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EGYPTIAN KITCHENWARE IN SOUTHERN LEVANT DURING EARLY BRONZE IB2 PERIOD

Abstract: Egyptian vats and bread molds from the Early Bronze IB2 period are found in abundance on numerous sites in Southern Levant. During that time many groups of Egyptians settled across Canaanean towns and villages, which the archaeological material proves. The presence of kitchenware proves that they preserved their culinary traditions and still used this characteristic type of vessel. The latest excavations at Tel Erani (2013-2018) resulted in finds of significant amounts of kitchenware concentrated around one building, as well as some hearths and flint tools, which relates well with this theory and suggests that a group of Egyptians indeed lived there among the local population during the end of the Early Bronze I period.

Keywords: bread molds; vats; Southern Levant; EB IB2; kitchenware; Tel Erani

During the Early Bronze IB2 period (EB IB2, periodization of Early Bronze Age after Yekutieli 2000, 129-131) Southern Levant experienced a discernible Egyptian presence, which is clearly visible in the material culture from sites dated to the second half of the 4th millennium (for EB chronology see Regev *et al.* 2012). The exact nature of this presence is still a subject of debate (de Miroschedji 2015; Braun 2016; Czarnowicz *et al.* 2016), although it seems undoubtable that at sites like Tel es-Sakan, En Besor and Tel Erani we can observe, mainly in pottery and flint tools, signs of permanent Egyptian habitation. Kitchenware made of local materials

but in foreign techniques and shapes, is one of the types of artifacts which could shed some light on the Egyptian activity in the region. This category includes bread molds and vats (or basins) which were used to prepare food. They were made of coarse fabric, with very little to no surface treatment (Braun 2005, 144; Jucha 2005, 51-52). One typical example of kitchenware is the holemouth jar, but as a primarily Canaanean form, it will not be discussed here in greater detail. This article aims to gather available data about bread molds and vats in Southern Levant at the end of the EB IB period, analyze them in relation to the site type and relate them to the newest results of excavations at Tel Erani, which is thought to have held an Egyptian trade outpost.

Egyptian kitchenware

Bread molds are one of the most characteristic pottery forms found numerously on sites across Egypt (Jacquet-Gordon 1981, 11). These crude, thick-walled vessels used for food production occur in huge quantities, marking the spots of long-term occupation by Egyptians. As a vessel type of everyday use, they appear in great numbers on every site in Egypt. Unfortunately, because of the low quality of workmanship they are usually found in pieces, and reconstruction is very difficult, often impossible. They are also found at sites abroad, at places where Egyptians were a visible part of local populations.

Bread molds are known in Egypt since the end of the Naqada II period (Breand 2015, 188), although their shape and quality changed over time (Jacquet-Gordon 1981, 11-16). During the Naqada III period bread molds were rough, open vessels of rather large rim diameters of 25-35cm. They were made out of Nile clay with addition of organic temper, usually straw, but sometimes also sand grains (Sobas 2014, 66). Walls were very thick, around 5cm. Rims could be flatted or rounded, with little concavity on top. They often have angular transition, which divides the body into two parts. It is clearly visible that the upper zone is a bit better made, sometimes even smoothed, and the lower zone is very coarse and uneven (Jucha 2005, 51). The base is rounded or slightly flattened. The interior of the mold is usually smooth and sometimes bears potmarks incised during forming, although some examples of signs on the exterior are known as well. Potmarks are relatively rare; at Adaima site for example, they constitute only 1.6% of the entire assemblage (Breand 2015, 191). The temperature of firing was very low, and they were likely not fired before bread making, only sun-dried.

They could be reused, thanks to the thickness of the walls and to the fact that it was relatively easy to remove a finished bread loaf out from them, especially when we compare them to the bread molds from later periods, which were rather tall with much a smaller rim diameter (Jacquet-Gordon 1981, 22-23; Sobas 2014, 66). Another theory, however, says that they were a single-use type of vessel destroyed after baking, hence the great number of sherds found on sites (Dessel 1991, 136; Breand 2015, 197).

Vats or basins are also found in great numbers (Charloux 2006, 226) and are connected with bread and beer production. These coarse, capacious open vessels could have served for dough preparation or for brewing and are connected with economic centers. Their simple form allowed for rather quick and easy shaping. Their thickened rims leaned outward, and the walls were around 3cm thick. The surface was rough, usually left untreated or slightly smoothed, but some single examples with yellow coating were recorded (Jucha 2005, 52).

The Naqada III period could be broadly correlated with the EB in Southern Levant (Czarnowicz *et al.* 2016, 30), the time when the Egyptians expanded to Canaan, supposedly established colonies and trading posts and maintained a trade route through the Sinai Peninsula (de Miroschedji 2015, 1004-1008, Fig. 1). At many sites in modern Israel, Egyptian pottery is found among local vessels. One important fact is that petrographic analysis has shown that they were made out of local loessy clay, which could be found around sites like En Besor or Tel Erani (Porat 1989; 1992; Dessel 1991). This means that the Egyptians indeed probably stayed on those sites for a longer time, maintaining their traditions of food making. This way of bread baking was previously unknown in the Levant and did not continue after the Egyptians withdrew from Canaanian cities.

It is clear that bread molds and vats are not high quality pottery, so it is no surprise that no one wanted to take them when travelling abroad. Because they were very simple and quick to make it was not a problem to manufacture them after settling in a new place. They have been found on sites where other Egyptian-style vessels were also present. Quantities of these finds varied considerably: sometimes only a couple of sherds like at Amaziya, while on other sites like Tel Erani or Tel Halif they were found in great numbers. There are also examples like Small Tel Malhata (Ilan 2002, 307-316), where the Egyptian pottery assemblage was made out of Nile clay and consisted mostly of closed, storage vessels, some with *serekhs*. Additionally, petrographic studies showed that none of the Egyptian vessels were made out of local clay (Porat 1989, 55).

The most important sites where kitchenware was found are Tel es-Sakan, Tel Halif, Amazyia, Tel Lod, Maghar, En Besor, Tel Ma'ahaz and Tel Erani (Pl. 1). They span from northern Negev to the central Coastal Plain, although it seems that most of the Egyptian activity was concentrated around Tel Erani and the En Besor region, which was the source of the clay used to manufacture the discussed pottery and the center of distribution of finished vessels to other sites (Porat 1989, 49-62).

Tell es-Sakan

Tell es-Sakan was discovered in 1998 and named as the main Egyptian colony in the Levant. It covers from 6 to 8ha. Tell es-Sakan had one of the biggest foreign assemblages in the region (de Miroschedji and Sadeq 2000, 98-101). Local pottery is relatively scarce and there are no 'hybrid vessels' (de Miroschedji *et al.* 2001, 85). The site was surrounded by a mud-brick wall. In its oldest phase it was only 1.5m wide, so it was not necessarily a defensive construction. At Naqadian settlements this kind of wall was erected to separate different parts of the site from each other. One example is Tell el-Farkha (Ciałowicz 2012), which was probably a political and economic center of the Eastern Delta in this period. In later phases the wall at Tell es-Sakan was widened to 3.5m, which still seems not all that wide when compared to the 8m-wide wall from Tel Erani (Ciałowicz *et al.* 2015, 18).

90% of the excavated pottery was described as Egyptian (de Miroschedji 2015, 1016), dated to the Nagada IIIB-C1 period. Vats and bread molds made from local clay were found in significant numbers. Some fragments of beer jars were reported (de Miroschedji 2015, 1016), although typical Egyptian beer jars known mostly from graves appeared in the Nagada IIIC2 period (Jucha 2012), which might suggest that these sherds were part of a medium-sized storage vessel of a different type.

The excavators suggest that the site was founded by settlers from Tell el-Farkha, the only place developed enough to set and maintain a colony at that time (de Miroschedji 2015, 1024-1025). The site was partially destroyed by Hamas in 2017, so any further excavations will not be possible for now. Only a small part of the settlement was studied, hence any wider conclusions about its nature are uncertain and prone to over-interpretation.

Tel Halif

The site, which lies 28km southeast of Tel Erani, was excavated by several expeditions and is a part of the regional Nahal Tillah Project (Levy

et al. 1997). During the works led by Seger in 1983-87 (Seger *et al.* 1990) scholars unearthed some architectural remains with substantial Egyptian pottery produced locally, both storage and kitchenware. Detailed studies made by Dessel (1991) discerned ten ware types. Among them three were used for production of Egyptian forms, and two of them were made of local-origin, loessy clay with straw temper (Dessel 1991, 131-135). Analysis of the material from the 1994-95 seasons from area D, stratum IIb, led to the discovery of a building with an irregular stone structure described as a *tabun* along with around 500kg of bread molds (Levy *et al.* 1997, 32). Ascribing the functionality of an oven to the mentioned stone structure is, however, questionable. The published plan and photos indicate rather a storage installation (for the Egyptian *tabun* see Chłodnicki 2012, 22, Fig. 5; Czarnowicz *et al.* 2016, 33, Fig. 7). After further research, scholars estimated the number at 100-200 individual vessels. Some examples have potmarks incised on external and internal sides (Dessel 1991, Fig. 43.4; Kansa and Levy 2002, Fig. 12.16-12.17). Rims were slightly flattened, sometimes with a concave rim top. Large basins for dough and beer production were found as well. Their rims were thickened and slightly flared, with surfaces left untreated with no decoration noted, although three sherds were covered with pink slip (Dessel 1991, Fig. 42).

Spatial distribution of the foreign pottery showed that it was concentrated mainly around the room with an adjacent *tabun*, although no clear distinction between Canaanean and Egyptian zones was visible. Researchers concluded that available data suggest that the Egyptians who settled in Tel Halif were integrated within the local population and did not constitute a separate social unit (Kansa *et al.* 2002, 89-90).

Amazyia

A relatively new site situated near Lachish and Tel Erani holds a silo complex and a settlement dated to the EB I period (Milevski *et al.* 2014, 713-714). A small amount of Egyptian pottery supports this dating. They were probably made locally, and among them are fragments of bread molds (Milevski *et al.* 2012, Fig. 7.4). If the interpretation of the stone-lined pits as silos is correct, it means that the site could have served as a supply center and was administered by a larger settlement, in this case Tel Erani (Milevski *et al.* 2014, 714-715).

Lod

The modern city of Lod lies on the central Coastal Plain. An ancient tell is located north of Lod's old city. More than 40 excavations were conducted, unearthing levels of occupation from Pottery Neolithic A to the Mamluk periods (van den Brink *et al.* 2015, 141), although most of the work still remains unpublished. Levels with EB I material with published results were excavated in 1997 (van den Brink *et al.* 2015), 2000 (Yannai and Marder 2000) and 2003 (Paz *et al.* 2005). Each expedition showed that the population of the settlement had a visible Egyptian element, although this was short-lived and it ended before EB II. The excavators found a substantial number of bread molds with rounded bodies or with angular transition. Their rims were rounded, often with concave rim tops. Petrographic study shows that they were made from loessy clay (Porat 2002, 291-296), just like at Maghar, which lies a little further south (Gophna *et al.* 2010, 20). Some wine jars and Canaanite pottery types were made out of clay which could be found near the site (van den Brink 2002, 298). This means that whoever used the bread molds at Lod probably brought them from the south, from Tel Erani and the En Besor region, where the main concentration of Egyptian activity took place. No information about basins or coarse bowls is given. For a description of Egyptian wine jars with *serechs* from Lod see van den Brink and Braun (2002).

Maghar

The site is located in central Israel, 12km from the Mediterranean Sea. It has not yet been excavated, so all available information is based on surveys conducted over the years (Kaplan 1953; Gophna 1974; Sasson 2003). Apart from Early Bronze material, artifacts from the Chalcolithic, Middle Bronze, Iron Age, Roman, Byzantine and Umayyad periods have been found (Gophna *et al.* 2010, 11-15). The majority of the pottery assemblage constitutes typical Canaanean forms, although some Egyptian types have been recognized as well. Among them are some fragments of bread molds. Petrography shows that they were made out of clay from the vicinity of Tel Erani and the En Besor region, around 30-40km to the south (Gophna *et al.* 2010, 20). Studies made on sherds collected in previous projects showed, however, that some of the wine jar fragments are of Egyptian origin (Braun *et al.* 2001, 79-80) which adds to the hypothesis that mostly kitchenware pottery was manufactured with the use of local clay, and high quality vessels were imported directly from Egypt. The settlement was at least partially enclosed by a fortification wall. Its foundation date is unsure; researchers

suggest it to be the very end of EB I or the beginning of EB II (Gophna *et al.* 2010, 29). The available data, however, are too uncertain to prove this hypothesis. The site needs systematic excavations to draw any further conclusions about its nature.

En Besor

Interpreted as an Egyptian outpost, this site lies in northwestern Negev. The excavators discerned four strata (Gophna 1995, 46). Strata III and IV are dated to EB IB, and the former is associated with the Egyptian presence in Southern Levant. The material is of foreign shapes, but made out of local loessy clay. This outpost was rather small, consisting of only one building, and was inhabited by around 10-12 people. Surprisingly, huge numbers of bread molds and other vessels were found inside it. When compared to the results of petrography from sites like Lod or Maghar, it might be suggested that at least some of the pottery was made in the south and then sent further north. Some bread molds have potmarks incised on the inner side (Gophna 1995, 74-75, Fig. 2). Most of the fragments have angular transition, and the lower part of the vessel was left completely untreated.

Basins were made of coarse material with straw temper, similarly to bread molds. The outer side was typically left untreated and rough. One of them was found complete, sunken in the floor of building A, which was later interpreted as a caravanserai or staging post (Gophna 1995, 67). Interestingly this particular vessel was imported from Egypt, not manufactured on site, in contrast to some other fragments of vats which were made locally (Gophna and Buzaglo 2000, 26). It shows that the first settlers of Canaan brought some utilitarian pottery with them, and only later did they begin to use loessy clay from the vicinity of their new home. Some examples of vats from En Besor were decorated on the exterior with incised lines in diagonal or zig-zag patterns (Gophna 1995, 79, Fig. 5.4).

Tel Ma'ahaz

The site lies in southern Shephelah, around 10km south of Tel Erani. Egyptian pottery comes from stratum I and is a part of a domestic assemblage (Amiran and van den Brink 2001, 31). Other finds such as flint tools and grinding stones uphold this concept. Among them there was a significant number of bread molds, made of local loessy clay with organic temper (Amiran and van den Brink 2001, Fig. 3.2). Some examples had an angular transition in the middle part of the body. Other types of kitchenware found are basins and bowls with flat bases, flaring rims, and no treatment on

the surface. Some of those bowls were made out of Nile clay, but examples made with loess are present as well (Porat 1989, 56). No architecture has been found so far, which might suggest that it was only a campsite, although the scope of explorations is still limited. So far it is hard to assess whether the excavated area is representative of the whole site (van den Brink and Braun 2003, 78).

Tel Erani

The site lies on the southern bank of Nahal Lachish and is known from the 1950s (Yeivin 1961), when the first excavations took place and led to the discovery of an EB city with monumental mud brick architecture, fortifications and significant amount of Egyptian pottery (Brandl 1989). Further work in the 1980s (Kempinski and Gilead 1991) shed new light on the times which directly preceded their arrival, the Erani C phase (Yekutieli 2006). Unfortunately, most of the pottery still remains unpublished.

The settlement or at least a part of it was already walled during those times, which might suggest that it was an important town, able to control surrounding smaller sites like Amazyia. Most of the material from the site is Levantine, so the foreign element was probably small but significant.

New excavations have been in progress since 2013 (Ciałowicz *et al.* 2016), under the auspices of the Jagiellonian University, Ben Gurion University and, since 2018, IAA and Buenos Aires University (Pl. 2, after Shalev *et al.* 2016, Fig. 3). During the work scholars were able to unearth an 'Egyptian trading post', a mud brick construction labeled Building H4, with a courtyard and great amount of Egyptian and Egyptianized pottery in its vicinity. Some *tabuns* and stone installations with analogies in Egypt were found as well. Additionally, some flint tools were made in the Egyptian technique, but with local raw materials (Valde-Nowak and Skłucki 2016, 93). Most of the foreign materials come from stratum V dated to Naqada IIIB-C1 and are comparable with Yeivin's stratum V from his work (Czarnowicz *et al.* 2016, 31).

All the pottery discussed here comes from sub-area D3H. Trenches at areas N and P/Q have been dated to the Erani C period and no Egyptian pottery was found there.

Typical Egyptian kitchenware, bread molds and vats, clearly shows that food production processes took place on site. The courtyard near Building H4 (Pl. 3, after Czarnowicz *et al.* 2016, Fig. 8) contained ovens for baking bread and a stone, bench-like installation (Czarnowicz *et al.* 2016, Fig. 12). It is thought to have served as a place for drying bread molds before baking.

Similar installations are known both from Predynastic Egypt (Czarnowicz *et al.* 2014, 238) and from Southern Levant, e.g. En Besor, where a similar construction was unearthed, also in a courtyard, that of Building A (Gophna 1995, 62-64, Fig. 1). Besides, many pits filled with ash and pottery fragments were found in the vicinity of Building H4. Inside it, another hearth was discovered, as well as an Egyptian-style flint knife with a handle made from non-local material (Valde-Nowak and Skłucki 2016, 93). Numerous fragments of vats for dough preparation were also found throughout the whole layer.

Bread molds from Tel Erani have a form rather typical of the Naqada IIIB-C1 period. They are crudely made, with very thick, around 5cm, walls, an untreated external side and a lightly smoothed internal surface. Many fragments have an angular transition dividing the body (Pl. 4: 2-3, 6). The bottom part of the vessel is of visibly lower quality, and in some cases finger imprints could be seen in the fabric. Only one example bears a potmark (Pl. 4: 1), a circle incised inside. Rims are rounded (Pl. 4: 2-3) or rectangular (Pl. 4: 6-10), with concave (Pl. 4: 11-13) or flattened rim tops (Pl. 4: 8, 10). The diameter varies between 20-30cm, although some reached even 40cm (Pl. 4: 12). Made with straw temper, they are very low quality, and were initially only dried and fired while baking bread. Some fragments were found inside pits or ovens, while the rest were scattered around the building and in the courtyard. Their number and spatial distribution show that they were an important element of the Egyptian activity at Tel Erani.

Egyptian vats are also quite easily distinguishable from local pottery and were already recognized in the assemblage from Yeivin's excavations (Brandl 1989, Fig 13.4). The rims are thickened, rounded and protrude externally (Pl. 5). They could reach more than 40cm in diameter. The walls, slightly bent towards the outside, are 2.5-3.5cm thick. These vessels were made of coarse, reddish-brown fabric of medium quality. On some examples it is visible that they were better fired outside than inside, but the surface is rather rough. No decoration was noted. They were probably used to prepare dough which was later baked in bread molds. They could also have served for beer production, but no brewery remains have yet been found at Tel Erani.

Petrographic studies made by N. Porat (1989, 49-57) on material from older excavations on the site shows that the kitchenware belonged to group 1: vessels made from loessy clay found around the site, with organic temper, usually straw, but sometimes also ash or animal dung. This practice is well-known from Egypt. In forms other than bread molds and vats belonging

to this group, organic temper was observed as well. Storage jars were ascribed to groups 2 and 3, made from material which originated in the Nile Valley.

Summary

Only two of the sites mentioned above are thought to be strictly Egyptian, Tel es-Sakan and En Besor. Another promising place is Tel Ma'ahaz, although it needs further excavations to better understand its character. The rest of the sites presented here had small but significant foreign elements in their pottery assemblages, but with visible differences between them. Tel Erani stands out as an important center in the region with its fortifications and building full of Egyptian pottery. Amazyia, on the other hand, lying just a few km south-east from Erani was a small food-storage village with just a few foreign pottery fragments. Those sherds do not necessarily prove the presence of an Egyptian population living among the locals. Tel Lod and Maghar are also interesting sites because the kitchenware, usually produced on site, was imported from many kilometers to the south, from the En Besor region. Who used them and why those people bothered to transport them so far instead of making them themselves remains a question.

Pottery found during excavations can help significantly with identifying contacts between different groups and the presence or absence of foreign elements among local populations, but it cannot provide straight and certain answers about the nature of an occupation or the ethnicity of the craftsmen (Braun 2005, 148). Egyptian kitchenware found on southern Levantine sites does not necessarily mean that Egyptians were living in every one of these places. The character of this type of pottery, however, points to the use of specific food production traditions. It seems unlikely that the Canaanians adopted those traditions under the simple influence of trading relations. It would be plausible that potters could produce Egyptian-style jars and send them later to Egypt with Levantine goods, although there seems no good explanation for the production of bread molds and vats in this specific style by the locals for their own use. Additionally, the existence of the purely Egyptian outpost at En Besor, which yielded huge amounts of kitchenware, could suggest that the main activity of the Egyptians was centered in that area and that they dealt with supplying other sites with familiar vessels for everyday use. This means that all of the Egyptian activity in the region was centralized and administered on a high level (de Miroschedji 2015, 1020-1024).

New excavations at Tel Erani support this claim. Egyptian pottery was found around sub-area D3H. Trenches at areas P/Q and N were dated to the Erani C period, which precedes the major Egyptian activity. It seems that in Area D3 a small group of foreign origin indeed lived and worked in and around unearthened buildings. Dough for bread was prepared in Egyptian vats, put into Egyptian bread molds and baked in Egyptian-style hearths. A flint knife found in one of the rooms only augments this theory. The exact character of this residence still remains unknown, as does the relationship between its inhabitants and the local community, but hopefully the ongoing research project will solve those questions as well.

Of course the hypothesis presented above is not the only possible way to view the nature of Egyptian-Canaanite relations in the EB IB1 period, but with the current state of research and available data it seems the most plausible. Signs of Egyptian activities are seen in both big, fortified settlements like Tel es-Sakan and Tel Erani and in smaller sites like Amazyia, which shows that their involvement in the region was substantial. It does, however, seem to have been rather peaceful, so it could have been concentrated on trade. It is still very hard to understand how the Egyptians lived among Levantine communities and the degree of their integration. What is known is that it did not last long, and at the beginning of EB II we can observe the withdrawal of Egyptians from the region.

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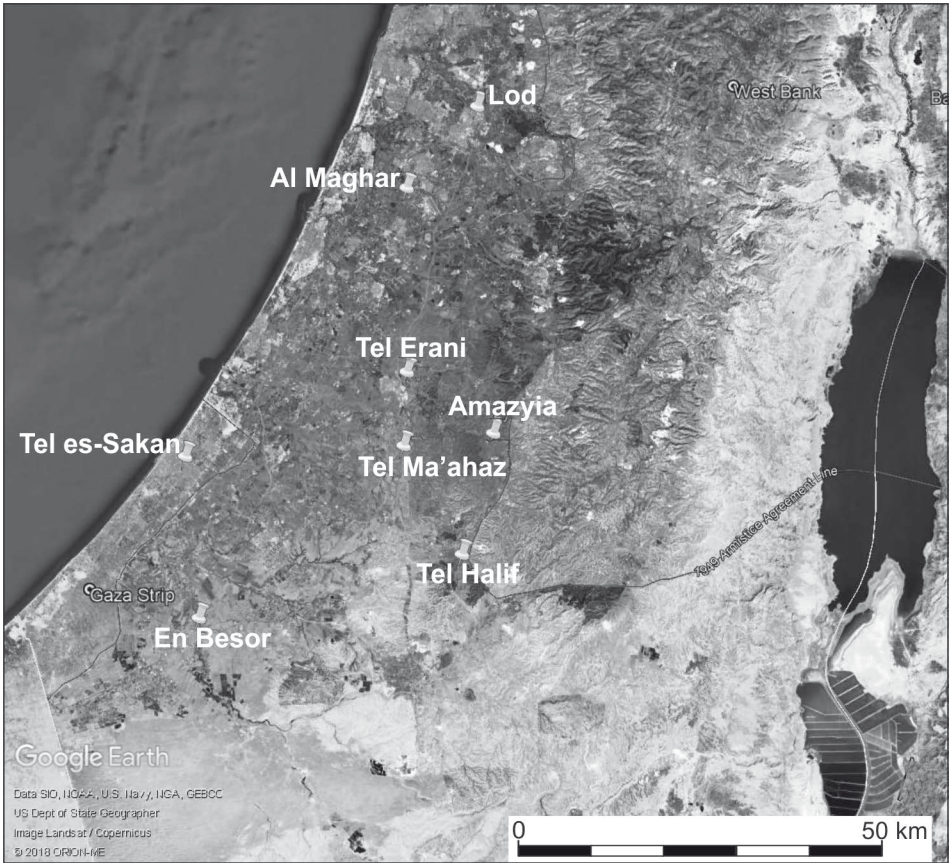
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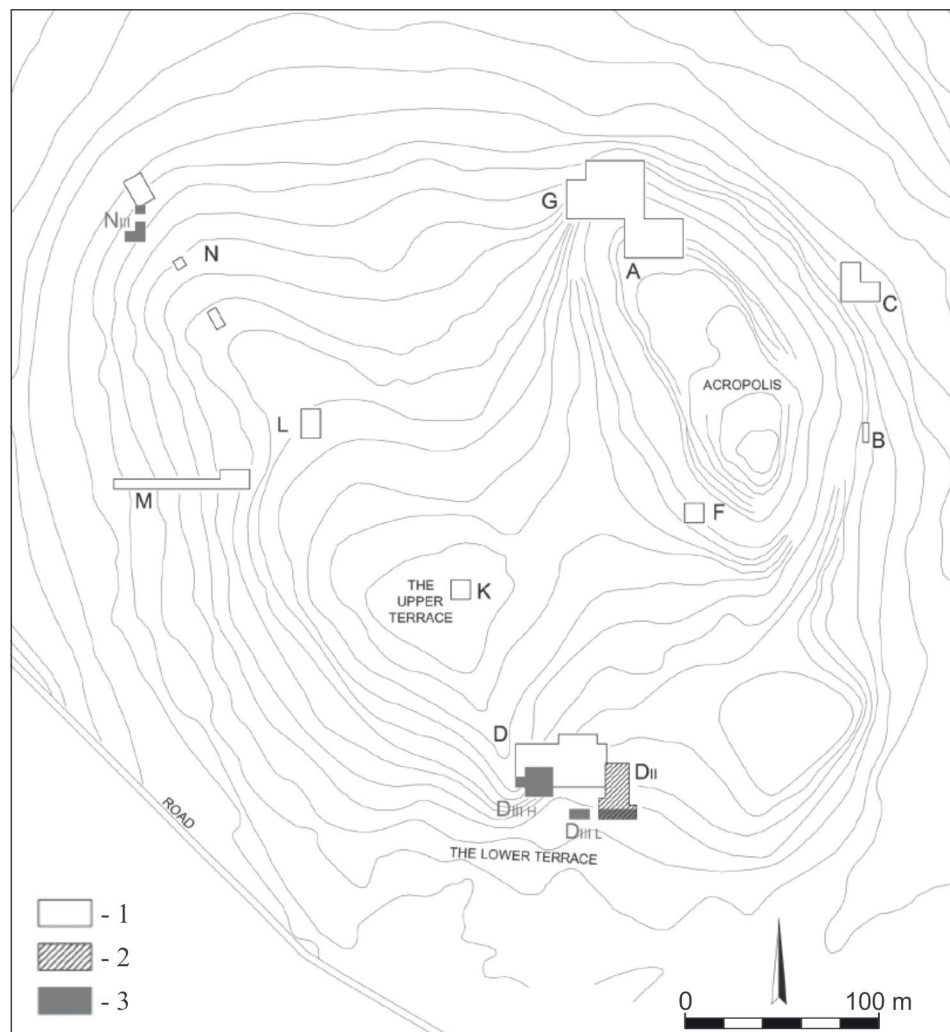
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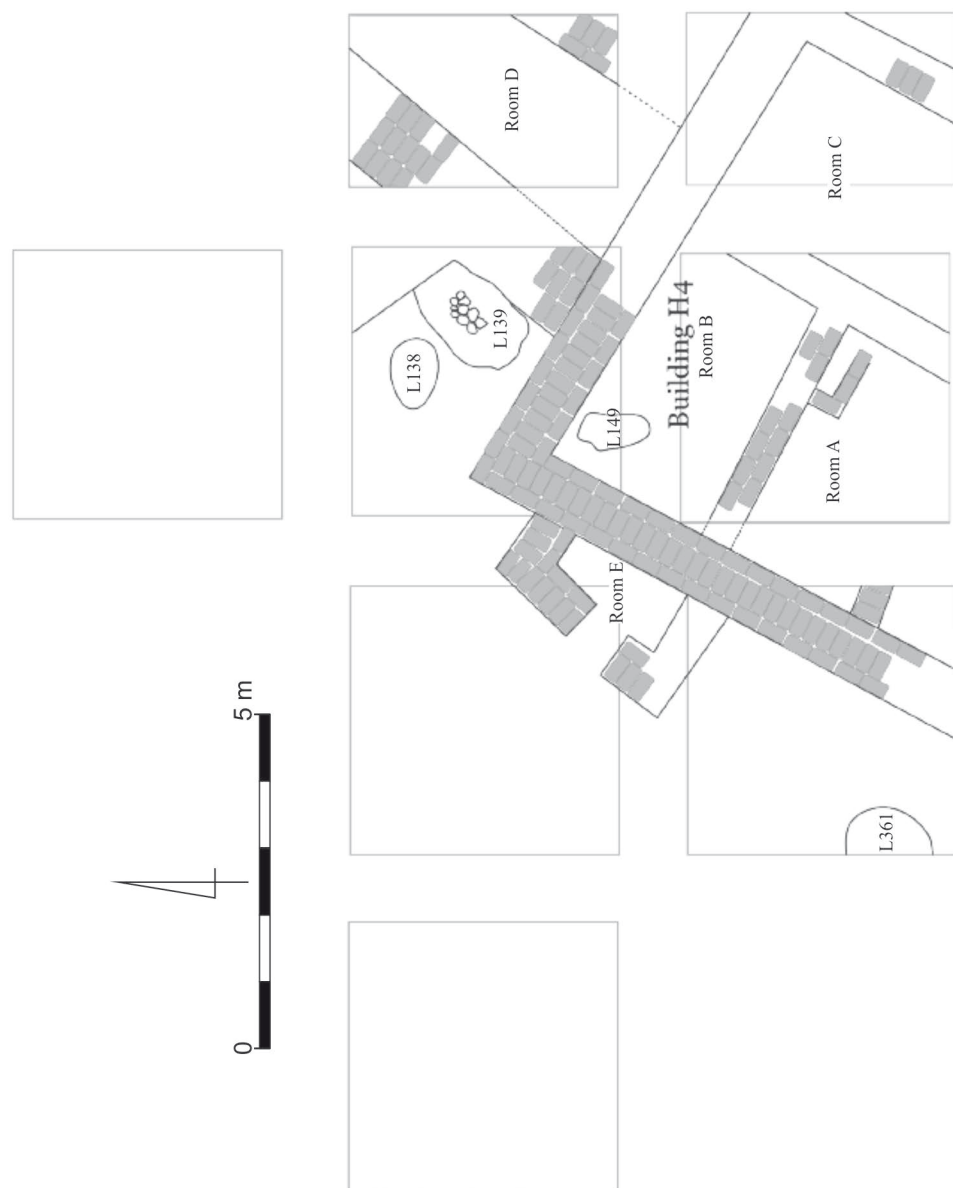
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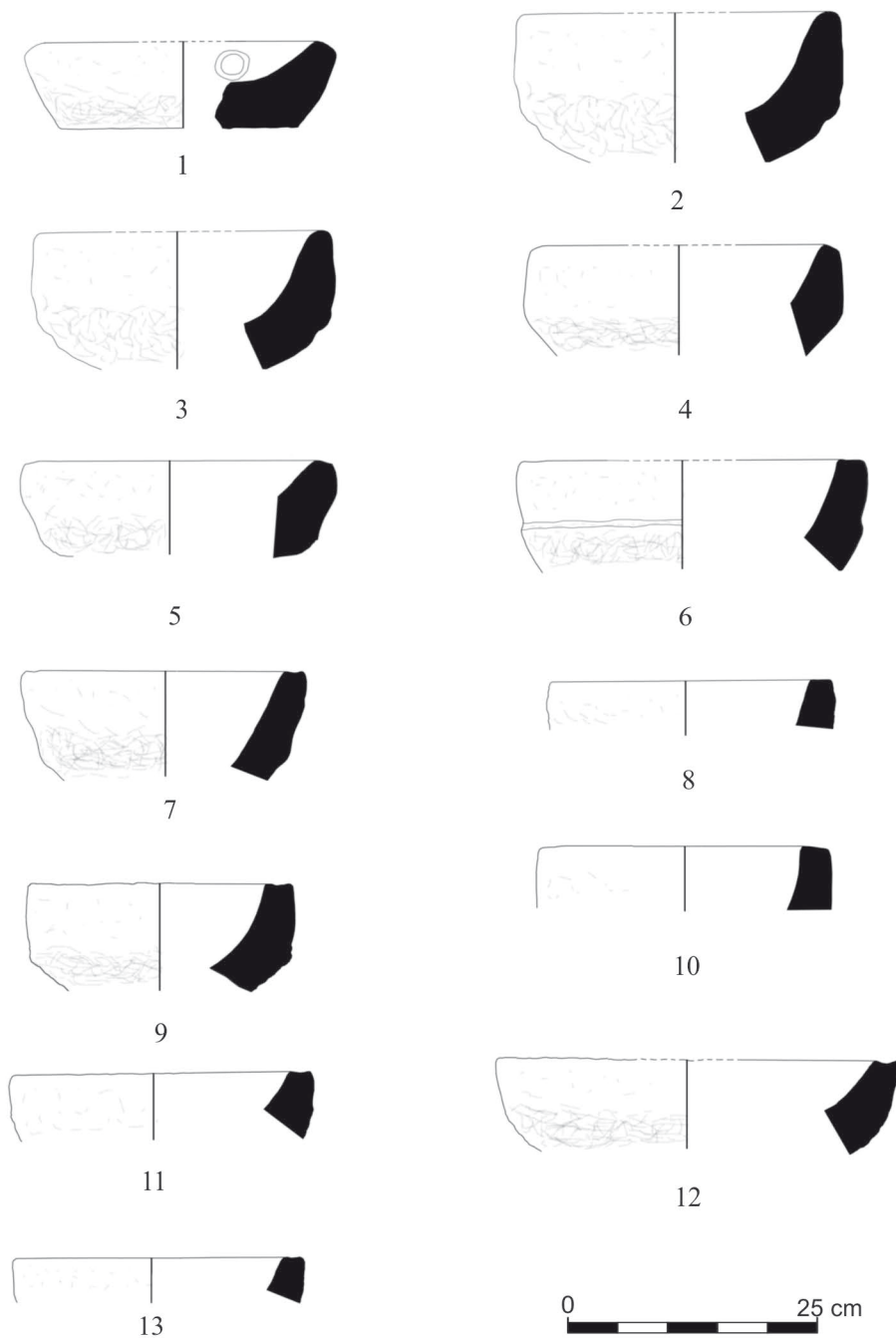
Pl. 1 – Sites mentioned in text



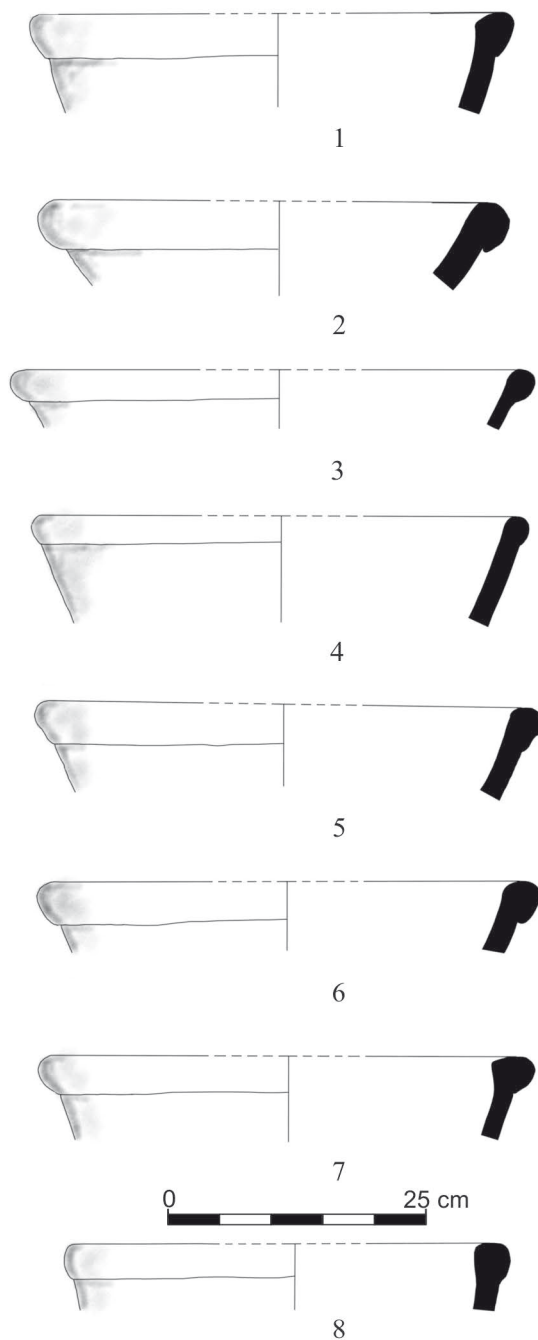
Pl. 2 – Plan of Tel Erani. Reproduced from Shalev O., Pasternak M., Atkins S., Yekutieli Y. 2016. History of Research at Tel Erani. In Ciałowicz K., Yekutieli Y., Czarnowicz M. (eds), *Tel Erani I. Preliminary Report of the 2013–2016 Excavations* 34.
Fig. 3. Kraków. Plan made by K. Rosińska-Balik



Pl. 3 – Tel Erani, area D3H, building H4. Reproduced from Czarnowicz M., Yekutieli Y., Ochał-Czarnowicz A., Pasternak M. 2016. The Excavations of Area D-3. In Ciałowicz K., Yekutieli Y., Czarnowicz M. (eds), *Tel Erani I. Preliminary Report of the 2013–2016 Excavations*. 34. Fig. 8. Kraków



Pl. 4 – Bread molds from Tel Erani from the 2013-2015 seasons.
Drawing archives of the expedition



Pl. 5 – Vats from Tel Erani from the 2013-2018 seasons.
Drawing archive of the expedition