of the Kings (Aston & Aston 1987, 28), dating from the late XVIIIth dynasty to the XXth dynasty.

#### Decoration

The decoration encountered on amphorae includes floral, abstract and linear motifs. In the discussion of the morphological development of the various sub-categories of amphorae which have been distinguished here and the list of well-dated amphorae those examples with decoration are indicated.

The majority of the decorated amphorae were ornamented after firing and are of the polychrome decorated type which employs blue, red, yellow, green and black on a white background. Not all examples employ the full range of colours. The decoration is dominated by the use of motifs representing floral garlands or collars and originates from the Egyptian practice of festooning such around certain vessels on festive or religious occasions (examples from tomb reliefs listed in Bell 1987, note 118).

During the XVIIIth dynasty polychrome decorated amphorae were used in both domestic and funerary contexts. Those from the former, found at Malkata and Amarna, have floral decoration in varying degrees of complexity in a continuous frieze restricted to the shoulder above the handles (pl. 7a-b), imitating garlands. An interesting feature of that on some examples is the use of what may be termed reserve decoration (pl. 7a M73/K 58), where the polychrome painted areas seem to serve as a backing to

the lotus petal shapes in the white of the underlying surface coating. A few sherds from Malkata preserve representations of the ties used to hold actual collars in place, indicating, therefore, that some amphorae were decorated with representations of such collars. One example of fig.2 no.1 from Malkata has simple linear decoration in red. Examples of fig.4 nos 2-3 are reported from Amarna covered entirely with blue (Peet & Woolley 1923, 129 & 133). They are of late XVIIIth dynasty or Ramesside Period date.

From funerary contexts of the XVIIIth dynasty come more elaborately decorated amphorae. Two amphorae of the type shown on fig.1 no.7, dating from the reign of Amenhotep II, carry decoration in imitation of vines upon their bodies (Brack and Brack 1977, 67-68 & pl. 15). A decorated example of fig.1 no.6, probably from the reign of Tuthmosis IV, has a design on its shoulder which resembles a wreath (Guidotti 1981, 95-96). They testify to the existence of actual vessels the decoration upon which is as elaborate as that seen on some depicted in tomb reliefs of approximately the same period (Davies 1923, pl.1; compare also Wreszinski 1915-23, pl. 169, though not on amphorae). These three amphorae are the earliest known decorated examples from the New Kingdom. A small amphora of the type illustrated on fig.6 no.5 from the tomb of Kha at Deir el-Medineh has an abstract shoulder decoration and floral and hieroglyphic motifs on its neck (pl. 7c). Decoration upon the neck is uncommon in the XVIIIth dynasty.

One category of amphora, known primarily from late XVIIIth dynasty contexts received pre-firing decoration of the blue-painted style, fig.7 nos 4-6 & 8, pls 8b-9. The decoration is characterised by the use of gazelle or ibex heads attached to the neck, which also carries floral motifs, as does the shoulder. The body of the animal may be painted on the shoulder (fig.7 no.5; pl. 8b) or applied to it (pl. 9). One atypical example, fig.7 no.7 (Boston 1982 no. 81), is decorated with two polychrome collars and lacks motifs on the neck.

While the use of polychrome decoration upon the shoulder only may have continued into the XIXth dynasty, the decoration on amphorae of the Ramesside Period is generally more elaborate. Characteristic of this period are polychrome decorated amphorae of the types shown on fig.7 nos 1-2 & pl. 8a. Such vessels frequently carry complex neck motifs and have representations of a floral collar on their shoulder and body, with ties often depicted. Some have floral garlands rather than collars (pl. 8a). The use of a chequer motif on the neck and lotus flowers, with or without buds, depending from the collar (pl. 8a) are rarely encountered, if at all, during the XVIIIth dynasty. Examples of this type of amphora occur rarely with pre-firing decoration (Bell 1987, 49 & 53), sherds from one such have been found at Tell Nebi Mend (Kadesh-on-the-Orontes; Hope, Blauer & Riederer 1981, 141 & 145-7). At least one jar is known upon which polychrome decorative elements were added to a vessel which had received pre-firing decoration (Bell 1987, 53 no. 33; pl. 8a centre here).

**Morphological Classification**

The amphorae of the New Kingdom are here divided into several categories based upon features of morphology, size and decoration. The following categories are proposed:

**Category 1: Amphorae with Vertical Handles and**

- a. round shoulders, a smooth body profile, short or medium tall necks, in large and medium sizes: figs. 1-3
- b. straight shoulders, an angular body profile, short necks, in large and medium sizes: figs. 4-5
- c. round shoulders, a smooth body profile, medium tall to tall necks, in small sizes: fig. 5.

**Category 2: Amphorae with Horizontal Handles and**

- a. short necks: fig. 6 nos 1-2
- b. tall and very tall necks: fig. 6 nos 3-8

The shoulders are round and the body profile smooth. Some examples have angular bodies and straight shoulders, resembling fig.6 no.7, though they cannot be precisely dated (e.g., Nagel 1938, fig.39 no.5).

**Category 3: Decorated Amphorae with Tall or Very Tall Necks, in small to large sizes, with**

- a. horizontal handles: fig.7 nos 1-2
- b. vertical handles: fig.7 nos 3-8 & pl. 9

Category 3b vessels have much larger handles than those of the other categories and they are attached to the rim or upper part of the neck and the shoulder. The majority of amphorae have handles attached to the upper body or shoulder only. Vessels of category 3 have been distinguished from the others because of the invariable occurrence of decoration. Vessels of categories 1-2 may be decorated, but they are more commonly undecorated.

**Morphology Development**

The morphological development of amphorae presented here is based upon a dated sequence of vessels which outline the main stages in the process. The date range ascribed to each type of amphora should not be taken as rigid, but merely as a guide to their period of occurrence. Where pertinent, reference has been made to additional variations which are not illustrated. The known date range for each shape is given on the accompanying figures and a list of dated examples with ware types (where known) and publication references is provided. The following comments are designed to draw attention to the main aspects of amphorae development and are of a preliminary nature.

The development of the Canaanite Jar in Palestine has been summarised by Amiran as

follows:

".....from delicately oval, the body becomes vigorously shouldered; the narrow rounded base turns into a thickened, heavy button-like base; the placement of the handles rises from the middle of the body to the pronounced shoulder, and the rim becomes plain." (Amiran 1969, 141)

While this does not adequately describe the development of the jar in Egypt, a glance at figures 1-2 and 4 of this study shows that similar tendencies were at work.

**Category 1a**

The shapes of the earliest amphorae found during the New Kingdom are shown on fig.1 nos.1-5 and pls 1-2a. They resemble, or are identical to, Levantine forms of the Late Bronze Age I (Amiran 1969, pl. 43 nos.1-2). Stamped amphorae handles bearing the cartouches of Tuthmosis I, and therefore of Egyptian manufacture, are reported from Serra East (Hughes 1963, 129; Knudstad 1966, 172). A body sherd from an amphora with the cartouche of this same ruler is referred to from Deir el-Medineh (Nagel 1938,129). While there is room for doubt concerning the identification of the form of the latter,<sup>6</sup> the stamped amphora handles from Serra East probably originated from one of these early forms of amphora, possibly either fig.1 no.1 or 2. A burial from Saqqara, possibly to be dated to the reign of Amenhotep I, contained an uninscribed amphora of the type of fig. 1 no. 1/2 (Bourriau 1981b, 31-2).

While it is uncertain whether all of the examples of forms fig.1 nos.1-3 cited in the list of dated amphorae were made in Egypt, such is certainly the case for those bearing stamp impressions. These include examples of fig.1 no.1 (Reisner 1910, 64 & fig. 304; Bruyere 1937b, 93 & fig. 47) and fig.1 nos 2-3 (Holthoer 1977, 98-99 & pl. 22). It is possible that the examples of fig.1 no.1 from the tomb of Hatnufer and Ramose, the parents of Senmut, were Egyptian made (Lansing & Hayes 1937) and also those from the tomb of Rennefer and Neferkhwet of type fig.1 no. 1/2 (Hayes 1935). Figure 1 no.4 is probably of Egyptian manufacture. While the place of manufacture of the example of fig.1 no.5 from the tomb of Meryet-Amun is uncertain, the other bears the cartouches of Tuthmosis III. Figure 1 no.6 is of Egyptian manufacture. The form of these early amphorae is first oval with a round base and short neck (fig.1 nos.1-3 & pls 1-2a), gradually becoming more slender (fig.1 no.6 & pl.2b).

The amphora soon developed a tapering lower body, more pronounced shoulder and taller neck (figs 1 no.7, 2 no.1 & pl.2c). The bases of this form are normally pointed and were made separately in a mould (pl. 5c), although examples from the Memphite tomb of Horemheb have coiled bases (Miss Bourriau, personal communication, 1981). The rims comprise a series of pronounced out-folded profiles, either rounded or square (Hope 1978, Part I fig. 5). This is the classic form of the Egyptian amphora which emerged during the period of Amenhotep II to Amenhotep III and lasted until the end of the New Kingdom. From the end of the XVIIIth dynasty there seems to have been a tendency for this form to taper more acutely (fig.2 nos 3-7 & pls 3-4a). The placement of the handles is usually higher on the upper body from the late XVIIIth dynasty onwards. A



more attenuated amphora with a flat base developed during the reign of Amenhotep III (fig.2 no.2) and lasted until the end of the dynasty (pl. 5a). However, vessels with wider lower bodies continued to be made (e.g., Steindorff 1937, pl. 78 forms 29-30; Petrie 1890, pl. XX.32 & XXI.56); a variant with a short neck also exists, with examples known from the reign of Ramesses II (Steindorff 1937, pl. 78 type 30.3 & pl. 100a-b & d). Possible broader versions of fig.2 no.6 are known of Ramesside Period date with round bases (Nagel 1938, figs 63.6 & 64.11). The example fig.2 no.8 from the reign of Merenptah has a wider lower body and more pronounced shoulder than the examples of the reign of Siptah - Twosret (Petrie 1890, pl. 20.32), a drawing of one of which is used for fig.2 no.8.

From the XIXth dynasty the existence of an ovoid amphora with a round or pointed base is attested (Fig.3 nos 1-2 & pl.6a). The shapes shown on fig.3 nos 3-7 and pl. 6b are included to illustrate late developments in the morphology of category 1a amphorae. Numbers 3-4 are of Ramesside Period date, possibly XIXth dynasty, while no.7 may be of XXth dynasty date, exemplifying a tendency to produce elongated forms. Number 5 and variants without an undulating neck profile from Deir el-Medineh tombs 359/360 (Nagel 1938, figs 17-19) and elsewhere (pl.6b) may also be of the late XXth dynasty or even later. The shape is very similar to amphorae in Nile silt wares of the Third Intermediate Period to XXVth dynasty (e.g., French 1986, 156 and figs 9.8-9.9 & 9.21: Silt Jars 1-2). From Nagel's description of the wares of those from Deir el-Medineh tombs 359/360 it is uncertain whether they were of marl, mixed clay or Nile silt fabric: they are described as of pink or dense red clay, probably implying a mixed clay. Figure 3 no.6 was found at Amarna used to contain infant burials and a date later than the XVIIIth dynasty suggested (Peet & Woolley 1923, 137), though how much later is uncertain.

Polychrome decoration exists on examples of figs 1 nos 6-7 and 2 no.1 (pl. 7a), as does an example of the latter painted after firing with one red band on its shoulder.

#### Category 1b

The introduction of vessels of this category seems to have occurred during the mid-XVIIIth dynasty. An example of fig.4 no.4 is shown in the Theban tomb 261, possibly of the time of Tuthmosis III (Mekhitarian 1978, 46-47), while another in tomb 62 of the reign of Amenhotep III is shown being brought to Egypt by Syrians (Davies & Faulkner 1947). Amphorae of this category originating in Canaan are encountered first amongst finds from Malkata and continue to occur throughout the Ramesside Period. The proto-type possessed the "button-like" or stump base (fig.4 nos 1-3) and possibly also a flat base (pl. 4b); the ledge at the neck is characteristic and occurs on examples of form fig.4 nos 1-2. Egyptian versions of this broad, angular-bodied amphora, may have been manufactured from the reign of Amenhotep III onwards and throughout the Ramesside Period.<sup>7</sup> The early examples of fig.4 nos 1-3 comprise shoulder, rim and base fragments, hence there is some uncertainty in the attribution.<sup>8</sup> While some

Egyptian-made examples may have possessed bases similar to the imports, they also occur with pointed, mouldmade bases and flat bases (fig.4 nos 4-7). The rim types occurring with category 1b vessels are also pronounced out-folds, some quite long, and one type has an indented back. Large base and lower body fragments from Malkata show that these amphorae could be very wide indeed.

The forms fig.4 nos 1-2 resemble those of the Late Bronze Age IIa from Palestine and those of figs 4 no.3 to 5 no.2 vessels of IIb date from that area (Amiran 1969, pl. 43, 4-6 & 8-12). Figure 4 no.4 is unusual in the number of handles it possesses and their location. The forms illustrated on fig.5 nos 1-3 and pl. 6c are possibly not of New Kingdom date. Examples from Amarna were found in the Main City and at the River Temple, implying to the excavators that the types lasted from the reign of Akhenaton into the XXth dynasty (Peet & Woolley 1923, 136). However, they probably derive from later activity at the site and closely resemble amphorae of the Third Intermediate Period to XXVIth dynasty (e.g., Mysliwiec 1987, nos 394-396. 61 note 91). Figure 5 nos 1 and 3 recall the tendency during the Ramesside Period to produce bulbous shapes, as noted with vessels of category 1 (fig.3 nos 1-2 and 5-6). Figure 5 no.4 is grouped with category 1b, though the low position of its maximum diameter and the situation of its handles are atypical of the group.

Polychrome decorated examples of fig.4 nos 1-3 are known (pl. 7b), as are sherds from fig.4 no.3 (?) covered with blue (Peet & Woolley 1923, 133); a blue-painted example of fig.5 no.4 is attested.

Amphorae of category 1b existed side by side with vessels of category 1a throughout the New Kingdom from the reign of Amenhotep III, a fact borne out by reliefs and finds, unlike in Palestine where they superseded them (Amiran 1969, pl. 43).

#### Category 1c

Although miniature amphorae may have occurred as early as the reign of Tuthmosis III, the small amphorae of category 1c do not seem to have appeared until the reign of Amenhotep II. As might be expected, the earliest forms resemble those of the large amphorae, though the small amphorae have a taller neck in relation to their total height. The development of the small amphorae parallels that of category 1a amphorae. The forms shown on fig.5 nos 13-14 are not precisely dated; variations not illustrated here can be seen on Steindorff 1937, pl. 80 type 34b. Variations on fig.5 no.9 with a concave neck and others of smaller size similar to that of fig.5 no.10 are known from Amarna (now in east Berlin). A variant of fig.5 no.10 with four handles is known (British Museum 58458), as is another with ovoid body and flaring neck, again with four handles (example from Amarna in East Berlin). Figure 5 no.12 occurs with a flaring neck (British Museum 25301)<sup>9</sup> and a larger version of fig.5 no.14 is known (Loat 1904, pl. II no.34). Figure 5 no.15 is unusual in possessing three vertical handles.

Polychrome decoration occurs on examples of fig.5 nos 9-10<sup>10</sup> and a short necked variant of fig.5 no.11.<sup>11</sup>

#### Category 2a

The form fig.6 no.1 possessed a short neck, as the example from the tomb of Tutankhamun proves (pl. 4a); if the identification of fragments from Malkata (E7787 & J6756) as of this type is correct, then it could be much wider than the illustration indicates. However, it is possible that these fragments originate from examples of fig.6 no.3. The elongated body of form fig.6 no.1 resembles that of figs 2 no.2 and 3 no.4; a polychrome decorated example of either fig.6 no.1 or no.3 is known from Amarna (Ashmolean Museum 1937.880; Hope forthcoming). Amphorae with two horizontal handles and medium tall necks, squarer than those shown on fig.6 no.1 and pl. 4a, are known from Deir el-Medineh (Nagel 1938, figs 61 & 65). They bear monochrome linear decoration in brown or black upon the neck and/or body; their precise date is uncertain, though they are probably of the XVIIIth dynasty. The neck height of fig.6 no.2 is uncertain and it is classified as short on the basis of parallels with vessels of category 1c, though tall necked parallels are known (Nagel 1938, figs 5 no.3 and 86 nos 5-6).

#### Category 2b

The tall neck of vessels of this category is reminiscent of the one-handed, tall necked vessel which occurs from the reign of Hatshepsut onwards (pl. 7c). It is from this reign or that of Tuthmosis III that the earliest example of fig.6 no.3 is known (Bruyère 1937b, fig. 47). An example from the tomb of Maiherperi dating to the reign of Amenhotep II has a flat base (Daressy 1902, pl. IV). A broad variant upon fig.6 no.6 with a round or pointed base and concave neck exists from the XIXth dynasty (Bruyère 1937, fig. 48), not dissimilar to fig.6 no.3. The form fig.6 no.8 is similar to that of the decorated amphorae of category 3 (fig.7 no.1). Other than the possible polychrome decorated example of fig.6 no.3 referred to above, examples of fig.6 no.5, one with blue-painted designs (Florence 3367)<sup>12</sup> and others with polychrome decoration are known (pl. 7c). The use of a ring base with vessels of this category and category 2a (fig.6 nos 4-5; Nagel 1938, fig. 65 nos 18 & 20) is atypical of the amphora family.

#### Category 3a

The two forms shown on fig.7 nos 1-2 illustrate a type of decorated amphora which occurs from the XIXth dynasty onwards. While the shape is derived from XVIIIth dynasty amphorae with horizontal handles (fig.6 nos 2-5), the combination of morphological details (height and shape of neck, shape of body) and decorative motifs is a Ramesside feature. Variation in the width of the neck and body of examples of fig.7 no.1 is encountered. Variants upon this shape comprise taller vessels with

wide, almost ovoid bodies, dating to the reign of Ramses II (Nagel 1938, fig.5 nos.1-2), smaller vessels with much wider necks, dating to the XIXth dynasty (pl. 8a; Berlin Catalogue 1967, nos 652 & 654) and vessels with almost bi-conical bodies from the tomb of Sennedjem, a contemporary of Seti I (Bierbrier 1975, 30-1) possibly buried at the beginning of the reign of Ramses II (Hayes 1959, fig. 257). Possibly of the reign of Ramses III are two vessels from the tomb of Hwy-nefer at Deir el-Medineh (Bruyère 1937a, fig. 28) which have ovoid bodies, medium-tall necks and residual handles. For a complete list of known examples of these types of amphorae see Bell 1987, 49-53.

#### Category 3b

The vessel shown on the fig.7 no.3 is a very rare type and, though having affinities with the amphorae family, also resembles certain necked jars of the New Kingdom. A similar vessel of New Kingdom date with a more elaborate neck is known (Wallis 1898, pl. XV 71).

The series of vessels shown on fig.7 nos 4-8 and pls 8b-9 represent a type of amphora which is, so far, known primarily from Malkata (chapter I) and Amarna (Hope forthcoming) of late XVIIIth dynasty date. All carry blue-painted decoration save no.7 which has polychrome decoration (Boston 1982, no. 81). Despite variations in size they have very similar morphology; they are all distinguished by the use of the decorative element of a gazelle or ibex head attached to their necks. The body of the animal may be applied to or painted on the shoulder (Boston 1982, nos 70 & 81). Figure 7 no.4 illustrates an unprovenanced example in the Petrie Museum which has been used to represent the complete shape from which fragments from Malkata and Amarna are derived. Figure 7 nos 5-6 illustrate variants with high maximum diameters from Malkata. A vessel of similar type is known from Deir el-Medineh, though it cannot be precisely dated as its exact find spot is unknown (Nagel 1938, 125 no. D.M.22.127 = Cairo 51915); such also is the case with an example found at Giza (chapter I, note 30). They both have a wide bi-conical body. Another was found at Gurob (Brunton & Engelbach 1927, grave 602, type 82W); this possess a tall foot and is unique in combining two recumbent gazelles and a Hathor head at the front (see chapter 2, pl.3a). It is of Ramesside date. Fragments from necked jars with applied gazelle and cow heads are reported from Qantir (Aston 1987a, 4). Whether they are actually from this type of amphora is uncertain; their precise date is not specified. The example illustrated upon pl. 9 can be ascribed to the late XVIIIth dynasty as the only other occurrences of such large amphorae are at Malkata and Amarna (fig.7 no.8).

### General Remarks

#### Amphorae of Categories 1a-2b

The function of amphorae during the New Kingdom can be ascertained from the numerous tomb reliefs in which they figure, from the docketts inscribed upon them, the attached

jar sealings and find contexts. It would seem that they were used primarily for the transport and both temporary and long term storage of food stuffs, various beverages, incense and oil (Hayes 1951; Hope 1978; Leahy 1978 and Smith 1976, 162-189) within domestic, religious and funerary contexts. For this purpose the shape of the vessel is ideally suited, and the selection of dense-bodied, hard-firing fabrics with surface coatings and/or burnishing, especially the mixed clay fabric I described above, can be seen as directly related to the function of the amphorae. These fabrics are relatively impermeable<sup>13</sup> and there is scant evidence to indicate that the Egyptians deemed it desirable to enhance this characteristic by applying coatings to the interior of the vessels.<sup>14</sup> One of the commonest commodities contained by amphorae was wine (Leahy 1985, 66 with references)<sup>15</sup> and it is possible to suggest on the basis of the evidence of the ostraca from Deir el-Medineh that the Egyptian name for the amphora was *mnt* (Kemp 1979, 183). Janssen states that all deliveries of wine to that community were in vessels of that name (1975, 350).<sup>16</sup> Furthermore, in the lists of donations to various temples made by Ramses III recorded in Papyrus Harris I, the use of the *mnt* vessel as a container of a wide range of commodities predominates, e.g., wine, ale, oils, incense, honey (Papyrus Harris I, 15a 1-13; Erichsen 1933). Such are the commodities which hieratic docketings show were stored or transported in amphorae. Holthoer has suggested that the name *hbnt* was also used (1977, 97). Recent work at Amarna has shown that amphorae of categories 1a and 1b were used extensively in water supply and distribution, including imported examples of types fig.4 nos 1-3 once emptied of their original content of wine or oil (Rose 1987a; Renfrew 1987).

A study carried out by Dr Helen Jacquet-Gordon of the inscribed amphora fragments of Ramesside date from Deir el-Medineh has indicated that certain shapes were used for the storage/transport of particular commodities (personal communication, 1982; see also Bell 1982, 160-161). For wine, amphorae of category 1a, with round shoulders and an angular transition to the neck, were used, while for *nḥḥ*-oil a type with a wider, straighter shoulder, which has an angular junction with the body but a round transition to the neck was used. *Nḥḥ*-oil was also occasionally stored in amphorae of category 1b, characterised by a high flat shoulder with a pronounced angular transition to the rest of the body and a short neck. Other types of oil and fats were stored in this type. Such a standardisation would have enabled the identification of the content simply by a glance at the shape of the container.

However, during the course of the author's study of the inscribed amphora fragments from Malkata (Hope 1978) no similar pattern emerged. That work was unfortunately hampered by the fact that the surviving fragments preserved little other than part of the shoulder, so that the morphology of the complete shape could not be determined. The majority of the pieces came from round shouldered amphorae which had served as containers for beverages (wine and ale), food stuffs and oil. Amphorae with straight shoulders, either variants of category 1a or of category 1b here, were found also to have contained beverages.

Amphorae were undoubtedly reused continuously within a domestic context, provided

they were not damaged during the removal of the large mud sealings which were frequently used to close them, particularly those which had contained wine (Leahy 1978, 2). The practice of opening amphorae so sealed by simply lopping off the neck and sealing together was amply attested at Malkata (Hope 1978, 8) and is not restricted to that site. The reuse of amphorae is clearly indicated by the occurrence of double docketings on some fragments (e.g., Hayes 1951, 39) and one amphora from the Tomb of Tutankhamun carries a hieratic docketing on its shoulder mentioning 'Wine of good quality from Iaty', while its jar sealing identifies the contents as 'Fruit of the Southern Oasis' (Černý 1965, no. 24; Cairo JE 62300). A similar explanation, that of re-use, possibly accounts for the inclusion of the jar dated to year 31 (of Amenhotep III) in that tomb (Černý 1965, no. 25), docketings from Amarna with regnal dates of Amenhotep III (e.g., years 28 and 30: Fairman 1951, 152; year 31: Leahy 1985, no. 73), the amphora dated to year 2 of Horemheb and those of years 6 and 19 of Ramesses II in tomb 359/360 at Deir el-Medineh (Nagel 1938, 14-51). The Horemheb amphora from this tomb, even though re-used, must have been extremely old by the time it was interred in the tomb.<sup>17</sup> In general the re-use of these vessels was probably restricted to a fairly short span of time (Leahy 1985, 66).

In addition to their use in transport and storage amphorae were also used for the serving of beverages on religious occasions, at banquets or in other less festive circumstances in the home. Occasionally they were drunk from directly with the aid of a siphon (on this see Bell 1987, note 80), especially in the case of beer. This is depicted upon a stela from Amarna in West Berlin (no.14122; Spiegelberg & Erman 1908) which is illustrated at the front of this chapter, a satirical sketch on an ostrakon of XIXth dynasty date (Brunner-Traut 1974, 125 & fig. 43) and in the Tomb of Ipy (Deir el-Medineh tomb 217), a contemporary of Ramses II (Wilkinson & Hill 1983, 148). The amphorae depicted as so used are of categories 1a and 1c here and are shown with polychrome decoration. It is probable that polychrome decorated amphorae of categories 1 and 2 were used mainly in serving rather than storage or transport. The fragile nature of their decoration would not stand up to much handling or careless treatment.

Finally, it is worth reiterating here that the use of one ware type (cream slipped and burnished, mixed fabric I) in the manufacture of amphorae during the New Kingdom, in preference to most others, indicates a degree of specialisation in their manufacture.<sup>18</sup> The potters were, quite clearly, aware of the functional requirements of the amphora, primarily the need for impermeability and, therefore, selected a clay type (or group of closely related clay types) which was suitable and applied secondary surface treatments to enhance the efficiency of the fabric. It is possible to suggest that most amphorae were made at certain centres only and that these probably coincided with the main wine producing and agricultural regions, such as the Delta and the Fayum. When other fabrics were used, the supplementation of supply from these centres with locally made amphorae may be implied (Hope 1978, 72-4; Hope, Blauer & Riederer 1981, Part IV). This suggestion requires further detailed investigation, however, before it can be regarded as proven.

## Amphorae of Category 3

Amphorae similar in shape to those shown on fig. 7 nos 4-8 and pls 8b-9 but lacking the distinctive animal head decoration are represented amongst the tribute brought to Egypt by Aegean and Syrian envoys during the first half of the XVIIIth dynasty (Montet 1937 and Vercoutter 1956, *passim*). In some scenes they are termed *ikn* or *ikny*. It has been suggested that the use of gazelle/ibex heads upon these vessels may indicate Syrian influence because of its association with the god Reshep (Fulco 1976, 29). However, to my knowledge no such vessels have been found outside Egypt and the use of the gazelle/ibex motif is undoubtedly of indigenous inspiration; the gazelle was sacred to the goddess Anukis. While they were probably used for serving wine, it is unlikely that they were used for storage or transport; they probably possessed an ornamental value. The gazelle or ibex heads, occasionally with bodies also, occur only in one position on the vessel, at the 'front', which may have a more elaborate decorative scheme than the 'back'.

Examples of the polychrome decorated amphorae of the types illustrated on fig. 7 nos 1-2 and pl. 8a all seem to derive from funerary contexts. Where their provenance is known they all originate from Deir el-Medineh and Gurob only (Bell 1987). They may have been decorated specifically for use in the afterlife and Bell has suggested a possible connection with the celebration of the Festival of the Valley at Thebes (1987, 56-7). A result of this is the possible identification of the floral collars painted upon these amphorae with the 'collar of justification' (*m3h/w3h n m3' hrw*), associated with concepts of rebirth and regeneration (Bell 1987, 57).

## DATED AMPHORAE OF THE NEW KINGDOM

The following list of well dated amphorae is based primarily upon complete vessels or large fragments thereof, which can be attributed with a degree of certainty to particular morphological variations within the categories adopted in this study. Sherd material has, in general, been omitted, except in the case of that from Malkata. Where museum numbers are known they have been cited; the excavation numbers are used for material from the University Museum, University of Pennsylvania excavations at Malkata. The following abbreviations are used:

N.K. = New Kingdom

A = Amenhotep, Akh = Akhenaton, H = Hatshepsut, Hor = Horemheb Mer = Merenptah

R = Ramesses, Tut = Tutankhamun

Dynasties are given in Roman numerals

For the ware types:

N = Nile clay, M = Marl clay, Mx = Mixed clay type, S = slip, B = Burnished, C = Cream

R = Red, W = White

Museums:

Ash	The Ashmolean Museum, Oxford
BM	The British Museum, London
Cairo	The Egyptian Museum, Cairo; the Journal d'Entree number is cited
Cleveland	The Cleveland Museum of Art
Florence	The Archaeological Museum, University of Florence
Hunterian	The Hunterian Museum, Glasgow
Liverpool	Merseyside County Museums, Liverpool
MFA	The Museum of Fine Art, Boston
MMA	The Metropolitan Museum of Art, New York
OI	The Oriental Institute, University of Chicago
Sydney	The Nicholson Museum, University of Sydney
Turin	The Museum of Egyptian Antiquity, Turin
UC	The Petrie Museum of Egyptian Archaeology, University College London

Cat. = category      Fig. = figure      Pl. = plate

Cat.	Fig.	Pl.	Ware	Date	References
1a	1.1	1	?	Hat	MMA 36.3.83 & 84, & vessel in Cairo: Lansing & Hayes 1937, 36-9; Hayes 1957, 79-80; Amiran 1969, 141.
			Egyptian	Hat-TIII	Bruyere 1937b, 92-4 & fig. 47; Firth 1915, pls 21a, 22b; Reisner 1910, 64 & fig. 304.
			?	AII	Vercoutter 1962, 115 & pl. XXXVIIIb.

## POTTERY OF THE NEW KINGDOM

Cat.	Fig.	Pl.	Ware	Date	References
	1.2	2a	Mx? Canaanite	Hat-TIII AIII?	Holthoer 1977,98-9, pls 22 & 54. Liverpool 1977-112.237; the vessel now contains a note referring to a docket of AIII, which cannot be detected on the vessel.
	1.1/2		?	TIII	Hayes 1935, fig.21.
	1.3		Mx? MxI,CS	Hat-TIII AII	Holthoer 1977,98-9,pl.22. Brack & Brack 1977,70 & pl.63.
	1.4		'White Ware'	Hat-TIII	Firth 1927, 87 no.v.
	1.5		MxI/II	TIII/AII	Cairo 66207: Winlock 1932, 31,fig.17c & pl. XXXI.
	1.3/4/5		Egyptian	TIII	Bruyere 1937a,fig.25.3.
	1.6		?	TIII	Karnak North AP430 & 1155: Jacquet 1971,279 & pl.XLVIII.
		2b	MxII?	AII	UC.15937:Petrie 1897,5 & 21,pl.V;?Randall-MacIver & Woolley 1911,116 & pl.39.10966.
			?WS	TIV	Guidotti 1981,95- 6, figs 1-2 & pl.IA (decorated).
	1.7		MxI,CSB	AII	Brack & Brack 1977,67-8 & pl. 15; 2 vessels (decorated).
	2.1	2c	MxI,CSB	AIII	M74.C1.1: Hope 1978, Part II,fig.1a; Malkata J6759, 6760,6857,6755(decorated); Hayes 1959, fig.151. It occurs in a wide range of wares, see Hope 1978 Part II,table 4. Cairo 62319 (vessel from tomb of Tut); Spiegelberg 1909, 39-40 & pl.XIX.71 (decorated); Newberry 1900, 145 & pl.II (decorated). On the provenance of the last two examples see Bell 1987,73.
			MxI,CSB	Akh	BM 57427,57429,& 58457.
			M,CS	Akh	Ash 1936.657: Lesko 1977, 27; BM 57428.
		3,4a	MxI,CS/ CSB	Tut	Vessels from his tomb,now in Cairo: Carter 1933, pl.L ;Lesko 1977,22 & 24.

Cat.	Fig.	Pl.	Ware	Date	References
			'Coarse clay, grey- yellow, smoothed'	'Pre-Ayc'	Hölscher 1939, pl.57e.
			?	?AIII/Hor	Nagel 1938, fig.109.2.
	2.2		MxII,B	AIII	Malkata M73/E 630.
			?	Akh	Peet & Woolley 1923,pl.LI
		5a	N	Akh	Ash 1893.1-41.268:Lesko 1977,27; BM 58620.
			?	'Pre-Ayc'	Hölscher 1939, pl.57i.
	2.3		?	?AIII/Hor	Nagel 1938, fig.109.1.
			?MI,CS	Hor	Nagel 1938,15 & fig.9.6.
			MxII	RII	Nagel 1938, fig.10.13.
			?N	RII	Nagel 1938, fig.13.26.
			MxI,CS	RII	Nagel 1938, fig.2.33.
			?	RIII	Spiegelberg 1923,fig.27.
	2.4		?MxI	RII	Nagel 1938,figs 8.2 & 10.11;Davies 1927,39.
	2.5		?MxII	RII	Nagel 1938, fig.8.1.
			?	RII	Schiaparelli 1924?, 54.
	2.6		?MxII	RII	Nagel 1938, fig.8.3.
	2.7		MxI,CS	RII	Paris 1976, no. LII.
			?M	RII	Nagel 1938, fig.12.21.
			N	RII	Nagel 1938, fig.9.8.
			MxII?	RII	Nagel 1938, fig.13.28.
	2.8		?	Mer	Petrie 1890, pl.20.32.
			N,CS	Siptah/ Twosret	UC.19159: Petrie 1897,17 & 29, pl.XVII;17 examples were found.
	3.1		MxI,Cs	RII	Brunton & Engelbach 1927, 21-4 & pl.38.
		6a	N,CSB	?XX	UC.19154: Griffith 1890, pl.XIV.5.
	3.2		?MxI	RII	Nagel 1938, fig.17.43; Steindorff 1937, pl.78.

## POTTERY OF THE NEW KINGDOM

Cat.	Fig.	Pl.	Ware	Date	References
	5.13	?		XVIII-XIX	Engelbach 1915, pl. XXXVII; Loat 1904, pl. II.
	5.14	?		XVIII-XIX	Loat 1904, pl. II.
	5.15		Mxl, CSB	AIII	Malkata M73/J 6754.
2a	6.1		Mxl, CSB	AIII	Malkata M73/J 6756.
			N	AIII	Malkata M73/E 7785.
			?	AIII	Schiaparelli 1927?, fig. 141.
			?	Akh	Frankfort & Pendlebury 1933, pl. LIII.
		4a	?Mxl, CS	Tut	Cairo 62300: Lesko 1977, 6 no. 500.
			'coarse grey-yellow, yellow out, smoothed'	'Pre-Aye'	Hölscher 1939, pl. 57a.
	6.2		?Mxl, CS /CSB	Akh	Frankfort & Pendlebury 1933, pl. LIII.
2b	6.3		Mxl, CSB	AII	Daressy 1902, pl. IV, no. 24009.
			?Mxl, CS/ CSB	Late XVIII	Bruyère 1937b, fig. 47.
			?	Akh	Pect & Woolley 1923, pl. LIII (several examples).
			Mxl, CSB & WS	Akh	Ash 1937.880 (decorated).
	6.4		?	Akh	Frankfort & Pendlebury 1933, pl. LIII.
			'fine grey-yellow, surface yellow & red polished'	'Pre-Aye'	Hölscher 1939, pl. 57b.
	6.5	7c	Mxl, CS	AIII	Turin 8619-20: Schiaparelli 1927?, fig. 124.
			?Mxl, CSB	Tut	Winlock 1941, pls V & IXa
			?Mxl, CSB	XVIII-XIX	Petrie 1890, pl. XXI.44.
	6.6		Mxl, CS	RII	Nagel 1938, fig. 15.37.
	6.7		Mxl, CS	XIX-XX	Nagel 1938, fig. 15.38.
	6.8		?	XIX-XX	Petrie 1891, pl. XXII.7.

Cat.	Fig.	Pl.	Ware	Date	References
3a	7.1		N, WS	RII	Nagel 1938, fig. 24.96-9.
			Mxl, CSB	RII	Ash 1921.1322, Hunterian D1921.27; Brunton & Engelbach 1927, pls XXIX, XXXVIII (several examples) Bourriau 1981a, no. 147.
			N, CS	RII	MMA 86.1.11: Bell 1987, 50 no. 3.
			N, WS	RII	Cairo 27216: Eggebrecht 1975, 158 & pl. XLVIIIb.
			M, CS	RII	MMA 86.1.10: Hayes 1959, fig. 257.
			M/Mxl, CS	RII	OI 86.1.13: Bell 1987, 50 no. 4.
			N, WS	XIX-XX	Nagel 1938, fig. 24.100-3
	7.2		N?	XIX	Loat 1904, 6 & pl. I.
3b	7.3		N, CS	Akh	Cairo 2671.
	7.4		N, CS	AIII	Numerous fragments from Malkata.
			N, CS	Akh	Fragments from Amarna.
(The example illustrated on fig. 7.4 is an unprovenanced vessel, UC 8697: see chapter I, fig. 11e and Bourriau 1987, pl. XXVI.2)					
	7.5		N, CS	AIII	Malkata M74/B1 349; OI 12.180.35.
	7.6	8b	N, CS	AIII	MMA 11.215.460: Hayes 1959, 247-8 & fig. 150 & Hope 1987a, illustration 16)
	7.4-6		?N, CS	Akh	Pendlebury 1951, 236; several fragments from Amarna (Hope forthcoming)
	7.7		M, WS	AIII?	Cleveland 20.1997: Cooney 1965, 5-6 & Boston, 1982 no. 81.
	7.8		N, CS	AIII	Fragments from Malkata.
			N, CS	Akh	Ash 1893.1-41.293-4; BM 59276; Cairo 66739; Sydney 62.1026; UC 24631-3. (all in Hope forthcoming)
	9		N, CS	Late XVIII	MFA 64.9: Terrace 1964, 49-52; Boston 1982, no. 70.

## NOTES

1. I am grateful to the following for permission to reproduce drawings herein: The Department of Egyptology, University College London, The Egypt Exploration Society, L'Institut Français d'Archéologie Orientale, Cairo, Professor T. Säve-Söderbergh and Professor R. Holthoer, and Verlag Phillip von Zabern. This study was prepared in 1980 and last revised in 1988. For a short study of Egyptian amphorae see Wood, B. G., 'Egyptian Amphorae of the New Kingdom and Ramesside Periods', *Biblical Archaeologist* June 1987, 75-8
2. I am indebted to Dr. Manfred Bietak and Dr Helen Jacquet-Gordon for information on amphorae from Tell el-Dab'a, Karnak North and Deir el-Medineh, and to Professor Rostislav Holthoer for information on amphorae from Amarna now in East Berlin. Barbara Adams and Rosalind Hall of the Petrie Museum facilitated the preparation of this study in various ways. I am grateful to Miss Janine Bourriau and Anthony J. Mills for their comments upon this study. Johnathan C. Howell kindly assisted with the preparation of the illustrations.
3. The standard definition of a type is employed here, i.e., the occurrence of a particular shape in a given ware.
4. The study of the inscribed ostraca from Deir el-Medineh by Dr Helen Jacquet-Gordon will shed valuable light upon the wares used in the manufacture of amphorae during the Ramesside Period.
5. Comparative material was very kindly supplied by Mrs Sara Ben-Arieh from Canaanite Jars of Late Bronze Age II date from the Palestinian sites of Tell Akko, Tell Mor and Tell Arad. Mr Peter Parr and Dr Ruth Amiran have identified the sherds from Malkata as of Palestinian origin.
6. Nagel applied the term amphora to some vessels without handles, e.g., Nagel 1938, fig. 62.3.
7. It is unnecessary to suggest that the examples of category 1b amphorae found amongst the pottery from tombs 359/360 at Deir el-Medineh were all re-used, and not of Ramesside date, as was done by Holthoer (1977, 97). Work on tomb 359 was begun in the reign of Ramesses III, and its owner Inherkha' may not have been buried therein until the beginning of the reign of Ramesses IX (Černý 1973, 308). Tomb 360 dates to the reign of Ramses II and belonged to Kaha, grandfather of Inherkha' (Černý, op. cit., 296-8). The pottery from both tombs was found mixed in the front courtyard, which they shared, and amphorae of category 1b could have originated from either of these tombs.
8. Examples attested by shoulder fragments are known from Malkata, Amarna and Buhen.

9. Another example is an unnumbered vessel in the Petrie Museum, made from mixed clay fabric I with a cream, burnished slip. It is unprovenanced and cannot be more precisely dated than to the New Kingdom.
10. Unnumbered examples to be found in the Petrie Museum made from mixed clay fabric I with a cream, burnished slip. They are unprovenanced and cannot, therefore, be precisely dated.
11. An unprovenanced and unnumbered example in the Petrie Museum, made from mixed clay fabric I with a cream, burnished slip.
12. The exact date of this vessel is uncertain; it is made from a Nile silt fabric which is red coated.
13. To test this an experiment was carried out in the Petrie Museum on a large amphora (UC. 19155) of unknown provenance. It is 72.0 cms in height, made from mixed clay fabric I with a cream, burnished slip. The vessel is of the type shown on fig. 2.7 of this study. It was filled with water to the point where the neck begins, and the level of the water was measured from this point at regular intervals. After 2 days it had dropped 2.0 cms, and after a week 5.5 cms; after 3 weeks the water was 10.5 cms below the original level. The degree at which the water permeated the vessel wall can be seen to have decreased quite considerably after the first few days, though leakage continued throughout the three week period. The areas through which most water escaped were those where the surface coating had worn away, and very little seemed to permeate through the coated areas. When filled to the beginning of the neck, 13.5 cms below the rim, the vessel held 17.3 litres and weighed 21 kg. The volume of water lost after 11 days was 0.675 litres, and after 21 days 1.45 litres. The rate of absorption and subsequent loss of liquid may be greater in the drier, hotter climate of Egypt. Some amphorae have been found with the word *mn* inscribed upon them. It is possible that this refers to the *mni* measure of capacity, which is thought to have been the equivalent of 15 litres (Ahitov, S., 'The  $\overline{\text{mn}}$  measure', *Journal of Egyptian Archaeology* 58 (1972), 302). It is conceivable that the name *mnt* which may have been applied to amphorae was derived from the *mni* measure which they could contain.
14. Amongst the inscribed fragments which have been examined during the course of this study, one from Amarna has a black, resinous coating adhering to its interior (unnumbered sherd in the Petrie Museum), and black deposits resembling pitch are referred to on fragments from Deir el-Medineh (Nagel 1938, 22 nos 33-5 & 45). That amphora from the tomb of Tutankhamun had a resinous coating on their interiors, as stated by Carter, has been disproven (Lucas 1962, 19-20).
15. For recent studies of Egyptian wine and viniculture see: Abd er-Razia, M., 'Die Altägyptischen Weingarten (k3nw/k3mw) bis zum Ende des Neuen Reiches',

Cat.	Fig.	Pl.	Ware	Date	References
	3.3	?		XIX/XX	Nagel 1938, fig.16.39-40.
	3.4	?N		XIX/XX	Nagel 1938, fig.14.31-2.
	3.5	6b	MxI,CS N ?MxI/II	XX? XIX/XX? XX/	Nagel 1938, fig.17.44. UC.19153. Nagel 1938, figs 17.45, 18.48-50 & 19. 56-58
	3.6	?		XIX-XX?	Peet & Woolley 1923, pl.LIV.
	3.7	?		?XX	Griffith 1890, pl.XIV.8.
1b	4.1		Canaanite MxI,CSB MxII,B MxI,CSB MxI,CS	AIII AIII AIII Akh Seti I	Malkata M73/J 6860 Malkata M73/K 2336 & 7935 Malkata M73/K 2287 Sherds observed at Amarna UC.30020:Petrie 1909,13 & pl.XLVI.12. This may be an example of fig.4.3.
	4.2		Canaanite  MxII,CS Canaanite 4b Canaanite ?	AIII  Akh Late XVIII	Malkata M74/C5 1. Peet & Woolley 1923, pl.LII several examples, some decorated, one is: Cairo 57357 Rose 1987b,133 & fig.5.10, vessel 62485 UC.26008: Smith 1976,193-4 and Emery, Smith & Millard 1979, pl.106c.
	4.1/ 2	7b	N,CS MxI,CS/CSB MxII, MxII,B MxII,WS	AIII-Akh	Sherds from Malkata and Amarna, some decorated.
1b	4.3	?		Akh-XIX	Peet & Woolley 1923, pl.LII(several examples, some decorated).
		?		Akh	Pendlebury 1951, 236(decorated).
		?		?AIII& Hor	Nagel 1938, figs 110.34-6 & 111(or Fig.4.7)
		M,B ?		RII XVIII/XIX	Nagel 1938, fig.2.8.(or Fig. 4.7) Petrie 1890, pl.XX.13.

Cat.	Fig.	Pl.	Ware	Date	References
	4.4		MxI,CSB	AIII	Malkata M73/J 6753.
	4.5		?N,CS	XIX-XX	Nagel 1938, fig.14.33.
	4.6		?MxII	XIX-XX	Nagel 1938, fig.15.35.
	4.7		?M	XIX-XX	Nagel 1938, fig.14.34.
	5.1		?	?N.K.	Peet & Woolley 1923, pl. LII(several examples).
	5.2		?	?N.K.	Peet & Woolley 1923, pl. LII(several examples).
	5.3		?	?XX	Griffith 1890, pl.XIV.3, several examples, one is: UC 16785 (tumulus VI)
	5.4	6c	N,CS		
	5.4		?N,CS	Akh	Peet & Woolley 1923, pl. LIII(several examples, one decorated; op. cit.,90).
1c	5.5		MxI,CSB	AII	Brack & Brack 1977,pl.65.
	5.6		MxI,CSB	AII	Brack & Brack 1977,pl.65.
	5.7		MxI,CSB	AIII	Malkata M73/J 6862 & 1189/1702.
	5.8		?MxI,CSB	Akh	Frankfort & Pendlebury 1933,pl.LIII(several examples)
	5.9		?MxI,CSB	Akh	Peet & Woolley 1923, pl. LI(several examples).
	5.10		MxI,CSB ?MxI,CSB	Akh XVIII-XIX	Peet & Woolley 1923, pl. LIII(several examples, one is BM 58626). Petrie 1890, pl.XXI.42 (decorated).
	5.11		?MxI,CSB /CS	XIX(RII?)	Brunton & Engelbach 1927, pl.38.
	5.12		N,RSB	Seti II	Petrie 1891,18 & pl.XIX.2

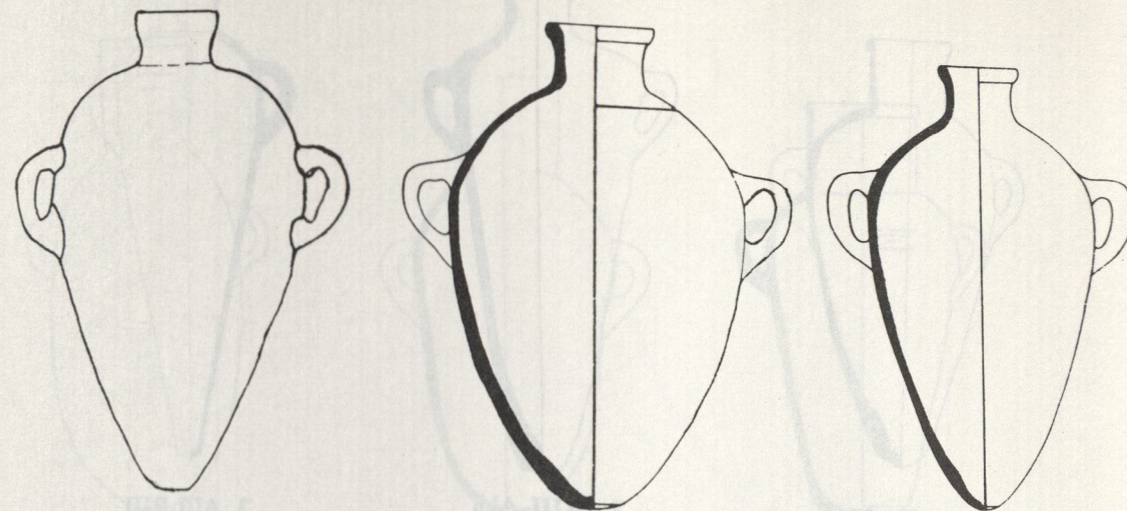


Mitteilungen des Deutschen Archäologischen Instituts Abteilung Kairo 35 (1979), 227-247; Lesko 1977; Darby, W. J., Ghalioungui, P. and Grivetti, L., *Food: the Gift of Osiris* (1977, London), II, chapters 14-5. The possibility that wines were aged in amphorae, and that good vintages were stored in them (Lesko 1977, *passim*), is difficult to verify, and this is not the place to attempt it. However, it should be pointed out that only when dealing with precisely dated jars, which are fully labelled and sealed, so that their age can be determined, can this topic be broached. Even under these conditions one cannot be certain that a jar was not re-used and sealed without the erasure of an already existing docket, as was the case with one of the vessels from the tomb of Tutankhamun referred to in the text of this study. The jars from that tomb do suggest that wine was kept in amphorae for several years, e.g., a vintage of year 4 was still available at the time of the king's death in year 10.

16. See also Fairman 1951, 161 no. 4 for a reference to the delivery of wine in *mn* vessels from Amarna.

17. Accepting the evidence of the docket found in the Memphite tomb of Horemheb, this monarch's highest known year date is year 13 (Martin, G. T., 'Excavations at the Memphite Tomb of Horemheb, 1978: Preliminary Report', *Journal of Egyptian Archaeology* 65 (1979), 13-16). From year 2 of Horemheb to the accession of Ramesses II would amount to 27 years. Of the burials in tomb 359/360 at Deir el-Medineh only those of Kaha and Inherkha' can be dated with precision, to the end of the reign of Ramesses II or beginning of that of Merenptah and the beginning of the reign of Ramesses IX respectively (see note 7, above). For the amphora of Horemheb's reign to have been part of the funerary equipment of either of these two would make it between 90 and 200 years old on burial. Tombs 359 and 360 also contained the burials of several other people, including Kaha's father Huy (Nagel 1938, 34-6; Černý 1973, 294-298), whose inscribed canopic jars were found (*ibid.*, fig. 23.78-80). Other dated amphorae from these tombs mention years 6, 19, 36, 40 and 46-49, probably all of Ramesses II. All of these jars and that of Horemheb's reign probably originated from tomb 360 rather than 359. The Horemheb year 2 amphora, as well as several of those dated to the reign of Ramesses II, probably accompanied an earlier burial therein, such as that of Huy.

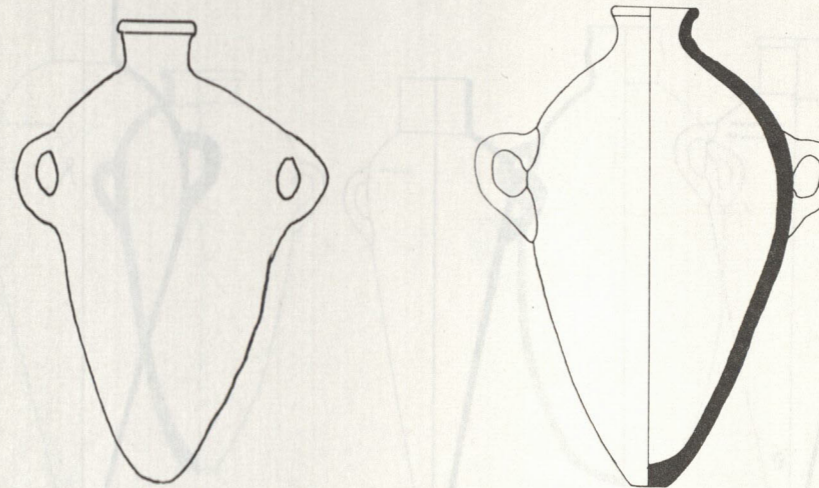
18. Suggested also in Nicholson and Rose 1985, 149. This same ware type was also used for one-handled, tall necked jars, lentoid flasks, double-vessels (e.g., flasks and tankards), tankards and wide bodied, neckless jars. This presumably resulted from the fact that they were destined to contain commodities, especially oils and perfumes as well as wines and foodstuffs, which were highly valued. The loss of contents through seepage would have occurred if porous fabrics had been used. Whether their manufacture was restricted to the same centres, or a limited number of centres, as has been suggested for the amphorae, is uncertain, though probable.



1. Hat-AII

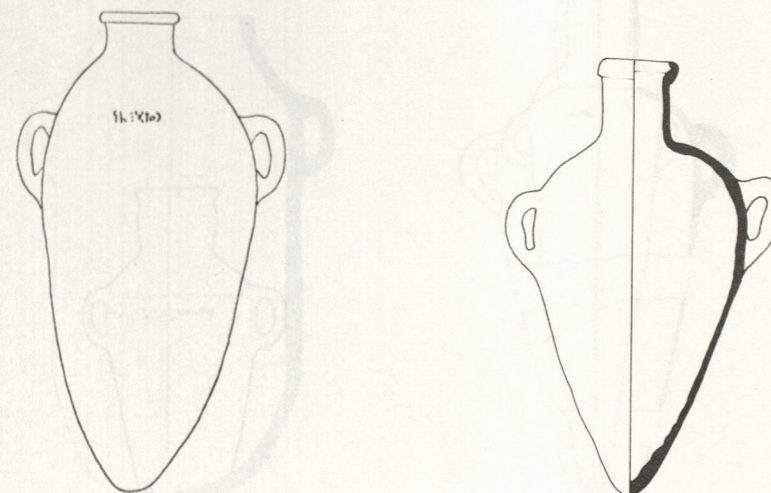
2. Hat-AIII?

3. Hat-AII



4. Hat-TIII

5. TIII-AII

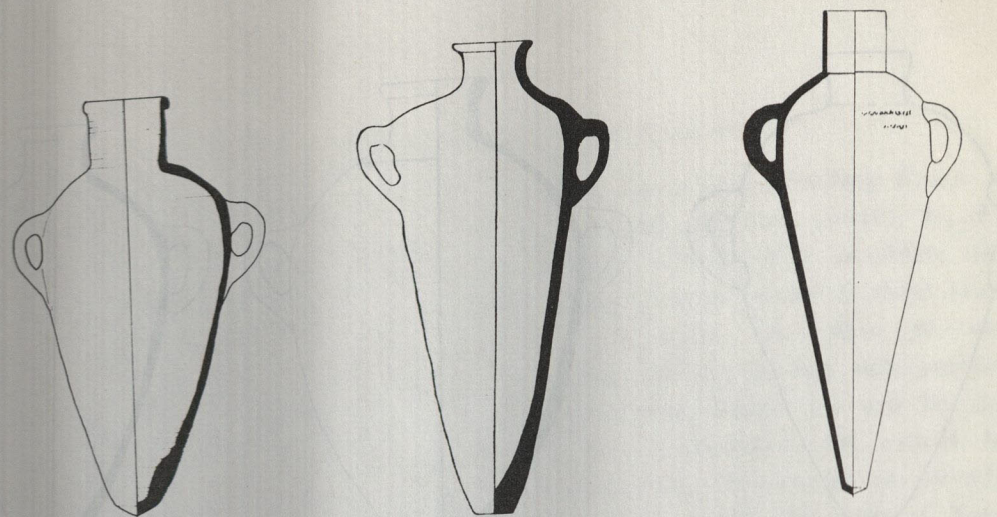


6. TIII-TIV

7. AII

Scale 1:10

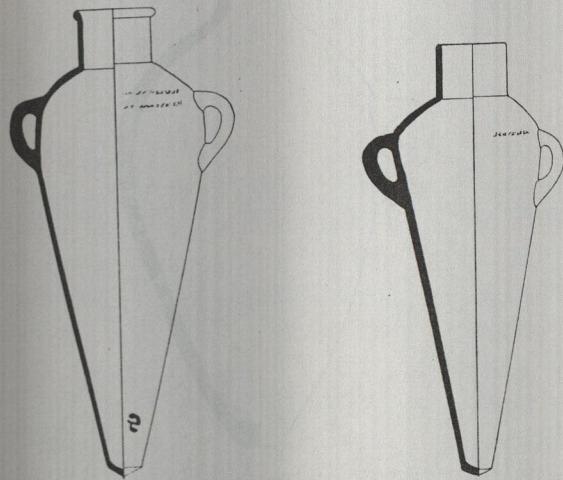
Figure 1: Category 1a Amphorae



1. AIII-Hor

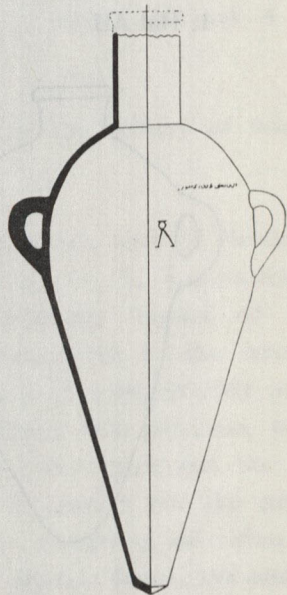
2. AIII-Akh

3. AIII-RIII

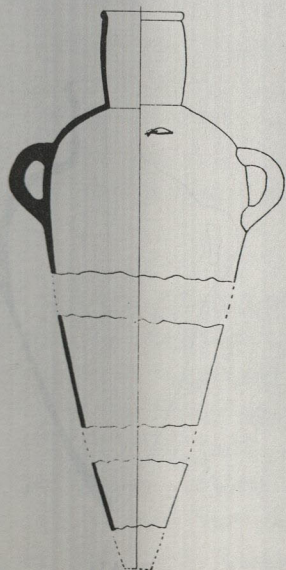


4. RII

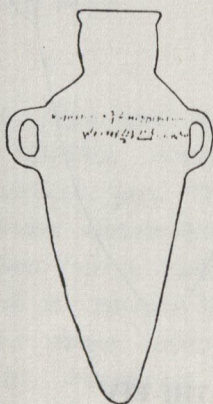
5. RII



6. RII



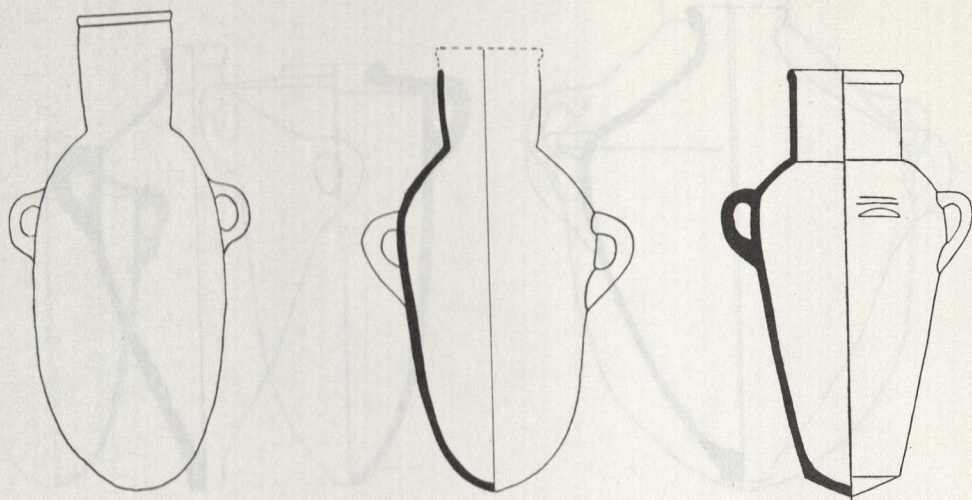
7. RII



8. Mer-Twosret

Figure 2: Category 1a Amphorae

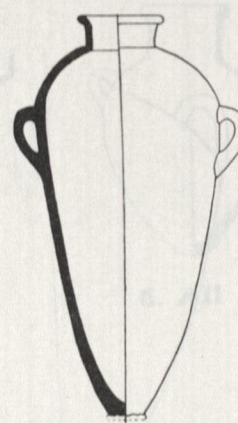
Scale 1:10



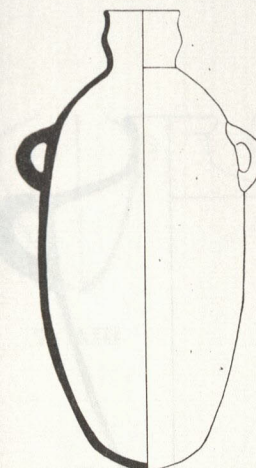
1. RII-XX

2. RII

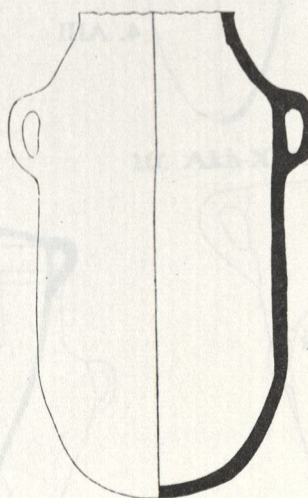
3. XIX-XX



4. XIX-XX



5. XX?



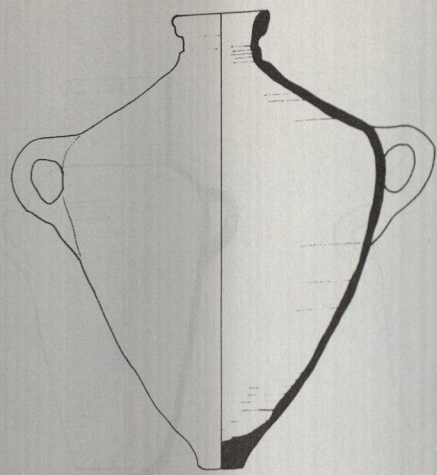
6. XIX-XX?



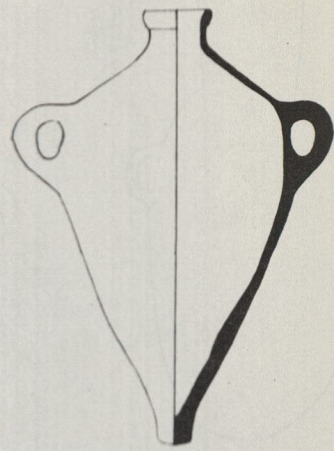
7. XX?

Figure 3: Category 1a Amphorae

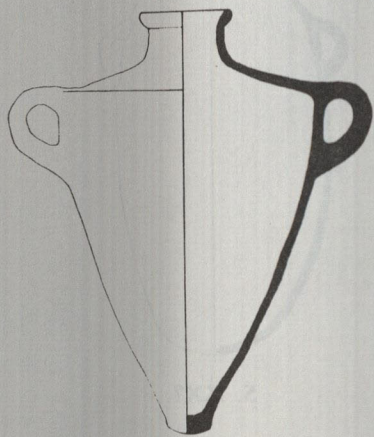
Scale 1:10



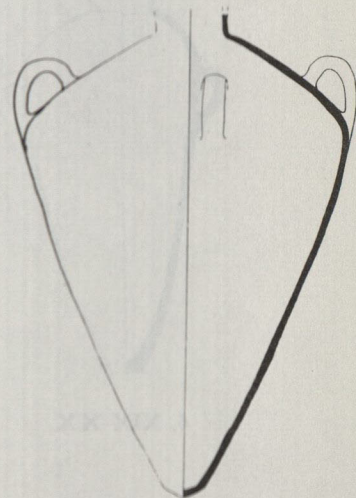
1. AIII-Seti I?



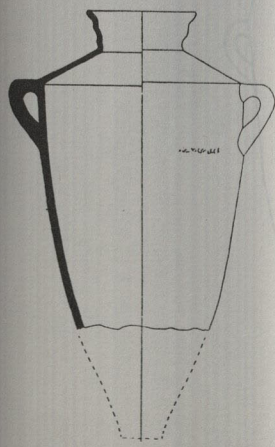
2. AIII-XIX?



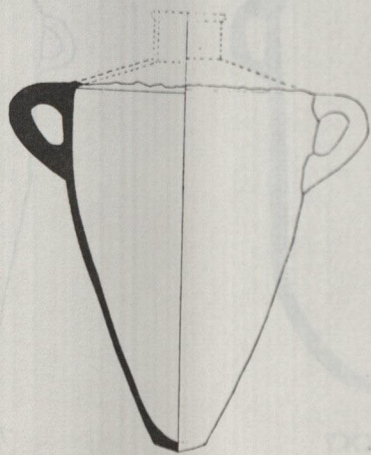
3. Akh-RII



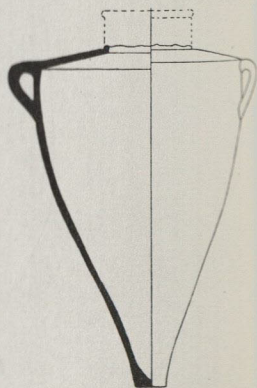
4. AIII



5. XIX-XX



6. XIX-XX



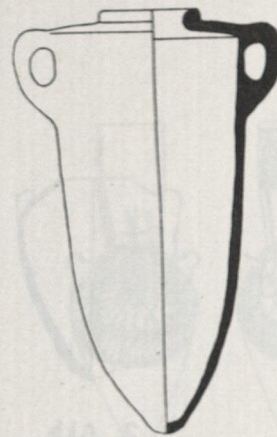
7. XIX-XX

Figure 4: Category 1b Amphorae

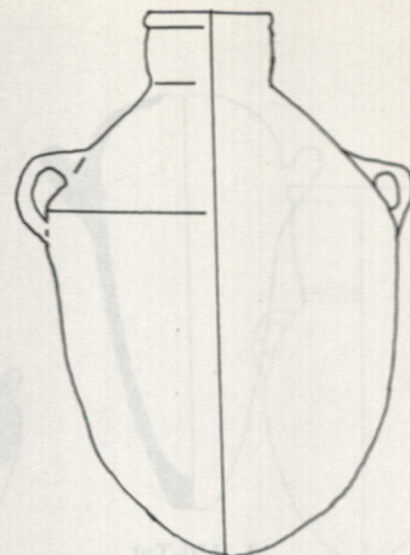
Scale 1:10



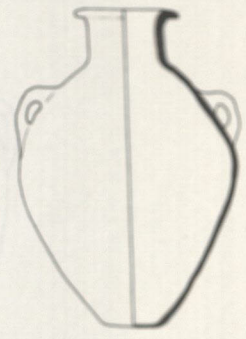
1. N.K.?



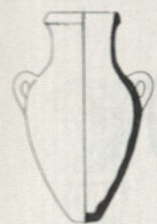
2. N.K.?



3. XX?



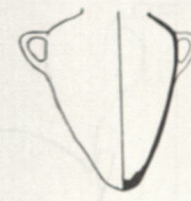
4. Akh



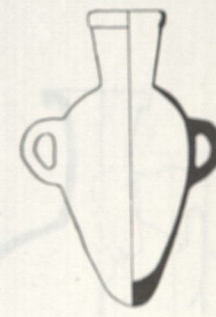
5. AII



6. AII



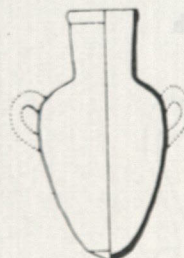
7. AIII



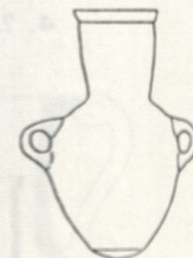
8. Akh



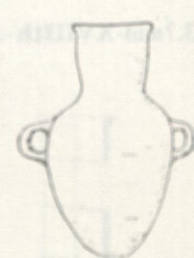
9. Akh



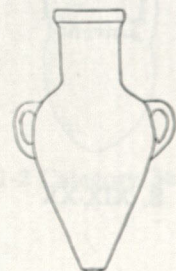
10. Akh-XIX?



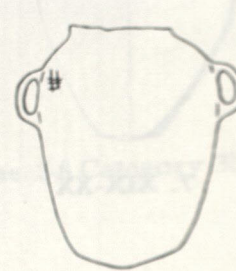
11. XIX



12. Seti II



13. XVIII-XIX



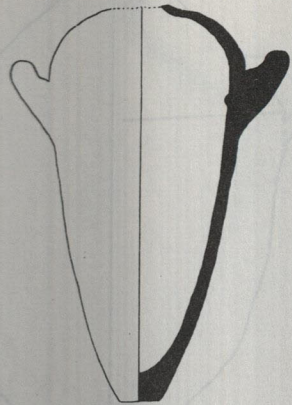
14. XVIII-XIX



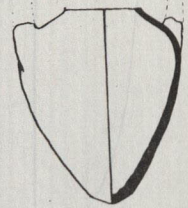
15. AIII

Figure 5: 1-4 Category 1b Amphorae 5-15 Category 1c Amphorae

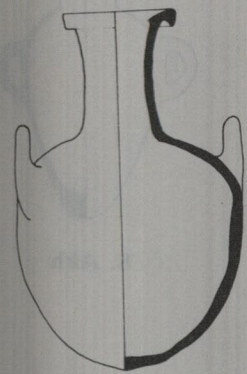
Scale 1:10



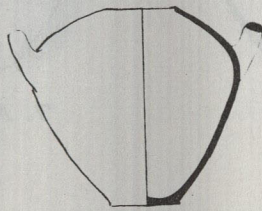
1. AIII-Tut



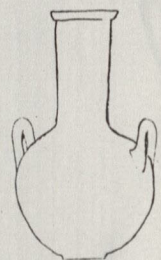
2. Akh



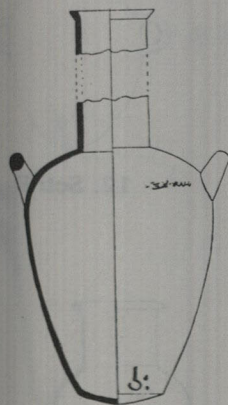
3. mid-XVIIIth-Akh



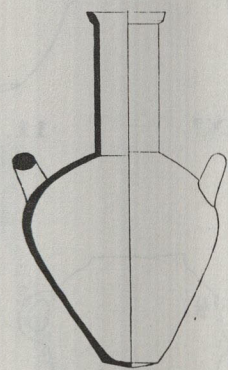
4. ?AIII-Akh



5. AIII-XIX



6. RII



7. XIX-XX

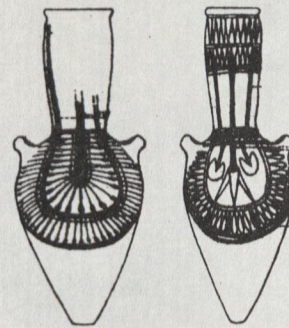


8. XIX-XX

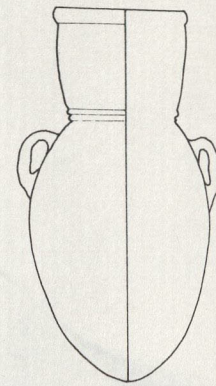
Figure 6: 1-2 Category 2a Amphorae 3-8 Category 2b Amphorae Scale 1:10



1. RII-XX?



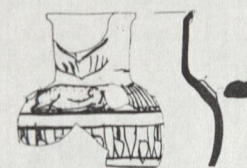
2. XIX(RII?)



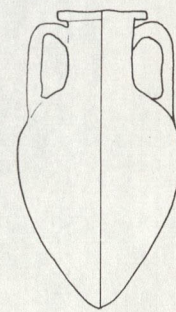
3. Akh



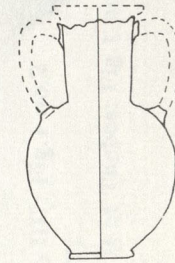
4. AIII-Akh



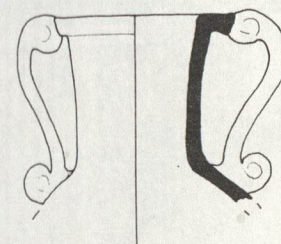
5. AIII



6. AIII



7. AIII?



8. AIII-Akh

Figure 7: 1-2 Category 3a Amphorae 3-8 Category 3b Amphorae Scale 1:10

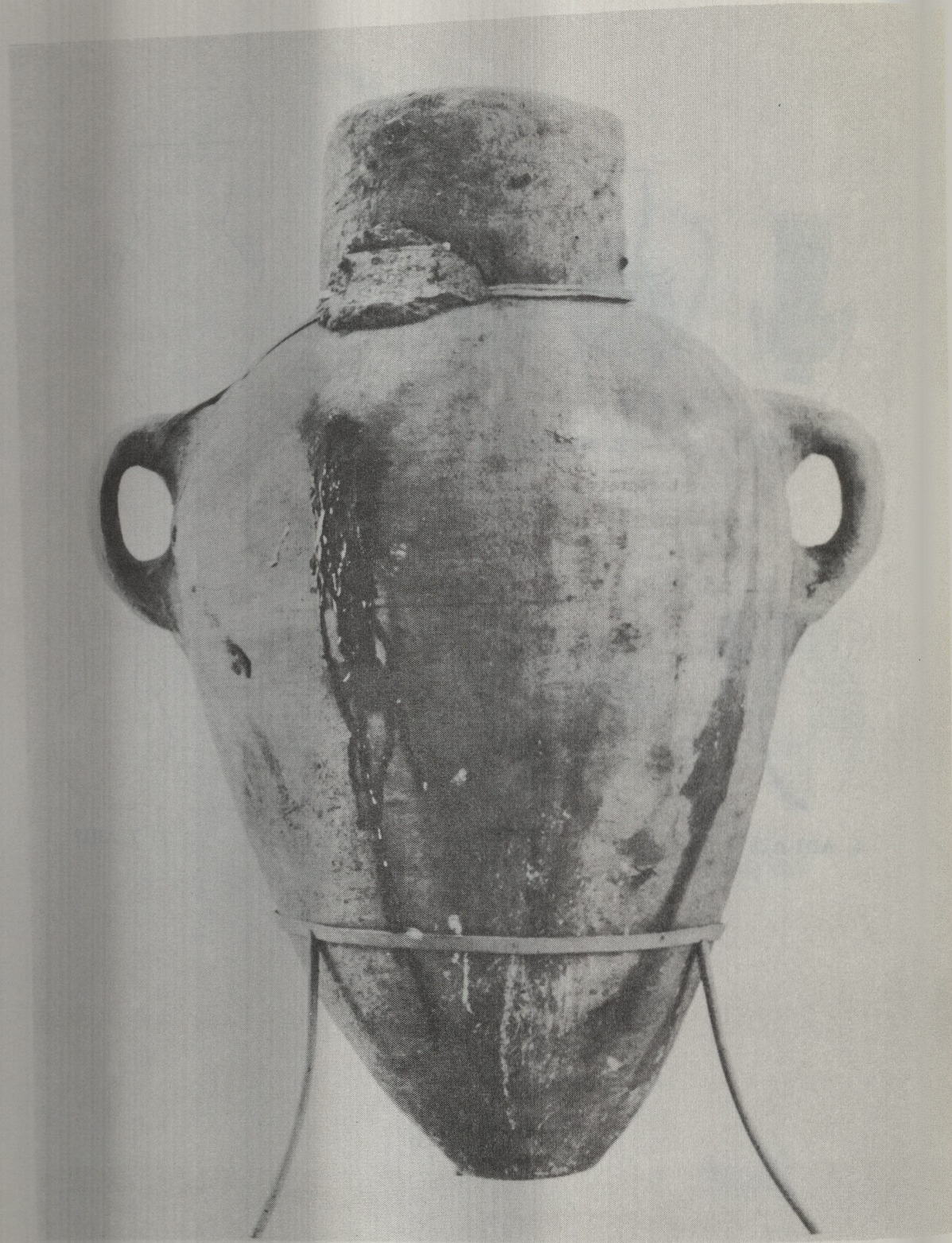


Plate 1: Amphora with sealing of Queen Hatshepsut: Fig.1 no.1  
(courtesy of the Metropolitan Museum of Art; 66.3.83).

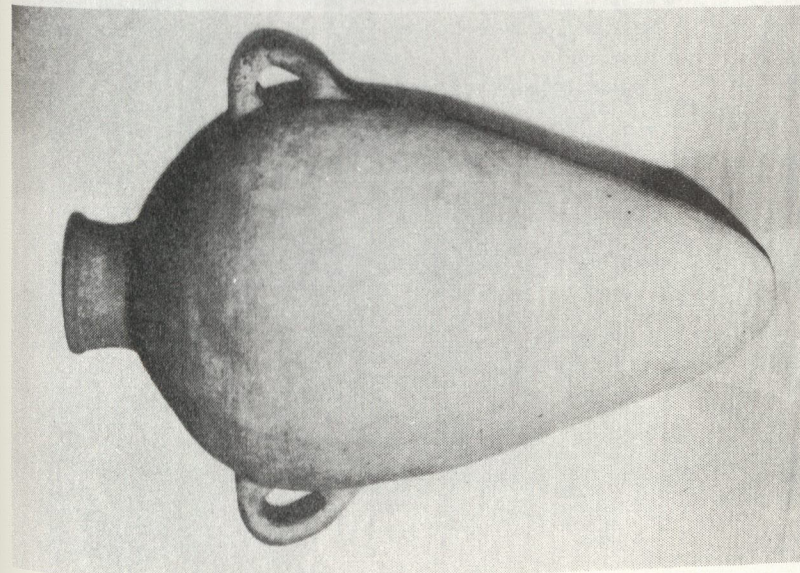


Plate 2a

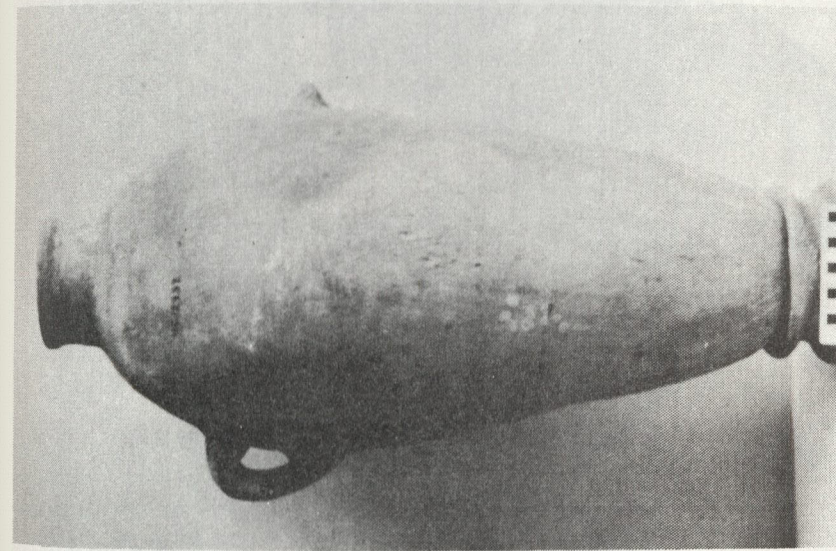


Plate 2b

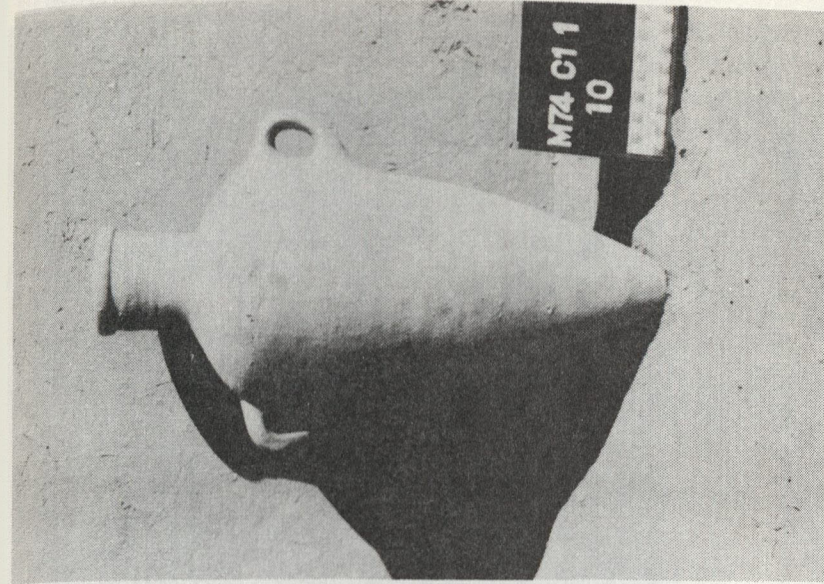


Plate 2c

Plate 2a: Unprovenanced amphora of the reign of Amenhotep III?: Fig.1 no.2  
(courtesy Merseyside County Museums; 1977.112.237).

Plate 2b: Amphora from the Mortuary Temple of Amenhotep II at Thebes: Fig.1 no.6  
(Courtesy of the Petrie Museum; UC 15937).

Plate 2c: Amphora from the Malkata palace complex of Amenhotep III: Fig.2 no.1

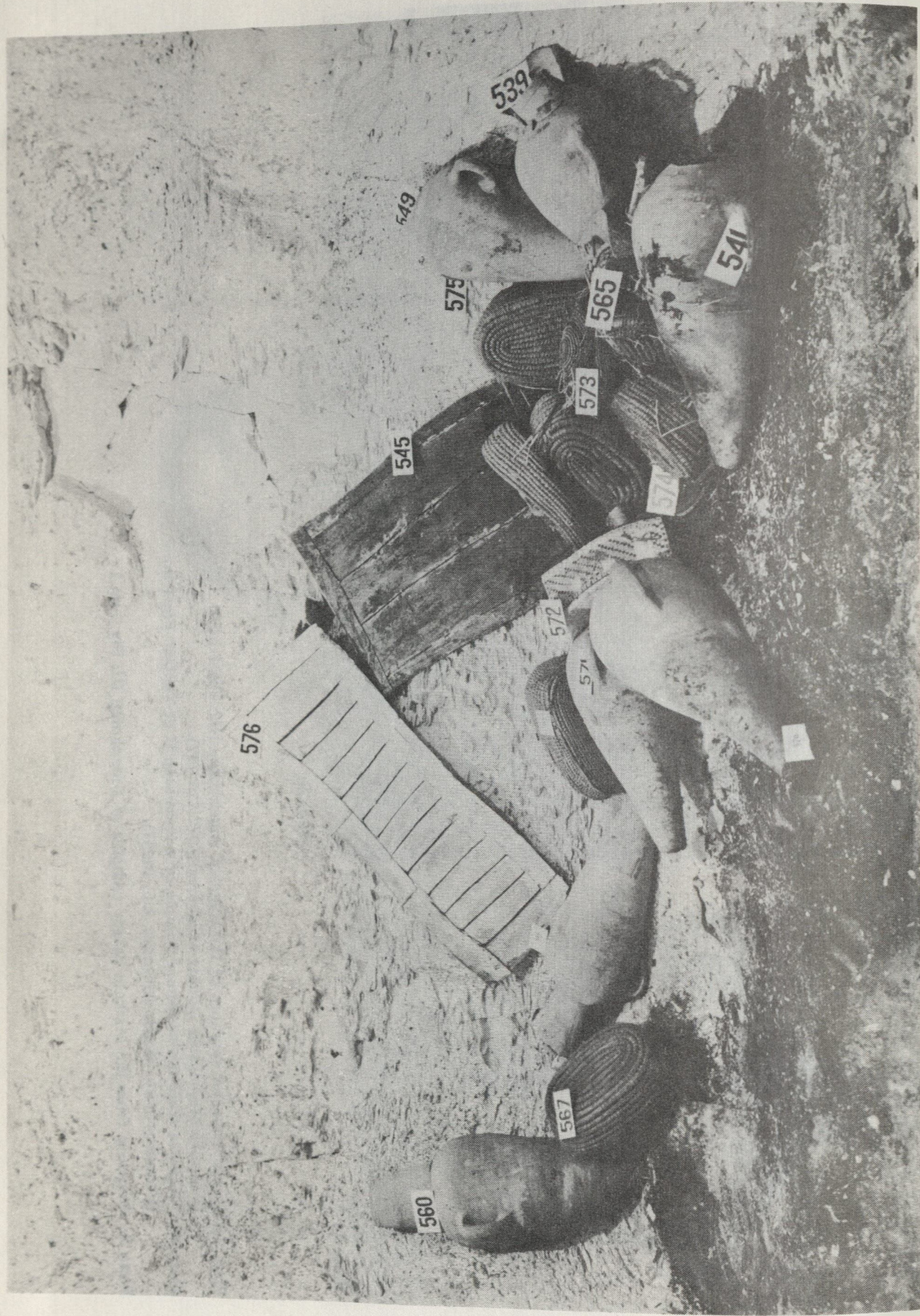


Plate 3: Amphorae in the tomb of Tutankhamun: Fig.2 no.1 (Courtesy of the Griffith Institute, Ashmolean Museum, Oxford).

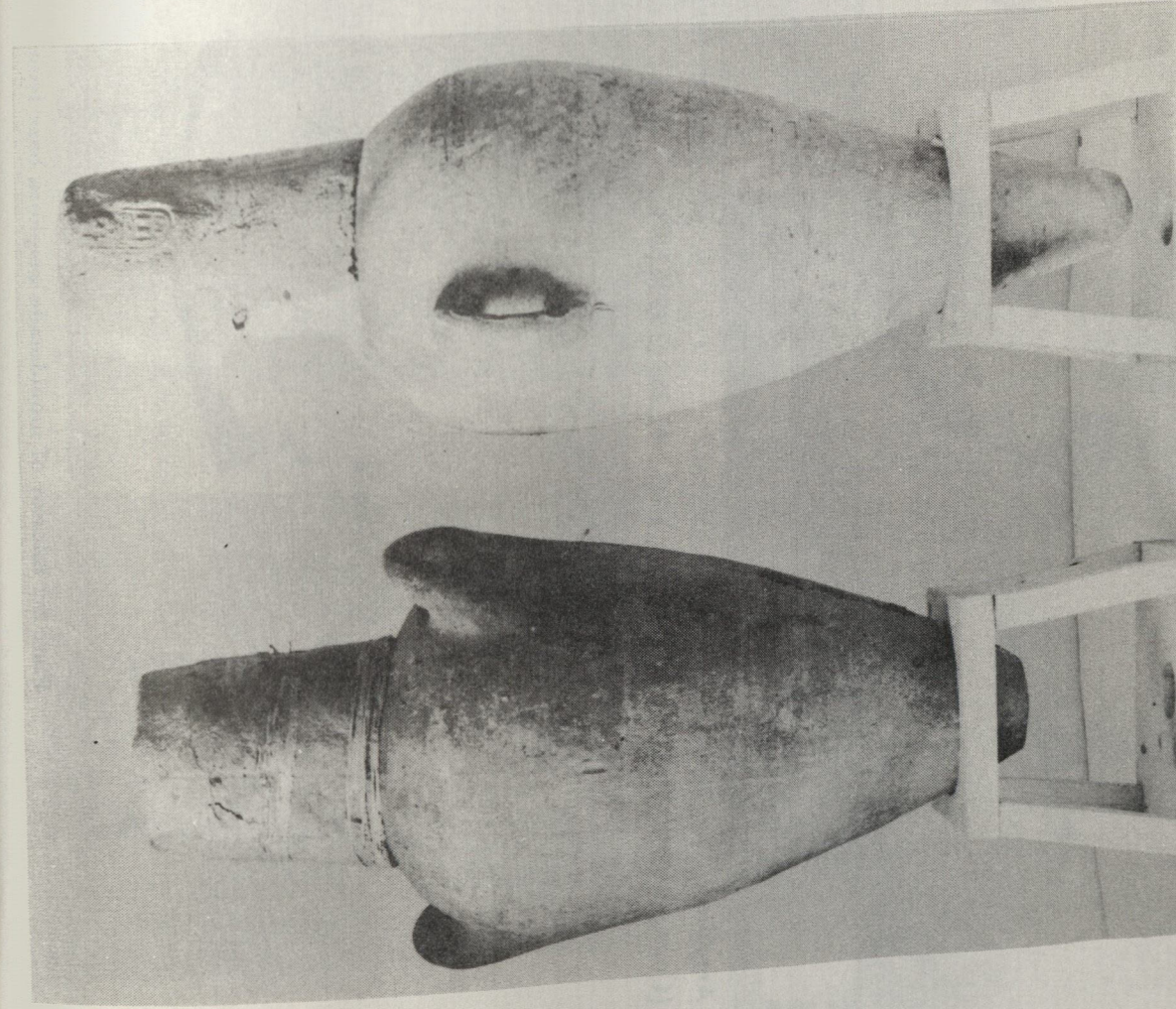


Plate 4a: Amphorae from the tomb of Tutankhamun (Cairo JE 62300 & 62306): Figs 2 no.1 and 6 no.1 (Courtesy of the Griffith Institute, Ashmolean Museum, Oxford).

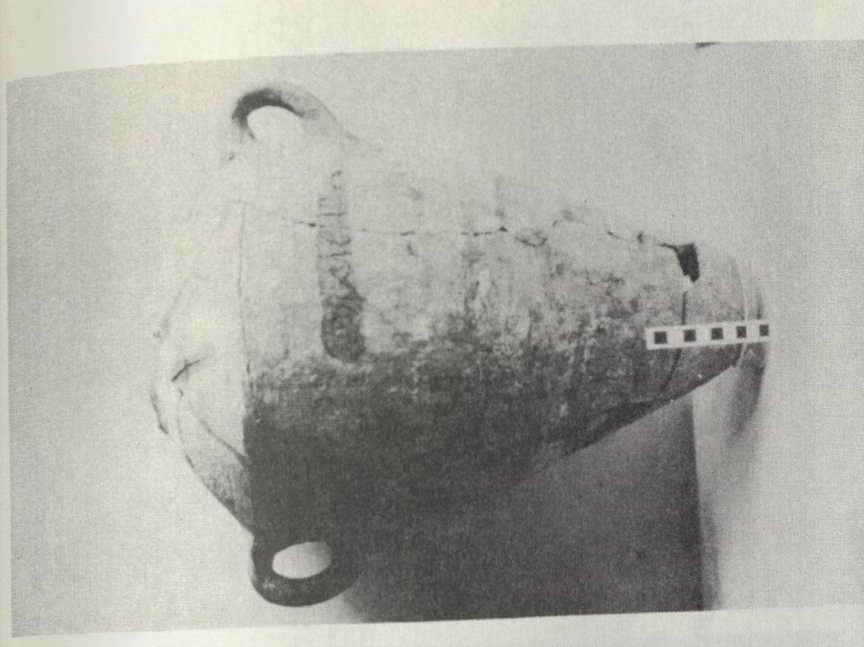


Plate 4b: Late XVIIIth dynasty amphora from Buhen: Fig.4 no.2 (Courtesy of the Petrie Museum; UC 24608).



Plate 7a: Amphorae shoulder sherds with polychrome decoration from Malkata.



Plate 7b: Shoulder sherds from a polychrome decorated amphora from Amarna (Courtesy of the Ashmolean Museum; 1893.1-41.308).



Plate 7c: Polychrome painted vessels from the tomb of Kha at Deir el-Medineh (Courtesy of the Egyptian Museum, Turin; centre 8619; Fig.6 no.5).



Plate 8a: Polychrome decorated vessels from Deir el-Medineh (Courtesy of the Egyptian Museum, Berlin; 21326, 21325 & 21327).

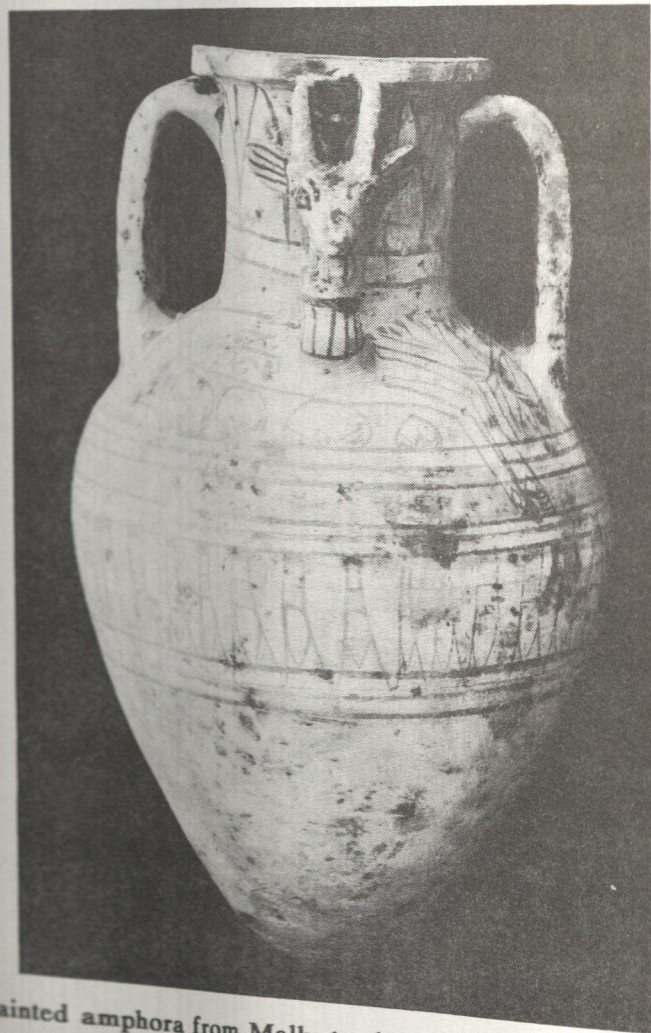


Plate 8b: Blue-painted amphora from Malkata (Fig.7 no.4) (Courtesy of the Metropolitan Museum of Art, Rogers Fund 1911; 11.215.460)

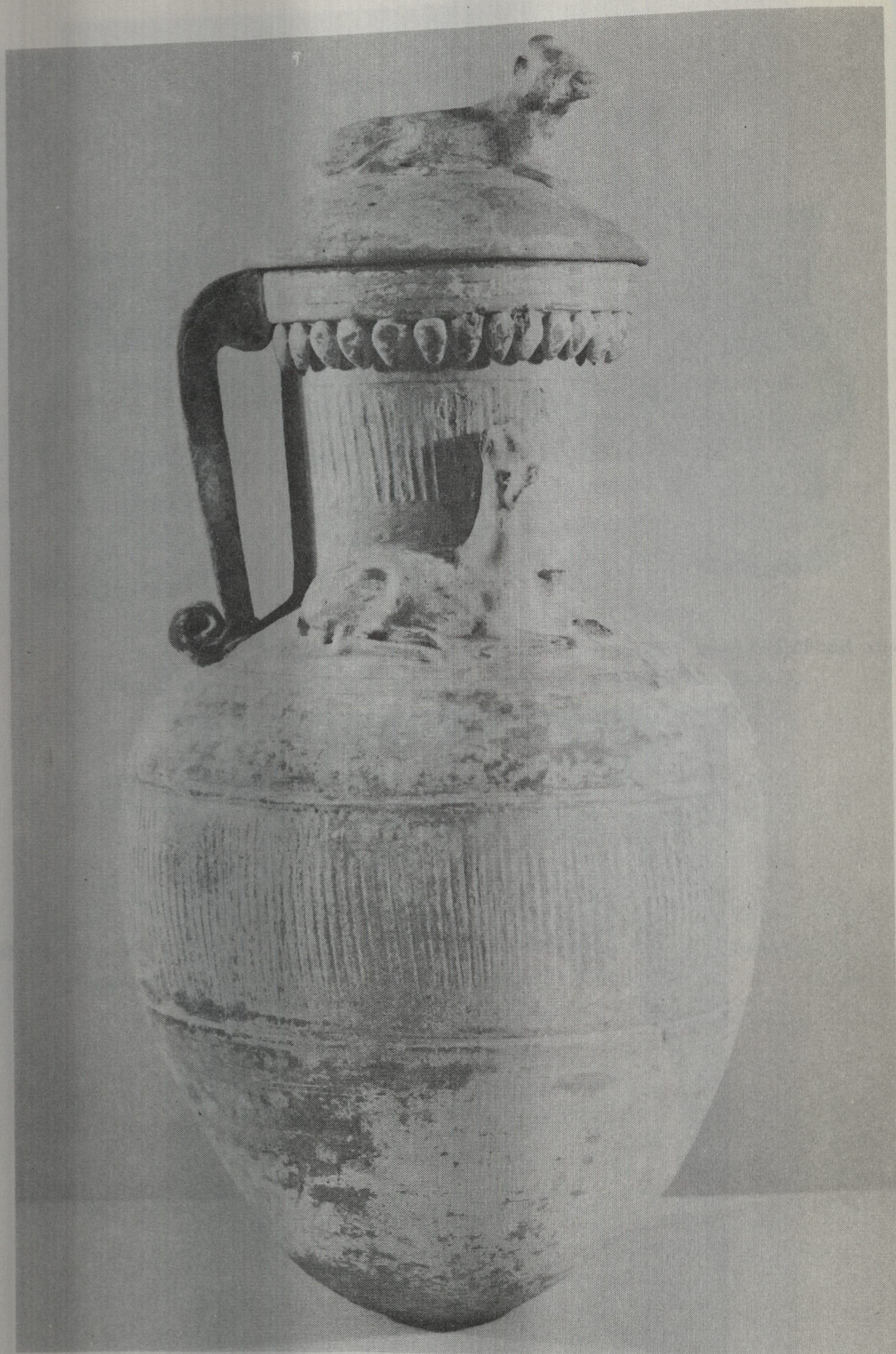


Plate 9: Large blue-painted amphora  
(Courtesy of the Museum of Fine Art, Boston; 64.9).

