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BREAD MOULD POTMARKS FROM  
A PROTODYNASTIC AND EARLY  
DYNASTIC SITE IN THE NILE DELTA,  
EGYPT.  
A VIEW FROM TELL EL-FARKHA

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**Abstract:** *This article focuses on potmarks from the Western, Eastern and Central Koms of the Tell el-Farkha site. They date back to the Protodynastic and Early Dynastic periods (up until the 1st Dynasty) and are associated with Phases 4 and 5 of the settlement. 91 of the potmarks have been identified and analysed. They were all incised on wet clay and covered either the inside or outside walls of bread moulds. 16 categories of patterns have been distinguished: cross, criss-cross, vertical and horizontal line combination, horizontal line, vertical line, curvilinear line, rectangular-like shape, animal-like shape, plant-like shape, star-like shape, arch-like shape, radial wheel shape, strokes on the rim, V-shaped sign, circle and semi-circle.*

**Keywords:** *Potmarks; Protodynastic and Early Dynastic Egyptian pottery; Tell el-Farkha settlement*

This paper presents data gleaned from the study of pre-firing potmarks found at Tell el-Farkha during exploration of the settlement.

The Tell el-Farkha site is situated in the eastern Nile Delta. Occupation of the site has been divided into seven main phases dating from Lower Egyptian culture until the beginning of the Old Kingdom (Chłodnicki 2012, 13; Jucha 2005, 19). This period of habitation allows a study to be made of pottery traditions from the middle of the Naqada II period up until the early Old Kingdom.

The paper aims to describe potmarks discovered on the Western, Eastern and Central Koms.<sup>1</sup> They originate from the Protodynastic and Early Dynastic periods (up until the 1st Dynasty), which coincide with Phases 4 and 5 of the site (Jucha 2005, 19)<sup>2</sup> dating to Naqada IIIA1-C (Chłodnicki 2012, 13).

A corpus of potmarks from the necropolis at Tell el-Farkha has already been studied by Jucha (Jucha 2008, 133-149). I instead focus on results of work on potmarks retrieved from the settlement. I intend for this to only be a preliminary report as I aim to later present a corpus of potmarks taken from the whole settlement of Tell el-Farkha and to then compare them with material characteristic of other settlement sites in the Nile Delta.

This article deliberates on potmarks taken from one group of pottery only, that of bread moulds. In Tell el-Farkha, this type of vessel is present in great quantity, particularly in Phase 5, as it makes up about 20 to 30% of the whole pottery assemblage (Mączyńska 2004, 427; Jucha 2005, 112, fig. 47; Sobas 2008, 99). Bread moulds were most frequently used in everyday life and also as daily offerings left outside tombs (Samuel 2000, 537-576; Hendrickx *et al.* 2002, 294). The majority of bread moulds have comparable rim dimensions varying from 20 to 35cm in diameter. The miniature bread moulds are, however, decidedly smaller in size, possessing a rim diameter from 13 to 17cm. On the Western Kom, individual examples are present from both Phases 4 and 5.

The bread mould vessels are easily recognisable thanks to the material used to make them. This was Nile clay tempered with medium-to-coarse sand grains and fine-to-medium chaff or coarse straw. Treatment of the surface was rough and the exterior was dented, whilst the inside was slightly smoothed. The bread moulds were lightly fired and the colour of their walls' surface varies from red to reddish brown to brown. Thanks to the thickness of their walls and their resistance during firing, the bread moulds could have been reused.

Bread moulds began to be developed in Tell el-Farkha in Phase 4, or Naqada IIIA1-IIIB (Chłodnicki 2012, 13). Their quantity increased at this

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<sup>1</sup> The potmarks analysed on the Western Kom originate from a part of the kom which has been investigated since 2006. Research concerning potmarks from other koms is based on both published material and that made available thanks to A. Mączyńska and M. Rozwadowski.

<sup>2</sup> Contrary to the Eastern and Central Koms, where settlements developed until the Old Kingdom, the Western Kom was abandoned at the beginning of the 1st Dynasty – Naqada IIIC1. For this reason, the paper focuses on potmarks from Phases 4 and 5 on all Koms, which was the last phase of occupation of the Western Kom at Tell el-Farkha.

time and the vessels then became even more numerous in later phases. Most bread moulds were shallow and wide in the Protodynastic period before becoming a more medium shallow in the Early Dynastic period. One common form was that of a rounded rim top with a slightly flattened or rounded base. Examples also exist of slightly deeper forms, also with a rounded rim top. Bread moulds with a flattened rim top also stand out and these could be both shallow and slightly deeper. Other deeper, shallow forms with a concave rim top were not as common as those previously mentioned, but they may have had a body divided into two zones (Jucha 2005, pls 68-73). Aside from these, examples with a rim thickened on the inside and tops cut diagonally inwards or outwards were also found (Mączyńska 2009, 98, 100).

Most of the pottery assemblage from the settlement site in Tell el-Farkha is of a very fragmentary nature, as both potsherds and potmark patterns are in most cases in a poor state of preservation. This makes both the interpretation of the markings and their classification into groups more challenging. Bread moulds are, however, one of the most numerous groups bearing potmarks from the Protodynastic and Early Dynastic periods. Moreover, the quantity of marks engraved on the moulds seems to indicate that mass production of such pots occurred.

Potmarks from the settlement were analysed in two different ways. The first was based on ceramic typology using the classes of R1 (rough coarse ware). The second method was also based on this group and focused on the preliminary typology of marks.<sup>3</sup>

91 potmarks were identified and analysed. All of them came from bread moulds from Phases 4 and 5. 24 of them originated from the Western Kom, 52 from the Eastern and 15 from the Central.

In the Protodynastic and Early Dynastic periods, potmarks were predominantly made before firing on wet clay. In the examples under analysis, all potmarks were incised before firing. The majority of marks (59.4% of the material analysed) were incised on the exterior walls of the bread moulds, with the remainder found on the interior surface (Fig. 1). Such inner patterns left a negative on the bread's surface. Some examples, however, included short incised strokes on the top of the rim and it is sometimes quite difficult to interpret whether they were made before or after firing (Gallorini 2009, 116). Potmarks were often made using either a sharp or blunt instrument or a finger on wet clay prior to firing (Adams and Porat

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<sup>3</sup> Apart from bread moulds, potmarks were also engraved on jars, bowls and unidentified fragments of potsherds at Tell el-Farkha (Sobas 2010, 405-413; Mączyńska 2012, 138-144).

	Exterior	Interior
<b>Group 1</b> Cross		
<b>Group 2</b> Criss-cross		
<b>Group 3</b> Vertical and horizontal lines		
<b>Group 4</b> Horizontal lines		
<b>Group 5</b> Vertical lines		
<b>Group 6</b> Rectangular-like shapes		
<b>Group 7</b> Curvilinear lines		
<b>Group 8</b> Animal-like shape (?)		
<b>Group 9</b> Plant-like shape (?)		
<b>Group 10</b> Star-like shape		
<b>Group 11</b> Strokes on the rim		
<b>Group 12</b> Arch-like shape		
<b>Group 13</b> V-shape sign		
<b>Group 14</b> Circle / dots		
<b>Group 15</b> Semi-circle		
<b>Group 16</b> Radial wheel shape		

Fig. 1. Frequency of particular signs on the exterior and interior sides of the bread moulds

1996, 98). In most examples, the potmarks applied to this type of vessel consisted of either one sign or a combination of two to four marks (van den Brink 1992, 267). In most cases, sign interpretation is quite problematic, but the results of analysis demonstrate that we can distinguish patterns such as (Fig. 2):

### 1. Cross

14 marks are cross-shaped (Fig. 3: 1-14). Seven of them are engraved on the interior surface (Fig. 1: Group 1) with the other seven on the exterior (Fig. 1: Group 1). They cover bread moulds with various kinds of rims such as: rounded (Fig. 4: 2, 9), flattened (Fig. 5: 6), concave (Fig. 6: 3-4) and a sloping outside rim (cut diagonally outwards, Fig. 6: 6), as well as undetermined sherds. 50% of the cross motif forms from the Western Kom were discovered in its southern section.

### 2. Criss-cross

Eight bread moulds were marked with a criss-cross pattern (Fig. 3: 15-22). Six of them were located on the exterior surface (Fig. 1: Group 2), with two of them on the interior (Fig. 1: Group 2). They appeared on forms with

	Sign	Exterior	Interior	All
1	Cross	7	7	14
2	Criss-cross	6	2	8
3	Combination of vertical and horizontal lines	13	4	17
4	Horizontal lines	2	0	2
5	Vertical lines	12	2	14
6	Rectangular-like shape	4	2	6
7	Curvilinear line	1	0	1
8	Animal-like shape (?)	0	1	1
9	Plant-like shape (?)	1	0	1
10	Star-like shape	1	0	1
11	Strokes on the rim	1	0	1
12	Arch-like shape	0	3	3
13	V-shaped sign	2	3	5
14	Circle/dots	4	8	12
15	Semi-circle	0	3	3
16	Radial-wheel shape	0	2	2
		54	37	91

Fig. 2. A list of signs which were marked on the bread moulds

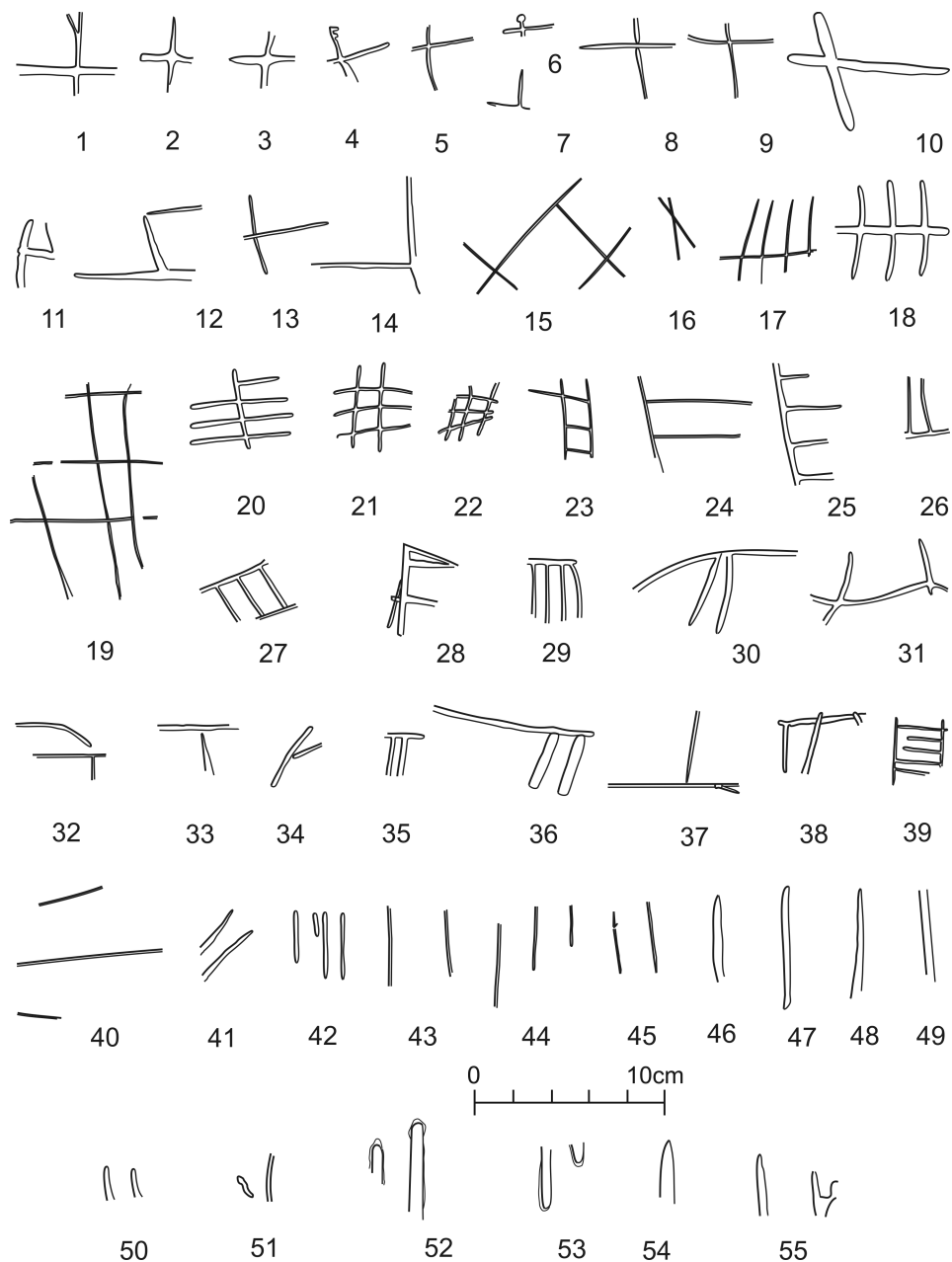


Fig. 3. Potmarks incised on bread moulds from the Eastern, Central and Western Koms of Tell el-Farkha. Drawings by A. Mączyńska (5, 9, 16, 18, 20-22, 27, 29, 31), M. Rozwadowski (6, 10, 11-14, 17, 23, 32-39, 41, 42, 45-55) and M. Sobas (1-4, 7, 8, 15, 19, 24-26, 28, 30, 40, 43, 44)

rounded and flattened rims and on some undetermined sherds. Bread moulds with this type of potmark predominated on the Central Kom.

### 3. Vertical and horizontal line combination

17 bread moulds were marked with patterns made up of a combination of vertical and horizontal lines (Fig. 3: 23-39) arranged in different fashions. The majority of them cover the exterior wall (Fig. 1: Group 3) of bread moulds with rounded (Fig. 4: 1, 3, 5-6, 8, 10), flattened (Fig. 5: 7), sloping outwards, concave or thickened inside rims (Fig. 7: 2, 4). Most of the marks are not very well preserved, which makes it hard to determine the entire design in all cases. One example does, however, clearly take the shape of a ladder. Some other forms merely consist of single or multiple lines going in horizontal and vertical directions.

### 4. Horizontal lines

Two forms are marked with straight horizontal (Fig. 3: 40) or diagonal (Figs 3: 41, 5: 2) lines. Both are marked on the exterior surface (Fig. 1: Group 4). There are, however, many more patterns containing curved and vertical lines.

### 5. Vertical lines

14 such markings exist (Fig. 3: 42-55). 12 of them cover the exterior surface (Fig. 1: Group 5), with two of them on the interior (Fig. 1: Group 5). Most markings consist of one, two or three lines and cover various forms of bread moulds (Fig. 7: 1), including those with rounded (Fig. 4: 7), sloping outwards (Fig. 6: 5), flattened, concave (Fig. 6: 7) and thickened inside rims (Fig. 7: 3).

### 6. Rectangular-like shape

Six markings with a rectangular-like shape (Fig. 8: 1-6) were discovered on various types of bread mould (Fig. 4: 11, 5: 4, 6: 1). Four of them appear on exterior walls, with the remainder on the interior surface (Fig. 1: Group 6). Several individual examples were also encountered:

7. Curvilinear line (Fig. 8: 7). This covers the exterior walls (Fig. 1: Group 7) of a bread mould with a rounded rim.

8. Animal-like shape (?) (Fig. 8: 8). This covers the interior walls (Fig. 1: Group 8) of a bread mould with a rounded rim (Fig. 5: 1).

9. Plant-like shape (?) (Fig. 8: 9). This covers the exterior walls (Fig. 1: Group 9) of a bread mould with a flattened rim which slopes a little bit outwards.

10. Star-like shape (Figs 1: Group 10, 8: 10). This covers the exterior walls of a bread mould with a rounded rim (Fig. 4: 4).

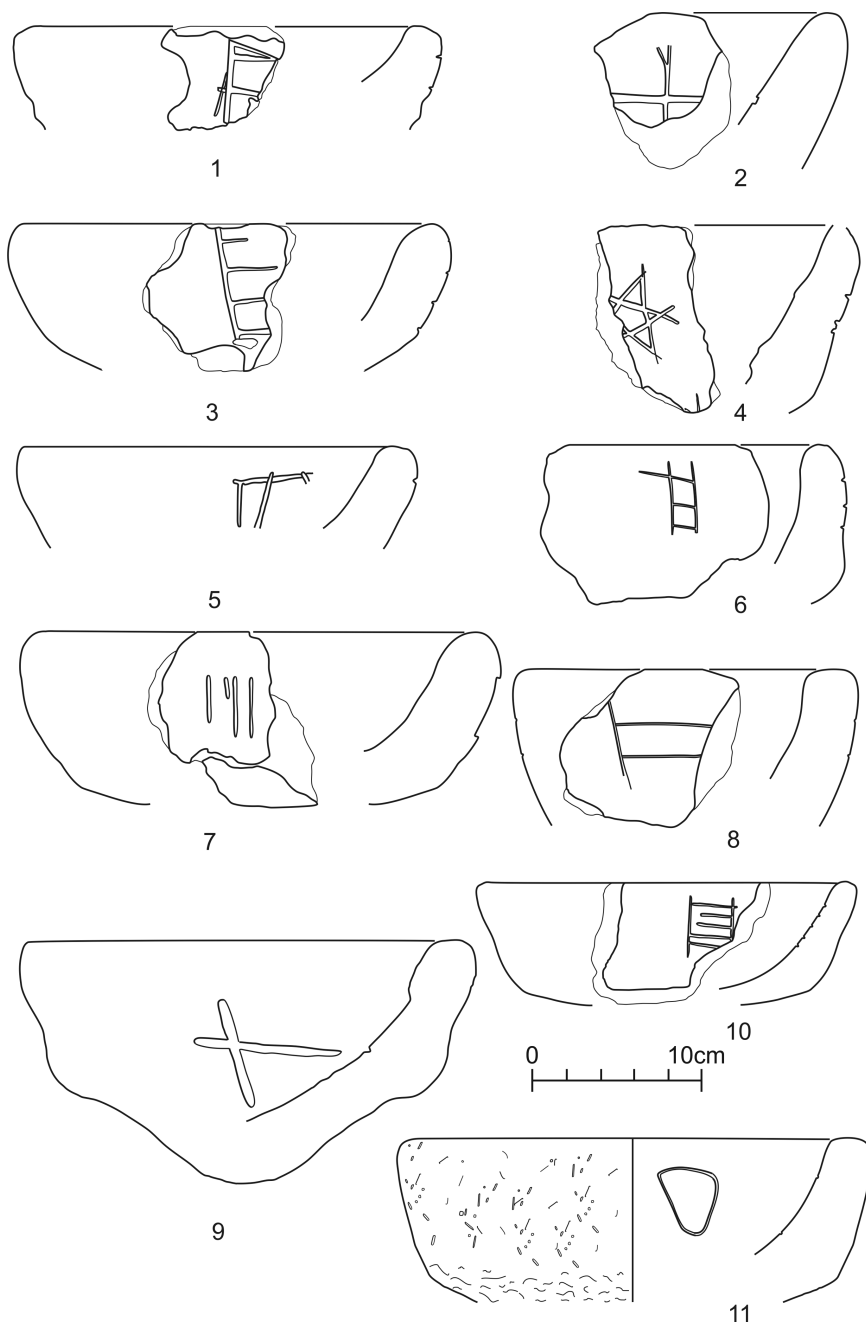


Fig. 4. Potmarks on complete or almost complete bread moulds from Tell el-Farkha.  
 Drawings by M. Rozwadowski (5-7, 9, 10) and M. Sobas (1-4, 8, 11)



11. Short incised strokes on the rim (Figs 1: Group 11, 8: 11). Two short incised strokes cover the top of the rounded rim on this potsherd.

#### 12. Arch-like shape

Three bread moulds were marked with an arch-like symbol (Fig. 8: 12-14). The markings were all found on the interior (Fig. 1: Group 12) surface of bread moulds with concave and flattened rims, thickened inwards (Fig. 7: 5).

#### 13. V-shaped sign

V-shaped signs (Fig. 8: 15-19) were carved on five bread moulds with round, concave (Fig. 7: 6) and flattened (Fig. 5: 8) rims. Three of them are located on the interior surface (Fig. 1: Group 13). On one of the vessels, the V-sign is merely part of a combination of symbols with vertical and horizontal lines. Another adopts the zig-zag pattern from the exterior walls of the vessel. Yet another could perhaps be identified as the hieroglyphic *Ka* (Fig. 8: 19) (Chłodnicki 1995, 26, fig. 2: 24-27; Jucha 2008, 144, 148, tab. 4A, fig. 3).

#### 14. Circle/dots

12 bread moulds possess a carved circle (Fig. 8: 20-31). Most of these appear on the interior walls (Fig. 1: Group 14). Two of the moulds have small, impressed round hollows on top of their rounded rims lying at a fairly regular distance from each other. Dots are also impressed on the upper part of these vessels just below the rim (Figs 5: 5, 6: 2). The multiple impressed dots cover either the exterior or interior surface of the vessels and are arranged in a disorderly manner. Oval-shaped markings (Fig. 8: 28-31) cover the lower part of four bread moulds. Three of them situated on the interior and the other on the exterior surface (Figs 1: Group 14, 6: 10).

#### 15. Semi-circle

All semi-circle markings (Fig. 8: 32-34) were carved on the inside of the vessels (Figs 1: Group 15, 6: 8-9) on their lower part. One was carved inside a form with a concave rim. It forms part of a combination of two semi-circles linked by a wavy line (Fig. 6: 9). The marking would probably have been part of a larger design, which has unfortunately not been preserved.

#### 16. Radial-wheel shape

Two radial-wheel shapes (Fig. 8: 35-36) were carved on the interior walls of vessels (Fig. 1: Group 16). One of them was on a bread mould with a flattened rim top (Fig. 5: 3).

Most of the markings are very simple, geometric shapes taking the form of crosses, circles or a variety of combinations of vertical and horizontal lines. Moulds with only one marking make up 75.8% of the total, whilst

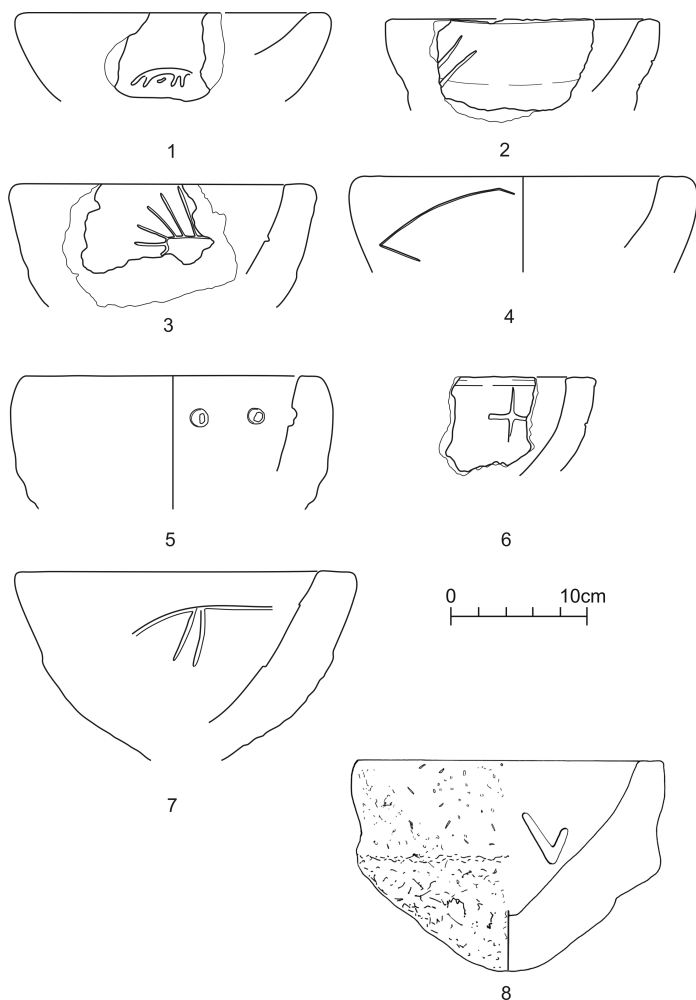


Fig. 5. Potmarks on complete or almost complete bread moulds from Tell el-Farkha. Drawings by M. Rozwadowski (2-5), A. Mączyńska (8) and M. Sobas (1, 6, 7)

combinations of two signs represent 14.3%. Three different markings (5.5%) and four or more (4.4%) are significantly less common (Fig. 9).

Potmarks from Tell el-Farkha can be compared with marks from other sites in the Nile Delta, such as Tell el-Murra (M. Jucha, personal communication), Tell es-Iswid (Bréand 2014, 156) and Buto (Köhler 1998, Taf, 42-46; Wodzińska 2011, 1090-1092), as well as with sites in Upper Egypt like Adaima (Buchež 2004, 682-685; Bréand 2011, 1015-1041).

The most commonly occurring marks in Tell el-Farkha are combinations of vertical and horizontal lines (19.5%) (Fig. 1: Group 3) and vertical

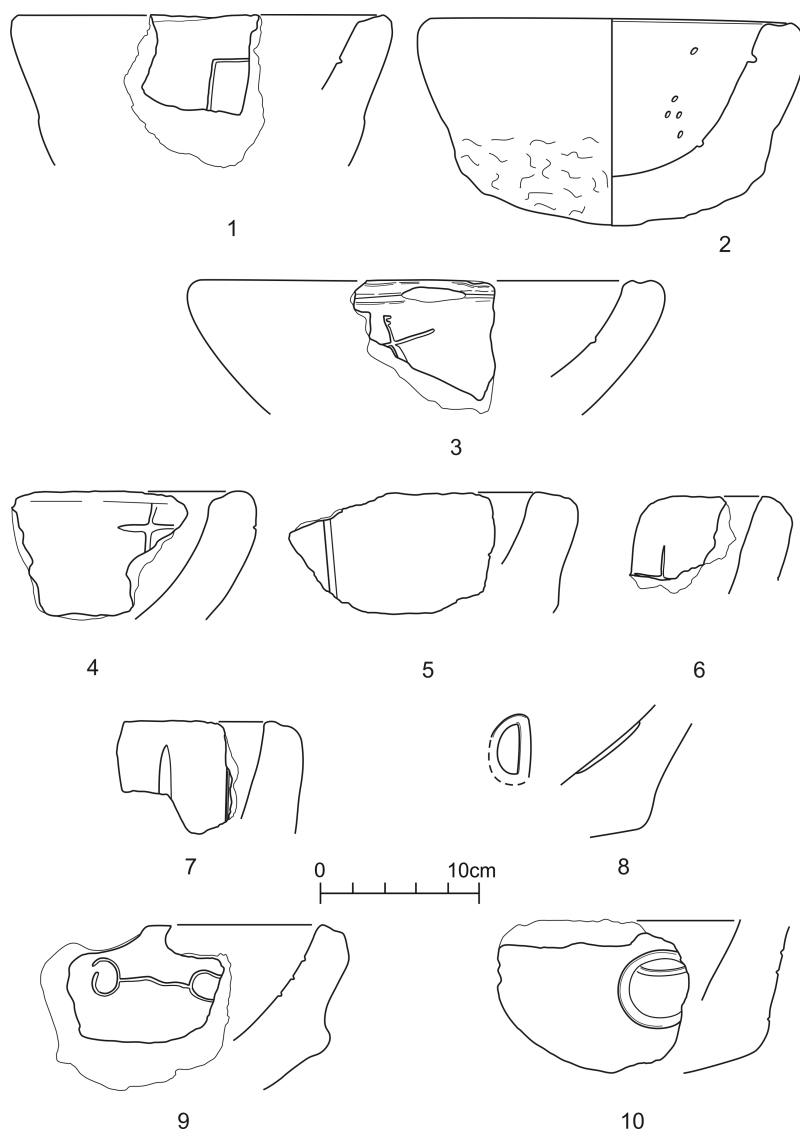


Fig. 6. Potmarks on complete or almost complete bread moulds from Tell el-Farkha. Drawings by M. Rozwadowski (1, 5, 7-10) and M. Sobas (2-4, 6)

lines (15.2%) (Fig. 1: Group 5). Such markings are also known from Tell el-Murra (M. Jucha, personal communication), Buto (Köhler 1998, Taf. 42: 3, 44: 3, 46: 5; Wodzińska 2011, 1091, fig. 16), Tell es-Iswid (Bréand 2014, 156, fig. 1: 2-3, 7-8) and Adaima (Buche 2004, 684-685, figs 7-8; Bréand 2011, 1020, tab. 1, 1030, fig. 8). They cover various forms of bread moulds, including those with rounded, sloping, flattened and concave rims.

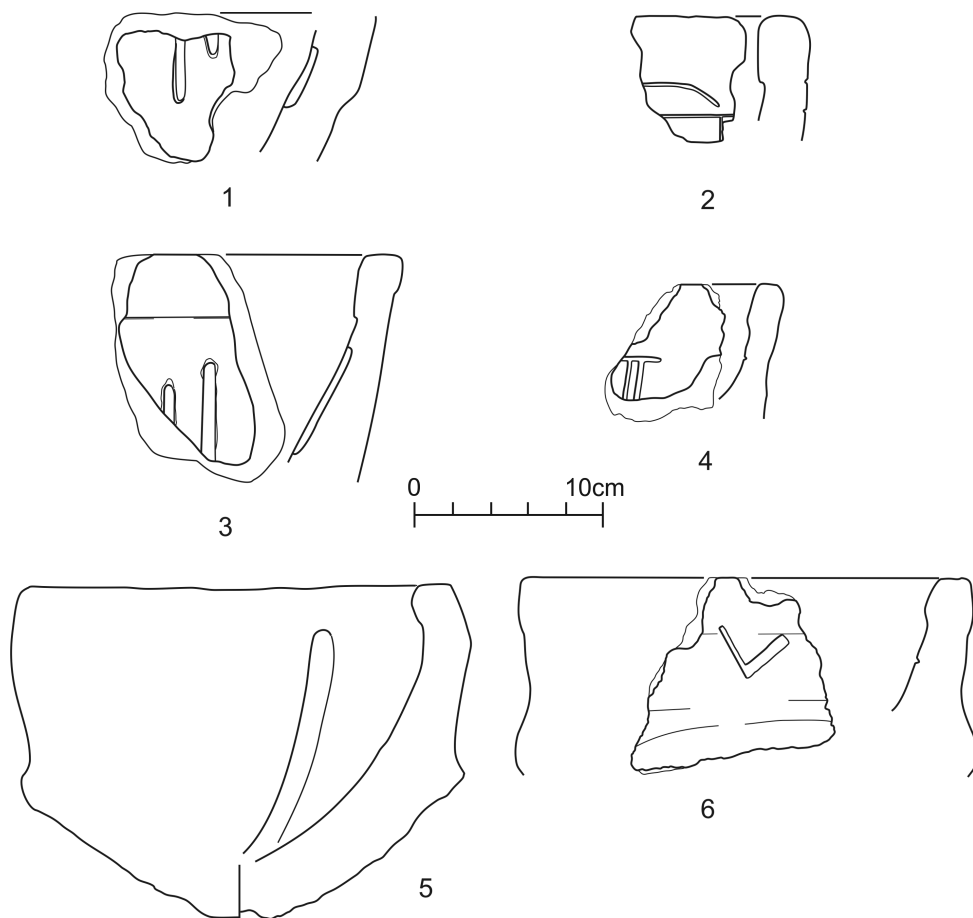


Fig. 7. Potmarks on complete or almost complete bread moulds from Tell el-Farkha.  
Drawings by M. Rozwadowski

The next most numerous group is that of crosses (Fig. 1: Group 1), which makes up 16.3% of the potmarks analysed at Tell el-Farkha. They are also quite common at other sites such as Adaima (Buchez 2004, 684, fig. 7), where they were incised on various types of bread mould, but mostly on those with rounded rims. The majority of the crosses were incised on the exterior surface of the vessels.

The group of circle potmarks also stands out (13.04%) (Fig. 1: Group 14). This group is also significant in Buto (Köhler 1998, Taf. 44: 1; Wodzińska 2011, 1091-1092, figs 16-17), where the marking occurs on bread moulds with rounded, flattened and concave rims, and in Adaima (Buchez 2004, 684-685, fig. 708) and Tell es-Iswid (Bréand 2014, 156).

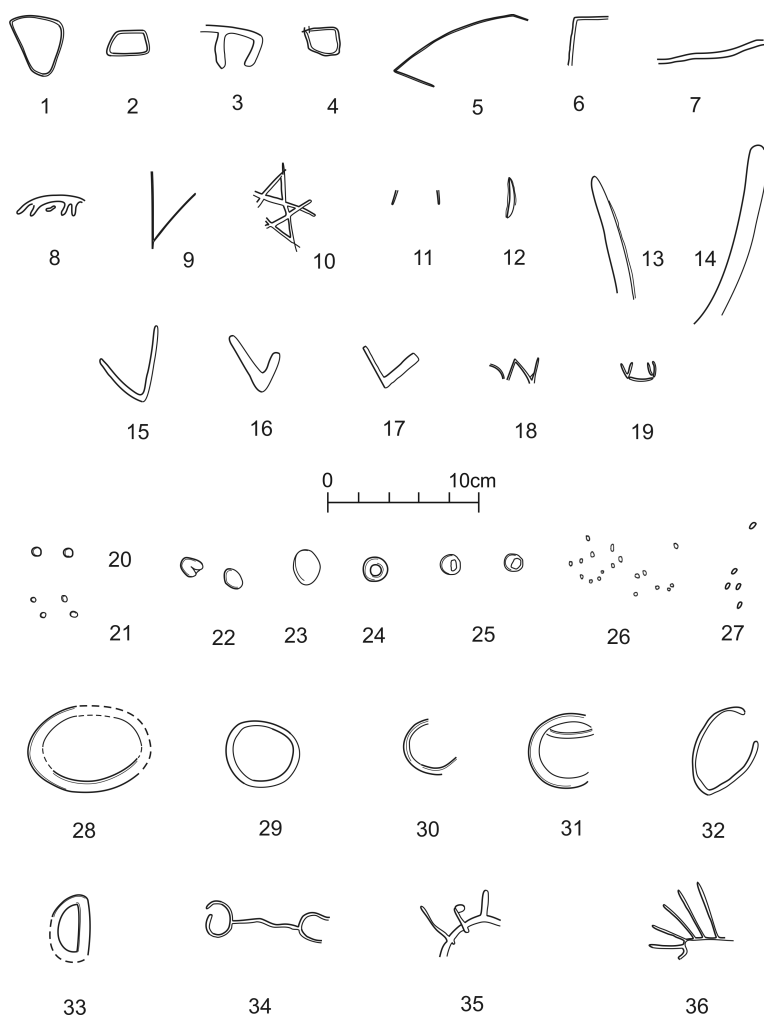


Fig. 8. Potmarks incised on bread moulds from the Eastern, Central and Western Koms of Tell el-Farkha. Drawings by A. Mączyńska (2, 3, 16, 32, 35), M. Rozwadowski (4-7, 11-15, 17-19, 22, 23, 25, 26, 28-31, 33, 34, 36) and M. Sobas (1, 8, 9, 10, 20, 21, 24, 27)

Although research on potmarks from the Protodynastic and Early Dynastic periods on vessels such as jars, bowls and bread moulds has intensified over the past few years as more publications have become available (Sobas 2010, 405-413; van den Brink 2011, 1005-1013; Mawdsley 2011, 1043-1071; Wodzińska 2011, 1073-1096; Mączyńska 2012, 115-145; Bréand 2011, 1015-1041), the interpretation of individual markings is still difficult to fully comprehend. Certain general theories have, however, been propounded. Firstly, it is possible that potmarks could have indicated

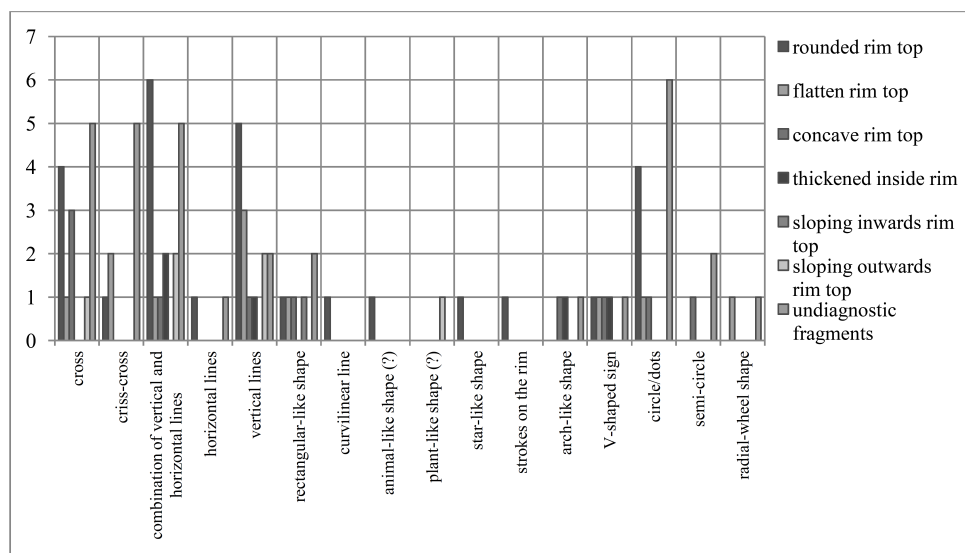


Fig. 9. Distribution of potmarks on particular types of bread mould

the work of an individual potter or workshop. Secondly, they may have been connected to their intended destination. It is also possible that the markings indicated the capacity of the vessels or the exact amount of product being kept in the pot. The markings may not only have identified the owner of a pot, but also indicated the name of the potter (van den Brink 1992, 276, note 4; Adams and Porat 1996, 98; Kroeper 2000, 216). In addition, it has been claimed that potmarks played a significant role in the functioning of Protodynastic and Early Dynastic administrations (Adams and Porat 1996, 107).

A wide variety of markings can be observed on the different types of bread mould. These potmarks appear on both the interior and exterior sides and on the rim, upper, middle and lower part of the vessels. It is much easier to interpret potmarks incised on the inside of pots, as they would have left an imprint on the bread crust which probably indicated the manufacturer. The form used for the bread may also have specified the recipient or could have been linked to the contents of the vessel. It is much harder to try to make sense of the markings which appear on the exterior walls of bread moulds.

It is also far from simple to determine what type of relation the shape of the potmark had with the type of bread mould. The markings mainly cover fragmentarily preserved bread moulds which possess varying kinds of rim. The number of potmarks analysed in this paper is too limited to draw

anything but preliminary conclusions. Very similar designs are, however, known to us from jars and bowls. To prove this, we can use research on potmarks from the Western Kom of Tell el-Farkha. In this case, it is perfectly clear that the most common marking on bread moulds was the criss-cross sign, which also appeared on jars and miniature bowls (Sobas 2010, 407, tab. I: 14; Sobas 2012, 187, fig. 3: 4). This diversity in the type of vessel demonstrates that the markings could not have indicated the product which was being transported or stored in the vessel (Bréand 2011, 1036). Similarly, in Minshat Abu Omar, 27 pots with potmarks mostly containing the remains of fish and animal bones were discovered, but the markings engraved on the surface of the pots varied greatly (Kroeper 2000, 216).

It is also hard to assume that vessels from various different sites were made by the same potter's hand or by one potter's workshop, as the sites where they were discovered lie a long distance from each other and distribution over such a long distance could have been problematic. With these particular examples, it is most probable that we should instead concentrate on the potters themselves and those receiving their work.

The potter or one of his helpers probably marked the vessels themselves before firing, perhaps with the intention of counting quantity in order to keep track of production. The potmarks on bread moulds could therefore have been made in a workshop, but in Tell el-Farkha a workshop has yet to be identified. Although bread moulds with cross motifs have been found all across the Tell el-Farkha site, the southern part of the Western Kom seems to be the area where they are most concentrated. As a result of the way in which the vessels were made and the assumption that potmarks were incised before firing, it is likely that marking occurred at the place of manufacture (Hope 1999, 126; Gallorini 2009, 119).

The fairly poor quality and high quantity of bread moulds, as well as their use in everyday life, suggests that they could have been made on site in domestic production. A relationship may also exist between the form of vessel, the potmarks and the contents of the vessel. Only a few analogous bread mould markings have been found at Buto (Köhler 1998, Taf. 46: 1-2), Adāima (Bréand 2011, 1030, fig. 8: 3-4) and Tell el-Farkha (Figs 3: 17, 8: 1).

Finally, there could also be a link between the specialisation of the potter and the particular shape of the bread moulds.

In brief, even though the potmarks were all made at one site, a variety of motifs exist. This probably means that they were made by different potters

or indicated a different type of production. Whether the mark was placed on the inner or outer walls of the vessel seems to have been far from systematic. It may have been done with a specific purpose in mind, but we cannot guess or explain it properly yet.

Taking everything into consideration, there is a genuine lack of publications on potmarks from settlement sites. According to van den Brink (1992, 265-296), most of the published potmarks come from cemeteries. So far, the largest number of published potmarks from a settlement comes from Adaima (Bréand 2011, 1015-1041), which contains 520 potmarks mainly from the Predynastic period. After future excavations on settlements, these statistics could, however be very different. New data on potmark research may prove very significant in aiding the study of ancient pottery. Finally, a detailed analysis of individual signs could be of great use in interpreting the way in which the administrative system functioned in Egypt during the period.

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