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## **Corpus of potmarks from the Pre/Early Dynastic cemetery at Minshat Abu Omar (Northeastern Delta, Egypt)**

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### **Introduction**

The site of Minshat Abu Omar in the N-E Delta was excavated by the Munich East Delta expedition from 1978 to 1990 (Kroeper and Wildung 1985; 1994; in press). The cemetery located on a *gezira* hill was used in two distinct time periods: an older, Pre/Early Dynastic period (ca. 3500-2900 BC) and in the Graeco-Roman time (300 BC - 300 AD). At the almost completely excavated cemetery (only the most northern part of the site which was already destroyed was not excavated), 420 Pre/Early Dynastic graves and 2630 Graeco-Roman burials were recorded. According to anthropological evidence the Pre/Early Dynastic population at this site, which probably owed its existence to the fact that it lay on one of the routes to the Near East, showed no unusual traits and seems to have been a "typical" Egyptian population.

During an examination of the surrounding area by means of a grid of drill-holes up to 6m in depth, a settlement of the Early Dynastic and possibly also of older date was found (Krzyzaniak 1993) covered with up to 5 metres of Nile silt.

The graves of the Pre/Early Dynastic period can be subdivided roughly into an older (ca. 3200-3000 BC) and younger group (3000-2900 BC), distinguishable by the type of grave offerings and by the position of the body.

Statistically, the amount of grave goods added to the burials changed with time here, as it did at other cemeteries of the same period: the older graves have on an average 3.7 offerings and only in one case were 36 offerings placed in the grave. The average offerings for the younger group, on the other hand, lies closer to 15.5 offerings, quite a few graves having over 40 offerings. This change in the

display of wealth in the graves can reflect a change in actual wealth (i.e. a growing group of elite) and also in a social awareness, e.g. a will to display wealth and position in the burial. Little difference was found in the grave groups between female and male graves as regards distribution and/or display of wealth.

### Vessels with potmarks

The ceramic vessels (2360 pieces) found in the graves in Minshat Abu Omar represent 69% of all objects, the rest of the finds are more precious objects made of stone, copper and ivory. These more exclusive objects represent a rather high percentage of objects, in comparison to other cemeteries of the same period (Castillos 1982).

In this paper the group of vessels with potmarks found in Minshat Abu Omar is to be presented completely since the 322 marks are a significant addition to the published marks which hail mostly from Abydos, Saqqara, Tarkan, Abu Roash and Tura (van den Brink 1992: fig. 4), cemeteries of the same time period. Still under discussion is the function and meaning of the marks, in particular as regards their importance to the beginning of written language in ancient Egypt (Dreyer 1992; 1993; Helck 1985; 1990; Kaiser and Dreyer 1982:227ff.). In particular the *serekhs* (Horus names of kings) of the "0" Dynasty have aroused great interest and discussion in light of their chronological importance to the unification of Egypt (Dreyer 1998; Kaiser 1990; van den Brink 1996; Vernus 1993).

### The corpus (Fig. 1-7, Tables 1-2)

The marks, here presented, are as copied from the vessels, not in an abstracted or standardised form (however due to space, not to scale) and as can be seen even similar signs vary a great deal in execution, indicating a kind of handwriting. Certainly these marks, even those on the same vessel type, were not inscribed on a mass production basis. Whereas a great majority of marks consists of abstract strokes or singular signs some few early inscriptions (i.e. *serekhs* and a collection of signs representing early hieroglyph inscriptions) are also present. In general, it can be said that both abstract signs/strokes and inscriptional evidence is present on the pots from Minshat Abu Omar and that both can occur on vessels in the same grave and are therefore contemporaneous. A strict development from abstract strokes to hieroglyphic signs is therefore not indicated. However, a development from early forms of hieroglyphs (e.g. signs for *k3*, *ntr* and *hwt*) to the developed form used in the Old Kingdom is indicated. A discussion and analysis of the reading/ interpretation of the individual signs is beyond the scope of this paper and will be presented elsewhere.

Two tables have been prepared for presentation of the potmarks/inscriptions. In Table 1 a-h the marks have been grouped for the sake of easier discussion, according to their occurrence on groups belonging to a simplified ceramic



typology. Typological considerations (Kroeper 1989a, b) concerning hand made ceramic where often accidental modelling and deliberate decoration or attributes are difficult to distinguish are to be discussed elsewhere (Kroeper, in preparation). On Table 2 a-f the potmarks are presented according to a preliminary marks typology.

The 22 ceramic forms (Fig. 1-5) presented here are not an exhaustive or detailed typology of all the ceramics in Minshat Abu Omar which is much more extensive - ceramic types exist on which no potmarks occurred, so they are not mentioned in this context. The slogans used for the types have been chosen as a help to identification of the type, they are not meant to indicate contents or function of the vessels – e.g. the wine vessels did not contain wine but are only named thus due to tradition.

The key to Table 1 a-h on which the potmarks/inscriptions are arranged according to the vessel types on which they occur is as follows:

- the numbering in the squares of the drawings indicates the numbering system used at the excavation and in all publications of Minshat Abu Omar so far:
  - the first number stands for the grave number,
  - the second number is the running number of the object found in the grave;
  - for example 1450/19 means: grave 1450/offering no. 19 in the grave;
- other abbreviations:
  - H1= vessel is completely hand made;
  - H2= bottom is hand made, top finished with a simple turning device;
- type description:
  1. type name mentioned on the plates;
  2. short description;
  3. ceramic material; method of production.

#### 1. *serekh*-type

2. Vessels with *serekhs* and other potmarks: tall ovoid body with rounded shoulders, short neck, profiled lip, flattened base; made of fine Nile clay with a large amount of lime in the matrix; surface smoothed horizontally on top, diagonally on the lower part of the body; on the shoulders impressed or wiped with finger tips, groups of flat bows (mostly 3x3) or sometimes continuous bows; the edges of the bows are often quite sharp; the shape varies from very slim to rather bulbous bodies; height usually between 45-60 cm; this type is very well made, the surface well smoothed and lightly polished;
3. The matrix is middle-fine to fine Nile clay mixed with much crushed lime; surface colour is usually a dusky-red sometimes mixed with cream coloured patches; H2.

#### 1. *serekh*-other

Often similar in shape and size to *serekh*-type vessels. Three major distin-

- guishing differences to the *serekh*-type occur together or individually ;
2. The lip is usually rounded, not profiled; the decoration around the shoulder varies from short pinches to indentations and scratches; if the shoulder decoration consists of bows, these are not impressed with the fingers but engraved with a tool.
  3. The matrix is mostly marl clay;
1. **ovoid rounded large**
  2. Vessels with a large ovoid/conical body, rounded shoulders, short neck, rounded lip, small rounded base; over 50 cm high;
  3. Both marl and Nile clays occur; surface smoothed; H2.
1. **ovoid flat large**
  2. Large ovoid/conical body with rounded shoulders, short neck, rounded lip; small flattened base; surface smoothed; over 50 cm high;
  3. Both marl and Nile clays occur; H2.
1. **ovoid rounded small**
  2. Vessels with a small ovoid body, rounded bottom, surface well smoothed often slipped; under 50 cm high;
  3. Mostly marl clay is used although some are made of Nile clay; H2.
1. **ovoid flat small**
  2. Vessel with small ovoid/conical body with rounded shoulders, flattened base, surface smoothed; under 50 cm high;
  3. Both marl and Nile clays; H2
1. **ovoid flat rough**
  2. Small ovoid/conical body with rounded shoulders, flattened base and surface left rough; many vertical scratches on bottom half of vessel, very thick walls; under 50 cm high;
  3. Made of rough Nile clay; H2.
1. **conical**
  2. Shoulders almost horizontal, body almost conical, base rounded; short neck, lip mostly rounded;
  3. Both marl and Nile clays occur; H2.
1. **barrel shaped**
  2. Barrel shaped body with short, mostly straight neck, and usually flattened projecting lip;
  3. Both marl and Nile clays occur; surface very smooth, usually red slip; H2.
1. **"nw"-type**
  2. Small ball-shaped vessels; varying from ball shaped to ovoid, bottom rounded sometimes slightly pointed; rounded lip, mostly without neck;



3. Rough Nile clay; hand modelled surface mostly left untreated; H1.
  1. **cylindrical**
  2. Cylindrical body, projecting rounded lip, flattened base;
  3. Mostly marl clays; surface well smoothed; H2.
1. **bowl-flat**
2. Low bowls mostly with rounded base; surface mostly roughly smoothed;
3. Nile clay; mostly rough surface; H1.
1. **bowl-deep**
2. Deep bowls; vessels occur in a great variety of shapes, mostly elliptical with slightly flattened base;
3. Great variety of matrix (marl and Nile clays) and surface treatment occur; both H1 and H2.
1. **other**
2. Vessels with unusual (occurring only one time) shape;
3. Made of both marl and Nile clays; both H1 and H2.
1. **other-import**
2. Imported vessels with unusual shapes, often with handles;
3. Imported fabric; H1.
1. **other-ovoid rounded rough**
2. Vessel with a small ovoid/conical body, large rounded shoulders, rounded bottom; surface left rough, many vertical scratches on bottom half of the vessel; very thick walls under 50 cm high;
3. Rough Nile clay; H2.
1. **other-"hes"-type**
2. Vessels with slim body and convex curve near base, shoulders almost horizontal, straight neck and profiled lip; base flat; usually decorated with 2x triple-groups of impressed decoration (bows) at shoulder height, wiped with fingers;
3. Fine Nile clay similar to *serekh*-type; surface lightly polished, dusky red; H2:

The following group of **wine type vessels 0-4** shows a great variety of shapes and decoration. The major distinguishing characteristic, besides body shape, is the horizontally applied, or lacking thereof, of rope decorations - ropes applied at various irregular heights on the body of the vessel. These ropes (except in very few cases) are flat and carelessly applied making it difficult in some cases (due to bad surface condition) to say with certainty if a rope decoration is present. In rare cases the ropes are thick and impressed with the fingers to form a kind of thick wavy rope. The size varies from 60-84 cm in height. The wine-type has here been subdivided into 4 groups for the sake of easier presentation. The suggestion made at various times that a chronological development of the wine-

jars is reflected in the amount of ropes applied (3 ropes-older, no ropes- younger) can not be confirmed in Minshat Abu Omar: in graves 1590, 2275 2590, 2900, 3040 wine vessels of all types can be found in one and the same grave.

Another vessel type similar in size, here called *serekh-other large*, is often classed with the wine jars in literature although they have a distinctive shape and decoration (see below).

1. **wine-type 0-4**; The vessels have a slim body of tall ovoid shape with slightly rounded shoulder and a small, mostly slightly flattened, base; the rounded or slightly pointed lip sits on a sharp contraction under the lip (no neck).
2. The vessels are made of middle fine Nile clay, mixed with much lime; the surface is usually slipped and smoothed, sometimes rubbed to a buff shine dark red in colour; usually they are rather carelessly made with modelling traces and bumps on the surface; the vessels were made in 3 parts, and the connecting points are usually easily "feelable" on the inside of the vessel; only the upper 3<sup>rd</sup> of the vessel was finished on a slow turning wheel, the middle and lower part were hand made; H2.
  - a. **wine-type 0**
  - b. without applied decoration;
  - a. **wine-type 1**
  - b. one rope at top mostly applied as a flat band around the shoulder area;
  - a. **wine-type 2**
  - b. two ropes at top, the two bands can be placed at widely differing positions to each other;
  - a. **wine-type 3**
  - b. two ropes, two on top, one at bottom; in some cases it is difficult to decide if the rope like protrusion near the foot is an applied rope decoration or only a ledge pulled from the foot of the vessel used for handling when the clay was still moist;
  - a. **wine-type 4**
  - b. one rope at top, one at bottom;
- 1 ***serekh-other large***
2. Body more bulbous than wine-type; at the top of shoulder sometimes overlapping, mostly continuous high bows flatly impressed/wiped with fingers; lip rounded, or profiled, base flat;
3. Middle fine Nile clay mixed with much lime; surface well smoothed, sometimes rubbed to a buff shine; more similar in general shape to the *serekh*-types although much larger (70-90 cm) and the production is not of such a high quality as with the *serekh* vessels. The shoulders are wider and the bows applied with a finger are less deeply impressed; H2.



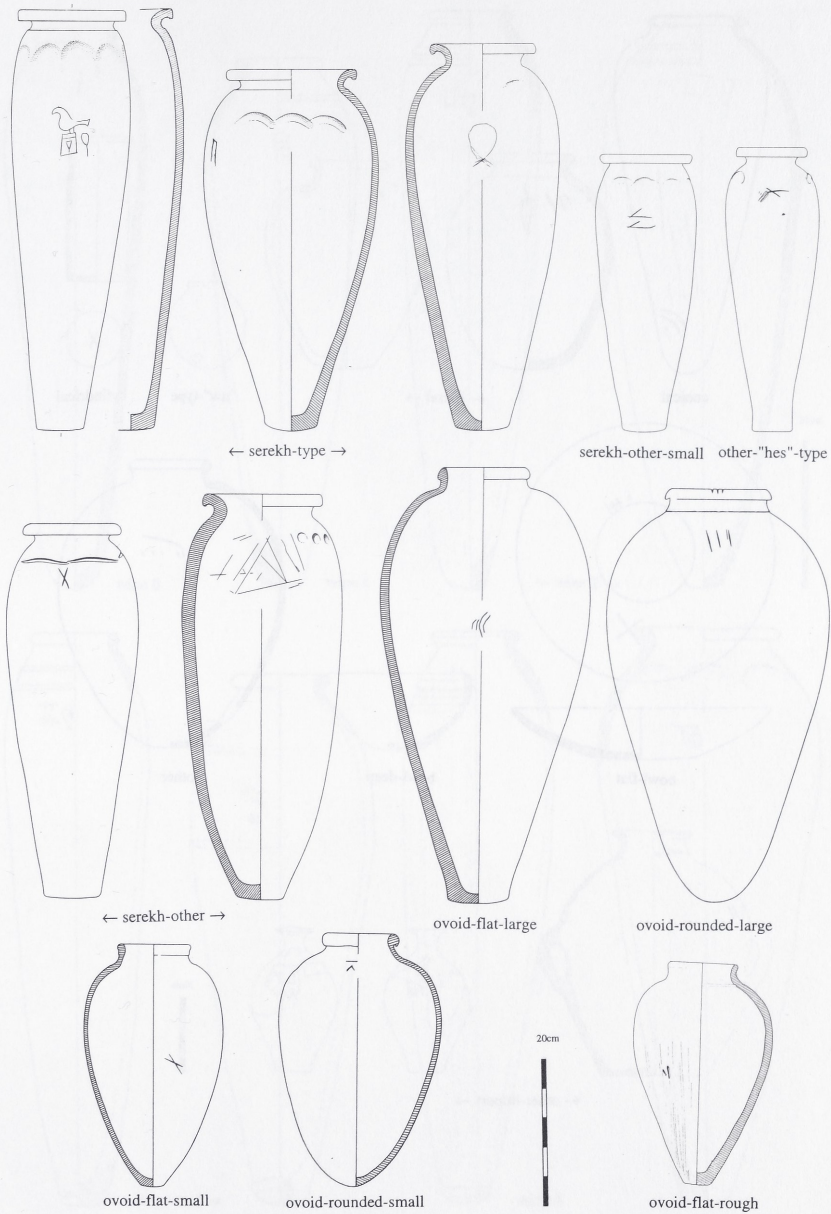


Fig. 1. Ceramic types.

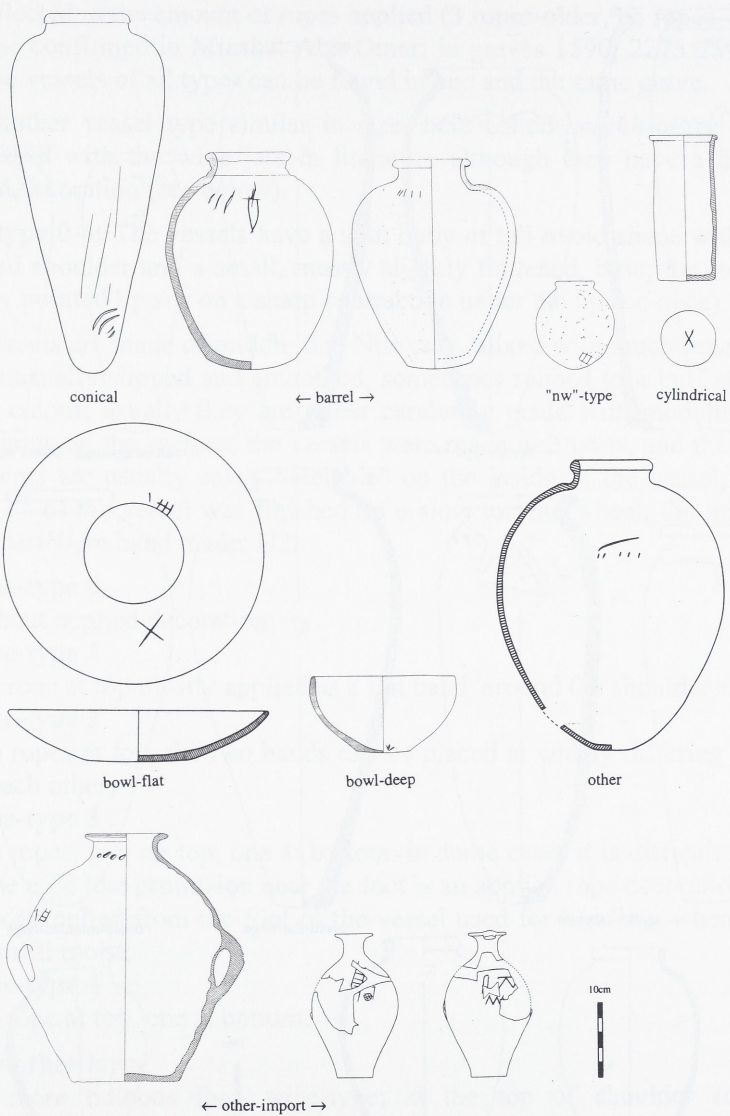


Fig. 2. Ceramic types.



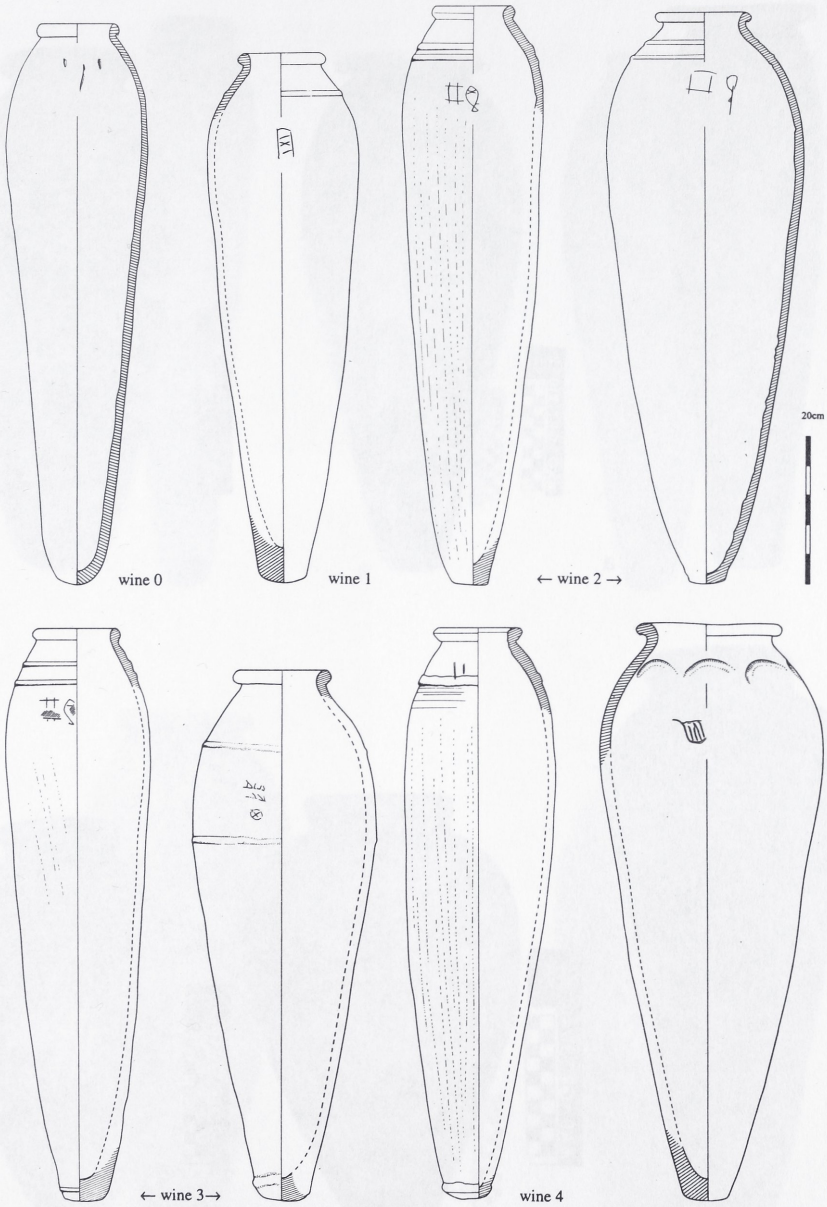


Fig. 3. Ceramic types.



Fig. 4. Ceramic types.



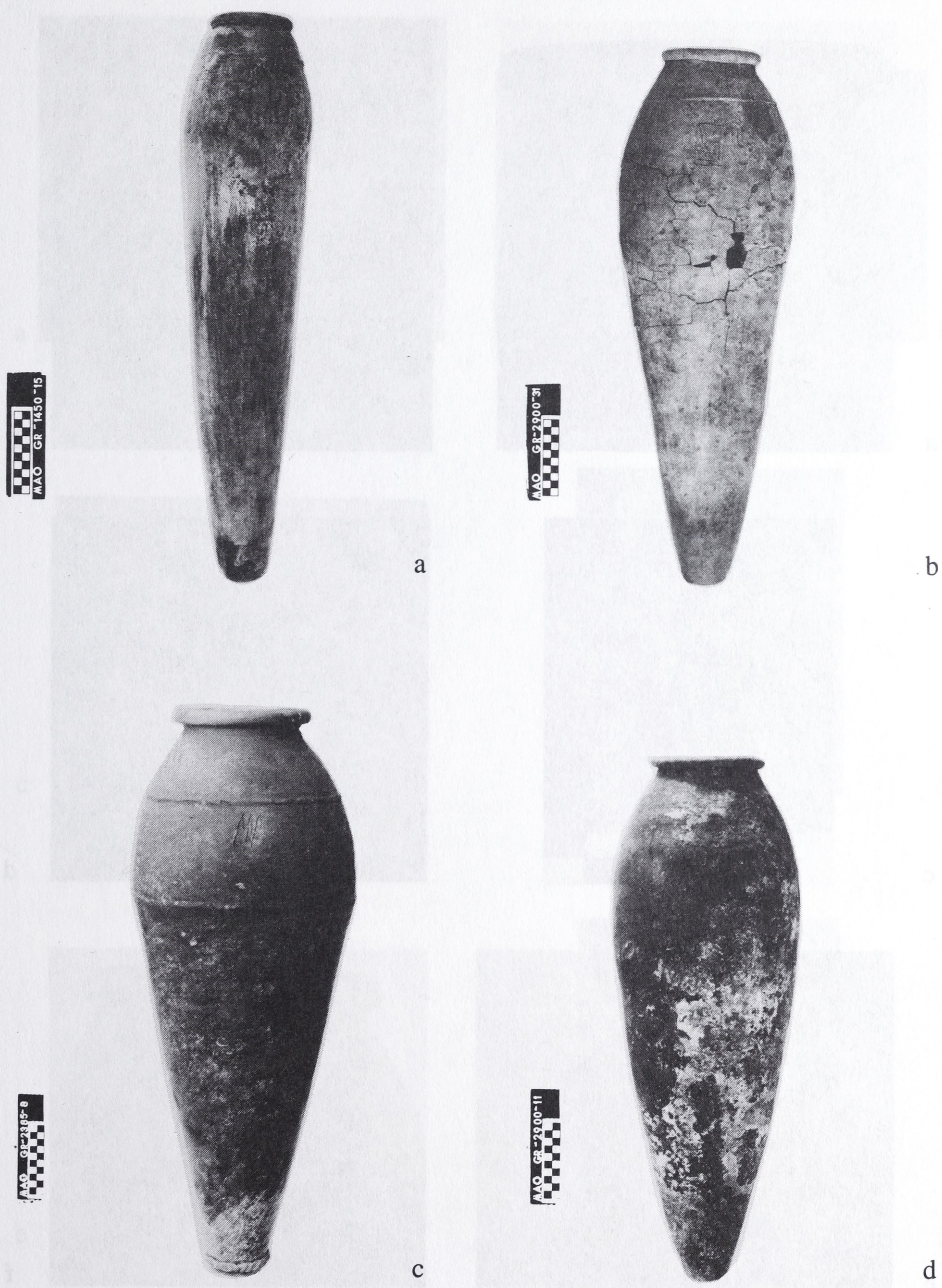


Fig. 5. Ceramic types.



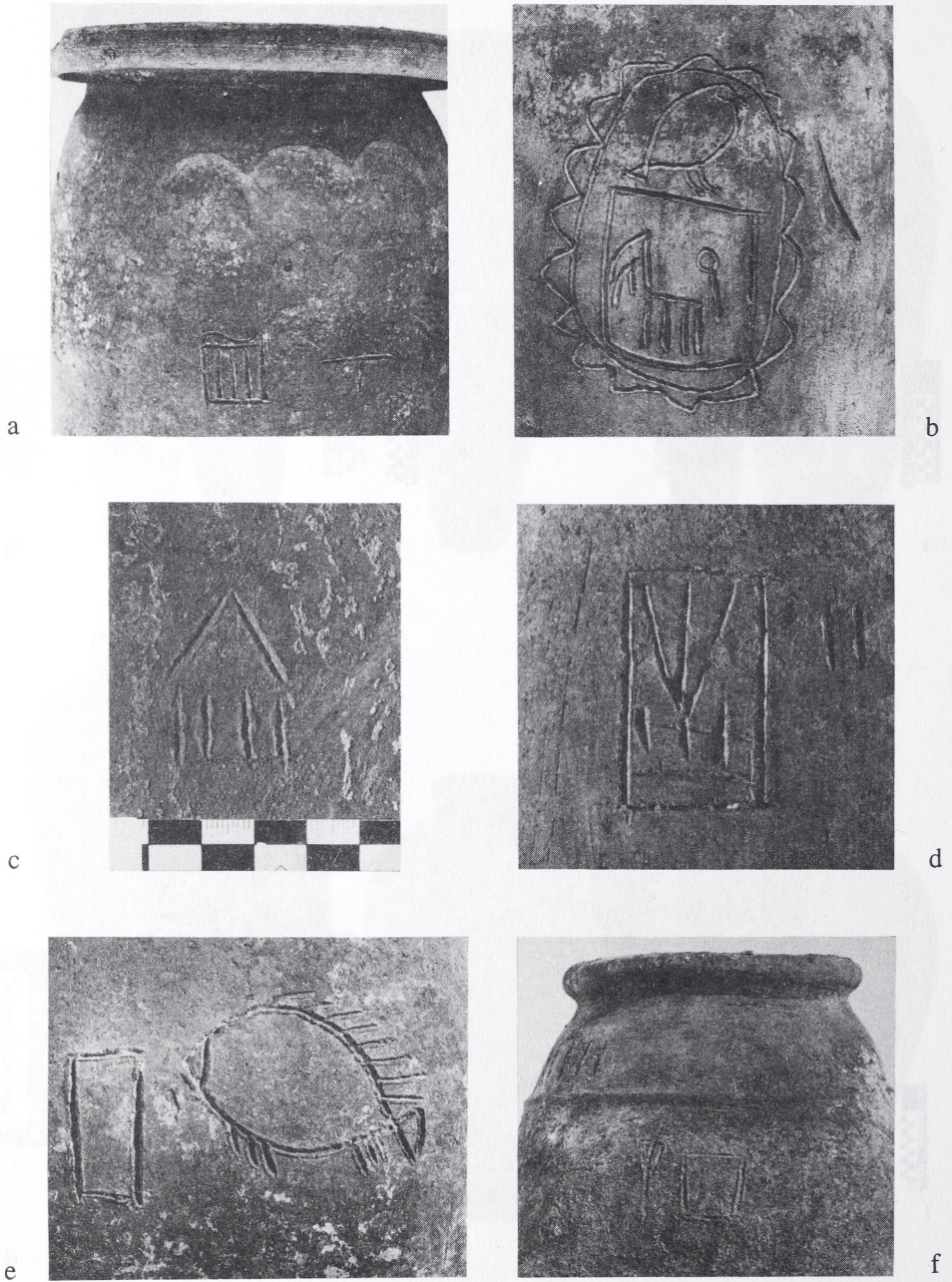


Fig. 6. Potmarks.



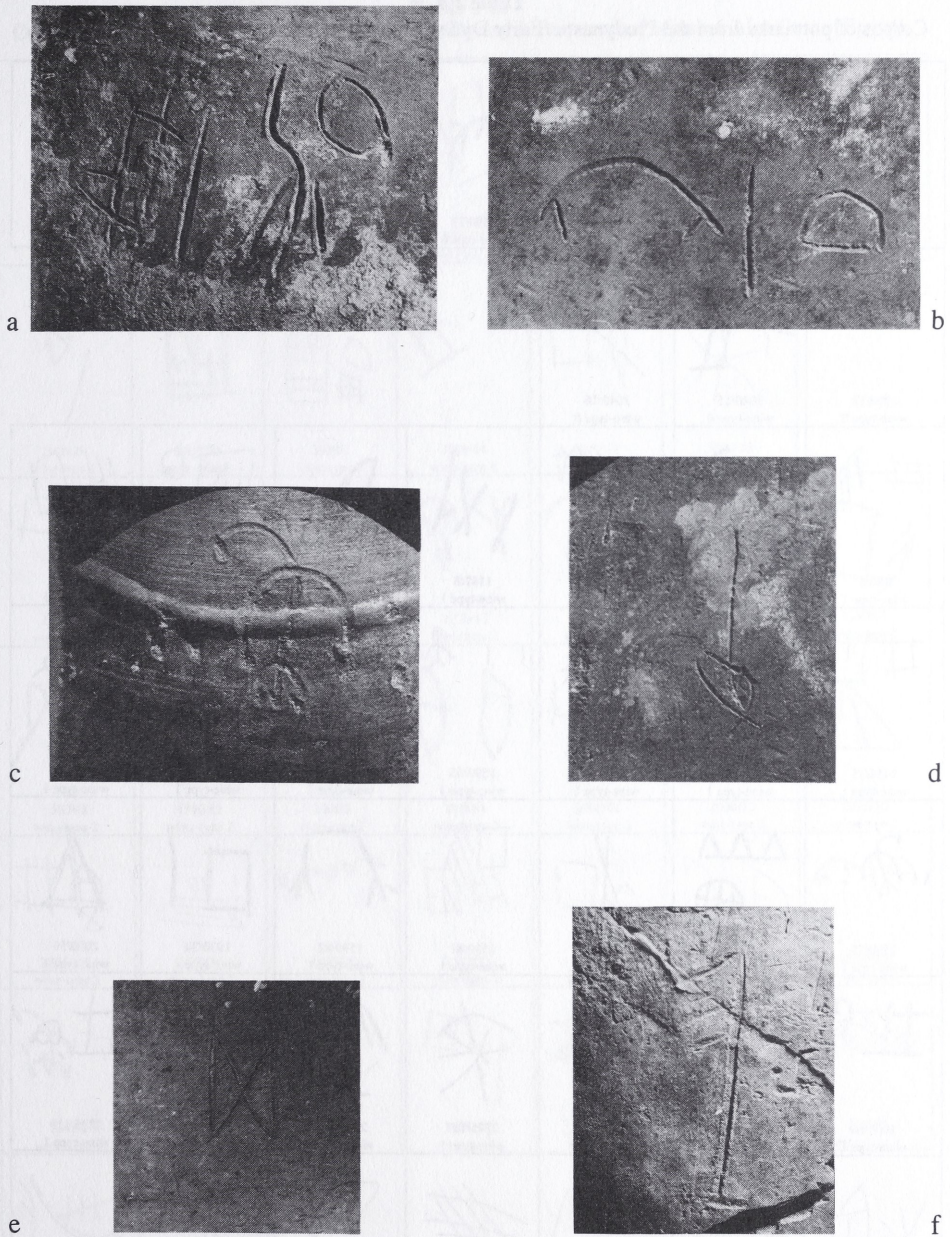

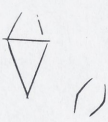


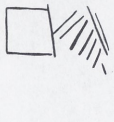

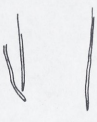

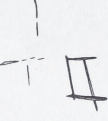


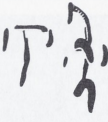





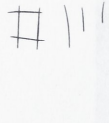





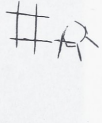
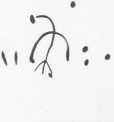










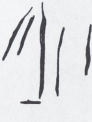

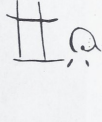

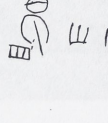


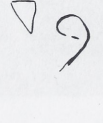
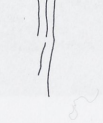



Fig. 7. Potmarks.

**Table 1 a.**  
Corpus of potmarks from the Predynastic/Early Dynastic cemetery of Minshat Abu Omar (Egypt).

 800/12 wine-type 0	 1450/19 wine-type 0	 1590/66 wine-type 0	 1590/73 wine-type 0	 1590/77 wine-type 0	 2780/13 wine-type 0	 2900/34 wine-type 0
 2990/17 wine-type 0	 3040/15 wine-type 0	 3040/16 wine-type 0				
 886/8 wine-type 1	 1030/13 wine-type 1	 1147/6 wine-type 1	 1147/8 wine-type 1	 1288/9 wine-type 1	 1363/36 wine-type 1	 1430/22 wine-type 1
 1450/15 wine-type 1	 1590/27 wine-type 1	 1590/60 wine-type 1	 1590/65 wine-type 1	 1590/70 wine-type 1	 1590/71 wine-type 1	 1590/72 wine-type 1
 1590/75 wine-type 1	 1590/76 wine-type 1	 1590/79 wine-type 1	 1590/81 wine-type 1	 1590/82 wine-type 1	 1930/34 wine-type 1	 2000/59 wine-type 1
 2000/60 wine-type 1	 2163/20 wine-type 1	 2275/106 wine-type 1	 2275/107 wine-type 1	 2275/110 wine-type 1	 2275/114 wine-type 1	 2275/119 wine-type 1
 2400/19 wine-type 1	 2400/21 wine-type 1	 2590/7 wine-type 1	 2590/9 wine-type 1	 2600/22 wine-type 1	 2600/23 wine-type 1	 2700/4 wine-type 1



**Table 1 b.**

Corpus of potmarks from the Predynastic/Early Dynastic cemetery of Minshat Abu Omar (Egypt).

						
2700/8 wine-type 1	2780/15 wine-type 1	2897/25 wine-type 1	2897/26 wine-type 1 ?	2897/56 wine-type 1	2900/9 wine-type 1	2900/19 wine-type 1
						
2900/29 wine-type 1	2900/31 wine-type 1	3009/1 wine-type 1	3040/14 wine-type 1	3040/17 wine-type 1	3040/28 wine-type 1	
						
1000/14 wine-type 2	1000/15 wine-type 2	1000/17 wine-type 2	1030/12 wine-type 2	1040/14 wine-type 2	1290/11 wine-type 2	1590/67 wine-type 2
						
1590/68 wine-type 2	1590/83 wine-type 2	2000/2 wine-type 2	2000/4 wine-type 2	2000/26 wine-type 2	2000/53 wine-type 2	2235/10 wine-type 2
						
2275/108 wine-type 2	2400/18 wine-type 2	2400/20 wine-type 2	2600/20 wine-type 2	2600/21 wine-type 2	2700/2 wine-type 2	2900/32 wine-type 2
						
1145/2 wine-type 3	1363/35 wine-type 3	1363/37 wine-type 3	1590/58 wine-type 3	2275/116 wine-type 3	2385/8 wine-type 3	2590/5 wine-type 3
						
2590/10 wine-type 3	3040/36 wine-type 3					

**Table 1 c.**  
Corpus of potmarks from the Predynastic/Early Dynastic cemetery of Minshat Abu Omar (Egypt).







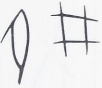


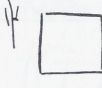















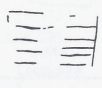







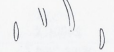











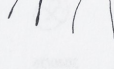
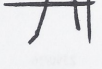
						
1450/18 wine-type 4	2163/21 wine-type 4	2590/3 wine-type 4	2780/12 wine-type 4	2900/30 wine-4	2163/18 wine-type 4	1590/61 wine-type 4
						
2275/104 wine-type 4	2590/6 wine-type 4	2780/14 wine-type 4	3040/12a wine-type 4	3040/12b wine-type 4	3040/56 wine-type 4	
						
1590/63 serekh-other-large	1590/64 serekh-other-large	1590/78 serekh-other-large	2275/115 serekh-other-large	2295/32 serekh-other-large	2900/8 serekh-other-large	2900/11 serekh-other-large
						
2900/33 serekh-other-large						
						
322/13 ovoid rounded small	322/14 ovoid rounded small	590/4 ovoid rounded small	800/10 ovoid rounded small	883/1 ovoid rounded small	883/2 ovoid rounded small	883/6 ovoid rounded small
						
900/7 ovoid rounded small	900/18 ovoid rounded small	1030/24 ovoid rounded small	1147/10 ovoid rounded small	1150/1 ovoid rounded small	1150/2 ovoid rounded small	1277/10 ovoid rounded small
						
1281/3 ovoid rounded small	1290/15 ovoid rounded small	1346/13 ovoid rounded small	1346/14 ovoid rounded small	1365/23 ovoid rounded small	1590/17 ovoid rounded small	1590/25 ovoid rounded small
						
1590/30 ovoid rounded small	1590/42 ovoid rounded small	1590/45 ovoid rounded small	1590/47 ovoid rounded small	1590/48 ovoid rounded small	1590/90 ovoid rounded small	1590/94 ovoid rounded small



Table 1 d.

Corpus of potmarks from the Predynastic/Early Dynastic cemetery of Minshat Abu Omar (Egypt).

 1705/7 ovoid rounded small	 1710/4 ovoid rounded small	 2110/10 ovoid rounded small	 2254/2 ovoid rounded small	 2295/10 ovoid rounded small	 2354/4 ovoid rounded small	 2770/6 ovoid rounded small
 2770/8 ovoid rounded small	 2820/25 ovoid rounded small	 2990/13 ovoid rounded small	 2990/14 ovoid rounded small	 2990/15 ovoid rounded small	 2990/16a ovoid rounded small	 2990/16b ovoid rounded small
 3009/21 ovoid rounded small	 3040/37 ovoid rounded small	 3040/40 ovoid rounded small				
 1127/1a ovoid rounded large	 1127/1b ovoid rounded large	 1705/1a ovoid rounded large	 1705/1b ovoid rounded large	 1705/1c ovoid rounded large		
 44/10 ovoid flat small	 1030/8 ovoid flat small	 1150/11 ovoid flat small	 1295/4 ovoid flat small	 1346/12 ovoid flat small	 1365/20 ovoid flat small	 1375/3 ovoid flat small
 1640/5 ovoid flat small	 1710/1 ovoid flat small	 2230/10 ovoid flat small	 2230/12a ovoid flat small	 2230/12b ovoid flat small	 2354/6 ovoid flat small	 2385/11 ovoid flat small
 2400/14 ovoid flat small	 3020/7 ovoid flat small	 3040/26 ovoid flat small	 3040/30 ovoid flat small	 3040/41 ovoid flat small	 3040/44 ovoid flat small	 3040/46 ovoid flat small
 3040/47 ovoid flat small	 3040/53 ovoid flat small	 3040/54 ovoid flat small				

Table 1 e.

Corpus of potmarks from the Predynastic/Early Dynastic cemetery of Minshat Abu Omar (Egypt).















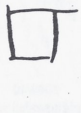
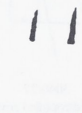











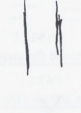

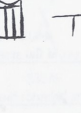
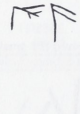


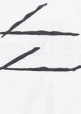

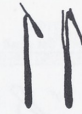
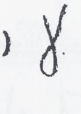
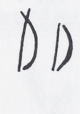






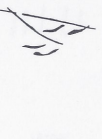


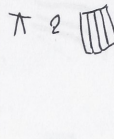






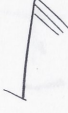






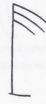
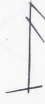


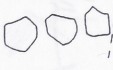





















 2780/17 ovoid flat rough small	 2899/10 ovoid flat rough small	 2899/12 ovoid flat rough small	 2899/42 ovoid flat rough small	 2899/50 ovoid flat rough small	 2899/59 ovoid flat rough small	 2899/71 ovoid flat rough small
 2900/15 ovoid flat rough small	 2900/36 ovoid flat rough small	 3040/9 ovoid flat rough small				
 109/2 ovoid flat large	 126/1 ovoid flat large	 126/4 ovoid flat large	 128/2 ovoid flat large	 415/1 ovoid flat large	 866/14 ovoid flat large	 1050/1 ovoid flat large
 1050/2 ovoid flat large	 1050/4 ovoid flat large	 1111/1 ovoid flat large	 1590/59 ovoid flat large	 1666/2 ovoid flat large	 1666/17 ovoid flat large	
 44/3 serekh-type	 109/3 serekh-type	 127/7 serekh-type	 160/1 serekh-type	 480/1 serekh-type	 490/3 serekh-type	 520/3 serekh-type
 570/4 serekh-type	 570/5 serekh-type	 590/6 serekh-type	 674/3 serekh-type	 674/4 serekh-type	 740/7 serekh-type	 741/2 serekh-type
 758/8 serekh-type	 1210/1 serekh-type	 1210/2 serekh-type	 1210/5 serekh-type	 1210/7 serekh-type	 1210/9 serekh-type	 1210/13 serekh-type



Table 1 f.

Corpus of potmarks from the Predynastic/Early Dynastic cemetery of Minshat Abu Omar (Egypt).

						
1210/15 serekh-type	1210/18 serekh-type	1210/21 serekh-type	1210/22 serekh-type	1210/30 serekh-type	1210/39 serekh-type ?	1326/5 serekh-type
						
1455/10 serekh-type	1513/2 serekh-type	1594/11 serekh-type	1640/10 serekh-type	1640/12a serekh-type	1640/12b serekh-type	1640/13 serekh-type
						
1640/14 serekh-type	1640/17 serekh-type	1640/21 serekh-type	1640/22 serekh-type	1666/3 serekh-type	1666/16 serekh-type	1705/9a serekh-type
						
1705/9b serekh-type						
						
1709/1 serekh-type	1800/4 serekh-type	1800/7 serekh-type	2030/3 serekh-type	2105/1 serekh-type	2200/5 serekh-type	2254/4 serekh-type?
						
2295/8 serekh-type	2295/15 serekh-type	2295/16 serekh-type	2295/17 serekh-type	2800/3 serekh-type	2820/24 serekh-type	2990/11 serekh-type
						
127/8 serekh-other	400/7 serekh-other	434/14 serekh-other	740/1 serekh-other	1050/5 serekh-other	1111/6 serekh-other	1127/10 serekh-other

**Table 1 g.**



















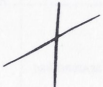








Corpus of potmarks from the Predynastic/Early Dynastic cemetery of Minshat Abu Omar (Egypt).

						
1295/1 serekh-other	1326/9 serekh-other	1513/4 serekh-other	2295/9 serekh-other-small			
						
44/9 conical	280/10 conical	400/1 conical	434/6 conical	866/9 conical	1265/3 conical	1326/7 conical
						
2030/1 conical	2235/5 conical					
						
1030/9 barrel shaped	1277/8 barrel	1363/27 barrel	1705/10 barrel	2275/9 barrel	2275/15 barrel	2400/12 barrel
						
401/2 "nw"-type	1254/1 "nw"-type	1420/2 "nw"-type				
						
404/1 plate	1143/6 plate	1290/3 plate	1430/18 plate			
						
123/1 bowl-flat	322/11 bowl-flat	900/5 bowl-flat	1168/1 bowl-flat	1277/3 bowl-flat	1590/18 bowl-flat	1590/51 bowl-flat






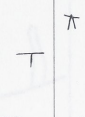



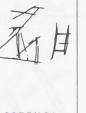

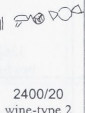








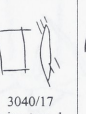
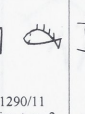
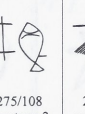


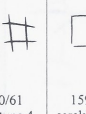

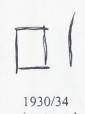
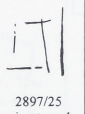

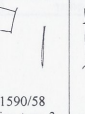
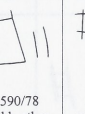
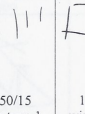




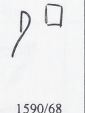
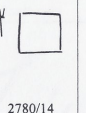
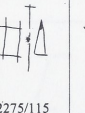
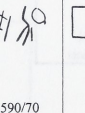
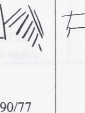
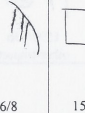


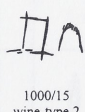
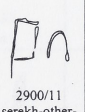
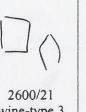
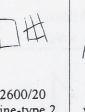
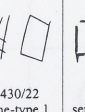
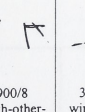
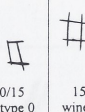
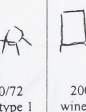
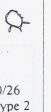


Table 1 h.

Corpus of potmarks from the Predynastic/Early Dynastic cemetery of Minshat Abu Omar (Egypt).



						
1859/4 bowl-flat	1930/24 bowl-flat	1930/25 bowl-flat	2000/6 bowl-flat	2400/5 bowl-flat		
						
322/20 bowl-deep	800/4 bowl-deep	1143/3 bowl-deep	1277/2 bowl-deep	1337/1 bowl-deep	1362/1 bowl-deep	1590/23 bowl-deep
						
900/29 cylindrical	900/36 cylindrical	1287/3 cylindrical	1345/7 cylindrical	1513/1 cylindrical	1594/1 cylindrical	1594/5 cylindrical
						
73/9 other	1290/7 other	1859/5 other	2110/4 other	2200/18 other		
						
1590/93a other-import	1590/93b other-import	2275/121 other-import				

**Table 2 a.**  
Potmarks and inscriptions - type-groups.

serekhs with and without Horus	 44/3 serekh-type	 160/1 serekh-type	 1800/7 serekh-type	 1640/13 serekh-type	 1590/60 wine-type 1	 520/3 serekh-type	 1210/22 serekh-type		
imported ware marks applied after firing	 1590/93a other-import	 1590/93b other-import	 2275/121 other-import						
longer inscriptions	 2163/21 wine-type 4	 2400/20 wine-type 2	 2400/21 wine-type 1	 2275/114 wine-type 1					
houses/hwt	 2900/33 serekh-other-large	 2400/19 wine-type 1	 2900/31 wine-type 1	 3009/1 wine-type 1					
prl hwt with fish	 1590/71 wine-type 1	 2780/15 wine-type 1	 3040/17 wine-type 1	 1290/11 wine-type 2	 2275/108 wine-type 2	 2275/116 wine-type 3	 1363/37 wine-type 3	 1590/61 wine-type 4	 1590/63 serekh-other-large
prl hwt with second elements	 1930/34 wine-type 1	 2897/25 wine-type 1	 2000/2 wine-type 2	 1590/58 wine-type 3	 1590/78 serekh-other-large	 1450/15 wine-type 1	 1000/14 wine-type 2	 3040/12a wine-type 4	 1590/59 ovoid-flat-large
	 1000/17 wine-type 2	 1590/68 wine-type 2	 2780/14 wine-type 4	 2275/115 serekh-other-large	 1590/70 wine-type 1	 1590/77 wine-type 0	 886/8 wine-type 1	 1590/81 wine-type 1	 1590/67 wine-type 2
	 1000/15 wine-type 2	 2900/11 serekh-other-large	 2600/21 wine-type 3	 2600/20 wine-type 2	 1430/22 wine-type 1	 2900/8 serekh-other-large	 3040/15 wine-type 0	 1590/72 wine-type 1	 2000/26 wine-type 2



**Table 2 b.**  
Potmarks and inscriptions - type-groups.

























	 2000/60 wine-type 1	 2275/119 wine-type 1							
<i>hwt</i> ?	 401/2 "nw"-type	 128/2 ovoid-flat-large	 800/10 ovoid-rounded-small	 1254/1 "nw"-type	 415/1 ovoid-flat-large	 1590/64 serekh-other-large	 1513/4 serekh-other		
harpoons and other hooks	 674/3 serekh-type	 1513/2 serekh-type	 2105/1 serekh-type	 740/7 serekh-type	 2385/8 wine-type 3	 2820/25 ovoid rounded-small	 1111/1 ovoid flat large	 674/4 serekh-type	
<i>ki</i>	 1640/14 serekh-type	 590/6 serekh-type	 1705/10 barrel	 1590/82 wine-type 1	 2900/32 wine-type 2	 2590/6 wine-type 4			
with <i>njw</i> (?)	 1363/36 wine-type 1	 1590/76 wine-type 1	 2897/56 wine-type 1	 3040/36 wine-type 3					
angles, triangles, segments	 883/2 ovoid rounded small	 1168/1 bowl flat	 1455/10 serekh-type	 883/6 ovoid rounded small	 2000/59 wine-type 1	 2000/53 wine-type 2	 2235/10 wine-type 2	 1594/11 serekh-type	 2254/4 serekh-type
	 2600/22 wine-type 1	 1363/35 wine-type 1	 1450/19 wine-type 0	 758/8 serekh-type	 2000/4 wine-type 2	 2700/2 wine-type 2			
tall narrow signs	 1210/1 serekh-type	 1210/21 serekh-type	 1277/8 barrel	 1594/1 cylindrical	 2900/9 wine-type 1				
animal/like	 1590/73 wine-type 0	 1147/6 wine-type 1	 1590/83 wine-type 1	 2990/17 wine-type 2	 2295/32 serekh-other-large	 127/7 serekh-type			

**Table 2 c.**  
Potmarks and inscriptions - type-groups.

plant/like	 2590/10 wine-type 3	 900/5 bowl-flat	 1145/2 wine-type 2	 1590/75 wine-type 3	 1590/65 wine-type 1	 1040/14 wine-type 2	 2780/12 wine-type 4	 1295/1 serekh-other	 1030/13 wine-type 1
	 434/14 serekh-other	 1030/12 wine-type 2	 2590/3 wine-type 4	 3040/28 wine-type 1	 2900/30 wine-type 4	 570/5 serekh-type	 2770/6 ovoid rounded small	 1590/23 bowl-deep	 1143/3 bowl-deep
	 2163/20 wine-type 1	 2200/5 serekh-type							
simple impressions/cuts on the lip	 400/7 serekh-other	 1127/1b ovoid rounded large	 1150/1 ovoid rounded small	 1640/21 serekh-type					
s3b/star	 1030/9 barrel	 1590/66 wine-type 0	 2275/107 wine-type 1	 2900/29 wine-type 1	 2163/18 wine-type 4	 2200/18 other	 1859/5 other	 1666/2 ovoid flat large	
ntr	 1210/2 serekh-type	 1210/5 serekh-type	 1210/9 serekh-type	 1800/4 serekh-type	 1210/13 serekh-type	 1326/5 serekh-type	 1640/10 serekh-type	 1640/22 serekh-type	 1666/3 serekh-type
	 2030/3 serekh-type	 2400/12 barrel	 2899/42 ovoid-flat-rough	 2899/50 ovoid-flat-rough	 2400/5 bowl-flat	 2295/15 serekh-type	 570/4 serekh-type	 1362/1 bowl-deep	 1590/25 ovoid-rounded-small
	 2275/110 wine-type 1								
mr-hoes	 123/1 bowl-flat	 1210/7 serekh-type	 1210/15 serekh-type	 1513/1 cylindrical	 2230/12a ovoid flat small				



**Table 2 d.**  
Potmarks and inscriptions - type-groups.






































circle and circular	 490/3 serekh-type	 1210/18 serekh-type	 1709/1 serekh-type	 2990/11 serekh-type	 1050/4 ovoid flat large	 1705/9b serekh-type	 2295/8 serekh-type	 109/3 serekh-type	 1705/9a serekh-type
	 741/2 serekh-other								
crosses	 1127/10 serekh-other	 1640/12a serekh-type	 740/1 serekh-other	 1640/12b serekh-type	 3040/37 ovoid rounded small	 1030/24 ovoid rounded small	 2770/8 ovoid rounded small	 1346/13 ovoid rounded small	 1420/2 "nw"-type
	 1590/79 wine-type 1	 2275/106 wine-type 1	 2700/8 wine-type 1	 3040/56 wine-type 4	 2230/10 ovoid flat small	 1594/5 cylindrical	 900/29 cylindrical	 73/9 other-"hes"-type	 1030/8 ovoid flat small
	 1295/4 ovoid flat large	 1147/10 ovoid rounded small	 322/14 ovoid rounded small	 1277/2 bowl-deep	 800/4 bowl-deep				
cross + other sign	 1710/1 ovoid flat small	 2295/17 serekh-type	 2897/26 wine-type ?	 3040/16 wine-type 0	 1290/3 plate	 1147/8 wine-type 1	 1450/18 wine-type 4	 404/1 plate	
single stroke	 44/9 conical	 1346/12 ovoid flat small	 1346/14 ovoid rounded small	 2235/5 conical	 3020/7 ovoid flat small	 2254/2 ovoid rounded small	 2295/16 serekh-type	 2780/13 wine-type 0	 1277/3 bowl-flat
	 590/4 ovoid rounded small	 1287/3 cylindrical	 2700/4 wine-type 1	 2820/24 serekh-type					
two strokes or dots	 322/11 bowl-flat	 480/1 serekh-type	 866/14 ovoid flat large	 1111/6 serekh-other	 1150/11 ovoid flat small	 1290/15 ovoid rounded small	 1326/7 conical	 1337/1 bowl-deep	 1363/27 barrel

**Table 2 e.**  
Potmarks and inscriptions - type-groups.

	 1590/18 bowl-flat	 1590/30 oval rounded small	 1590/48 oval rounded small	 1666/16 serekh-type	 1710/4 ovoid rounded small	 1705/1c ovoid rounded large	 1930/24 bowl-flat	 1930/25 bowl-flat	 2275/104 wine-type 4
	 2400/14 ovoid flat small	 2780/17 ovoid flat rough small	 2800/3 serekh-type	 2899/10 ovoid flat rough small	 2899/71 ovoid flat rough small	 2900/15 ovoid flat rough small	 2900/36 ovoid flat rough small	 3009/21 ovoid rounded small	 3040/9 ovoid flat rough small
	 3040/44 ovoid flat small	 1281/3 ovoid rounded small	 1288/9 wine-type 1	 2295/10 ovoid rounded small	 2000/6 bowl-flat	 2990/15 ovoid rounded small	 2899/59 ovoid flat rough small	 2990/16b ovoid rounded small	 2990/14 ovoid rounded small
3 lines and/or dots	 800/12 wine-type 0	 1640/5 ovoid flat small	 126/4 ovoid flat large	 280/10 conical	 1050/5 serekh-other	 1326/9 serekh-other	 900/36 cylindrical	 1127/1a ovoid rounded large	 1640/17 serekh-type
	 2600/23 wine-type 1	 2900/34 wine-type 0	 2990/16a ovoid rounded small	 3040/41 ovoid flat small	 1590/47 ovoid rounded small	 2899/12 ovoid flat rough small	 3040/30 ovoid flat small	 3040/47 ovoid flat small	 3040/53 ovoid flat small
	 3040/54 ovoid flat small	 900/7 ovoid rounded small	 900/18 ovoid rounded small	 2295/9 serekh-other-small	 1143/6 plate	 322/20 bowl-deep	 434/6 conical	 1365/23 ovoid rounded small	 1265/3 conical
	 1277/10 ovoid rounded small	 1590/42 ovoid rounded small	 1590/45 ovoid rounded small	 1705/7 ovoid rounded small	 2230/12b ovoid flat small				
4 strokes and/or points	 109/2 ovoid flat large	 400/1 conical	 1150/2 ovoid rounded small	 1590/17 ovoid rounded small	 1590/51 bowl-flat	 1590/90 ovoid rounded small	 2275/9 barrel	 3040/40 ovoid rounded small	 3040/46 ovoid flat small



**Table 2 f.**  
Potmarks and inscriptions - type-groups.

									
	1705/1b ovoid rounded large	44/10 ovoid flat small	2354/4 ovoid rounded small	3040/26 ovoid flat small	1375/3 ovoid flat small	1345/7 cylindrical	2990/13 ovoid rounded small	2110/4 other	2354/6 ovoid flat small
more than 4 strokes and/or dots									
	883/1 ovoid rounded small	1290/7 other	1365/20 ovoid flat small	1430/18 plate	1859/4 bowl-flat	2275/15 barrel	3040/12b wine-type 4		
criss-cross									
	126/1 ovoid-flat-large	3040/14 wine-type 1	2030/1 conical	322/13 ovoid rounded small	1050/1 ovoid flat large	127/8 serekh-other	1590/94 ovoid rounded small	1666/17 oval flat large	1705/1a ovoid rounded large
									
	2110/10 ovoid rounded small	2385/11 oval flat small	2590/9 wine-type 1						
singular									
	866/9 conical	1050/2 ovoid flat large	1590/27 wine-type 1	2400/18 wine-type 2	2590/7 wine-type 1	2900/19 wine-type 1			
fragmentary									
	2590/5 wine-type 3	1210/30 serekh-type	1210/39 serekh-type?						

## Statistical analysis

The distribution of amount of marks on the different ceramic types and overall percentage in the cemetery as a whole is shown in the following chart:

vessel type with potmarks	amount with marks	total amount	% type-groups with potmarks
<i>serekh</i> -type	55	139	39%
<i>serekh</i> -type-small	1	7	14%
<b><i>serekh</i>-types together</b>	56	146	38%
<i>serekh</i> -other	10	28	36%
ovoid-flat-large	13	23	57%
ovoid-rounded-large	2	3	67%
<b>ovoid-large together</b>	15	26	58%
ovoid-flat-small	24	43	56%
ovoid-rounded-small	43	144	30%
<b>ovoid-small together</b>	67	187	36%
other-ovoid-rounded-rough	1	53	2%
ovoid-flat-rough-small	10	412	2%
<b>ovoid-rough together</b>	11	465	2%
conical	10	48	21%
barrel	7	39	18%
"nw"-type	3	372	1%
cylindrical	7	243	3%
bowl-deep	7	125	6%
bowl-flat	12	50	24%
plate	4	22	18%
other-"hes"-type	1	63	2%
other	3	72	4%
other-import	2	17	12%
wine-type 0	10	15	67%
wine-type 1	48	65	74%
wine-type 2	20	24	83%
wine-type 3	10	10	100%
wine-type 4	12	18	67%
<i>serekh</i> -other-large	8	9	89%
<b>total wine and <i>serekh</i>-other-large</b>	108	143	76%

Numerically and by percentage the highest amount of marks is found on the large "wine" vessels (108 pieces) which seems directly related to the increase



in offerings in the graves of this time period (Dynasty 1) and corresponds to the statistics of other cemeteries. In second place appear the ovoid-rounded and flat vessels with 67 marks which mostly occur together with the wine-vessels, and thirdly the *serekh*-type with 56 marks (dated to the "0" Dynasty).

Only in three cases can potmarks be assigned to the older group of graves (before 0 Dynasty), showing that potmarks became significant only at a later (chronologically) period (namely 0-1 Dynasty) which happens to correspond to the overall increase in the amount of offerings placed in the burials.

The distribution of the amount of signs is somewhat different from other sites: 1 sign occurs in 125 cases which is equal to 39% of the total; 2 signs occur 114 times - equal to 35%; 3 signs occur 55 times - equal to 17% and more than 3 signs occur 30 times which equals about 9% of all potmarks.

The most frequently occurring signs are the *hwt* signs (squares) occurring together with a second sign (41 times), two lines (34 times), crosses (30 times), 3 lines (20 times) and *ntr* signs (19 times).

Of the total amount of 2360 ceramic vessels found in the cemetery, 322 were engraved with potmarks representing 14% of the total volume. These vessels with potmarks were found in 100 graves; 320 more graves had ceramic offerings but none of these carried any potmarks. The distribution of potmarks in the graves of males (32 cases) and females (41 cases) might be significant, however since in 19 cases the sex of the body was not able to be determined and in 6 other cases no bones were present, interpreting this difference must be approached with caution. Potmarks are practically absent from children graves:

sex groups	number of graves containing potmarks	total amount of graves in cemetery	distribution of graves with marks in the whole cemetery according to sex groups
no bones	6	31	1%
?	19	93	5%
child	2	86	0%
male	32	107	8%
female	41	103	10%
total	100	420	graves containing potmarks 24%

The amount of vessels with one or more potmarks found in the graves also varies a great deal; interestingly the highest amount of marks was not found in the grave with the highest amount of offerings:

No. of graves	vessels with pot-marks in the grave	Nr. of graves	vessels with pot-marks in the grave
32	1	3	7
29	2	1	8
16	3	3	12
8	4	1	19
3	5	1	36
3	6		

### Summary

The theories about the meaning of the marks have varied from interpretations as potter marks, contents description, tax marks, and ownership marks (for a summary see van den Brink 1992: note 4). That tax marks were added to cylindrical vessels in the 0-1 Dynasty is indisputable, however they are always written in ink on the vessels (Kaplony 1963-1964). All the marks from Minshat Abu Omar (except for 9 pieces) were engraved before firing. Of nine marks scratched into the surface after firing two sets are on imported vessels, seven others were scratched into the surface of locally made ware. That marks on imported ware are practically always scratched into the surface after firing was also confirmed by a study of Adams and Porat (1996: 98ff.) of imported vessels found in Abydos.

The possibility that the marks may be an indication of contents seems rather small since most marks were already applied at the ceramic workshop/s, and similar marks are found on different vessel types. Further it was noted that the 27 (of 322) pots with potmarks found in Minshat Abu Omar, which actually had remains of contents in them (mostly consisting of animal and fish bones, botanical remains and shells in a mixed context), could not be associated in any consistent way with the marks on the pots. That a distribution or collection place might be indicated by some of the marks is more likely. In particular the large amount of double signs consisting of squares (*hwt*) with fish or other signs may indicated a place of origin from some centre of distribution in the Delta, especially as some main estate names in the Delta known from the Old Kingdom contain a fish sign in the name (Bietak 1975:149-177; Zibelius 1978; Kaplony 1981). The vessels with marks consisting of simple strokes of various lengths and numbers have been numerically tested as to vessel size and volume using the method proposed by Nordström (1972:79). Parallels could not be found as regards volume or size and the amount of strokes or points scratched into the surface of the vessels.

Many questions are still open as regards to the meaning of the potmarks, however by eliminating some of the proposed interpretations a final solution may be in sight.



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